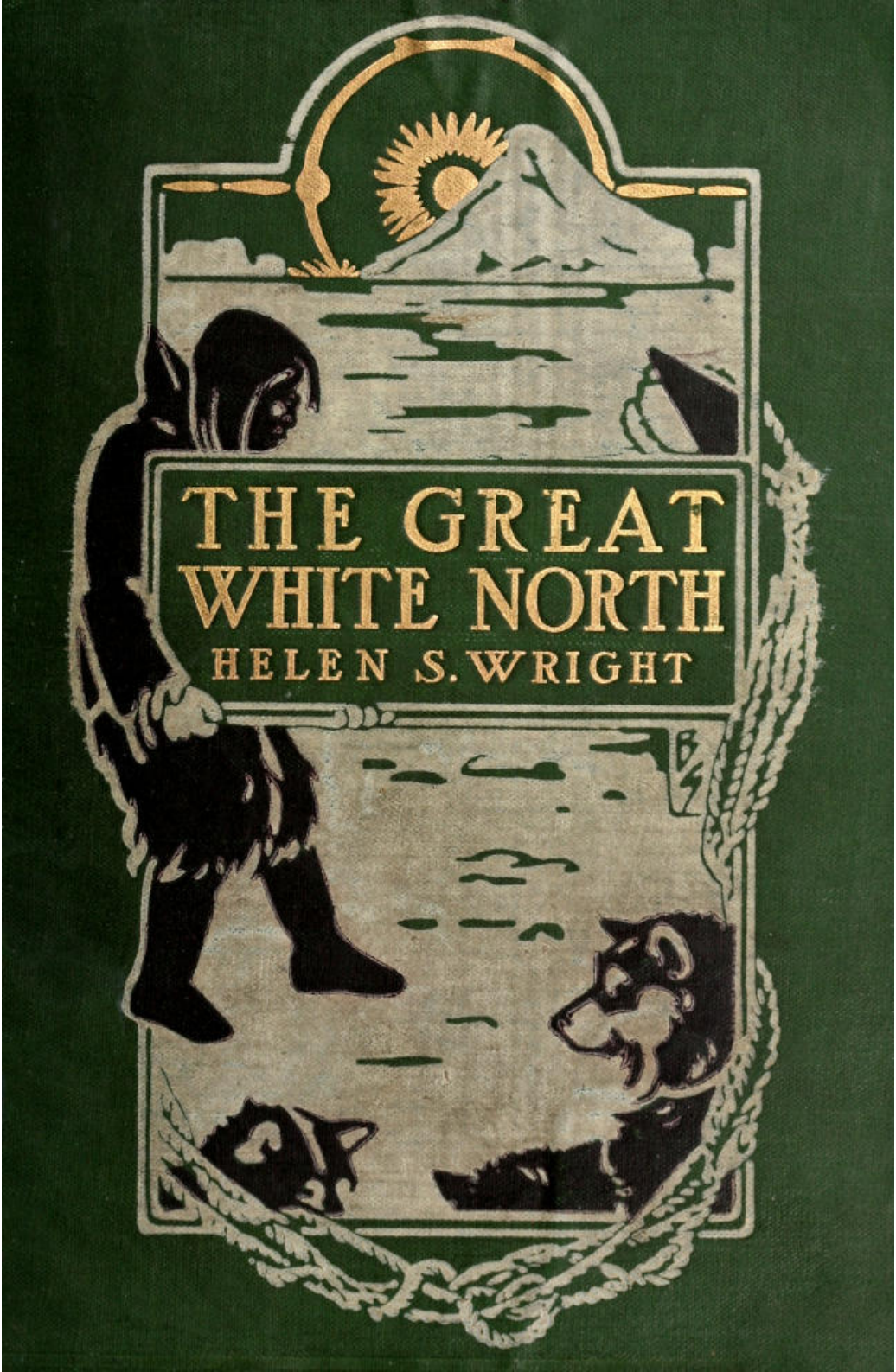
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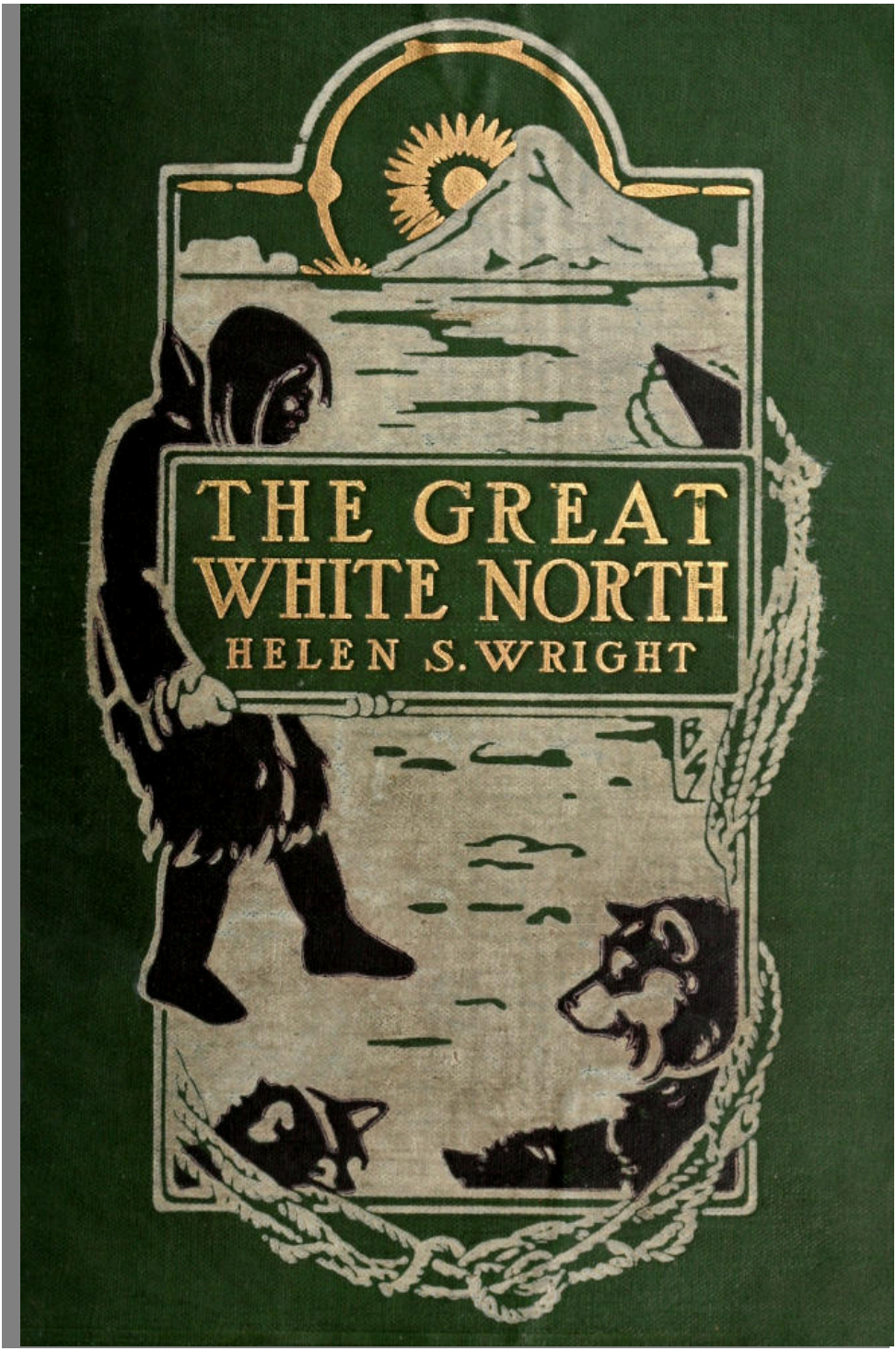
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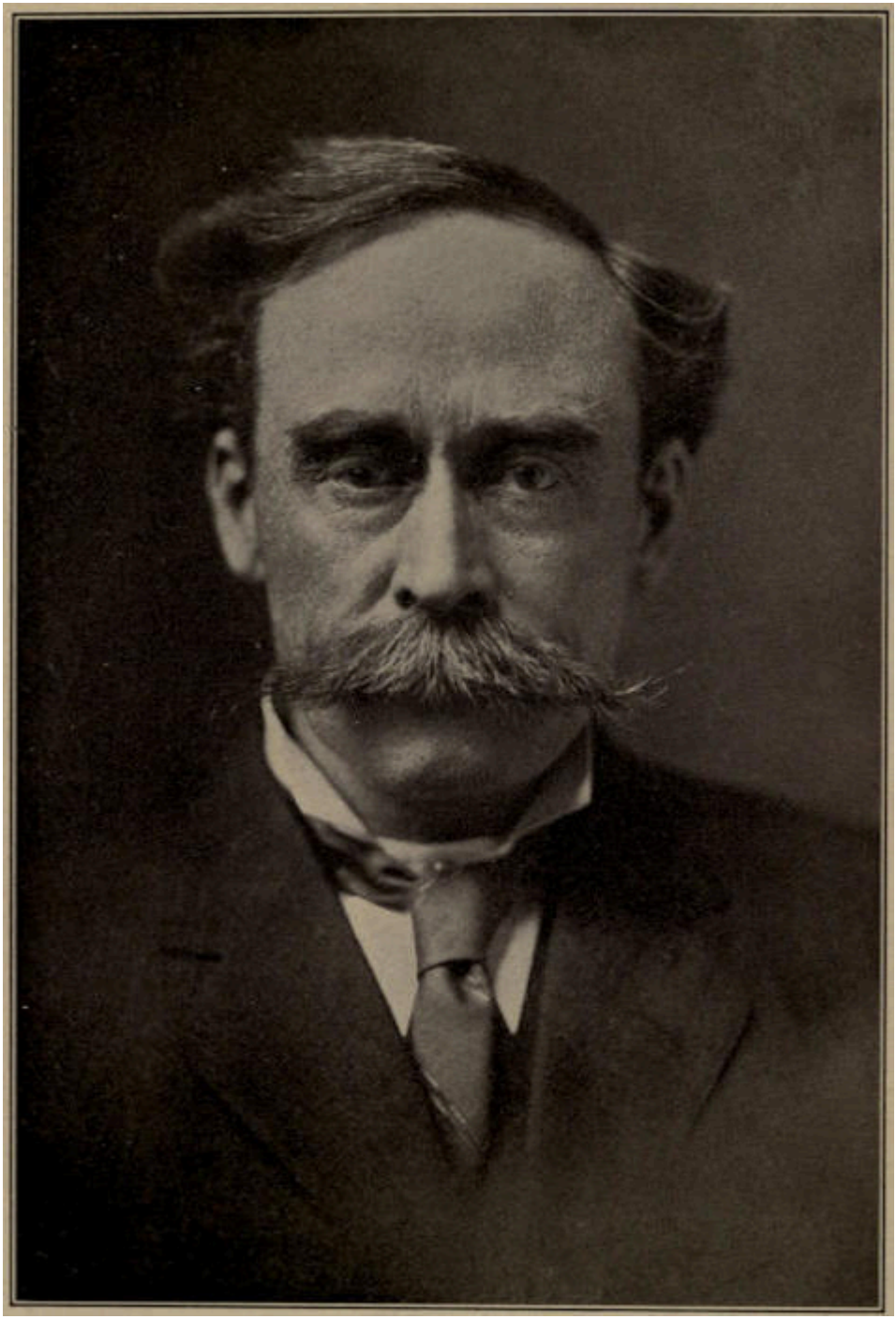

Commander Robert Edwin Peary, U.S.N.

Who reached the Pole April 6, 1909

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THE GREAT WHITE NORTH

THE STORY OF

POLAR EXPLORATION

FROM THE EARLIEST TIMES TO THE
DISCOVERY OF THE POLE

BY
HELEN S. WRIGHT

New York
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1910

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PREFACE

The material for this book has been gathered from the rich storehouse of Arctic Literature. The chief labour of its composition lay in elimination rather than construction. The great field I have endeavoured to present can hardly be brought with justice to the narrow bounds of a single cover, but I have conscientiously endeavoured to bring to the reader's mind an accurate record of brilliant deeds that go to make the history of the far North, and have let the explorers themselves tell the story of *how* these deeds have been accomplished.

Between the lines of their simple language describing stern facts or desperate realities, one reads the character and temperament of the adventurer; one gathers lessons of patience, self-sacrifice, and endurance unsurpassed in the history of mankind, and perhaps appreciates, for the first time, the splendid fibre of which he is made. Stripped of the conventions and luxuries of civilized life, he plunges into the great unknown to fight a relentless war against the greatest foes to his existence,—Cold, Starvation, and Death. Though he may fall by the wayside a victim to the Cause, or crawl home on hands and knees over the rough fastnesses of the frozen wilderness, famishing,—perhaps dying,—the record of his work lives on; the fundamental principles of great character do not perish, but stand through the centuries, a star of hope to the weary traveller on his pilgrimage along the well-trodden pathway of everyday life, and stirs the layman to a better endurance of the burdens and perplexities of the common lot.

It is with pleasure I make grateful acknowledgment to the gentlemen who have accorded me their gracious permission to quote from their works, to Commander Robert E. Peary, to Major-General A. W. Greely, and Sir Allen Young, and to the following publishers and others who, by furnishing material or giving consent to use selected matter, or by kind assistance in other ways, have made my work possible: The American Publishing Company, Hartford, Conn., for selections from "Our Lost Explorers"; D. Appleton & Company for selections from Charles Lanman's "Farthest North" and Payer's "New Lands within the Arctic Circle"; The Century Company for selections from General Greely's article on "The Northwest Passage"; to Clinedinst, Washington, D.C., for permission to reproduce the copyright portraits of Admirals Schley and Melville, General Greely, and Commander Peary; Constable & Company, and E. P. Dutton & Company, Ltd., London, for permission to reproduce the portrait of Amundsen in the latter's work, "The Northwest Passage"; Doubleday, Page & Company for selections from Commander Peary's "Nearest the Pole," and for the portrait of Anthony Fiala and other illustrations from the latter's work, "Fighting the Polar Ice"; The Encyclopædia Britannica Company for a selection from an article by Markham on "Polar Regions"; to J. Scott Keltie, Esq., editor of the *Geographical Journal*, for selections from that journal; Houghton; Mifflin Company for selections from "The Voyage of the Jeannette" and Melville's "In the Lena Delta"; Dodd, Mead & Company for selections from the Duke of Abruzzi's "On the Polar Star"; Benjamin B. Hampton, Esq., for permission to reproduce photographs of the Peary expedition of 1908 and Commander Peary's map, and Mr. Hampton and the *New York Times* for permission to quote Commander Peary's telegram announcing his discovery of the Pole; the editor of the *Illustrated London News* for permission to reproduce the portraits of Sir Edward Belcher, Captain Nares, and Commander Markham; Little, Brown & Company for selections from General Greely's "Handbook of Polar Discoveries"; The London Agency for Ordnance Maps for selections from Sir Allen Young's "Pandora Voyages"; Longmans, Green & Company for selections from Nansen's "First Crossing of Greenland" and Sverdrup's "New Land"; the editor of *McClure's Magazine* for a selection from Mr. Baldwin's article on "The Baldwin-Ziegler Arctic Expedition,"

which appeared in that magazine in 1901-1902; Albert Operti, Esq., for permission to reproduce the portraits of W. H. Gilder, Lieutenant Schwatka, Colonel Brainard, Captain De Long, and Lieutenant Lockwood; C. Kegan Paul & Company for a selection from Markham's "Great Frozen Sea"; G. P. Putnam's Sons for a selection from Mr. Alger's article on "Roald Amundsen," which appeared in *Putnam's Monthly*; the editor of the *American Review of Reviews* for a selection from Mr. McGrath's article on "Polar Exploration," which appeared in that magazine; Sampson, Low, Marston & Company, London, for a selection from "German Arctic Expeditions"; Charles Scribner's Sons for a selection from Schwatka's "Search," Greely's "Three Years' Arctic Service," and Schley's "Rescue of Greely"; F. A. Stokes Company for permission to reproduce illustrations from Commander Peary's work, "The North Pole," and for the loan of photographs; and to the same company for selections from Andrée's "Balloon Expedition" and Peary's "Northward over the Great Ice."

CONTENTS

PAGE

CHAPTER I

Early adventurers. Pytheas.—Dicuil.—Other.—Wulfstan.—The Norsemen.—Iva Bardsen.—The Cabots.—The Cortereals.—Willoughby and Chancellor.—Stephen Burrough.—Niccolò Zeno.—Frobisher.—Pet and Jackman.—Sir Humphrey Gilbert.—Davis.—Barentz 1

CHAPTER II

Seventeenth and eighteenth centuries. Hudson.—Baffin.—Deshneff.—Behring.—Schalaroff.—Tchitschagof.—Anjou and Von Wrangell.—Phipps 18

CHAPTER III

Early nineteenth century. Ross and Parry, May 3, 1818. Object of voyage, search for Northwest Passage through Davis Strait and explore bays and channels described by Baffin.—Met natives near Melville Bay.—The discovery by Ross of the famous Crimson Cliffs.—Enters Lancaster Sound.—Advance barred by imaginary Crocker Mountains.—Return of expedition to England.—Buchan and Franklin North Polar expedition *via* Greenland and Spitzbergen.—*Dorothea* and *Trent* in Magdalena Bay, June 3, 1818.—Reached high latitude of 80° 37′ N.—Course directed to east coast of Greenland.—Disastrous battle with the ice.—*Dorothea* disabled.—Hasty return to England 29

CHAPTER IV

1819-1827. Parry's first voyage.—Object, to survey Lancaster Sound and prove the non-existence of Crocker Mountains.—Discovery of new lands.—Parry Islands.—Attains longitude 110° W., thereby winning the bounty of five thousand pounds offered by Parliament.—Winters near Melville Island. Second voyage.—Ships *Hecla* and *Fury*.—Examines Duke of York Bay and Frozen Strait of Middleton.—Winters off Lyon Inlet.—Sledge journeys.—Object, to make Northwest Passage *via* Prince Regent Inlet.—Reached Port Bowen.—Ten months' imprisonment.—Destruction of the *Fury*.—Hasty return to England. Fourth voyage.—Purpose to reach the Pole *via* Spitzbergen with sledge boats over ice.—*Hecla* as transport.—Parry's farthest 82° 45′ N. reached, June 23, 1827 41

CHAPTER V

Nineteenth century *continued*. Scoresby and Clavering.—Former visited Jan Mayen Island in 1817.—Later he visited east coast of Greenland.—Discovered Scoresby Sound. In 1824, Captain Lyon surveyed Melville Peninsula.—Adjoining straits and shores of Arctic America.—In 1825, Captain Beechey in the *Blossom* sailed through Behring Strait and passed 57

beyond Icy Cape.—Surveyed the coast as far as Point Barrow, adding 126 miles of new shore.—Second voyage of Captain John Ross.—Undertaken in 1829.—Discovers Boothia.—Wintered in Felix Harbor.—Discovery of North Magnetic Pole by nephew of Captain John Ross.—Commander James Clark Ross.—Valuable observations.—Sledge journeys to mainland.—Four years spent in the Arctic.—Perilous retreat.—Safe return.—Land journey by Captain Back.—The Great Fish-Back River.—Point Ogle.—Point Richardson.—Back's farthest point was 68° 13′ 57″ north latitude, 94° 58′ 1″ west longitude. Land journeys of Simpson and Dease, 1836.—Descend the Mackenzie River to the sea.—Surveyed west shore between Return Reef and Cape Barrow.—In 1839, they explored shores of Victoria Land as far as Cape Parry.—Crossed Coronation Gulf.—Descended the Coppermine.—Reached the Polar Sea. Overland journey in 1846 by Dr. John Rae confirmed Captain John Ross's statement that Boothia was a peninsula

CHAPTER VI

Sir John Franklin.—Early life.—First land expedition of 1819-1821.—Journey from York Factory to Cumberland House.—Reach Fort Providence.—Winter at Fort Enterprise.—Explorations.—5550 miles.—Hardship.—Starvation.—Return.—Second land journey.—1825.—Winter quarters at Great Bear Lake.—Descent of the Mackenzie River to the Polar Sea.—1200 miles of coast added to map.—The last journey of Sir John Franklin, 1845.—The *Erebus* and *Terror*.—Last seen in Melville Bay 79

CHAPTER VII

Search for Sir John Franklin.—Captain Kellett.—Captain Moore.—Dr. Richardson.—Dr. Rae.—Sir J. C. Ross.—Mr. Parker.—Dr. Goodsir.—Collinson, M'Clure.—The *Felix*.—*Prince Albert*.—Commanded by Charles C. Forsyth.—Captain Austin's squadron.—Captain Ommaney.—Lieutenant Sherard Osborn.—Commander Cator.—Grinnell expedition under De Haven 95

CHAPTER VIII

Search for Sir John Franklin *continued*.—Sledge journey of Captain Austin's squadron.—Return of *Prince Albert* under command of Captain Kennedy.—Bellot 120

CHAPTER IX

Search for Sir John Franklin *continued*.—Sir Edward Belcher's squadron.—Inglefield.—Rae's journey.—Discovery of Northwest Passage by Captain M'Clure.—Death of Bellot 141

CHAPTER X

Sledging parties of Sir Edward Belcher's squadron.—Desertion of the ships. 174
—Return to England.—Story of the *Resolute*.—Traces of Sir John Franklin discovered by Dr. Rae.—Anderson's journey.—The voyage of

the *Fox* under Commander M'Clintock.—Sledge journeys.—Record and relics of Franklin's expedition.—*Fox* returns to England

CHAPTER XI

The second Grinnell expedition.—Commanded by Dr. Elisha K. Kane.—Winter quarters in Rensseläer Harbor.—Sledging trips.—To the rescue.—Effects of exhaustion and cold.—Dr. Kane's journey.—Great Glacier of Humboldt.—Return and illness of Dr. Kane. Second winter in the ice.—Privations and suffering.—Abandonment of the *Advance*.—Retreat and rescue 199

CHAPTER XII

Dr. Hayes's expedition. Winter quarters at Port Foulke, Greenland coast.—Death of Sonntag.—Dr. Hayes's journey.—Attempt to cross Smith Sound.—Hayes's farthest.—"Open Polar Sea."—Homeward bound 235

CHAPTER XIII

Charles Francis Hall.—Early life.—Interest in fate of Sir John Franklin.—First journey to Greenland.—Discovery of Frobisher relics.—Experiences and study of the Eskimos. Second journey.—Delays and disappointments.—Sledging trips.—King William Land at last.—Franklin relics.—Return of Hall to United States. *Polaris* expedition.—Reaches high northing.—Hall's sledge journey.—Return and death.—*Polaris* winters.—No escape.—*Polaris* is wrecked.—Part of crew adrift on the ice-floe.—Remainder build winter hut.—Final rescue and return to United States 243

CHAPTER XIV

Captain Thomas Long.—Discovery of Wrangell Land.—Captain Carlsen and Captain Palliser sail across the Sea of Kara.—Captain Johannesen circumnavigates Nova Zembla.—First German expedition.—Second German expedition.—*Germania*, Captain Koldewey commanding.—*Hansa*, Captain Hegemann.—Departure from Bremen.—Crossing the Arctic Circle.—Island of Jan Mayen.—The ice line.—Separation from the *Hansa*.—Adrift on the ice-floe.—Winter.—Final rescue.—*Germania* beset.—Winter.—Sledging parties.—Lieutenant Payer's remarkable journey—77° 1′ north latitude.—Return of the *Germania* 268

CHAPTER XV

Norwegian expedition, 1871. Payer and Weyprecht.—The *Tegetthoff* adrift in the Polar pack.—Discovery of Franz Josef Land.—Payer's sledge journeys.—Payer's farthest 82° 5′ north latitude.—Cape Fligely.—Abandonment of the *Tegetthoff*.—Retreat of officers and crew.—Picked up by Russian fishermen.—Home 286

CHAPTER XVI

Baron A. E. von Nordenskjöld.—First voyage, 1858.—Accompanies succeeding Swedish expeditions.—Spitzbergen.—Voyage of *Sofia*.—1868.—Nordenskjöld's journey to Greenland.—Voyage of the *Polhem*.— 298

Attempt to reach the Pole by reindeer sledge.—Unexpected discouragements and disasters.—Voyage of the *Proven*.—1875.—The Kara Sea.—Journey repeated the following year.—In the *Ymer*.—Voyage of the *Vega*

CHAPTER XVII

British expedition of 1875.—The *Alert* and *Discovery*.—Captain George S. Nares, F. R. S., Albert H. Markham, F. R. G. S.—Two voyages of the *Pandora*, 1875-1876.—Schwatka's search for the Franklin records, 1878-1879 310

CHAPTER XVIII

The *Jeannette* expedition, 1879-1881.—In command of Captain George W. De Long.—Leaves San Francisco.—Touches at Ounalaska, August 2.—Reaches Lawrence Bay, East Siberia, August 15.—Last seen by whale bark *Sea Breeze* near Herald Island, September 2.—The *Jeannette* beset in ice-pack September 6, never again released.—Daily routine of officers and crew.—Ship springs a leak.—A frozen summer.—Sight of new land.—A second winter in the pack.—The *Jeannette* crushed.—Abandonment.—The retreat.—The fate of the three boats.—Death of De Long's party.—Melville's search 345

CHAPTER XIX

International circumpolar stations.—Failure of Dutch expedition.—Greely expedition reaches Lady Franklin Bay.—Life at Fort Conger.—Sledge journey of Brainard and Lockwood.—Farthest north.—Greely's journey to interior of Grinnell Land.—Lake Hazen.—Failure of relief ship *Neptune* to reach Conger in 1882.—Official plans for Greely's relief in 1883.—*Proteus* crushed in ice.—Garlington's retreat.—Greely's abandonment of Fort Conger.—Greely reaches Cape Sabine.—The beginning of a hard winter.—Death of members of the party from starvation and cold.—Schley's brilliant rescue of the remnant of the Lady Franklin Bay expedition in 1884 369

CHAPTER XX

Nansen.—The man.—First Arctic experience.—Plans the crossing of Greenland.—Carries out his great undertaking.—Voyage on the *Fram*.—Drifting with the current.—Life aboard.—Nansen and Johannesen start for the Pole.—Difficulties of travel.—The "Farthest North!"—The retreat.—A winter on the Franz Josef Land.—Attempt to reach Spitzbergen by kayak.—The meeting at Cape Flora with Frederick Jackson.—Home in the *Windward* 401

CHAPTER XXI

Journeys of Dr. A. Bunge and Baron E. von Toll.—Exploration in Spitzbergen.—Sir Martin Conway.—Dr. A. G. Nathorst.—Professor J. H. Gore.—Andrée's balloon expedition to the North Pole.—Search for Andrée by Theodor Lerner.—J. Stadling.—Dr. A. G. Nathorst.—Captain Bade.—Walter Wellman's plan to reach the Pole from Spitzbergen.— 417

Italian expedition under Duke of Abruzzi.—Loss of the *Stella Polare*.—Captain Umberto Cagni's journey.—Breaks the record.—Retreat.—Home.—Baldwin-Ziegler expedition of 1900.—Complete equipment.—Return of expedition in autumn.—Ziegler expedition under Anthony Fiala.—The *America* reaches high northing.—Winters in Triplitz Bay.—Is destroyed.—Failure of sledge journeys.—Relief ship does not come.—Second winter.—Return of party by *Terra Nova* in 1903

CHAPTER XXII

Otto Sverdrup.—Four years' voyage of the *Fram*.—Journeys in Ellesmere Land.—Important exploration of Jones Sound.—Discovery of new lands.—Release of the *Fram*.—Captain Roald Amundsen.—The voyage of the *Gjoa*.—Reaches head of Petersen Bay (King William Land).—Two years' stay.—Valuable scientific observations.—Visits from Eskimos.—Sledge journeys.—Release from the ice.—August 14, 1906.—Completion of the Northwest Passage.—Another Arctic winter.—Sledge journey of Amundsen to Eagle City.—Release of the *Gjoa*.—Reaches San Francisco, 1907 435

CHAPTER XXIII

Robert E. Peary.—The man.—First visit to the Arctic, 1886.—Other journeys, 1891.—Independence Bay, Greenland.—Discovers Melville Land and Heilprin Land.—Subsequent journeys, 1893-1895.—Discovery of famous "Iron Mountain."—Summer voyages, 1896-1897.—North Pole journey of 1898.—Peary seriously disabled by frost-bites.—Polar expedition in S.S. *Roosevelt*, 1905-1906.—Final dash for the Pole, 1908 455

CHAPTER XXIV

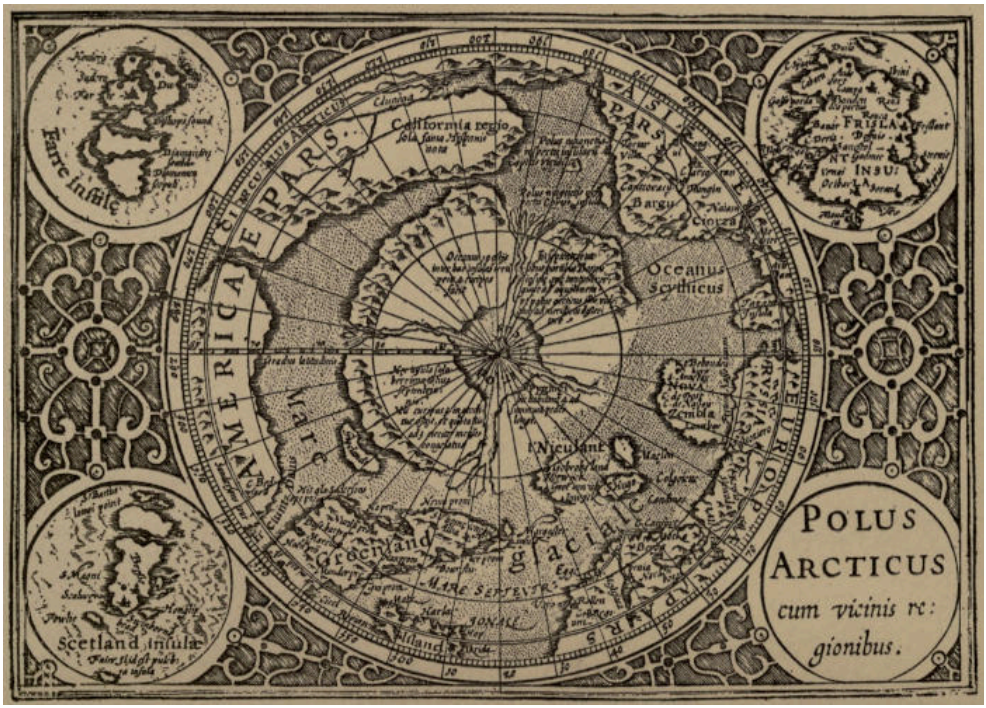
Dr. Frederick A. Cook.—Claims discovery of the Pole.—His return from the Arctic.—Reception by the Danes.—Announcement of conquest of the Pole by Peary.—Denounces Dr. Cook.—Acceptance of Peary's claims by the American Geographical Society.—Dr. Cook sends manuscript to Copenhagen.—Verdict.—Prior claim to the discovery of the North Pole.—Not proven 470

Explanation of Terms 477

Index 481

LIST OF ILLUSTRATIONS

Commander Robert Edwin Peary	*Frontispiece*
Hondius his Map of the Arctike Pole, or Northerne World	xx
	FACING PAGE
Sebastian Cabot	3
Sir Hugh Willoughby	7
Martin Frobisher	10
Sir Humphrey Gilbert	14
Davis's Ships *Sunshine* and *Moonshine*	17
The Death of Henry Hudson	21
Peter Feodorovitsch Anjou	28
Ferdinand von Wrangell	28
Captain John Ross, R.N.	32
Entering Lancaster Sound	52
John Franklin	80
Upernavik	99
Henry Grinnell	110
The Graves on Beechey Island	113
E. K. Kane	120
The Rescue in Melville Bay	128
Landing near Grinnell Cape	170
Nipped in the Ice	180
A Gale in the Arctic Sea	209
The Outlook from Cape George Russell	215
Humboldt Glacier	218
I. I. Hayes	224
Five Members of the Grinnell Expedition	231
Tennyson's Monument	234
Frobisher's Map of Meta Incognita	243
Funeral of Captain Hall	254
Jan Mayen Island	273
A. E. Nordenskjöld	288
Foul Bay	305
The *Vega* in Konyam Bay	309
The Crew of the *Vega*	316
Disco Island	320
Lieutenant Frederick Schwatka, U.S.A.	337
W. H. Gilder	344
Captain G. W. De Long, U.S.N.	352
Rear Admiral George W. Melville, U.S.N.	369
Colonel David Legge Brainard, U.S.A.	373
Lieutenant James B. Lockwood, U.S.A.	380
General A. W. Greely, U.S.A.	384
Rear Admiral Schley, U.S.N.	400
The Retreat of 1904—Sledge Column leaving Cape Mellinbock	433
Breaking Camp at Cape Richthope	433
Anthony Fiala	437
Roald Amundsen	444
Cape Flora in Early July, 1904	448
The Coal Mine at Cape Flora	448
The *Roosevelt* drying her Sails	456
Cairn erected over the Body of Marvin	460
Camp Morris Jesup	462
The Peary Sledge	464
Christmas Dinner on the *Roosevelt*	464
The Flag that Peary carried to the Pole	468
Map of Arctic Explorations, 1860-1909	474



HONDIUS HIS MAP OF THE ARCTIKE POLE, OR NORTHERNE WORLD

THE GREAT WHITE NORTH

CHAPTER I

Early adventurers: Pytheas.—Dicuil.—Other.—Wulfstan.—The Norsemen.—Iva Bardsen.—The Cabots.—The Cortereals.—Willoughby and Chancellor.—Stephen Burrough.—Niccolò Zeno.—Frobisher.—Pet and Jackman.—Sir Humphrey Gilbert.—Davis.—Barentz.

A grave old world, majestically swinging upon its axis, the mystery of its northern extremity locked closely within its breast, is suddenly electrified by the news that at last man, for centuries baffled in his heroic efforts, has revealed its hidden secret, and that Old Glory, symbol of the daring of the moderns, floats from the Pole itself.

What a thrill of interest passes over the nations of the earth; universal excitement; universal rejoicings. Cablegram, Marconigram, carry the wonderful tidings under the seas or around the world in space.

The Pole at last! For ages the northern lights have beckoned the adventurous spirits to fathom the phenomena of the great unknown, have lured man into harbours fantastic with the frozen ice of centuries, have inspired him to cross the Greenland ice cap—or make his lonely trail through the "barrens" of North America or the desolate "tundra" of Siberia, his dauntless courage unquenched by previous records of privation, starvation, and death itself. One after another of intrepid explorers have left their stories of thrilling adventure, and record of their names or those of their benefactors to mark their personal discoveries.

What a history, what suffering, what sacrifice, compensated by great achievement, by heroism, by glory—by the additions to the world's record of scientific knowledge!

Who were the early mariners that aspired to penetrate the unknown seas of ice? Far back in the centuries, Pytheas, bold adventurer, brought back rumours of an island in the Arctic Circle called Thule, at first welcomed by the ancients as a wonderful discovery, but afterwards discredited. In the ninth century some Irish monks, carried away by religious enthusiasm and an adventurous spirit, seem to have visited Iceland, and one, Dicuil by name, left written evidence, about 825, confirming the story of the island Thule, which some of the brethren visited, and reported there was no darkness at the summer solstice. Other and Wulfstan, athirst for discovery and knowledge, set sail in the reign of King Alfred, and in all probability the former rounded the North Cape and visited the shores of Lapland, though his exact discoveries cannot now be identified.

Sebastian Cabot

From the "Harford" portrait attributed to Holbein

The hardy Norsemen, realizing the advantage of hunting and barter among the natives of Greenland, made permanent settlements at Brattelid and Einarsfjord. As far as 73° north latitude a cairn was found, and upon a runic stone was a date 1235, and there is evidence that other settlers reached as far as latitude 75° 46′ N. and Barrow Strait in 1266 or thereabouts. Toward the middle of the fourteenth century Norway was cursed with the Black Death, and the colonists in far-off Greenland were forgotten. Forsaken by their own countrymen, they received little assistance from the native Eskimos, for we read they were overrun and attacked by them about 1349. A rare old document, the oldest work on Arctic geography, consisting of sailing directions for reaching the colony from Ireland, was written by one Iva Bardsen, the steward of the Bishopric of Gardar, in the East Bygd. Bardsen was a native of Greenland and went forth for the purpose of helping the sister colony. All of this early history is vague and unsatisfying, but it shows the adventurous spirit of those early mariners. Within the next hundred years, that is to say between 1348 and 1448, at rare intervals there was some communication with the Greenland settlements, but finally it ceased altogether. Later the desire to find a short route to India inspired merchantman and mariner to cross the Arctic Circle, and in the sixteenth and seventeenth centuries expeditions of note, led by men of dauntless spirit, find their record upon the pages of history.

THE CABOTS

Born in Bristol, England, about 1476, Sebastian Cabot, ambitious son of an adventurous father, John Cabot, became zealous at an early age, through the successes of Columbus, to attempt a like achievement. Father and son proposed to Henry VII to sail west, and reach India by a shorter route. The king, pleased with the idea of entering a new field of maritime discovery, confided to the Cabots the execution of this plan. A patent was granted March 5, 1496. "It empowered them to seek out, subdue, and occupy, at their own charges, any regions which before had been unknown to all Christians." They were empowered to take possession of such lands and set up the royal banner. They were authorized to return to the port of Bristol and no other, and a fifth of the gains of the voyage were to be turned over to the crown. The following year, 1497, John and Sebastian sailed from Bristol in the good ship *Mathew*.

By the records of an old map of this period the land first seen by the Cabots was the coast of Nova Scotia or Island of Cape Breton. The Cabots designated the mainland as "Prima Terra Vesta," and is outlined between 45° and 50°, showing land called St. Juan, no doubt Prince Edward Island and mouth of the St. Lawrence. In the Privy Purse expenses of Henry VII there is the following interesting expenditure, "10th of August, 1497. To him that found the new Isle, £10." No doubt, this modest sum was paid for Newfoundland.

With the enthusiasm of the first voyagers stimulating them to fresh effort, the Cabots secured a second "patent" to John Cabot, dated February 3, 1498, giving him the command of six vessels, of not more than two hundred tons each, and to quote the exact words of this document, "them convey and lede to the lande and isles of late found by the said John in oure name and by oure commandment."

But before the small fleet was in readiness, the father died, and to his son fell the enterprise. With five vessels, Sebastian set sail from Bristol in May, 1498, and reaching the American coast ascended as high as 67° north latitude, probably passing into Hudson Bay. He determined to press on in a desire to find an open channel to India. His men became appalled at the dangers that beset navigation in those higher latitudes and mutinied, compelling him to retrace his course.

There is a vague rumour that he had with him upon this voyage over a hundred emigrants, whom he landed in these high latitudes, and who all perished from cold, although the season was midsummer. However, he brought back to England three natives of the countries he had visited, and for his successful discoveries of more than eighteen hundred miles of our North American coast, the king rewarded him by conferring upon him the office of Grand Pilot of England.

The interest and exertions of Sebastian Cabot did not abate, for this hero, extolled by contemporary writers for his character and courage, by his unflagging perseverance and indomitable will promoted the successful expeditions of 1553, for which he was appointed governor for life of the Muscovy Company. This company was established by the merchants of London for the purpose of extending commerce and trade in India and Cathay, and to find a northeast route that would expedite their enterprise.

WILLOUGHBY AND CHANCELLOR

Three ships were fitted out, and Cabot drew up instructions which are curious reading at this day. The expedition was under Sir Hugh Willoughby and Richard Chancellor, and sailed May 20, 1553, "for the search and discovery of northern parts of the world, to open a way and passage to our men, for travel to new and unknown kingdoms." Cabot instructs these men to treat all natives "with gentleness and courtesy, without any disdain, laughing, or contempt." If they should be invited to dine with any lord or ruler, they should go armed and in a posture of defence. He tells them to beware of "persons armed with bows, who swim naked in various seas and harbours, desirous of the bodies of men which they covet for meat."

Of Sir Hugh Willoughby, first in command of the *Bona Speranza*, it is recorded that he was tall and handsome and had proved a valiant soldier; of Richard Chancellor, that he was beloved and genial and especially noted for "many good parts of wit."

Thus on that bright morning in early May, these two commanders with their loyal crew sailed down the Thames amid the firing of guns and cheers of the crowds assembled upon the river banks to wish them God-speed. It was understood between the commanders that should their vessels become separated, they should try to meet at Wardhuys, "a good port in Finmark."

They proceeded northward and passed the northernmost cape of Europe in July. At night during a dense fog and storm, the two ships separated, the third and smallest kept with Willoughby, and the two brave commanders and their crews never met again. Proceeding northward some two hundred miles, reaching Nova Zembla, Willoughby was forced by the ice to return to a lower latitude. In September, 1553, he harboured in the mouth of the river Arzina, in Lapland.

He wrote in his journal at this time: "Thus remaining in this haven the space of a weeke, seing the year farre spent, and also very evill wether, —as frost, snowe, and haile, as though it had been the deepe of winter, wee thought it best to winter there."

In January, according to the record of Willoughby's journal, all were living. In the spring Russian sailors, venturing in these high latitudes, were surprised to see two ships frozen in the ice. The relentless grip of the Arctic winter still held them fast; the hand of death in its most gruesome shape had reaped its harvest. Not a man survived. How brief the details, yet the imagination shudders at the agonies of their last days, —the cold, intense, congealing; the impenetrable, melancholy dark, and death, laying its icy fingers upon the despairing heart of each in turn and the "last Man," surrounded by the stark forms of his companions, wrestling alone with inexorable fate.

Chancellor's vessel, the *Bona Ventura*, reached the Bay of St. Nicholas, and landed near Archangel, which was then but an isolated castle. He undertook a journey to Moscow, which resulted in successful arrangements for commercial enterprise, Russia at that time being almost as little known as the far east. Returning safely to England, he was warmly welcomed as having proved the practical utility of Arctic voyages.

One of the companions of Chancellor on this voyage, Stephen Burrough, materially aided by Sebastian Cabot, then in his eighty-fourth year, set sail in 1556 from Gravesend, in a small pinnace named the *Search-thrift*. Before the departure, the ship and crew were visited by Cabot, and it is recorded of this farewell visit that "Master Cabot gave the poor most liberal almes, wishing them to pray for the good fortune and prosperous success of the *Search-thrift*; and for very joy that he had to see towardness of our intended discovery, he entered into the dance among the rest of the young and lusty company; which being ended he and his friends departed most gently, commending us to the governance of Almighty God."

Sir Hugh Willoughby

Burrough skirted the northern coast of Lapland to the eastward, discovering the strait leading to the Kara Sea, between Nova Zembla and Waigat. As a result of "the great and terrible abundance of ice that we saw with our eyes," Burrough explored no farther, but sailing into the White Sea wintered at Colomogro, returning home the following spring.

THE CORTEREALS

As early as 1500 a Portuguese, Caspar Cortereal by name, endeavoured to reach Cathay by the Northwest Passage and reached between 50° and 60° north latitude. After making captive some fifty-seven natives, for the purpose of making them slaves, he returned to Lisbon, October 18, 1501.

The following year he set sail again with two ships and is supposed to have reached Hudson Strait, where the vessels became separated. Caspar Cortereal and his crew were never heard of again.

The other ship returned to Lisbon with the unfortunate tidings, and a brother, Miguel, set sail from Lisbon, in the spring of 1502, on a searching expedition. Upon reaching Hudson Strait the ships separated to explore the various inlets and islands of the locality. Two of the ships reached the point of rendezvous, but the third, with Miguel Cortereal on board, never appeared. Thus the two brothers shared a like fate.

A third brother, Vasco, petitioned the king to equip another expedition to send in search of the missing men, but this the king refused to do on the ground that the loss of two was greater than he could afford to sustain. No tidings were ever received that could throw any light upon the sad fate of the bold mariners.

One of the most curious productions by geographers was a map published in 1558 by one Niccolò Zeno, a Venetian noble, whose ancestor of the same name had left with notes and journals a record of certain northern journeys made by him toward the end of the fourteenth century. He had entered as pilot the service of a mariner named Zichnmi, remained many years in his service, and, joined later by a brother called Antonio, spent some time in a country he named Frislanda. Later both brothers found their way back to Venice. The young Niccolò, discovering the

mutilated letters and maps of these brothers, proceeded to prepare a narrative and elaborate map which was considered a most valuable addition to knowledge and continued to be an authority for more than a century.

The names are very curious and confusing, but are supposed to be identified as follows:—

Engronelant, Greenland; Islanda, Iceland; Estland, Shetland Islands; Frisland, Faroe Isles; Mackland, Nova Scotia; Estotiland, Newfoundland; Drogeo, coast of North America; Icaria, coast of Kerry or Ireland.

FROBISHER

The three voyages of Frobisher undertaken between the years 1576-1578 were in a great measure financed by a rich and influential merchant named Michael Lok, whose passion for geographical research led him to encourage the young explorer, who set out in the spring of 1576 in two small vessels, the *Gabriel* and *Michael*. The latter parted company in the Atlantic, and the *Gabriel* continued her voyage alone. Frobisher sighted land about July 20 and called it Queen Elizabeth's Foreland.

Continuing on his course, he entered the following day the strait that bears his name, calling the land "Meta Incognita." He made a landing and explored the land to some extent, returning to England with some bright yellow ore which aroused the enthusiasm of gold seekers and greatly assisted him in expediting his other voyages. His primary aim of seeking for the Northwest Passage was all but forgotten in the excitement caused by the possible discovery of untold wealth.

Queen Elizabeth issued instructions for his guidance upon future voyages: "Yf yt be possible," so states the official document, "you shall have some persons to winter in the straight, giving them instructions how they may observe the nature of the ayre and state of the countrie, and what time of the yeare the straight is most free from yce; with who you shall leave a sufficient preparation of victualls and weapons, and also a pynnas, with a carpenter, and thyngs necessarie, so well as may be."

The second journey, much better equipped than the first, brought home, beside specimens of plants and stones, large quantities of the supposed gold ore. But though the dream of an El Dorado was never realized, and the ore was eventually proved worthless, Frobisher's greatest victory to science was establishing the fact that there were two or more wide openings leading to the westward between latitude 60° and 63° on the American coast. Of his personal character we note with interest that he was a brave, skilful leader of men, rough in bearing, but a strict disciplinarian, and carried through his designs with the enthusiasm of a true explorer.

PET AND JACKMAN

Arthur Pet and Charles Jackman, commanding two vessels, set out in 1580 with instructions to sail through the strait leading between Nova Zembla and Waigat, and from thence eastward beyond the Obi River. They reached Wardhuys on the 23d of June. About two weeks later they approached Nova Zembla, but ice retarded their advance. They sighted Waigat on the 19th of July. While trying to push their way along its southern coast, they were embarrassed by shallows and obliged to go round by the north. They forced their way between the shore and a low island only to be closed in by the ice, which stopped further progress. The ships were widely separated, and could only communicate with each other by the beating of drums or firing of muskets. Warping their ships as opportunity offered, they finally got in closer communication. Of the weather, they write at this time, "Winds we have had at will, but ice and fogs too much against our wills, if it had pleased the Lord otherwise." Surrounded by fields of ice, enveloped in fog, they were obliged to make fast to icebergs, where, "abiding the Lord's pleasure, they continued with patience." By the 13th of August the season was considered too far advanced to penetrate farther. Pet had discovered a strait between the mainland and Waigat leading into the Kara Sea, and with this news he returned to England. Jackman wintered in a Norwegian port; sailing home in the spring, his ship with all on board was lost at sea.

SIR HUMPHREY GILBERT

The distinguished British naval commander, Sir Humphrey Gilbert, near relative of Sir Walter Raleigh and favourite of Queen Elizabeth, being ambitious to colonize Newfoundland, obtained in 1578 full power from the queen to undertake a voyage of discovery and settle such parts of North America "as no Christian prince or his subjects could claim from previous possession." His second voyage was undertaken in 1583, and with five ships under his command, he sailed out of Plymouth Sound, June 11.

Martin Frobisher

A contagious disease breaking out on one of the vessels, the property of Sir Walter Raleigh, and commanded by Captain Butler, it returned to England; the four remaining, the *Delight*, the *Golden Hinde*, the *Swallow*, and the *Squirrel*, sighted Newfoundland about June 30. Here they landed August 3, taking possession of the harbour of St. John's in the name of Queen Elizabeth. A miner, brought for the purpose of finding precious metals, should such exist in the newly discovered territory, claimed to locate a silver mine, which news was greeted with much enthusiasm by the entire fleet. So many of the crew having become ill, Sir Humphrey found it advisable to send home the *Swallow* with the sick on board. He then embarked on the *Squirrel*, of only ten tons, the smallest ship of the fleet.

Sailing out of the harbour of St. John's on August 20, he reached by the 27th latitude 44° with fair weather. Two days later a gale arose preceded by a dense fog. The *Golden Hinde* and *Delight* were beaten in among the rocks and shoals. The *Golden Hinde* signalled to stand out to sea, but the *Delight* did not heed this, and was shortly afterward wrecked upon a shoal, where her stern was quickly beaten to pieces. A few of the crew escaped in a boat, but the captain and a hundred men went down with the ship. The heroic Captain Browne, only recently transferred from the *Swallow* to the *Golden Hinde*, when urged to save himself, spurned the idea and stood bravely at his post rather than bear the reproach of having deserted his ship, though that ship, himself, and all hands left aboard were doomed to destruction. The small boat into which a few had crowded, drifted about in the midst of the gale, which threatened every instant to swamp them. They were without food and suffered greatly from thirst. Fearing the overcrowded boat would founder unless materially lightened, a man named Headley suggested that lots be drawn; those drawing the four shortest should be thrown overboard. But one of their number, Richard Clarke, who had been master of the *Delight*, rose in the bow and answered sternly, "No, we will all live or die in company."

Two more days passed with increased sufferings. They tried to appease the pangs of hunger with seaweed that floated on the surface of the waves, and they drank sea-water. On the fifth day the man Headley died and one other. All but Clarke were praying to God for death, rather than such continued agony. Clarke tried to encourage them by telling them they would surely reach land by the morrow, and if they did not make it by the seventh day, they might throw him overboard. The seventh day came at last, and by noon they sighted land, as Clarke had prophesied; in

the afternoon they landed. They gave thanks to God, and after slaking their unbearable thirst with fresh water, the strong ones found some berries growing wild with which to feed the party. In several days they slowly regained their strength.

Later they rowed along the coast, hoping to reach the bay of Newfoundland and met some Spanish whalers who frequented these waters. They satisfied their hunger by eating berries and peas, landing at intervals for the purpose. Before long they fell in with a Spanish ship; the captain took them to St. Jean de Luz in the Bay of Biscay. Landing near the French frontier, they travelled through France and reached England about the end of the year 1583.

The loss of the *Delight* was a serious blow to Sir Humphrey Gilbert; of the five ships with which he had started only the *Golden Hinde* and the *Squirrel* survived. The impenetrable fogs which at this juncture enveloped these ships were most disheartening to the crew, and already the provisions on board the *Squirrel* were running low. Officers and men besought Sir Humphrey to return, but reluctantly, with no abatement in his enthusiasm for adventure, he only consented to alter his course, upon their promise to embark with him again the following spring. On August 31 they turned their bows toward home.

On the 2d of September, having hurt his foot and wishing it dressed by the surgeon, Sir Humphrey Gilbert boarded the *Golden Hinde*, and later repeated the visit to take part in an entertainment with the captain and crew. He mentioned the sorrow at the loss of the *Delight*, and of certain papers and ore that the Saxon miner had procured in Newfoundland. He was advised to remain aboard the *Golden Hinde*, the *Squirrel* being so encumbered with heavy artillery and other freight that she was not considered safe to face the storms so likely to occur in mid-ocean at that season of the year. After consideration, Sir Humphrey replied,—

"I will not now desert my little vessel and crew, after we have encountered so many perils and storms together."

Being supplied from the *Hinde* with some necessary provisions, Sir Humphrey returned to the *Squirrel*.

On the 9th of September, in the latitude of England, the overburdened little craft of ten tons showed signs of foundering. Sir Humphrey was seen by the *Hinde* sitting in the stern of his vessel with a book in his hand and was heard to call out,—

"Courage, my lads! we are as near heaven on sea as on land!"

At midnight she sank with all on board. Thus terminated the first attempt to colonize the inhospitable shores of Newfoundland.

DAVIS

Following closely upon the disastrous voyage of Sir Humphrey Gilbert came the three voyages of Davis between the years 1585 and 1588. He discovered the strait that bears his name, opened a way to Baffin Bay and the Polar Sea, and surveyed a considerable extent of the coast of Greenland.

BARENTZ

Between the years 1594 and 1596, William Barentz made three journeys to the Arctic, losing his life in the disasters and privations of the last voyage. In this third voyage, he made his way to the sea between Spitzbergen and Nova Zembla, where he writes, "We came to so great a heape of ice that we could not sayle through it." In August, 1596, they were surrounded by drifting ice which crushed around them with such alarming force as to make "all the haire of our heads to rise upright with feare." They made every effort to extricate themselves from their perilous position, but on the 11th of September "we saw that we could not get out of the ice, but rather became faster, and could not loose our ship, as at other times we had done, as also that it began to be winter, so took counsell together what we were best to doe, according to the time, that we might winter, and attend such adventures as God would send us; and after we had debated upon the matter (to keepe and defend ourselves both from the colde and wild beasts), we determined to build a house upon the land, to keepe us there in as well as wee could, and to commit ourselves unto the tuition of God."

While searching for material wherewith to build their winter-quarters, they discovered a quantity of driftwood for which they thanked God for a special act of Providence, and "were much comforted, being in good hope that God would show us some further favour; for that wood served us not only to build our house, but also to burne, and serve us all the winter long; otherwise, without all doubt, we had died there miserably with extreme cold."

In spite of the intense cold which made the building of their hut most laborious, there was open water an "arrow shot" beyond their ship. They dragged their stores on hand sleds, and by October their dwelling, closely thatched with sea rack to keep out as much cold as possible, was completed, and "we setup our dyall and made the clock stride." On the 4th of November, "wee saw the sunne no more, for it was no longer above the horizon; then our chirurgion made a bath (to bathe us in) of a wine-pipe, wherein wee entered one after another, and it did us much good, and was a great meanes of our health."

Sir Humphrey Gilbert

Regulations were established, food was apportioned, and extra clothing distributed. Traps were set for foxes and other game, but soon the weather became so rigorous that for days they were snowed in and could not open their door. They were in darkness except for their fire, the smoke of which became almost unendurable. Ice formed two inches thick in their berths, and their misery may be imagined better than described.

On the 7th of December, they managed to secure some coal from their ship, and with it made a good fire which warmed them somewhat, though it nearly asphyxiated them. The cold becoming ever more intense and their supply of wood diminishing, their sufferings are noted repeatedly in their journal.

"It was foule weather again, with an easterly wind and extreame cold, almost not to bee endured, where upon wee lookt pittifully one upon the other, being in great feare, that if the extreamitie of the cold grew to bee more and more, wee should all dye there with cold; for that what fire soever wee made it would not warme us; yea, and our sake, which is so hot, was frozen very hard, so that when we were every man to have his part, we were forced to melt it in the fire, which wee shared every second day about halfe a pint for a man, where with we were forced to sustayne ourselves; and at other times we dranke water, which agreed not well with the cold, and we needed not to coole it with snow or ice; but we were forced to melt it out of the snow."

They were often awed by the great volumes of sound, "like the bursting asunder of mountains and the dashing them to atoms." About the middle of January, they were forced, under great difficulties, to secure more wood, and, making another trip to the vessel, they found much ice accumulated within, and returned to their hut with a fox caught in the ship's cabin, which provided them with fresh meat.

On Twelfth Night they made a heroic effort to make merry. They drew lots for the honour of being king of Nova Zembla, and the gunner was royally installed. Imagining themselves back in Holland, they drank to the three kings of Cologne, soaking biscuit in the wine that for days they had set aside out of their scant store to celebrate this "great feast." But the intense cold and storms that soon followed excluded every other idea,

and for days they were shut in, trying to bring warmth to their frozen bodies with hot stones, but while sitting before the fire, their backs would be white with frost, while their stockings would be burned before they could feel heat to their feet.

Their stock of provisions was becoming exhausted, and although they had seen traces of bears and heard the foxes running over their heads, they could not secure any.

On January 24, Gerard de Veer, Jacob Keemsdirk, and a third companion, upon making their way to the seaside toward the north, saw the sun above the horizon for the first time. Not having expected this event for fourteen days later, Barentz was doubtful of their accuracy. On the 26th, one of their number who had long been ill died, and they dug a grave seven feet in the snow, "after that we had read certaine chapters and sung some psalmes, we all went out and buried the man."

As daylight increased, they left their hut for short periods of exercise.

By May their impatience to leave this desolate spot prompted them to make preparations for departure, and without waiting to see if their ship would be navigable when once released from the ice, they repaired their two boats and awaited the first opportunity "to get out of that wilde, desart, irkesome, fearfull, and cold countrey."

On the 13th of June, the twelve survivors left the miserable shelter that had been their home for ten months, and took to the open boats. Their sufferings and privations cannot be described; three of their number succumbed, and Barentz himself became too ill for service.

Davis's Ships, the "Sunshine" and the "Moonshine"

As they passed Icy Cape, a headland of Alaska, latitude 70° 20´ N., longitude 161° 46´ W., Barentz asked to be lifted up to see it once more, and the dying man's eyes rested with pleasure upon its cheerless coast.

On the twentieth day of June, Barentz was told that a man in the other boat named Claes Andriz was near death. He remarked he would not long survive his comrade. He was examining at the moment a chart of the countries and objects they had seen on their voyage. He turned to Gerard de Veer, who had made this chart, and asked him for something to drink. Hardly had he swallowed the liquid when he suddenly expired. Saddened and disheartened, the remnant of this unfortunate expedition struggled on until September, when they reached the coast of Lapland.

After a voyage of eleven hundred and forty-three miles, these heroes of the north left their boats in the "Merchant's house" at Coola as "a sign and token of their deliverance." A Dutch ship carried them to Holland, where they appeared before the curious crowds of Amsterdam in the costume they had worn in Nova Zembla. They were honoured by their countrymen and made to repeat their wonderful adventures before the ministers of the Hague.

To the early maps of the period at the close of the sixteenth century, Newfoundland and adjacent coast line had been added by the Cabots, who had reached as far as 67° north latitude, Frobisher Strait, an outline of the lands that he had visited, Davis Strait, and a portion of Greenland's east coast. But, more important than the discovery of new territory was the stimulus to Arctic enterprise, which through Richard Chancellor had established valuable trading activities between England and far-distant Russia. The journeys of the Cotereals had opened a way to Spanish and Portuguese fisheries off the banks of Newfoundland, and Frobisher's supposed discovery of gold in distant lands had given zest to discovery in the New World by the English, exemplified by Sir Humphrey Gilbert's daring but unsuccessful attempt to colonize Newfoundland.

CHAPTER II

Seventeenth and eighteenth centuries: Hudson.—Baffin.—Deshneff.—Behring.—Schalaroff.—Tchitschagof.—Anjou and Von Wrangell.—Phipps.

HUDSON

No century has produced a more daring or renowned mariner than Henry Hudson, or one whose melancholy fate has provoked more pity. Down through the decades the story of his adventures has been told and retold at the fireside of the old to the eager ears and quickening imagination of the young.

Talented, indefatigable, fearless, his achievements, in the infancy of Arctic exploration, handicapped by the lack of all that invention and science has secured to modern explorers, place him in the first rank, with the greatest navigators the world has known. As early as 1607 he had distinguished himself by pushing as far north as latitude 81½°, in his effort to follow the instructions of the Muscovy Company to penetrate to the Pole. Attempting the Northeast Passage in 1608, he saw North Cape on the 3d of June; pushing to the eastward on parallels 74° and 75°, he skirted Nova Zembla, but found it impossible to penetrate higher than 72° 25′.

The next year the Dutch sent him to try this passage again, though the previous voyage had convinced him that the Northeast Passage was impractical.

He passed Warhuys, returning past North Cape, pushing his way to the American coast, where he searched for a passage, and, sailing into New York harbour, discovered the magnificent river which bears his name. This splendid achievement only stirred his ambitions further, and under the patronage of Sir John Wolstenholme, Sir Dudley Digges, and other distinguished men, a vessel of fifty-five tons was fitted out and provisioned for six months.

Under the command of Hudson, the *Discovery* set sail April 17, 1610. Touching at Orkney and Faro islands, they sighted the southeastern part of Iceland, May 11. Later they reached the Vestmanna Isles, and saw Mount Hecla in eruption. On June 4, Hudson writes, “This day, we saw Greenland perfectly over the ice; and this night the sun went down due north, and rose north-north-east, so plying the fifth day we were in 65°.”

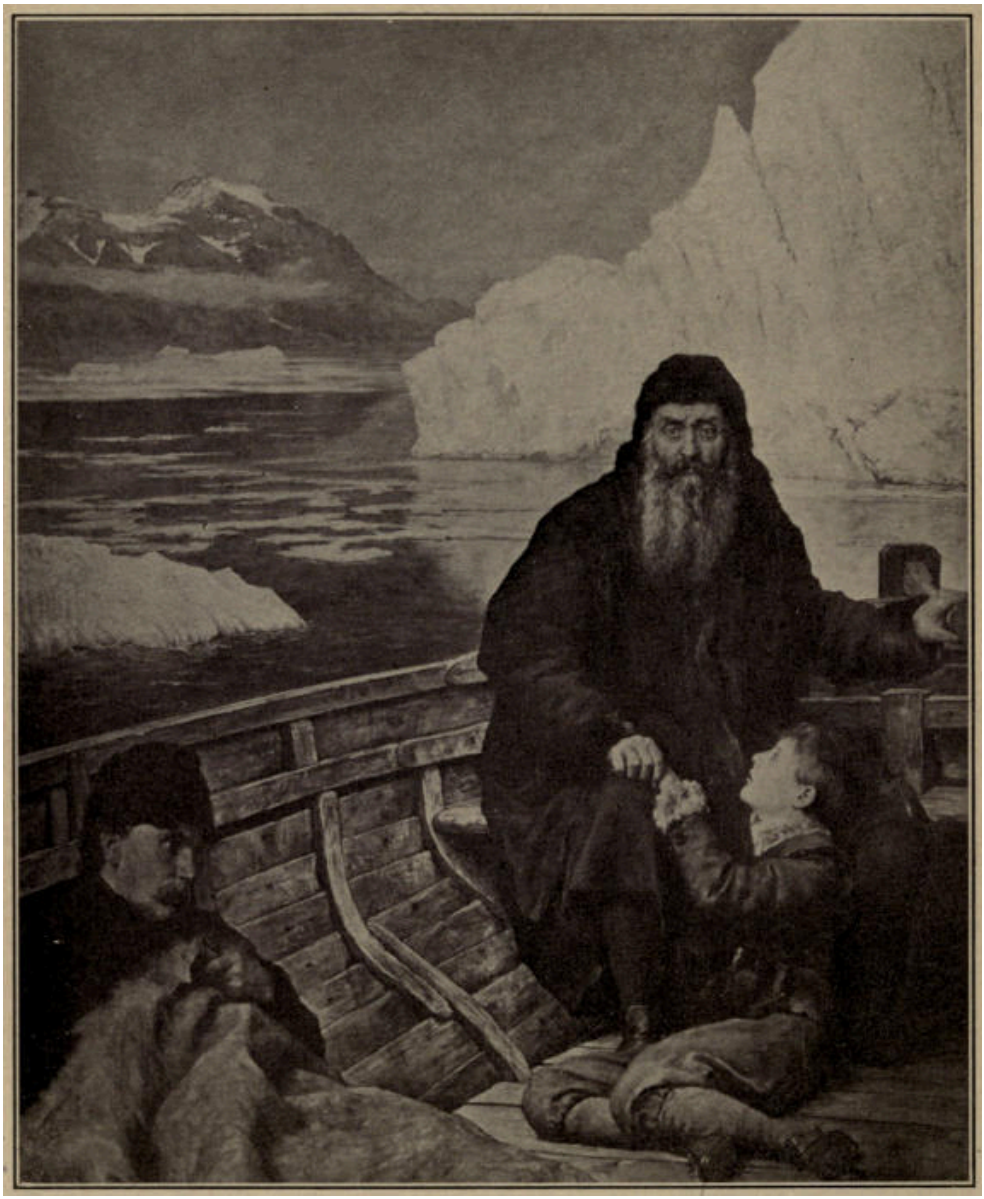
Taking their course northwest, they passed Cape Desolation. A school of whales was sighted at this juncture, and later icebergs were encountered. In June they saw Resolution Island; going to the south of this island, they were carried by the current northwest, until they struck shore ice, from which it was most difficult to extricate themselves.

At this time a growing discontent among the men first appeared on board; some were for returning before the perils of the journey should become greater, others were for continuing. Hudson showed them a chart showing that they had sailed two hundred leagues farther than any Englishmen had sailed before. The situation of the ship, at times embedded in ice, at others pushing her way through leads of open water, was critical and discouraging, but Henry Hudson continued his intricate navigation, finally being rewarded by finding himself in a clear, open sea. Sighting three headlands, he called them Prince Henry Cape, King James, and Queen Anne, and, continuing, he saw a hill which he called Mount Charles, and later sighted Cape Salisbury. While exploring the south shore, he discovered an island, one point of which he named Deepe Cape, the other, Wolstenholme. He entered a bay, which, from the date, he called Michaelmas Bay.

The season was advancing; already the days were very short and the nights long and cold. Realizing it was time to find shelter for the winter, he cast about to discover a suitable location. By the first of November he had the vessel hauled aground, and ten days later it was frozen in. The stock of provisions was very low, but the men supplemented it by killing or trapping anything that was serviceable for food, and after game left them in the spring, they lived on such birds as they could secure; when these, too, migrated, they ate moss, frogs, and buds.

With the breaking up of the ice in the spring, preparations were made for returning home.

In Hudson’s own bay, in the cold embrace of the shores he had explored, Henry Hudson divided the last remnants of food equally among his men. They were a famished, despairing crew, maddened with suffering. The cry for bread was in their vitals, and there was no bread. Hunger and misery made their brains reel, robbed them of their godliness, and reduced them to wild animals at bay. It took but the encouragement of one of their number, Green by name, to incite them to mutiny.



The Death of Henry Hudson

From the painting by Collier

On June 21, "The ship's company, both sick and well, were in berths, dispersed generally two and two about the ship. King, one of the crew who was supposed to be friendly to Hudson, was up, and in the morning they secured him in the hold by fastening down the hatches. Green then went and held the carpenter in conversation to amuse him, while two of the crew, keeping just before Hudson, and one, named Wilson, behind him, bound his hands. He asked what they were about, and they told him he should know when he was in the shallop. Another mutineer, Juet, went down to King in the hold, who kept him at bay, being armed with his sword. He came upon deck to Hudson, whom he found with his hands tied. Hudson was heard to call to the carpenter, and tell him he was bound. Two of the devoted

party, who were sick, told the mutineers their knavery would be punished. They paid no attention; the shallop was hauled up to the side of the vessel, and the sick and lame were made to get into it. The carpenter, whom they had agreed to retain in the vessel, asked them if they would not be hanged when they reached England, and boldly refused to remain with them, preferring to share the fate of Hudson and the sick men."

The crew then set sail, and the boat in which were Hudson and his companions was never seen again. After many hardships and vicissitudes and much loss of life through the onslaught of the natives, where they landed to secure food, a remnant of the unfortunate crew found their way past the Cape of God's Mercies and thence to Cape Desolation in Greenland. Pursuing their homeward course, they were reduced to the last extremities by hunger, one-half a fowl fried in tallow per man being their only sustenance each twenty-four hours.

Just before their last bird was devoured, they sighted the north of Ireland, where they landed, and later made their way to Plymouth.

BAFFIN

Following the example of Hudson, and with the purpose of further discovery, Baffin set sail in 1616 and explored the vast bay eight hundred miles long and three hundred miles wide that bears his name. He saw Lancaster Sound and brought home observations and reports of latitude and longitude, the accuracy of which was doubted for many years, but has since been verified and accredited to him.

Equally tragic with the fate of Henry Hudson was the last voyage of that great Russian commander, Behring, whose life was one long record of heroic achievement. He had seen many parts of the world while serving under Peter the Great, by whom he was given the commission of lieutenant in 1707, and captain-lieutenant in 1710. In a previous voyage he had explored the straits which bear his name. These straits had been navigated nearly a century before by Deshneff, one of the early Russian explorers who made several voyages between 1646 and 1648. His great object was to round to the mouth of the Anadry River, and there form a traders' settlement. Deshneff and his companions were the first navigators to sail from the Arctic Sea to the Pacific, and proved, at a much earlier period than is generally supposed, that the continents of America and Asia are not united.

Behring set sail June 4, 1741, with two vessels from Kamtschatka in the harbour of St. Peter and St. Paul. Steering eastward toward the American continent, he sighted land the 18th of July, in latitude 58° 28′ and 50° longitude, from Anatsda. Captain Tschirikov, who commanded this second boat, had seen the land a few days previously and, having determined to send some men ashore for investigation, the shallop and long-boat were manned with seventeen of the crew for this purpose. They never returned to the ship. Such a grave disaster determined Behring to send this vessel back to Kamtschatka.

He proceeded on his voyage alone, hoping to reach as high latitude as 60°, but progress was slow, owing to the varied coast-line and the labyrinth of islands which border this vicinity. They fell in with a few natives, who had been on a fishing expedition, with whom they held some friendly intercourse. Progress continued to be retarded by calms and currents, and finally dirty weather set in early in September and raged in a violent storm for seventeen days.

BEHRING

The scurvy now attacked the crew, and numerous deaths occurred. Behring determined to return to Kamtschatka. Through an unfortunate blunder, they erred in their course, and land remained invisible. The approach of winter became alarming, the cold increased, and rain turned to ice and snow. The unfortunate crew were in a pitiable condition from the miserable disease that laid hold of them. The steersman had to be supported at the wheel by two other sick men that he might continue at his post of duty. Finally he was disabled, and men hardly more fit took his place one by one. Almost daily some one died, and the ship, no longer with enough hands to man her, was at the mercy of the elements. The nights became long and dark, the water supply was running low, and certain destruction and death awaited the remnant of human beings left on board, unless a harbour of refuge could be found.

At last one morning land was sighted. The approach was difficult, the ship so crippled as to be almost unmanageable, and the rocks threatened instant destruction. Darkness came on before they could make a landing. In their attempt to anchor, two cables parted, and the anchors were lost; they had no third anchor in readiness.

At this juncture it seemed as if the hand of Providence intervened, for a huge wave lifted them across a sand bar, between a narrow opening of high rocks, and they found themselves in calm water, where the next day they made a successful landing. The land proved a barren and treeless island, fortunately well supplied with game, but there was no hut or shelter of any kind, showing it to be uninhabited. Such of the crew as were able made shelters under projecting sand-banks, using sail-cloth to keep out the wind and cold, and there they brought their sick and dying comrades. But the shock to some of the sickest proved fatal, and, before their dead bodies could be interred, foxes attacked and devoured portions of the hands and feet.

A special shelter was made for the brave old captain, now reduced to the last extremities of disease, his body emaciated, his mind enfeebled. He was moved November 9, and there he lay dying, passing the weary hours in the vagaries of delirium, by covering his shrunken form with sand, making his own grave, as it were, until, on December 8, 1741, he passed away. There he rests, Behring Island his sepulchre, and his name is upon every map of the world, showing the straits dividing North America and Asia, through which he sailed in the glory of his prime.

The command was now under Waxall, who rallied his men to superhuman effort, that they might pass the weary winter and attempt making their escape in the spring. A frightful blow to their hopes was the wrecking of their vessel and a loss of valuable food supplies, which took place the 29th of December.

By March, 1742, the forty-five survivors (thirty of their number having perished) were confronted by the problem of how to make their escape when the ice should permit. Their boat was a total wreck, and their only hope lay in constructing from the débris a craft that would be sufficiently trustworthy to carry them to civilization. At Waxall's suggestion, they took the old vessel to pieces, and one Sawa Slaradoubzov, a native of Siberia, who had worked in the shipyard at Okhotsk, offered to construct the new craft.

Early in May the ship was started. It was forty feet long and thirteen broad, one masted, a small cabin in the poop and a galley in the fore part of the vessel. A second small boat was also made.

On the 10th of August it was launched and christened the *St. Peter*. During a few days' calm that followed, the rudder, sails, and ballast were adjusted. Provisions and such furs as they had collected were put aboard, and they set sail on the 16th. Although Slaradoubzov had never been a carpenter, his craft proved seaworthy and breasted a gale in fine shape.

They sighted Kamtschatka, August 25, entered the Bay of Awatska the next day, and made port at Petropalovski, August 27. It is pleasant to note that the Russian government conferred the lowest rank of nobility upon Sawa Slaradoubzov, that of Sinboiarskoy.

The Russians have been untiring in their endeavour to discover a passage eastward to the north of Cape Tainmer and Cape Chelagskoi. In 1760, Schalaroff attempted to force the passage that had proved so disastrous to Behring; in spite of mutiny and hardship, he renewed his attempt three times, but was finally wrecked about seventy miles east of Cape Chelagskoi, where he and his crew perished miserably from starvation.

Admiral Tchitschagof endeavoured to force a passage round Spitzbergen in the year 1764, but in spite of courage and perseverance, his expedition was unsuccessful. Later Captain Billings in 1787 made two attempts, both of which were unsuccessful.

ANJOU AND VON WRANGELL

Many years later, 1820 to 1823, Lieutenant Anjou and Admiral Von Wrangell made a series of remarkable sledge journeys starting from the mouth of the Kolyma River. On the fourth journey, March, 1823, Von Wrangell reached latitude 70° 51′, longitude 175° 27′ W., one hundred and five versts in a direct line from the mainland over a frozen sea. Several times the party came near losing their lives by breaking through the ice. After reaching this high latitude and recognizing signs of open water to the north, Von Wrangell writes:—

"Notwithstanding this sure token of the impossibility of proceeding much further, we continued to go due north for about nine versts, when we arrived at the edge of an immense break in the ice, extending east and west further than the eye could reach, and which at the narrowest part was more than a hundred fathoms across.... We climbed one of the loftiest ice hills, where we obtained an extensive view towards the north, and whence we beheld the wide, immeasurable ocean spread before our gaze. It was a fearful and magnificent, but to us a melancholy, spectacle. Fragments of ice of enormous size floated on the surface of the agitated ocean, and were thrown by the waves with awful violence against the edge of the ice-field on the further side of the channel before us. The collisions were so tremendous, that large masses were every instant broken away, and it was evident that the portion of ice which still divided the channel from the open ocean would soon be completely destroyed. Had we attempted to have ferried ourselves across upon one of the floating pieces of ice, we should not have found firm footing upon our arrival. Even on our side, fresh lanes of water were continually forming, and extending in every direction in the field of ice behind us. With a painful feeling of the impossibility of overcoming the obstacles which Nature opposed to us, our last hope vanished of discovering the land which we yet believed to exist."

Of the difficulties that confronted them upon their return, Admiral Von Wrangell writes:—

"We had hardly proceeded one verst when we found ourselves in a fresh labyrinth of lanes of water, which hemmed us in on every side. As all the floating pieces around us were smaller than the one on which we stood, which was seventy-five fathoms across, and as we saw many certain indications of an approaching storm, I thought it better to

remain on the larger mass, which offered us somewhat more security, and thus we waited quietly whatever Providence should decree. Dark clouds now rose from the west, and the whole atmosphere became filled with a damp vapor. A strong breeze suddenly sprang up from the west, and increased in less than half an hour to a storm. Every moment huge masses of ice around us were dashed against each other, and broken into a thousand fragments. Our little party remained fast on our ice island, which was tossed to and fro by the waves. We gazed in most painful inactivity on the wild conflict of the elements, expecting every moment to be swallowed up. We had been three long hours in this position, and still the mass of ice beneath us held together, when suddenly it was caught by the storm, and hurled against a large field of ice. The crash was terrific, and the mass beneath us was shattered into fragments. At that dreadful moment, when escape seemed impossible, the impulse of self-preservation implanted in every living being saved us. Instinctively we all sprang at once on the sledges, and urged the dogs to their full speed. They flew across the yielding fragments to the field on which we had been stranded, and safely reached a part of it of firmer character, on which were several hummocks, and where the dogs immediately ceased running, conscious, apparently, that the danger was past. We were saved: we joyfully embraced each other, and united in thanks to God for our preservation from such imminent peril."

PHIPPS

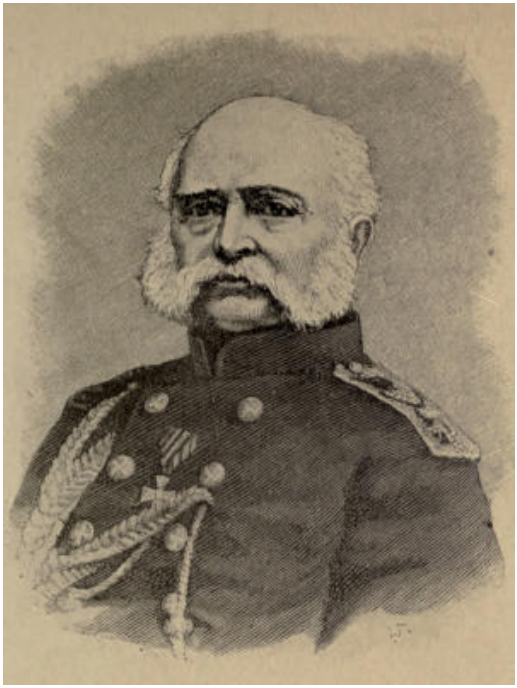
The primary object of the Phipps expedition sent out by the Royal Society of England, under the solicitation of the government and all scientific men of the time, was to reach the Magnetic Pole and solve, if possible, the causes of the variation of the compass and other scientific problems. With two vessels, the *Racehorse* and the *Carcase*, Captain Phipps set out in 1773 and skirted the eastern shore of Spitzbergen to 80° 48′ north latitude. Here he was beset with ice and could proceed no farther. Accompanying this expedition was young Nelson, later the hero of Trafalgar. An anecdote of Nelson showing his courage and daring on this trip is told as follows:—

"While out in small boats one of the officers had wounded a walrus.... The wounded animal dived immediately, and brought up a number of its companions; and they joined in an attack on the boat. They wrested an oar from one of the men, and it was with the utmost difficulty that the crew could prevent them from staving or upsetting her, till Nelson came up; and the walruses, finding their enemies thus reënforced, dispersed. Young Nelson exposed himself in a most daring manner."

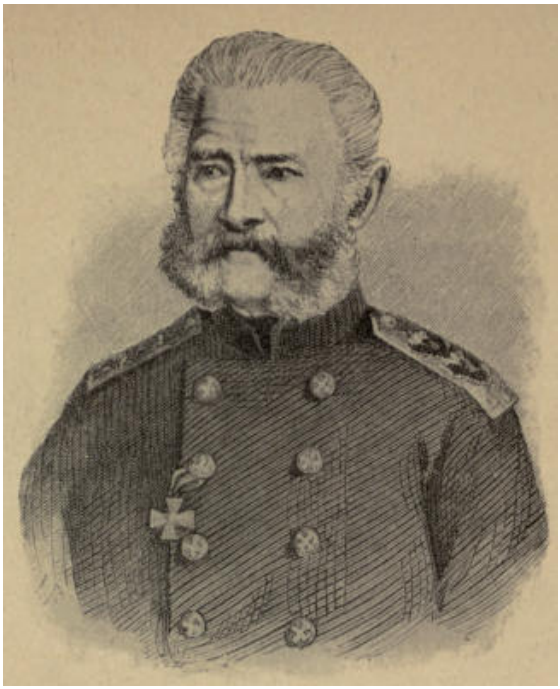
The unfortunate situation of his vessels forced Phipps to retrace his course and return to England.

Under instructions to attempt the passage of Ice Sea, from Behring Strait to Baffin Bay, the ill-fated Cook sailed in 1776, but failed to sail beyond Icy Cape, where he found impenetrable ice; however, he reached as far as North Cape on the coast of Asia.

Mackenzie, the last of the eighteenth-century explorers, left Fort Chipewyan, and descended the Mackenzie River, a much larger stream than the Coppermine previously discovered by Hearne. He followed the course of the river until he reached an island "where the tide rose and fell," but there is no certainty that he reached the ocean. The land expeditions were for geographical discovery and not for the discovery of the Northwest Passage, that had occupied mariners for so many years.



Peter Feodorovitsch Anjou



Ferdinand von Wrangell

CHAPTER III

Early nineteenth century: Ross and Parry, May 3, 1818.—Object of voyage, search for Northwest Passage through Davis Strait and explore bays and channels described by Baffin.—Met natives near Melville Bay.—The discovery by Ross of the famous Crimson Cliffs.—Enters Lancaster Sound.—Advance barred by imaginary Crocker Mountains.—Return of expedition to England.—Buchan and Franklin North Polar expedition *via* Greenland and Spitzbergen.—*Dorothea* and *Trent* in Magdalena Bay, June 3, 1818.—Reached high latitude of 80° 37′ N.—Course directed to east coast of Greenland.—Disastrous battle with the ice.—*Dorothea* disabled.—Hasty return to England.

As a result of the many disastrous voyages to the Arctic, there was a long period of inactivity in polar research, which continued for the first sixteen years of the nineteenth century. Interest was revived, however, by the astounding report that ice which had cut off the Danish colonies from communication with their native country for centuries, had suddenly become free, and that certain Greenland whalers had sailed to the seventieth and eightieth parallel.

ROSS AND PARRY

The British Admiralty in conjunction with the Council of the Royal Society decided to fit out two expeditions: One under Captain John Ross and Lieutenant Edward Parry, whose object was to force a northwest passage through Davis Strait and to explore the bays and channels described by Baffin at the head of the immense bay that bears his name. The second expedition under Buchan and Franklin was to direct its course by way of Greenland and Spitzbergen in search of the Pole, and make its way through Behring Strait out to the Pacific.

The four ships were the best equipped for Arctic research that had ever been sent out from England, and the commanders were instructed to collect all possible information that would promote scientific knowledge in natural history, geology, meteorology, and astronomy as to the special phenomena existing in high northern latitudes.

On the 3d of May, 1818, the two expeditions parted company in Brassa Sound, Shetland, and sailed for their respective destinations. The *Isabella* and *Alexander*, under the command of Ross and Parry, reached Wygat Sound on the 17th of June, where they were detained by the ice in company with forty-five whalers, until the 20th. They made observations from the shore of Wygat Island, which they found to be misplaced on the maps by no less than five degrees.

By warping and towing they made slow progress, narrowly missing destruction by the pressure of huge ice-floes, but finally making the open water. High mountains were descried on the north side of this bay called by Ross, Melville Bay, the precipices varying in height from one thousand to two thousand feet.

An Eskimo, John Sacheuse, who acted as interpreter to the expedition, went ashore and brought back with him a dozen or more natives, who were much entertained by the hospitality provided for them by the ship's company. After partaking of tea and biscuits, a dance was held on the deck, and of this Captain Ross gives an amusing description:—

"Sacheuse's mirth and joy exceeded all bounds: and with a good-humored officiousness, justified by the important distinction which his superior knowledge now gave him, he performed the office of master of ceremonies. An Eskimo M.C. to a ball on the deck of one of H. M. Ships in the icy seas of Greenland, was an office somewhat new, but Nash himself could not have performed his functions in a manner more appropriate. It did not belong even to Nash to combine in his own person, like Jack, the discordant qualifications of seaman, interpreter, draughtsman, and master of ceremonies to a ball, with those of an active fisher of seals and a hunter of white bears. A daughter of the Danish resident, (by an Eskimo woman,) about eighteen years of age, and by far the best looking of the half-caste group, was the object of Jack's particular attentions; which being observed by one of our officers, he gave him a lady's shawl, ornamented with spangles, as an offering for her acceptance. He presented it in a most respectful and not ungraceful manner to the damsel, who bashfully took a pewter ring from her finger and gave it to him in return, rewarding him, at the same time, with an eloquent smile, which could leave no doubt on our Eskimo's mind that he had made an impression on her heart."

Near Cape Dudley Digges a curious condition of the ice was noted by Captain Ross as follows:—

"We have discovered that the snow on the face of the cliffs presents an appearance both novel and interesting, being apparently stained or covered by some substance which gave it a deep crimson color. This snow was penetrated in many places to a depth of ten or twelve feet by the coloring matter."

Passing Smith and Jones Sound, Ross reached the entrance of Lancaster Sound by the last of August. "On the 31st," he writes, "we discovered, for the first time, that the land extended from the south two-thirds across this apparent Strait, obscured its real figure. During the day much interest was excited on board by the appearance of the Strait. The general opinion, however, was that it was only an inlet. The land was partially seen extending across; the yellow sky was perceptible. At a little before four o'clock A.M., the land was seen at the bottom of the inlet by the officers of the watch, but before I got on deck a space of about seven degrees of the compass was obscured by the fog. The land which I then saw was a high ridge of mountains extending directly across the bottom of the inlet. This chain appeared extremely high in the centre. Although a passage in this direction appeared hopeless, I determined to explore it completely. I therefore continued all sail. Mr. Beverly, the surgeon, who was the most sanguine, went up to the crow's nest, and at twelve reported to me that

before it became thick he had seen the land across the bay, except for a very short space. At three, I went on deck; it completely cleared for ten minutes, when I distinctly saw land around the bottom of the bay, forming a chain of mountains connected with those which extended along the north and south side. This land appeared to be at the distance of eight leagues, and Mr. Lewis, the master, and James Haig, leading man, being sent for, they took its bearings, which were inserted in the log. At this moment I also saw a continuity of ice at the distance of seven miles, extending from one side of the bay to the other, between the nearest cape to the north, which I named after Sir George Warrenden, and that to the south, which was named after Viscount Castlereagh. The mountains, which occupied the centre, in a north and south direction, were named Crocker's Mountains, after the Secretary to the Admiralty."

The much-disputed "Crocker Mountains" brought the navigator ridicule and discredit upon his return to England. The return was decided upon on October 1, that date being the limit to which his instructions permitted Captain Ross to remain in northern latitudes.

Although the extraordinary blunder cost Captain Ross reputation and the confidence of his friends, he had nevertheless rendered valuable addition to Arctic knowledge; his scientific observations had been unremitting and accurate. He had mapped the west coast of Davis Strait, had advanced through Baffin Bay, thereby proving the claims of that famous old mariner, and had been the first to meet the Eskimos of the far north, who were to render such valuable assistance to future explorers.

The progress of the *Dorothea* and the *Trent* under the respective commands of Captain David Buchan and Lieutenant-Commander John Franklin (later Sir John Franklin) was delayed by fog and storm until they sighted Cherie Island, latitude 74° 33′ N., and longitude 17° 40′ E., famous for its herds of walruses from which the Muscovy Company had derived much profit by sending ships to the island for oil, the crew capturing as many as a thousand animals in the course of six or seven hours.

The ships now encountered small floes and huge masses of ice, which augmented the difficulties of progress, and this Lieutenant Beechey, the clever artist and interesting narrator of the voyage, describes as follows:—

"There was, besides, on the occasion an additional motive for remaining up; very few of us had ever seen the sun at midnight, and this night happening to be particularly distorted by refraction, and sweeping majestically along the northern horizon, it was the object of imposing grandeur, which riveted to the deck some of our crew, who would perhaps have beheld with indifference the less imposing effect of the icebergs; or it might have been a combination of both these phenomena; for it cannot be denied that the novelty occasioned by the floating masses was materially heightened by the singular effect produced by the very low altitude at which the sun cast his fiery beams over the icy surface of the sea.

"The rays were too oblique to illuminate more than the inequalities of the floes, and falling thus partially on the grotesque shapes, either really assumed by the ice or distorted by the unequal refraction of the atmosphere, so betrayed the imagination that it required no great exertion of fancy to trace in various directions architectural edifices, grottos, and caves here and there glittering as if with precious metals. So generally, indeed, was the deception admitted, that, in directing the route of the vessel from aloft, we for a while deviated from our nautical phraseology, and shaped our course for a church, a tower, a bridge, or some similar structure, instead of for humps of ice, which were usually designated by less elegant appellations.

"After sighting the southern promontory of Spitzbergen, the two ships were parted in a severe gale. The snow fell in heavy showers, and several tons' weight of ice accumulated about the sides of the brig (the *Trent*) and formed a complete casing to the planks, which secured an additional layer at each plunge of the vessel. So great, indeed, was the accumulation about the bows, that we were obliged to cut it away repeatedly with axes to relieve the bow-sprit from the enormous weight that was attached to it, and the ropes were so thickly covered with ice, that it was necessary to beat them with large sticks to keep them in a state of readiness for any evolution that might be rendered necessary, either by the appearance of ice, to leeward or by a change of wind."

By the 3d of June the ships were reunited in Magdalena Bay. Surrounding this harbour of refuge are high mountains rising precipitously about three thousand feet high, the deep valleys filled with immense beds of snow. The temperature is particularly mild on the western coast of Spitzbergen, and in consequence there is a luxury of Alpine plants, grasses, and lichens, also of animal life, reindeer, and flocks of birds, such as the auk, willock, gulls, cormorants, also walruses and seals.

There are numerous glaciers from which huge pieces would occasionally break away. Mr. Beechey describes in a most interesting way the fall of one of these extraordinary masses of ice:—

BUCHAN AND FRANKLIN

"The first was occasioned by the discharge of a musket at about half a mile's distance from the glacier. Immediately after the report of the gun, a noise resembling thunder was heard in the direction of the iceberg (glacier) and in a few seconds more an immense piece broke away, and fell headlong into the sea. The crew of the launch, supposing themselves beyond the reach of its influence, quietly looked upon the scene, when presently a sea arose and rolled toward the shore with such rapidity, that the crew had not time to take any precautions, and the boat was in consequence washed upon the beach, and completely filled by the succeeding wave. As soon as their astonishment had subsided, they examined the boat, and found her so badly stove that it became necessary to repair her in order to return to the ship. They had also the curiosity to measure the distance the boat had been carried by the wave, and found it to be ninety-six feet."

Describing a second avalanche he writes:—

"This occurred on a remarkably fine day, when the quietness of the bay was first interrupted by the noise of the falling body. Lieutenant Franklin and myself had approached one of these stupendous walls of ice, and were endeavoring to search into the innermost recess of a deep cavern that was near the foot of the glacier, when we heard a report as if of a cannon, and, turning to the quarter whence it proceeded, we perceived an immense piece of the front of the berg sliding down from the height of two hundred feet at least into the sea, and dispersing the water in every direction, accompanied by a loud,

grinding noise, and followed by a quantity of water which being previously lodged in the fissures now made its escape in numberless small cataracts over the front of the glacier."

So great was the disturbance of the waters by this great falling mass that the *Dorothea* was seen to be careening at a distance of four miles. After it became somewhat settled, they approached it and found it to be nearly a quarter of a mile in circumference. "Knowing its specific gravity and making fair allowance for its inequalities, its weight was computed at 421,660 tons."

The ships left Magdalena Bay, June 7, and made their slow way through brash ice which became thicker and more impenetrable until a fortunate breeze dispersed it. Sailing in a westerly direction, they encountered several whale-ships, which reported others beset by the ice in that direction. Captain Buchan changed his course and stood to the northward, passing Cloven Cliff, an isolated rock, marking the northwestern boundary of Spitzbergen. Near Red Bay they were stopped by the ice, and the channel by which the vessels had entered became entirely closed. The ships were here hemmed in, in almost the same position where Baffin, Hudson, Poole, Captain Phipps, and all the early voyagers to this quarter had been stopped. Of their perilous situation, Lieutenant Beechey writes:—

"The ice soon began to press heavily upon us, and, to add to our difficulties, we found the water so shallow that the rocks were plainly discovered under the bottoms of the ships. It was impossible, however, by any exertion on our part, to improve the situation of the vessels. They were as firmly fixed in the ice as if they had formed part of the pack, and we could only hope that the current would not drift them into still shallower water, and damage them against the ground."

It was now found necessary to attach the ships to floes by ice-anchors, which was done with considerable exertion.

Taking advantage of a break in the ice, they reached Vogel Sang about June 28, where the crew were fortunate enough to secure forty reindeer and plenty of eider-ducks.

On the 6th of July, Captain Buchan, finding the ice conditions favourable, determined to make as far an advance to the north as possible. By most arduous labours in warping and tracking, etc., he attained a latitude of 80° 34′ N., but, though attached to floes, he found himself being carried to the southward by the current. On the 15th and 16th of July, both ships suffered considerable ice pressure. The nine days following, the crew worked night and day to free the ships and get into open water.

Having given the ice a fair trial and proved it unnavigable, Buchan turned his attention toward the eastern coast of Greenland, intending, if it proved impenetrable there, to round the south cape of Spitzbergen and attempt to make an advance between that island and Nova Zembla. A terrific gale struck them the 30th of July, which brought down the ice upon them and threatened their immediate destruction. Of this encounter Lieutenant Beechey gives a most vivid description:—

"In order to avert the effects of this as much as possible, a cable was cut up into thirty feet lengths, and these, with plates of iron four feet square, which had been supplied to us as fenders, together with some walrus hides, were hung round the vessels, especially about the bows. The masts, at the same time, were secured with additional ropes, and the hatches were battened and nailed down. By the time these precautions had been taken, our approach to the breakers only left us the alternative of either permitting the ships to be drifted broadside against the ice, and so to take their chance, or of endeavoring to force fairly into it by putting before the wind. At length, the hopeless state of a vessel placed broadside against so formidable a body became apparent to all, and we resolved to attempt the latter expedient."

Beechey, in describing the appalling scene, continues:—

"No language, I am convinced, can convey an adequate idea of the terrific grandeur of the effect now produced by the collision of the ice and the tempestuous ocean. The sea, violently agitated and rolling its mountainous waves against an opposing body, is at all times a sublime and awful sight; but when, in addition, it encounters immense masses, which it has set in motion with a violence equal to its own, its effect is prodigiously increased. At one moment it bursts upon these icy fragments and buries them many feet beneath its wave, and the next, as the buoyancy of the depressed body struggles for reascendancy, the water rushes in foaming cataracts over the edges, while every individual mass, rocking and laboring in its bed, grinds against and contends with its opponent, until one is either split with the shock or upheaved upon the surface of the other. Nor is this collision confined to any particular spot; it is going on as far as the sight can reach; and when from this convulsive scene below, the eye is turned to the extraordinary appearance of the blink in the sky above, where the unnatural clearness of a calm and silvery atmosphere presents itself, bounded by a dark, hard line of stormy clouds, such as this moment lowered over our masts, as if to mark the confines within which the efforts of man would be of no avail, the reader may imagine the sensation of awe which must accompany that of grandeur in the mind of the beholder." And he continues: "If ever that fortitude of seamen was fairly tried, it was assuredly not less so on this occasion; and I will not conceal the pride I felt in witnessing the bold and decisive tone in which the orders were issued by the commander (the present Captain Sir John Franklin) of our little vessel, and the promptitude and steadiness with which they were executed by the crew."

As the vessel rapidly approached the dangerous wall of ice, each person instinctively secured his own hold, and, with his eyes fixed upon the masts, awaited in breathless anxiety the moment of concussion. “It soon arrived; the brig (*Trent*), cutting her way through the light ice, came in violent contact with the main body. In an instant we all lost our footing; the masts bent with the impetus, and the cracking timbers from below bespoke a pressure which was calculated to awaken our serious apprehensions. The vessel staggered under the shock, and for a moment seemed to recoil; but the next wave, curling up under her counter, drove her about her own length within the margin of the ice, where she gave one roll, and was immediately thrown broadside to the wind by the succeeding wave, which beat furiously against her stern, and brought her lee side in contact with the main body, leaving her weather side exposed at the same time to a piece of ice about twice her own dimensions. This unfortunate occurrence prevented the vessel penetrating sufficiently far into the ice to escape the effect of the gale, and placed her in a situation where she was assailed on all sides by battering-rams, if I may use the expression, every one of which contested the small space which she occupied, and dealt such unrelenting blows, that there appeared to be scarcely any possibility of saving her from foundering. Literally tossed from piece to piece, we had nothing left but patiently abide the issue; for we could scarcely keep our feet, much less render any assistance to the vessel. The motion, indeed, was so great, that the ship’s bell, which, in the heaviest gale of wind, had never struck of itself, now tolled so continually, that it was ordered to be muffled, for the purpose of escaping the unpleasant association it was calculated to produce.

“In anticipation of the worst, we determined to attempt placing the launch upon the ice under the lee, and hurried into her such provisions and stores as could at the moment be got at. Serious doubts were reasonably entertained of the boat being able to live among the confused mass by which we were encompassed; yet as this appeared to be our only refuge, we clung to it with all the eagerness of a last resource.”

It was only too evident that she could not long survive the critical position in which she was placed and that the only salvation lay in penetrating still farther into the ice. To this end, more sail was spread, and, with the added power, she righted herself, split a small field of ice, fourteen feet in thickness, and effected a passage for herself between the pieces. On the gale abating, both ships reached the open sea, but were greatly disabled, the *Dorothea* in a foundering condition. In this useless state they made for Fair Haven, in Spitzbergen, where they underwent necessary repairs. Lieutenant Franklin urgently requested to be allowed to return to the interesting quest which they had been obliged to abandon, but this being impossible, owing to the shattered condition of the ships, the expedition put to sea the end of August and reached England about the middle of October, 1818.

CHAPTER IV

1819-1827: Parry's first voyage.—Object, to survey Lancaster Sound and prove the non-existence of Crocker Mountains.—Discovery of new lands.—Parry Islands.—Attains longitude 110° W., thereby winning the bounty of five thousand pounds offered by Parliament.—Winters near Melville Island.—Second voyage.—Ships *Hecla* and *Fury*.—Examines Duke of York Bay and Frozen Strait of Middleton.—Winters off Lyon Inlet.—Sledge journeys.—Object, to make Northwest Passage *via* Prince Regent Inlet.—Reached Port Bowen.—Ten months' imprisonment.—Destruction of the *Fury*.—Hasty return to England. Fourth voyage.—Purpose to reach the Pole *via* Spitzbergen with sledge boats over ice.—*Hecla* as transport.—Parry's farthest, 82° 45′ N., reached June 23, 1827.

PARRY'S FIRST VOYAGE

The principal object of Lieutenant W. E. Parry's first voyage under the direction of the British Admiralty was to pursue the survey of Lancaster Sound, so abruptly discontinued by Captain Ross the previous year, and decide the probability of a northwest passage in that direction, thus settling the much-disputed question of the existence of the "Crocker Mountains," which Parry, who had accompanied Ross, declared from the first to have been an ocular illusion. Should Lancaster Sound not prove navigable, Smith and Jones sounds were to be explored.

The *Hecla*, 375 tons, and the *Griper*, 180 tons, were strengthened and provisioned for two years. Sailing from the Thames May 11, 1819, they reached Davis Strait the last week in June, and here experienced a good deal of annoyance from ice, through which they made a slow and difficult passage by heaving and warping, reaching Possession Bay a month later. Upon landing the men were not a little surprised to see their own footprints of the previous year; a fox, a raven, some ring flowers, and snow-buntings were seen, also a bee. Tufts and ground plants grew in considerable abundance wherever there was moisture.

Proceeding on their voyage, they reached, by August 4, longitude 86° 56′ W., three degrees to the westward of where land had been laid down by Captain Ross. Passing through Barrow Strait, they found ice to such an extent north of Leopold Island that Parry determined to shape his course to the southward and explore the beautiful sheet of water to which he gave the name of Regent Inlet.

The compass now became useless, owing to the local attraction, and the binnacles were discarded. Having penetrated one hundred and twenty miles and having given the farthest point of land the name of Cape Kater, it was found necessary to return to the southward or be caught in the ice. Skirting the north shore of Barrow Strait, they later passed two large openings, to the first of which Parry gave the name of Wellington Channel, also naming various capes and inlets, as he passed them, Batham, Barlow, Cornwallis, Bowen, Byam Martin, Griffith, Lowther, Bathurst, and others.

Navigation now became extremely difficult, owing to thick fogs, but notwithstanding many obstacles they reached the coast of an island larger than any yet discovered, which they called Melville Island, and by the 4th of September Lieutenant Parry was able to make the joyful announcement to his crew that, having passed longitude 110° W., they were entitled to the reward of five thousand pounds promised by Parliament to the first ship's company which should reach that meridian.

To celebrate their success, they gave the name of Cape Bounty to the farthest neck of land sighted in the distance. Every effort was now made to push forward in the hope of reaching longitude 130° W., thereby securing the second reward held out by the government. They had progressed but a short distance when, to their great disappointment, farther advance became impossible by reason of an impenetrable barrier of ice.

The approach of winter decided Lieutenant Parry to seek the shelter near Melville Island and there prepare for the long winter months.

To the group of islands in the vicinity of which he had taken refuge, he gave the name of Georgian Islands, in honour of His Majesty, King George III, but later the name was changed to Parry Islands.

Knowing well that good spirits meant good health in the tedious winter months, Lieutenant Parry established a school for his men, as well as the diversion of a newspaper, and the ship's crew acted several plays, which were most enthusiastically received. In spite of enforced exercise and other methods for keeping in good physical condition, scurvy showed itself among the crew, and such antiscorbutics as lemon juice, pickles, mustard, cress, and spruce-beer were put into requisition. Later, snow-blindness afflicted some of the men, but was relieved by washes and the wearing of black crape before the eyes.

As the spring approached, the ships were made ready for the first opportunity to escape from the ice, which, however, remained impenetrable.

On the 1st of June an excursion was made across Melville Island by Lieutenant Parry and others, carrying provisions for three weeks. They found such parts of the ground as were free from snow covered with dwarf willow, sorrel, and poppy, also moss and saxifrage. A few ducks and ptarmigan were killed. Upon his return to the ship the middle of June, Captain Parry ordered his men to make daily excursions after sorrel, which they procured in large quantities and greatly enjoyed. On the western side of the island at Bushman's Cove, in Liddon's Gulf, they found "one of the pleasantest and most habitable spots we had yet seen in the Arctic regions, the vegetation being more abundant and forward than in any other place, and the situation sheltered and favorable for game."

Though channels and pools were everywhere forming, it was not until the second of August that the great mass of ice broke up and floated out. The ship now made for the open water, but after a short advance, in spite of every effort, they found themselves once more prevented by the impenetrable barrier of ice from making their way westward. There seemed no alternative but a return homeward, and after taking certain additional observations of the two coasts extending along Barrow Strait, they set sail for England.

A warm welcome awaited the daring navigators, who had reached a longitude greater by more than 30° than any other explorer; who had discovered many new lands, islands, and bays; had established the fact of a polar sea north of America; and had wintered successfully in the Arctic, bringing back his crew in good condition.

PARRY'S SECOND VOYAGE

Parry's unprecedented success and the enthusiasm for Arctic exploration throughout England decided the British Admiralty to send out a second expedition to attempt a passage in a lower latitude than that of Melville Island. The *Hecla* and the *Fury* were manned and provisioned and put under the command of Captain Parry and Lieutenant Lyon, whose travels in Tripoli, Mourzouk, and other parts of northern Africa had already brought him consideration and some degree of renown. The transport *Nautilus* was to accompany the ships as far as the ice, and transship extra provisions and stock as soon as room could be found for them.

The ships sailed from the Nore on the 8th of May, 1821, and by the 2d of July were at the mouth of Hudson Strait, having parted with the *Nautilus* the previous day. Icebergs in formidable numbers had already been encountered, and the desolate condition of the shores, the naked rocks, the snow-covered valleys, and the thick fogs encountered were anything but encouraging.

Progress was now made through very heavy floes, and between strong currents, eddies, and icebergs they were menaced by serious danger for more than ten days. While embayed in the ice, they sighted near Resolution Island three strange ships also fast in the ice. These they later managed to join, and found them to be Hudson Bay Company's traders, the *Prince of Wales*, the *Eddystone*, and the *Lord Wellington*, chartered to convey one hundred and sixty emigrants, who intended settling on Lord Selkirk's estate at the Red River. Of these people Lieutenant Lyon writes an interesting account:—

"While nearing these vessels, we observed the settlers waltzing on deck for above two hours, the men in old-fashioned gray jackets, and the women wearing long-eared mob caps, like those used by Swiss peasants. As we were surrounded by ice, and the thermometer was at the freezing point, it may be supposed that this ball *al vero fresco* afforded us much amusement."

Some days later they fell in with some Eskimos, who came out to the ships, the men in their kayaks, the women in their special "oomiaks." The natives boarded the ships and, says Captain Lyon:—

"It is quite out of my power to describe the shouts, yells, and laughter of the savages, or the confusion which existed for two or three hours. The females were at first very shy, and unwilling to come on the ice, but bartered everything from their boats. This timidity, however, soon wore off, and they, in the end, became as noisy and boisterous as the men."

"The strangers were so well pleased in our society," continues Captain Lyon, "that they showed no wish to leave us, and when the market had quite ceased, they began dancing and playing with our people, on the ice alongside.

"In order to amuse our new acquaintances as much as possible, the fiddler was sent on the ice, where he instantly found a most delightful set of dancers, of whom some of the women kept pretty good time. Their only figure consisted in stamping and jumping with all their might. Our musician, who was a lively fellow, soon caught the infection, and began cutting capers also. In a short time every one on the floe, officers, men, and savages, were dancing together, and exhibited one of the most extraordinary sights I ever witnessed. One of our seamen, of a fresh, ruddy complexion, excited the admiration of all the young females, who patted his face and danced round him wherever he went. The exertion of dancing so exhilarated the Eskimos, that they had the appearance of being boisterously drunk, and played many extraordinary pranks. Among others, it was a favorite joke to run slyly behind the seamen, and shouting loudly in one ear, to give them at the same time a very smart slap on the other. While looking on, I was sharply saluted in this manner, and, of course, was quite startled, to the great amusement of the bystanders. Our cook, who was a most active and unwearied jumper, became so great a favorite, that every one boxed his ears so soundly as to oblige the poor man to retire from such boisterous marks of approbation. Among other sports, some of the Eskimos, rather roughly but with great good humor, challenged our people to wrestle. One man in particular, who had thrown several of his countrymen, attacked an officer of a very strong make, but the poor savage was instantly thrown, with no very easy fall; yet, although every one was laughing at him, he bore it with exemplary good humor. The same officer afforded us much diversion by teaching a large party of women to bow, courtesy, shake hands, turn their toes out, and perform other polite accomplishments; the whole party, master and pupils, presenting the strictest gravity.

"Toward midnight all our men, except the watch on deck, turned into their beds, and the fatigued and hungry Eskimos returned to their boats to take their supper, which consisted of lumps of raw flesh, and blubber of seals, birds, entrails, etc.; licking their fingers with great zest, and with knives or fingers scraping the blood and grease which ran down their chins into their mouths."

FROZEN STRAIT OF MIDDLETON

Parry made an examination of Duke of York Bay, and the 20th of August reached the Frozen Strait of Middleton. Two days later the *Hecla* and *Fury* got well into Repulse Bay, and a careful examination of the shores was made by parties of officers and men in boats. By the 31st of August they reached Gore Bay, which was packed with ice. Encountering thick fogs, northerly winds, and heavy ice-floes, they found that in spite of every exertion they were being carried back to the spot in Fox Channel from which they had started some days before. However, they later made some advance and anchored near Lyon Inlet.

Early in October the sludge, or young ice, began to form, a warning of approaching winter, to be followed shortly by the pancake ice and bay ice, which necessitated finding at once winter quarters for the ships. The southeast extremity of an island off Lyon Inlet was selected, and called Winter Island, and the monotonous winter closed in upon them shortly after.

TEN MONTHS' IMPRISONMENT

The usual theatrical diversions were provided for the entertainment of the crew, and the "Rivals" was presented as well as another successful play. The crew took kindly to a school established by the officers and to other forms of mental and physical activity designed to keep the expedition in good health and spirits. Christmas was celebrated with especial good cheer, and English roast beef, which had been kept by being frozen, was served, as well as cranberry pies and plum puddings. The effect of the intense cold upon certain of their stores is interesting:—

"Wine froze in the bottles. Port was congealed into thin pink laminæ, which lay loosely, and occupied the whole length of the bottle. White wine, on the contrary, froze into a solid and perfectly transparent mass, resembling amber."

On the 15th of March, a party under Captain Lyon started out to explore the land near the ships; they were provisioned for three or four days, but their experience was most unfortunate. The cold was intense, their tents at night affording little protection against the frightfully low temperature. They spent some time digging out a snow hut, which they hoped would prove warmer, but this was hardly more satisfactory. The following morning they found themselves almost buried with snow which had drifted at night during a fierce gale which now raged. All paraphernalia, sledges, etc., were completely buried. To remain where they were was as impracticable as to move on. Carrying with them a few pounds of bread, some rum, and a spade, the party set out in the hope of reaching the ships. Captain Lyon records their sufferings as follows:—

"Not knowing where to go, we wandered among heavy hummocks of ice, and suffering from cold, fatigue, and anxiety, were soon completely bewildered. Several of our party now began to exhibit symptoms of that horrid kind of insensibility which is the prelude of sleep. They all professed extreme willingness to do what they were told in order to keep in exercise, but none obeyed; on the contrary, they reeled about like drunken men. The faces of several were severely frost bitten, and some had for a considerable time lost sensation in their fingers and toes; yet they made not the slightest exertion to rub the parts affected, and even discontinued their general custom of warning each other on observing a discoloration of the skin. Mr. Palmer employed the people in building a snow wall, ostensibly as a shelter from the wind, but in fact to give them exercise when standing still must have proved fatal to men in our circumstances. My attention was exclusively directed to Sergeant Speckman, who, having been repeatedly warned that his nose was frozen, had paid no attention to it, owing to the state of stupefaction into

which he had fallen. The frost bite now extended over one side of his face, which was frozen as hard as a mask; the eyelids were stiff and one corner of the upper lip so drawn up as to expose the teeth and gums. My hands being still warm, I had happiness in restoring circulation, after which I used all my endeavors to keep the poor fellow in motion; but he complained sadly of giddiness and dimness of sight, and was so weak as to be unable to walk without assistance. His case was so alarming that I expected every moment he would lie down never to rise again.

"Our prospect now became every moment more gloomy, and it was but too probable that four of our party would be unable to survive another hour. Mr. Palmer, however, endeavored, as well as myself, to cheer the people up, but it was a faint attempt, as we had not a single hope to give them. Every piece of ice, or even of small rock or stone, was now supposed to be the ships, and we had great difficulty in preventing the men from running to the different objects which attracted them, and consequently losing themselves in the drift. In this state, while Mr. Palmer was running round us to warm himself, he suddenly pitched on a new beaten track, and as exercise was indispensable, we determined on following it, wherever it might lead us. Having taken the Sergeant under my coat, he recovered a little, and we moved onward, when to our infinite joy we found that the path led to the ships."

It was not until the 2d of July that the ships, free from ice for the first time in 267 days, put to sea, but not without danger of squeezes from the moving ice-floes which frequently threatened the destruction of the ship. Pushing to the northward, they entertained high hopes of making the looked-for passage to the Polar Sea, but unfortunately a formidable line of impenetrable ice barred the way and determined Parry to make an expedition along the frozen surface of the strait in which they found themselves.

For four days Parry, accompanied by a party of six, made a laborious and fatiguing advance over the uneven hummocks of ice that confronted them. At times open water made the journey still more perilous. Their exertions were at last repaid when they came in view of a bold cape, where they found the strait at its narrowest part about two miles across. To the westward the land receded until it became invisible, and Captain Parry beheld the great Polar Sea, into which he had long hoped to force his way. Naming this the Fury and Hecla Strait, he made ready for the return to the ships.

Taking advantage of every favourable condition, Captain Parry now made as rapid progress toward his goal as the ice would permit. Under full sail they pushed into the rotten ice that formed the barrier to the open water, but suddenly they became fixed,—not another yard could be gained. It was now found necessary to extricate the vessels and seek shelter for another long winter. On the 30th of October, by the usual operation of sawing, the ships were drawn into the harbour of Igloolik, and made ready for the winter, which was now rapidly closing.

Excursions were occasionally made with dogs and sledges bought of the Eskimos, but the season settled down with unusual severity and the second long winter's night proved much more trying than the first. Death and scurvy made their lamentable appearance, and although Captain Parry desired to make another effort the following year by transferring to the *Fury* all provisions that could be spared, and sending the *Hecla* home with the sick, this project was abandoned, and on the 9th of August they turned their faces homeward.

They touched at Winter Island and found radishes, mustard, cress, and onions that they had planted the previous year still alive. The ships were drifted about in a stormy sea at the mercy of ice-floes and adverse currents. Not until September 23 did they get free into the Atlantic; and, the 10th of October, 1823, reached Lerwick, Scotland.

DESTRUCTION OF THE FURY

This expedition having proved the impracticability of a passage through the western extremity of Melville Island or by way of Fury and Hecla Strait, it was hoped that a passage might be accomplished through Prince Regent Inlet. For this purpose, Captain Parry was again fitted out in the *Hecla* and in the accidental absence of Captain Lyon, Lieutenant Hoppner was put in command of the *Fury*. The expedition sailed from Northfleet on the 19th of May, 1824, and entered Davis Strait about the middle of June. Lancaster Sound was not reached until September 10, and Port Bowen was made their winter quarters. After ten months' imprisonment, the ships were once more free, but, later overtaken by gales, both ships sustained serious damage. Drift ice caught them and threatened immediate destruction. The *Fury* was thrown on shore and seriously damaged. Later it was found necessary to abandon her. The *Hecla*, now overcrowded by the provisions and crew of the *Fury*, could no longer pursue her course and was forced to return to England. Bitter as was his disappointment, Parry clung to the idea that a northwest passage would some day be accomplished, and to this end he wrote:—

"I feel confident that the undertaking, if it be deemed advisable at any future time to pursue it, will one day or other be accomplished; for setting aside the accidents to which, from their very nature, such attempts must be liable, as well as other unfavorable circumstances which human foresight can never guard against, or human power control, I cannot but believe it to be an enterprise of practicability. It may be tried often and fail, for several favorable and fortunate circumstances must be combined for its accomplishment: but I believe, nevertheless, that it will ultimately be accomplished."

"I am much mistaken, indeed," he continues, "if the Northwest Passage ever becomes the business of a single summer; nay, I believe that nothing but a concurrence of very favorable circumstances is likely ever to make a single winter in the ice sufficient for its accomplishment. But there is no argument against the possibility of final success; for we know that a winter in the ice may be passed not only in safety, but in health and comfort."

PARRY'S FOURTH VOYAGE

"I in April, 1826," writes Captain Parry, "proposed to the Right Honorable Viscount Melville, the first lord commissioner of the Admiralty, to attempt to reach the North Pole by means of travelling with sledge-boats over the ice, or through any spaces of open water that might occur. My proposal was soon afterward referred to the president and council of the Royal Society, who strongly recommended its adoption; and an expedition being accordingly directed to be equipped for this purpose, I had the honour of being appointed to the command of it; and my commission for his majesty's ship the *Hecla*, which was to carry us to Spitzbergen, was dated the 11th of November, 1826.

Entering Lancaster Sound

"Two boats were constructed at Woolwich, under my superintendence, after an excellent model suggested by Mr. Peake, and nearly resembling what are called 'troop-boats,' having great flatness of floor, with the extreme breadth carried well forward and aft, and possessing the utmost buoyancy, as well as capacity for storage. Their length was twenty feet, and their extreme breadth seven feet. The timbers were made of tough ash and hickory, one inch by half an inch square, and a foot apart, with a 'half timber' of smaller size between each two. On the outside of the frame thus formed was laid a covering of Mackintosh's water proof canvas, the outer part being covered with tar. Over this was placed a plank for fir, only three-sixteenths of an inch thick; then a sheet of stout felt; and over all, an oak plank of the same thickness as the fir; the whole of these being firmly and closely secured to the timbers by iron screws applied from without."

"On each side of the keel," continues Captain Parry, "and projecting considerably below it, was attached a strong 'runner' shod with smooth steel, in the manner of a sledge, upon which the boat entirely rested while upon the ice." Two wheels were also attached, but soon discarded as useless, owing to the unevenness of the ice.

Two officers and twelve men were selected for each boat's crew. The *Hecla*, acting as transport for the adventure, sailed March 27, 1827, and made Hakluyt's Headland by the 13th of May, where she was shortly beset by an ice-floe which carried her off to the eastward, causing both delay and vexation. For the safety of the *Hecla* it was found necessary to return to Spitzbergen and secure anchorage in a safe harbour. This Parry accomplished and, finding a convenient recess, which he named Hecla's Cove, made ready for the main object of the expedition.

Having with him seventy-one days' provisions, consisting of pemmican, biscuit, cocoa, and rum, with spirit of wine to be used as fuel, changes of warm clothing, thick fur dresses for sleeping in, and stout Eskimo boots, he got away June 22, and proceeded in open water some eighty miles, when the boats came to a trying condition of mixed surface ice and water, through which it was found necessary alternately to haul and float them. Owing to the better condition of the ice, it was deemed best to reverse the usual course of life.

"Travelling by night and sleeping by day," writes Captain Parry "so completely inverted the natural order of things that it was difficult to persuade ourselves of the reality. Even the officers and myself, who were all furnished with pocket chronometers, could not always bear in mind at which part of the twenty-four hours we had arrived; and there were several of the men who declared, and I believe truly, that they never knew night from day during the whole excursion. When we rose in the evening, we commenced our day by prayers; after which we took off our fur sleeping dresses and put on clothes for travelling, the former being made of camlet lined with raccoon skin, and the latter of strong blue cloth. We made a point always of putting on the same stockings and boots for travelling in, whether they had been dried during the day or not, and I believe it was only in five or six instances at the most that they were not either still wet or hard frozen. This indeed was of no consequence, beyond the discomfort of first putting them on in this state, as they were sure to be thoroughly wet in a quarter of an hour after commencing our journey; while, on the other hand, it was of vital importance to keep dry things for sleeping in. Being 'rigged' for travelling, we breakfasted upon warm cocoa and biscuit, and after stowing the things in boats, and on the sledges, so as to secure them as much as possible from the wet, we set off on our day's journey and usually travelled four, five, or seven hours, according to circumstances."

They made very slow progress in spite of their strenuous exertions, owing to the floes being small, exceedingly rough, and intersected by lanes of water which could not be crossed without unloading the boats. Rain added to their discomfort, causing the ice to form into numberless irregular needle-like crystals, which proved very trying to the feet. Elevated hummocks presented themselves, over which it was almost impossible to draw the boats.

Even by the utmost efforts they could not make an advance of more than a mile and a half or two miles in five or six hours. Realizing the unfavourable conditions for reaching the pole, owing to the advanced season of the year, Parry soon relinquished that hope and bent his energies

to reaching at best the 83° parallel, if possible. But now to his utter discouragement it was found that the drifting of the snow fields was gradually carrying them backward, and that, in spite of every attempt to advance, they were daily losing ground.

On July 23, they reached their farthest north, 82° 45′. "At the extreme point of our journey," says Parry, "our distance from the *Hecla* was only one hundred and seventy-two miles in a S. W. direction. To accomplish this distance, we had traversed, by our reckoning, two hundred and ninety-two miles, of which about one hundred were performed by water previously to our entering the ice. As we travelled by far the greater part of our distance on the ice three, and not unfrequently five, times over, we may safely multiply the length of the road by two and a half; so that our whole distance, on a very moderate calculation, amounted to five hundred and eighty geographical, or six hundred and sixty-eight statute miles, being nearly sufficient to have reached the pole in a direct line. Up to this period, we had been particularly fortunate in the preservation of our health."

Owing to the increased softness of the ice, the return trip was even more difficult than the advance, the men sinking to their thighs in the ice slush. By the 11th of August the joyful sound of the surf breaking against the margin of the ice was heard, and later the boats were launched into open water, and in another ten days they rejoined the *Hecla*, and soon afterward sailed for England.

Parry's remarkable voyages, besides reaping a rich harvest of scientific data, had proved the navigability of Lancaster Sound, the non-existence of the Crocker Mountains, and that Prince Regent Inlet opened into Barrow Strait, which in turn widened into Melville Sound, and thence opened into the polar ocean. He had added to the map the important archipelago or Parry Islands, many of which he named and explored; had outlined the sounds, bays, and inlets through which he had sailed; discovered Hecla and Fury Strait; and demonstrated the impracticability of making the northwest passage by way of Frozen Strait.

CHAPTER V

Nineteenth century, continued: Scoresby and Clavering.—Former visited Jan Mayen Island in 1817, later visited east coast of Greenland, discovered Scoresby Sound.—In 1824, Captain Lyon surveyed Melville Peninsula.—Adjoining straits and shores of Arctic America.—In 1825, Captain Beechey in the *Blossom* sailed through Behring Strait and passed beyond Icy Cape.—Surveyed the coast as far as Point Barrow, adding 126 miles of new shore.—Second voyage of Captain John Ross.—Undertaken in 1829.—Discovers Boothia.—Wintered in Felix Harbor.—Discovery of North Magnetic Pole by nephew of Captain John Ross.—Commander James Clark Ross.—Valuable observations.—Sledge journeys to mainland.—Four years spent in the Arctic.—Perilous retreat.—Safe return.—Land journey by Captain Back.—The Great Fish-Back River.—Point Ogle.—Point Richardson.—Back's farthest point was 68° 13′ 57′′ north latitude, 94° 58′ 1′′ west longitude. Land journeys of Simpson and Dease, 1836.—Descend the Mackenzie River to the sea.—Surveyed west shore between Return Reef and Cape Barrow.—In 1839, they explored shores of Victoria Land as far as Cape Parry.—Crossed Coronation Gulf.—Descended the Coppermine.—Reached the Polar Sea.—Overland journey in 1846 by Dr. John Rae confirmed Captain John Ross's statement that Boothia was a peninsula.

The names of Scoresby and Clavering hold their own special interest in the long list of heroes of the north. A practical whaleman, of an intelligent and scientific frame of mind, Scoresby, as early as 1806, had penetrated to within five hundred geographical miles of the Pole. In 1817 he had made an excursion to Jan Mayen Island, and later ascended Mitre Cape, whose summit is estimated at three thousand feet above the level of the sea. But not until 1822 did his discoveries reach the greatest importance. In this year, while searching for better fishing grounds, he fell in with the eastern coast of Greenland, a shore almost entirely unknown, except where the Dutch colonies of Old Greenland were supposed to have been situated. Skirting this bleak and barren coast, Scoresby named inlets, bays, and capes as he discovered them, passing Jameson Land and finally reaching Scoresby Sound.

The coast of Jameson Land seemed especially fertile, and evidences of rude habitations were seen, but no human beings discovered. Proceeding northward, still following the coast-line, he was soon beset with ice, and though he named other points of land and inlets, he was obliged to return, not having run across the whales which it was his business to secure.

Good fortune, however, favoured him, for on the 15th of August numerous whales appeared round the ship; three were secured, and the ship now "full-fished" could make a happy return to England after a most successful year.

The following season, Captain Clavering, commander of H. M. S. *Griper*, conveyed a Captain Sabine to Hammerfest in Norway, where Sabine desired to make certain scientific observations on the comparative length of the pendulum as affected by the principle of attraction. Other northern points were to be touched for similar purposes, and Spitzbergen and the east coast of Greenland were designated, the latter point being reached early in August. "He landed his passenger and the scientific apparatus on two islands detached from the eastern shore of the continent, which he called the Pendulum Islands, and of which the outermost point is marked by a bold headland rising to the height of three thousand feet." ("Arctic Adventures," Sargent.) While waiting for Captain Sabine, Clavering reconnoitred the coast, and was more fortunate than Scoresby in running across some of the natives, who closely resembled those described by Parry. By the beginning of September, Sabine having completed his observations, the *Griper* made her way, not without difficulty and delays, by way of Drontheim, back to England.

MELVILLE PENINSULA

In 1824, Captain Lyon, commanding the *Griper*, was given the task of the survey of Melville Peninsula, adjoining straits, and the shore of Arctic America. Overladen and unseaworthy, the *Griper* was totally unfit for such an expedition, and upon reaching Roe Welcome, she was struck by a gale which threatened the destruction of both the ship and crew. After being battered around at the mercy of the storm for three days and nights, in which

commander and crew had taken no rest or sleep, she was finally brought to anchor in a shallow bay, later designated as God's Mercy. Here she was still in imminent danger of being grounded, and there seemed little hope of her surviving the high seas then running. The crew were ordered to prepare for the worst, and to this end each man was commanded to put on his warmer clothing. Of this scene, Captain Lyon writes:—

"Each, therefore, brought his bag on deck and dressed himself, and in the fine athletic forms which stood exposed before me, I did not see one muscle quiver, nor the slightest sign of alarm. Prayers were read, and they then all sat down in groups, sheltered from the wash of the sea by whatever they could find, and some endeavored to obtain a little sleep. Never, perhaps, was witnessed a finer scene than on the deck of my little ship, when all hope of life had left us. Noble as the character of the British sailor is always allowed to be in cases of danger, yet I did not believe it to be possible that among forty-one persons, not one repining word should have been uttered. Each was at peace with his neighbor and all the world; and I am firmly persuaded that the resignation which was then shown to the will of the Almighty, was the means of obtaining His mercy. God was merciful to us, and the tide, almost miraculously, fell no lower."

As soon as the weather conditions permitted, they attempted to proceed up Melville Channel, but another storm overtook them, and, after consulting with his officers, it was decided to turn the crippled ship for home.

Another expedition that set out about this time (1825) was commanded by Captain Beechey. The *Blossom* was directed to round Cape Horn and enter the Arctic by way of Behring Strait. In describing this great gateway to the north, Captain Beechey writes:—

"We approached the strait which separates the two great continents of Asia and America, on one of those beautiful still nights well known to all who have visited the Arctic regions, when the sky is without a cloud, and when the midnight sun, scarcely his own diameter below the horizon, tinges with a bright hue all the northern circle.

"Our ship, propelled by an increasing breeze, glided rapidly along a smooth sea, starting from her path flocks of aquatic birds, whose flight, in the deep silence of the scene, could be traced by the ear to a great distance."

To the north of Cape Prince of Wales, they were visited by Eskimos with whom they bartered and had friendly intercourse. By the 22d of July, the ship reached Kotzebue Sound, and after exploring a deep inlet on its northern shore, which they named Hotham Inlet, they continued their course to Chamisso Island, where they hoped to fall in with Sir John Franklin's expedition, then in the field. Skirting the coast by Cape Thomson, Point Hope, Cape Lisburn, Cape Beaufort, and Icy Cape, they began to see evidences of the approach of winter, and rather than risk being frozen in, they returned to Kotzebue Sound. From here Captain Beechey despatched the barge in charge of his lieutenants to survey the coast. This they successfully accomplished as far as Point Barrow, a distance of one hundred and twenty-six miles of new shore.

The last of August, 1827, found the *Blossom* again at Chamisso Island, where intercourse was renewed with the Eskimos. By October, no news having been received of Franklin, Captain Beechey reluctantly shaped his homeward course. Not until the following year, October 12, 1828, did he arrive in England, after an absence of three years and a half.

ROSS' SECOND VOYAGE

We now return to Captain John Ross, whose professional reputation had suffered for ten years, under the cloud of his early failure. Ever anxious to retrieve his unfortunate mistakes, he had in vain implored the British Admiralty to send him once more to the Arctic. Undaunted by their refusal and indifference, he persevered in his determination,

and at last found a liberal supporter in Felix Booth, a rich distiller, who contributed seventeen thousand pounds toward the proposed expedition, Captain Ross adding his own entire fortune, which was about three thousand pounds more.

A small Liverpool steamer called the *Victory*, one hundred and fifty tons, was purchased and provisioned for three years. Accompanying Captain Ross, as second in command, was his nephew, James Ross, who had sailed with him on the first voyage to the Arctic, and had also accompanied Parry on all his voyages. Setting sail in May, 1829, with the avowed object of making, if possible, the Northwest Passage by some opening leading out of Regent Inlet, they neared the Danish settlement of Holsteinborg, in Greenland, toward the last of July, where they received a most hospitable welcome from the governor. Their stores were replenished and certain other additions made, including six Eskimo dogs, a present from the governor. Sailing northward, they sighted the imposing mountains of Disco Island, partially covered with snow, and later, Hare Island, which they found clear, approaching latitude 74°, where the *Hecla* and *Fury* had been ice-bound in 1824. No ice whatever was encountered. Not without emotion, Captain Ross entered Lancaster Sound, the scene of his early blunder. Now he found scarcely any trace of ice, and he sailed through the middle of it, passing, on the 10th of August, Cape York, after which the land turns southward and, with the opposite coast of North Somerset (Boothia), forms the broad opening of Prince Regent Inlet. Some days later they passed the scene of the *Fury's* wreck. They examined the spot, and found that though the hull had entirely disappeared, the tents and poles were still standing. The canisters of preserved provisions were in perfect condition, also the wine, sugar, bread, flour, and, cocoa, and, after replenishing their own stores, they left a large quantity behind.

By the middle of August they had crossed the mouth of Cresswell Bay and reached Cape Parry, the farthest point seen by Parry on his previous voyage, but here they found difficulty in navigating, owing to the compass being useless by proximity to the Magnetic Pole. Ice conditions also became alarming and obliged them to make fast to the drifting floes, which sometimes carried them forward, but more often backward, so that considerable time and distance was lost in this manner. In the few weeks remaining, before the winter cold held them ice-bound, Captain Ross explored some three hundred miles of coast land, going as far as Brentwell Bay, thirty miles beyond Cape Parry. Here Captain Ross went ashore and formally took possession in the king's name, calling this land Boothia.

Wintering in Felix Harbor, the party had several occasions for intercourse with the Eskimos, from whom they gathered remarkable information regarding the geography of the country. This led Captain Ross to send out several expeditions, hoping to establish the possibility of a passage through to the west, when the summer should again free their ships, but after careful inspection it was concluded that their only hope was to the north. Though the observations were made from several distant points, and much valuable information collected, the months rolled by in hopeless succession, with no apparent prospect of leaving this desolate spot.

JAMES CLARK ROSS

Not until the 17th of September were the ships free, and even then they advanced only three miles to find themselves blocked once more, and a few days later hopelessly frozen in for another dreary winter. Not until April, 1830, were any excursions attempted, and in one of these Commander James Clark Ross had the good fortune to discover the North Magnetic Pole in latitude 70° 5′ 17′′, longitude 96° 46′ 45′′ W.

"The place of the observatory," he writes, "was as near to the Magnetic Pole as the limited means which I possessed enabled me to determine. The amount of the dip, as indicated by my dipping-needle, was 89° 59′, being thus within one minute of the vertical; while the proximity at least of this

pole, if not its actual existence where we stood, was further confirmed by the action, or rather by the total inaction, of the several horizontal needles then in my possession."

"As soon," continues Commander Ross, "as I had satisfied my own mind on the subject, I made known to the party this gratifying result of all our joint labors; and it was then that, amidst mutual congratulations, we fixed the British flag on the spot, and took possession of the North Magnetic Pole and its adjoining territory in the name of Great Britain and King William IV. We had abundance of materials for building in the fragments of limestone that covered the beach, and we therefore erected a cairn of some magnitude, under which we buried a canister containing a record of the interesting fact, only regretting that we had not the means of constructing a pyramid of more importance, and of strength sufficient to withstand the assaults of time and the Eskimos. Had it been a pyramid as large as that of Cheops, I am not quite sure that it would have done more than satisfy our ambition under the feelings of that exciting day."

The succeeding summer was hardly more encouraging than the previous one. Not until the last week in August were they successful in reaching open water by the laborious effort of warping and towing, and, after encountering gales and ice-floes, they were again fast in the ice by the 27th of September, after a discouraging navigation of only four miles.

The thought of a third winter in the dreary Arctic had a most disheartening effect upon the crew. Their only hope of ultimately extricating themselves from their forlorn situation was in abandoning the *Victory*, taking to their boats, and making their laborious way to the wreck of the *Fury*, where, supplying themselves with a fresh stock of provisions, they could push on to Davis Strait, in the hope of being picked up by a passing whale-ship. The general health of the men was showing a decline; scurvy showed itself as early as November of this trying year.

By April 23, 1832, the first part of the expedition started on the wearisome journey of some three hundred miles to Fury Beach. Owing to the weight of the loads, combined with snow-drifts and ice barriers, it was necessary to go back and forward and cover the same ground several times; thus after a month they had travelled three hundred and twenty-nine miles in this trying and circuitous manner to gain thirty in a direct line.

THE RETREAT

On the 29th of May, final leave was taken of the *Victory*, her colours nailed to the mast, a parting glass drunk in her honour, and the brave old ship left to her Arctic loneliness. Not until the first of July did the whole crew reach Fury Beach, after incredible obstacles had been encountered and overcome, the slow and laborious advance made more arduous by the heavy loads they carried.

Immediately, however, they set to work and reared a canvas shelter, which they called Somerset House. The following month was spent in fitting out their boats. An open sea now gave them hope of reaching, through Barrow Strait, to Baffin Bay. Icebergs and gales proved most disastrous to their hopes and, after making a heroic attempt, they found it necessary to return to Fury Beach and spend their fourth winter in the Arctic.

The winter proved exceedingly severe, and their canvas shelter quite inadequate to keeping out the cold. However, matters were improved by a thick snow wall. Sickness, in the dreaded form of scurvy, caused much uneasiness, and in February, 1833, one of their number succumbed to the disease. Their situation had now become alarming, for if they were not liberated the following summer, there was little chance of any of their number surviving another year.

As early in the season as it was possible to travel, they set forth on their life-and-death struggle for safety. Reduced in strength, many of the men being sick, the laborious process of advancing their loads was even slower than the preceding year. However, by the 12th of July, they all reached

their boat station in Batty Bay. Not until August 14 was a lane of water leading northward discovered, and, embarking at an early hour the following morning, they pursued their course with rising spirits. On the evening of the 16th, they were at the northeastern point of America with the open sea ahead of them. Icebergs were numerous, but their courage was gaining every moment, and they took small note of such obstacles. Passing through Barrow Strait, they made that day seventy-two miles. Delayed by contrary winds, they did not reach Navy Board Inlet until the 25th, where they harboured for the night.

Early the following morning, they were aroused from sleep by the lookout man calling "a sail," but though they made every effort to reach this ship, it passed them by unobserved. At ten o'clock they sighted another vessel which was becalmed. By hard rowing they reached her and found her to be the *Isabella* of Hull, a ship in which Ross had made his first voyage to those seas. The captain and mate could hardly believe their eyes when Ross announced that he and his party were the survivors of the *Victory*, which had been given up for lost more than two years previously. Ross describes the scene on board that followed:—

"The ludicrous soon took the place of all other feelings; in such a crowd, and such confusion, all serious thought was impossible, while the new buoyancy of our spirits made us abundantly willing to be amused by the scene which now opened. Every man was hungry, and was to be fed; all were ragged, and were to be clothed; there was not one to whom washing was not indispensable; nor one whom his beard did not deprive of all human semblance. All, everything, too, was to be done at once; it was washing, shaving, dressing, eating, all intermingled; it was all the materials of each jumbled together, while in the midst of all there were interminable questions to be asked and answered on both sides; the adventures of the *Victory*, our own escapes, the politics of England, and the news which was now four years old.

"Night at length brought quiet and serious thoughts, and I trust there was not a man among us who did not then express, where it was due, his gratitude for that interposition which had raised us all from a despair which none could now forget, and had brought us from the very borders of a most distant grave, to life and friends and civilization. Long accustomed, however, to a cold bed on the hard snow or the bare rocks, few could sleep amid the comfort of our new accommodations. I was myself compelled to leave the bed which had been kindly assigned me, and take my abode in a chair for the night, nor did it fare much better with the rest. It was for time to reconcile us to this sudden and violent change, to break through what had become habit, and inure us once more to the usages of our former days."

After five years in the Arctic, Captain Ross and his crew were homeward bound, carrying with them a record unprecedented in Arctic history. Boothia Felix had been discovered; the connecting isthmus had been crossed to the mainland of America and explorations made in the direction of Franklin Passage, Victoria Strait, and King William Sound; the Magnetic Pole had been located; and a series of most valuable observations kept during the entire period.

Previous to his arrival in England, the prolonged absence of Captain Ross had caused great anxiety to his countrymen, and, although his expedition had been a private affair in no way connected with the Admiralty, the government nevertheless felt it to be a national concern that his fate and that of the crew should be ascertained if possible.

LAND JOURNEY OF CAPTAIN BACK

Subscriptions were raised to promote a relief expedition, liberally added to from the public treasury, and an expedition fitted out in charge of Captain Back, who had volunteered his services, accompanied by the surgeon and naturalist, Dr. Richard King. With three men, they left Liverpool, February 17, 1833, on a packet-ship bound for New York, where they landed after a rough voyage of thirty-five days.

From New York they went to Montreal, where they secured four more volunteers from the Royal Artillery Corps and some other assistants, and embarked on the St. Lawrence in two canoes. Making a brief stop at Sault Ste. Marie, for the purpose of purchasing a third canoe, they directed their course to the northern shores of Lake Superior.

On May 20, they arrived at Fort William. By the first week in June, the canoes reached Fort Alexander at the southern extremity of Lake Winnipeg. Coasting this lake, Captain Back made for Norway House, where he secured his full complement of men, eighteen in all, and they started in high spirits for Fort Resolution, the eastern shore of the Great Slave Lake. The chief annoyance experienced on this long canoe trip was the torment from myriads of sand-flies and mosquitoes, of which Captain Back writes:—

"How can I possibly give an idea of the torment we endured from the sand-flies? As we dived into the confined and suffocating chasms, they rose in clouds, actually darkening the air; to see or to speak was equally difficult, for they rushed at every undefended part, and fixed their poisonous fangs in an instant. Our faces streamed with blood, as if leeches had been applied, and there was a burning and irritating pain, followed by immediate inflammation, and producing giddiness, which almost drove us mad, and caused us to moan with pain and agony."

After securing all possible information from the Indians and others, relative to the course of the northern rivers of which he was in search, Captain Back divided his party. Leaving several under the escort of Mr. McLeod, an employee of the Hudson Bay Company, he proceeded with four men in search of the Great Fish River, later named after Back himself.

On August 19, Captain Back began the ascent of the Hoar Frost River, and made his laborious way through woods, swamps, cascades, and rapids. From the summit of a high hill, Back discovered a beautiful lake, studded with islands, to which he gave the name of Aylmer Lake, after the governor-general of Canada at that time. Some of his men were despatched to investigate this lake, and in their absence Back accidentally discovered the source of the river which they had ascended, in Sand Hill Lake.

"For this occasion," he writes, "I had reserved a little grog, and need hardly say with what cheerfulness it was shared among the crew, whose welcome tidings had verified the notion of Dr. Richardson and myself, and thus placed beyond doubt the existence of the Thleu-ee-choh, or Great Fish River."

Moving on, they found it was impossible to navigate Musk-Ox Lake in their frail canoes, owing to the force of the rapids. Reaching Clinton Golden Lake, they met with some friendly Indians. At Cat or Artillery Lake the canoes were abandoned, and the rest of their return journey was made on foot over gorges, ravines, and precipitous rocks, where a false step would have proved fatal.

Upon reaching Fort Reliance, they found Mr. McLeod had erected the framework of their winter quarters. All hands immediately turned to, and by the 5th of November they exchanged their cold tents for the more hospitable abode. The winter now set in with unusual severity. The unfortunate Indians of this locality came daily to the camp and implored food for themselves and their starving families. "Famine with her gaunt and bony arm," writes Back, "pursued them at every turn, withered their energies, and strewed them lifeless on the cold bosom of the snow.

"It was impossible to afford relief to all, and the poor creatures would stand round while the men were taking their meals, watching every mouthful with the most pitiful, imploring look, but never uttering a word of complaint. Seated round the fire, they would take bits of their reindeer garments, roasting these and eagerly devouring them. A few handfuls of mouldy pemmican intended for the dogs, was received with gratitude.

"Often," adds Back, "did I share my own plate with the children whose helpless state and piteous cries were peculiarly distressing; compassion for the full-grown may, or may not, be felt, but that heart must be cased in steel which is insensible to the cry of a child for food."

On January 17 the thermometer stood at 70° below zero. Of this extreme cold Captain Back writes:—

"Such indeed was the abstraction of heat, that with eight large logs of dry wood on the fire, I could not get the thermometer higher than 12° below zero. Ink and paint froze, the sextant cases and boxes of seasoned wood, principally fir, all split. The skin of the hands became dry, cracked, and opened into unsightly, smarting gashes, which we were obliged to anoint with grease. On one occasion after washing my face within three feet of the fire, my hair was actually clotted with ice before I had time to dry it."

Had it not been for the timely assistance of Akaitcho, a friendly Indian chief who had arrived with a supply of men and who brought them game, their sufferings might have had a disastrous ending, but this old brave expressed his sentiments in the noble words:—

"The great chief trusts us, and it is better that ten Indians perish than one white man should perish through our negligence and breach of faith."

With the approach of spring, Captain Back began preparations for his intended journey to the sea-coast, but on April 25 a messenger arrived with the welcome news that Captain Ross and the survivors of the *Victory* were alive and had arrived safely in England. Extracts from the *Times* and *Herald* were shown Captain Back to confirm the news.

"In the fulness of our hearts, we assembled and humbly offered up our thanks to that merciful Providence, which, in the beautiful language of the Scripture, hath said, 'Mine own will I bring again, as I did some time from the deeps of the sea.' The thoughts of so wonderful a preservation overpowered for a time the common occurrences of life. We had just sat down to breakfast: but our appetite was gone, and the day was passed in a feverish state of excitement. Seldom, indeed, did my friend Mr. King or I indulge in a libation, but on this joyful occasion, economy was forgotten, a treat was given to the men, and for ourselves the social sympathies were quenched by a generous bowl of punch."

The four months spent in the remarkable journey of Captain Back and his men to the Polar Sea are one continual recital of hairbreadth escapes in the falls, rapids, and cataracts of the Thleu-ee-choh, and of the incredible suffering and hardship bravely endured by all hands. In describing one of their narrow escapes, where the boat was obliged to be lightened to shoot the rapids, Captain Back writes:—

"I stood on a high rock, with an anxious heart, to see her run it. Away they went with the speed of an arrow, and in a moment, the foam and rocks hid them from view. I heard what sounded in my ear like a wild shriek; I followed with an agitation which may be conceived, and to my inexpressible joy, found that the shriek was the triumphant whoop of the crew, who had landed safely in a small bay below."

VICTORIA LAND

On the 29th, while threading their course down the great river, they saw headlands to the north which gave them the assurance that the coast was not far distant. To this majestic promontory, Back gave the name Victoria.

"This then," he writes, "may be considered as the mouth of the Thleu-ee-choh, which after a violent and tortuous course of five hundred and thirty geographical miles, running through an iron ribbed country, without a single tree on the whole line of its banks, expanding into five large lakes,

with clear horizon most embarrassing to the navigator, and broken into falls, cascades, and rapids, to the number of eighty-three in the whole, pours its water into the Polar Sea, in latitude 67° 11′ N., and longitude 94° 30′ W., that is to say, about thirty-seven miles more south than the mouth of the Coppermine River, and nineteen miles more south than that of Back's River, at the lower extremity of Bathhurst's Inlet."

The following days were a succession of incredible hardships, the result of the damp weather, the barrenness of the coast, and the soft snow and slush into which the men plunged knee-deep at every step. No fire could be lighted, and in consequence they had no means of securing warmth or cooked food; the men became low-spirited and discouraged. The country was flat and desolate, an "irregular plain of sand and stones; and had it not been for a rill of water, the meandering of which relieved the monotony of the sterile scene, one might have fancied one's self in one of the parched plains of the East, rather than on the shore of the Arctic Sea."

Making a heroic advance, Back discovered and named Point Ogle and Point Richardson, caught a sight of Boothia Felix, and then having reached latitude 68° 13′ 57′′ N., longitude 94° 58′ 1′′ W., he unfurled the British flag and took formal possession in the name of His Majesty, William IV, amid the enthusiastic cheers of his comrades. They left the cold Arctic shores the middle of August, and not until the 17th of September did they meet Mr. McLeod at Sandy Hill Bay, according to appointment, and with him reached Fort Reliance on the 27th.

A second winter was passed in the wilderness of the inhospitable north, devoted by Back and Dr. King to writing their journals, mapping their discoveries, and arranging their scientific data, the crew occupying themselves in hunting and fishing expeditions.

The last of March, Captain Back, having left instructions for Dr. King to proceed as soon as the weather would permit to the company's factory at Hudson Bay, there to embark for England in their spring ships, proceeded through Canada, and by way of New York to England, where he arrived at Liverpool the 8th of September. Dr. King reached England a month later.

For this remarkable discovery and voyage down the Great Fish River, Captain Back received from the Royal Geographical Society their Royal premium (a gold medal). In 1835 he was knighted, having already had the congratulations and approbation of His Majesty, the King.

The following year Captain Back made another Arctic voyage, in command of the ship *Terror*, up Hudson Strait. Unfortunately the ship got fast in the ice off Cape Comfort, and there remained at the mercy of the destructive ice-pack through a dreary winter until the following July. She had become so disabled that she was barely equal to crossing the Atlantic, but the return voyage was fortunately accomplished in safety.

SIMPSON AND DEASE

In 1836 the Hudson Bay Company, desiring to complete the survey of their northern territories, especially the coastline of Arctic America, sent out two of their employees, Dease and Simpson, with a party of twelve men.

Descending the Mackenzie River to the sea, they surveyed the westward shore-line between Return Reef and Cape Barrow. Two large rivers were discovered, the Garry and Coleville. Though the season was midsummer, the ground was frozen, and northeasterly winds made progress very trying.

By the 1st of August, further navigation proved impracticable and, dividing the party, Simpson, with some of the men, continued the journey on foot, and Dease remained with the rest of the crew in charge of the boats. Simpson fell in with Eskimos, of whom he hired an oomiak, a large canoe, to aid him as occasion demanded. A few days later he writes:—

"I saw with indescribable emotions Point Barrow stretching out to the northward and enclosing Elson Bay, near the bottom of which we were now," Lieutenant Elson having been in charge of the *Blossom's* barge which reached this "farthest" in 1826. Upon the return of Simpson the party took up winter quarters at Great Bear Lake.

The following June they descended the Coppermine, where, in shooting the rapids, they "had to pull for their lives, to keep out of the suction of the precipices, along whose base the breakers raged and foamed, with overwhelming fury. Shortly before noon, we came in sight of Escape Rapid, of Franklin; and a glance at the overhanging cliffs told us that there was no alternative but to run down with full cargo." "In an instant," continues Simpson, "we were in the vortex; and, before we were aware, my boat was borne toward an isolated rock, which the boiling surge almost concealed. To clear it on the outside was no longer possible; our only chance of safety was to run between it and the lofty eastern cliff. The word was passed and every breath was hushed. A stream which dashed down upon us over the brow of the precipice, more than one hundred feet in height, mingled with the spray that whirled upwards from the rapid, forming a terrific shower-bath. The pass was about eight feet wide, and the error of a single foot on either side would have been instant destruction. As, guided by Sinclair's consummate skill, the boat shot safely through those jaws of death, an involuntary cheer arose.

"Our next impulse was to turn round to view the fate of our comrades behind. They had profited by the peril we incurred, and kept without the treacherous rock in time."

Hardly had they reached the coast before they were stopped by the ice, and hopelessly delayed many days. The season was rapidly advancing, and yet no real work had been accomplished. On the 20th of August, Simpson and seven men started on a ten days' walk to the eastward of Boathaven. Progress was both difficult and discouraging. On the 23d they reached an elevated cape, beyond which further progress was impossible. Of this scene Simpson writes:—

"I ascended the height, from whence a vast and splendid project burst suddenly upon me. The sea, as if transformed by enchantment, rolled its free waves at my feet, and beyond the reach of vision to the eastward. Islands of various shapes and sizes overspread its surface, and the northern land terminated to the eye in a bold and lofty cape, bearing *east-northeast*, thirty or forty miles distant, while the continental coast trended away southeast. I stood, in fact, on a remarkable headland, at the eastern outlet of an ice-obstructed strait. On the extensive land to the northward, I bestowed the name of our most gracious sovereign, Queen Victoria. Its eastern visible extremity I called Cape Pelly, in complement of the governor of the Hudson Bay Company."

In 1839, Simpson and Dease made a more successful journey. The ice conditions being better, they sailed through the strait that separates Victoria Land from the mainland. They pushed on to Simpson Strait, which divides Boothia from the mainland, and later doubled Point Ogle. Upon reaching Montreal Island in Back's Estuary, they found certain provisions left there by Captain Back five years before. On the 25th of August, 1839, they erected a cairn at their farthest point near Cape Herschel.

Exploring 150 miles of the shores of Victoria Land as far as Cape Parry and the Bays of Wellington, Cambridge, and Byron, they crossed Coronation Gulf and finally reentered the Coppermine River, after a voyage of more than 1600 miles in the Polar Sea. For his remarkable achievements, Simpson was awarded the Founder's Gold Medal of the Royal Geographical Society of London.

RAE'S OVERLAND JOURNEY

In 1846, the Hudson Bay Company fitted out another expedition to be sent into the field for the purpose of surveying the northeast corner of the

American mainland; the mouth of the Castor and Pollux to the Gulf of Akkolee, so as to link the discoveries of Dease and Simpson and those of the second voyages of Ross and Parry.

An employee of the company, Dr. John Rae, was chosen for this purpose and put in command of twelve men. Dr. Rae is described as a man of unusual attainments, a surgeon, astronomer, an able steersman; combining with his abilities for leadership the accomplishments of a first-rate snow-shoe walker and dead shot.

After a canoe trip of two months' duration, the party arrived at York Factory early in October. Here they passed the winter, and, as soon as the weather would permit, set sail in two boats, and skirted the shores of Hudson Bay.

At Fort Churchill they found natives engaged in capturing white whales, which make their way to these waters. They secured the services of two Eskimos, father and son, Oolig-buck by name, who accompanied the expedition as interpreters.

In passing Chesterfield Inlet, they heard the grunting and bellowing of walruses, "making a noise," says Rae, "which I fancy would much resemble a concert of old boars and buffaloes." At Republic Bay they bought sealskin boots from the Eskimos, and of the incident Rae says, "One of our female visitors took them out of my hands, and began chewing them with her strong teeth, for the purpose of softening up the leather."

Proceeding on their toilsome journey, they traced the coast from Lord Mayor Bay to within ten miles of Fury and Hecla Straits, confirming Captain Ross in his statement that Boothia was a peninsula; and not returning to York Factory until September, 1847.

Their long winter was spent at Repulse Bay, where they built a stone house and procured provisions by hunting and fishing. Dr. Rae, being an excellent shot, secured in one day as many as seven deer within two miles of their shelter. In the month of September, sixty-three deer, five hares, one seal, one hundred and seventy-two partridge, and one hundred and sixteen salmon and trout were secured. By the middle of October the deer became scarce, but two hundred partridges were secured, also a few salmon, so that by the time all game had migrated, they had a fairly well-stocked larder. However, the question of fuel was a vexing one, as there was no wood to speak of, but the capture of two seals supplied them with oil for their lamps.

Toward February it was found necessary to limit the men to one meal a day.

As the spring advanced, they made a series of journeys. Of these Dr. Rae describes making camp after a fatiguing day's travel:—

"Our usual mode of preparing lodgings for the night was as follows: As soon as we had selected a spot for our snow-house, our Eskimos, assisted by one or more of the men, commenced cutting out blocks of snow. When a sufficient number of these had been raised, the builder commenced his work, his assistants supplying him with material. A good roomy dwelling was thus raised in an hour, if the snow was in a good state for building. Whilst our principal mason was thus occupied, another of the party was busy erecting a kitchen, which, although our cooking was none of the most delicate or extensive, was still a necessary addition to our establishment, had it been only to thaw snow. As soon as the snow-hut was completed, our sledges were unloaded, and every eatable (including parchment-skin and moose-skin shoes, which had become now favorite articles with the dogs) taken inside. Our bed was next made, and, by the time the snow was thawed or the water boiled, as the case might be, we were all ready for supper. When we used alcohol for fuel (which we usually did in stormy weather) no kitchen was required."

After days of exposure and hardship, Dr. Rae writes:—

“We were again on the march, and arrived at our home at half past eight P.M., all well, but so black and scarred on the face, from the combined effects of oil, smoke, and frost-bites, that our friends would not believe but that some serious accident from the explosion of gunpowder had happened to us. Thus successfully terminated a journey little short of six hundred English miles, the longest, I believe, ever made on foot along the Arctic coast.”

Of another trip made in May, Dr. Rae writes:—

“Our journey hitherto had been the most fatiguing I had ever experienced; the severe exercise, with a limited allowance of food, had reduced the whole party very much. However, we marched merrily on, tightening our belts,—mine came in six inches,—the men vowing that when they got on full allowance they would make up for lost time.”

By the last of August, 1847, the party returned to civilization, where Dr. Rae was awarded four hundred pounds by the Hudson Bay Company for his important services.

CHAPTER VI

Sir John Franklin.—Early life.—First land expedition of 1819-1821.—Journey from York Factory to Cumberland House.—Reach Fort Providence.—Winter at Fort Enterprise.—Explorations.—5550 miles.—Hardship.—Starvation.—Return.—Second land journey.—1825.—Winter quarters at Great Bear Lake.—Descent of the Mackenzie River to the Polar Sea.—1200 miles of coast added to map.—The last journey of Sir John Franklin, 1845.—The *Erebus* and *Terror*.—Last seen in Melville Bay.

No name holds more romantic association with Arctic history than that of Sir John Franklin. What a career, what love of adventure, what hardships endured with heroic fortitude, what leadership that could inspire others to passionate loyalty, and superhuman endurance under unspeakable trials, and what a *fate*!

Let us review briefly a life that stands in the foremost rank of naval history, not so much by great achievement, as by that particular charm of character, indefinable and subtle, that is based on those great qualities of tolerance, justice, loyalty, simplicity, and warm affections.

John Franklin, the youngest son of twelve children, was born in the small market town of Spilsby, Lincolnshire, April 16, 1786. He was early destined for the church and educated at St. Ives, and later at Louth Grammar School. A holiday jaunt with a young companion, twelve miles to the shores of the North Sea, with its overwhelming grandeur, changed his career and decided him for the life of a sailor.

The shrewd old father, with that acute knowledge of the short-lived enthusiasms of youth, put him to test, and at fourteen years of age young John served on a merchantman bound for Lisbon. Undaunted by the hard berth of a sailor lad, we find him in 1801 on the quarter-deck of the *Polephemus*, under Captain Lanford, leading in line at the battle of Copenhagen, Lord Nelson's hardest fought battle.

His iron will, ever more firm in its determination for a life of adventure, secured him later a berth in the discovery ship *Investigator*, exploring the coast of Australia, where Franklin acquired valuable astronomical and surveying skill under his able relative, Captain Flinders.

Transferred to the *Porpoise*, which, in company with the *Cato*, was wrecked on a coral reef off the coast of Australia, August 18, 1803, the lad, with one hundred and fifty others, spent fifty days on a strip of sand only four feet above water. Captain Flinders, after making his way 250 leagues to Port Jackson in an open boat, rescued his companions. Franklin finally reached Canton, where he secured passage to England in the *Earl Camden*, East-Indiaman, under Sir Nathaniel Dance, commodore of the China fleet.

An engagement with the French squadron occurred in February, 1804, at which young Franklin rendered valuable service as signal midshipman. On his return to England he was assigned to the *Bellerophon*. At the battle of Trafalgar, he gallantly stood on the poop, with the dead and dying falling beside him, attending to the signals, with a coolness and accuracy that won him the unstinted admiration of his comrades.

For the next two years he served under Admirals Cornwallis, St. Vincent, and Stratham; then for six years in the *Bedford*.

In the disastrous attack upon New Orleans, Franklin commanded the boats in a fight with the enemy's gunboats; he captured one of them and suffered a slight wound in the shoulder in a hand-to-hand encounter.

John Franklin

He was promoted to first lieutenant for gallant service and assigned to the *Forth*, which, after the abdication of Napoleon and the restoration of the Bourbons, conveyed the Duchess d'Angouleme back to France.

SIR JOHN FRANKLIN

It is not surprising that after such a varied and distinguished career, Franklin should be one of the first to enter with whole-souled enthusiasm into the renewed interest shown by England in Arctic discovery and exploration.

Of the Buchan expedition in which Franklin was second in command, we already know the history. The succeeding expeditions, though spoken of as failures in their main object, won for him a renown quite unique in Arctic honours, and the last, so tragically fatal in its results, did more, through the numberless searching parties sent out to discover news of the missing ships, to extend the world's scientific knowledge and geographical accuracy of Arctic America, than could possibly have been accomplished had the expedition been a success.

Before taking up in detail the journeys of Sir John Franklin, it might be well to make note of a side-light in his remarkable character. To this man a career meant the paramount ambition of life, a passion stronger than the love of woman, of family, of home or physical comforts. After the return of the Buchan and Franklin expedition, the gentle poetess, Anne Porden, who had written "Viels, or Triumph of Constancy," the "Cœur de Lion," and a short poem on the Arctic expedition just returned, visited the *Trent* and met the gallant John Franklin in the full blush of his youthful manhood. He fell in love, and upon his return from his first land expedition, in 1823, they were married, but with the distinct understanding that sweet Anne should "never, under any circumstances, seek to turn her husband aside from the duty he owed his country and his career." And she kept her word, but at what sacrifice!

In June of the following year a daughter was born to them, but the mother never regained her health; a few months later, putting in John Franklin's hand a silken flag to be carried north to victory, the work of her dying fingers, she courageously bade him God-speed, and he started, amid the applause of an enthusiastic nation, upon that second journey—little guessing she, too, was about to embark upon the great unknown.

"My instructions, in substance," writes Franklin of the first land expedition of 1819-1821, "informed me that the main object of the expedition was that of determining the latitude and longitude of the northern coast of North America, and the trending of that coast from the mouth of the Coppermine River to the eastern extremity of that continent."

He was authorized to take counsel with the Hudson Bay officials, and plan his course accordingly. In fact, much was left to his own discretion, and before leaving England he was fortunate enough to go over the details of the proposed journey with Sir Alexander Mackenzie, the only living English explorer who had visited that coast.

Accompanied by Dr. Richardson, surgeon and naturalist (later Sir John Richardson), Admiralty Midshipman George Back (later Sir George Back), Robert Hood, and another Englishman, John Hepburn, Franklin sailed from Gravesend in the *Prince of Wales*, May 23, 1819.

On reaching York Factory, the principal depot of the Hudson Bay Company, he found an unfortunate state of affairs existing between them and the Northwest Company. A bitter rivalry had resulted in the detention at York Factory of certain partners of the other company, and the result of this unfortunate quarrel had serious results upon his own future.

JOURNEY TO CUMBERLAND HOUSE

He was advised to make for Cumberland House, and later through a chain of posts to the shores of Great Slave Lake. With only one steersman and a boat so small that many of the provisions were in consequence left

behind, Franklin made his start up the Hayes River, September 9. Sailing was frequently varied by the arduous labour of tracking, and not unfrequently a portage was found necessary, which added to the fatigues and discouragements of the day.

At one of the outposts of the Hudson Bay Company, they were again obliged to leave some of their stores under promise that these would be forwarded in the spring, and later, at Swampy Lake, the tenants of the depot gave them a supply of mouldy pemmican, which of course had to be thrown away later. Thus from the outset the expedition laboured under the fatal handicap of insufficient stores.

At Oxford House, Holy Lake, they secured some good pemmican and also fish, and, as the season was advancing, they pushed onward. They finally reached the mouth of the Saskatchewan, and, following the river, they first arrived at Little River, then Pine Island Lake, and at last, on October 23, Cumberland House. Already ice had impeded their journey, and here they determined to winter, at the invitation of Governor Williams.

Impatient to be on his way, and desirous of securing guides, hunters, interpreters, and stores for the journey to the sea, Franklin, accompanied by Back and Hepburn, started, January 19, 1820, for Fort Chipewyan, with provisions for fifteen days. After a winter's journey of eight hundred and fifty-seven miles, they reached their destination.

The various posts at which they stopped supplied them with only a limited amount of provisions, and the prospect of securing more was most discouraging. Sickness of the Indians in the hunting season foretold a scarcity for the following spring; moreover, the rivalry of the fur companies and the lavish expenditure of their stores in opposition tactics had resulted in greatly depleted food supply, so that provisions expressly intended for Franklin were later consumed before reaching him.

The travellers had suffered greatly from the unaccustomed use of snow-shoes, the weight of several pounds of snow clinging to the shoes having galled and lamed their feet. Yet the journey had not been considered as wearing as that from York Factory to Cumberland House.

The return of geese, ducks, and swans, together with the melting of the snow and ice, now gave indications of approaching spring. Mr. Hood writes of this time:—

"The noise made by the frogs, which this inundation produced, is almost incredible. There is strong reason to believe that they outlive the severity of winter. They have often been found frozen, and revived by warmth; nor is it possible that the multitude which incessantly filled our ears with their discordant notes could have been matured in two or three days."

Speaking of the resuscitation of fish, Franklin writes:—

"If in this completely frozen state, they were thawed before the fire, they recovered their animation. This was particularly the case with the carp, and we had occasion to observe it repeatedly, as Dr. Richardson occupied himself in examining the structure of the different species of fish, and was always in the winter under the necessity of thawing them before he could cut them. We have seen a carp recover so far as to leap about with much vigor after it had been frozen thirty-six hours."

Richardson and Hood now joined Franklin, and the party increased by sixteen Canadian voyageurs, a Chipewyan woman, and two interpreters, made their way northward. It was now the middle of July, and their whole stock of provisions consisted of hardly more than one day's supply. Fortunately they soon added a buffalo, and at Moose Deer Island they got some supplies from the Hudson Bay and Northwest Company officers.

About the last of July they reached Fort Providence. From the Indian chief Akaitcho they secured guides, the party having been increased to twenty-nine, exclusive of three children. A journey of five hundred and fifty-two miles was accomplished, with no little hardship. Lack of food and other privation caused the Canadian voyageurs to break out in open mutiny. At Fort Enterprise winter quarters were established.

WINTER AT FORT ENTERPRISE

Early in October, Back and a party returned to Fort Providence to arrange for the transportation of stores expected from Cumberland House. The stores were anxiously awaited, and it was hoped they would arrive by New Year's Day, 1821. In the meantime the party were subsisting for the most part on reindeer meat, fish twice a week, and a little flour. The middle of January seven of Back's party returned, bringing with them as many stores as they could haul.

A little later Back returned, having performed on foot the remarkable journey of more than eleven hundred miles on snow-shoes, sleeping in the open, with only the protection of a blanket and a deerskin, the thermometer frequently at 40° and once at 57° below zero,—and passing several days without food.

The failure of the great fur companies to keep their contracts had resulted in almost no provisions being secured. At Fort Enterprise it was now found necessary to curtail rations to the most meagre amount, and many of the Indian families camped about the house were obliged to satisfy the cravings of hunger with bones, deer's feet, and bits of other offal.

"When," says Franklin, "we beheld them gnawing the pieces of hide, and pounding the bones for the purpose of extracting some nourishment from them by boiling, we regretted our inability to relieve them, but little thought that we ourselves should be afterwards driven to the necessity of eagerly collecting these same bones, a second time, from the dung-hill."

In July, 1821, the expedition having dragged canoes and baggage with fifteen days' provisions to the bank of the Coppermine, embarked upon the main object of the enterprise. By the 25th they had doubled Cape Barrow, and its eastern side they named Inman Harbor. The dangers and discouragements that beset Arctic travellers soon fell to their lot. Their stock of food, replenished with a few deer, soon became exhausted, and the ration issued to each man was a meagre handful of pemmican and a small portion of soup.

By the 5th of August, they had reached the Back River and then explored Melville Sound and Bathurst Inlet. Having reached Point Turnagain, and meeting with no Eskimos who could replenish their provisions, Franklin was obliged to turn back, having sailed nearly six hundred geographical miles in tracing the irregular shore of Coronation Gulf from the Coppermine River.

STARVATION

Reduced to the last extremity for want of food, the last bit of pemmican and arrowroot having formed a scanty supper, and without means of making a fire, the forlorn party spent the fifth day of September in bed while a snowstorm raged above them and drifted into their tent, covering their thin blankets several inches. Of this day writes Franklin:—

"Our suffering from cold, in a comfortless canvas tent in such weather with the temperature at 20°, and without fire, will easily be imagined; it was, however, less than that which we felt from hunger."

For two days they lived on a lichen known as *tripe de roche*, and on the 10th "they got a good meal by killing a musk-ox. To skin and cut up the animal was the work of a few minutes. The contents of its stomach were devoured upon the spot; raw intestines, which were next attacked, were pronounced by the most delicate amongst us to be excellent."

The effects of suffering and famine began to show themselves in the improvidence and indifference of the men. Three fishing-nets were left behind, and one of the canoes broken and abandoned. Mosses, an occasional partridge, *tripe de roche*, bits of singed hide, and such marrow as could be extracted from finds of bones of animals formed their only diet.

Though weak and lame, Back pushed forward in search of relief. One by one the starving men fell by the wayside. Hood, suffering from the effects of *tripe de roche*, which never agreed with him, became too exhausted to proceed, and Dr. Richardson volunteered to remain with him. As one by one the various members dropped down with fatigue, only five besides Franklin were left in the advance party. These continued their weary pilgrimage, cheered with the hope that at Fort Enterprise would be found shelter and the much-needed supplies which had been promised them. Alas! their grief and disappointment may be imagined upon entering this wretched depot to find it desolate and without a vestige of provisions.

"It would be impossible," says Franklin, "to describe our sensations after entering this miserable abode, and discovering how we had been neglected; the whole party shed tears, not so much for our own fate as for that of our friends in the rear whose lives depended entirely on our sending immediate relief from this place."

To their surprise they found a note from Back stating that he had reached the shelter two days before by another route and had immediately pressed on in hope of finding the Indians, and if not, he would direct his steps to Fort Providence, though he doubted if he and his party could reach there in their present unfortunate condition.

Franklin and his men gathered together what could be used as food and found several deerskins that had been thrown away the previous year and a few bones gathered from the refuse heap. These, with *tripe de roche*, they made into a soup and endeavoured to support life on the putrid mass. Later on one more member of the party came in, and a day or two after a man named Balanger of Back's party reached camp in all but a dying condition. He had fallen into a rapid, had come near drowning, and was then speechless from exhaustion and exposure. When warmed, dry clothing put on, and given a little soup, he was sufficiently restored to answer questions.

Back had not found the Indians and was making for Fort Providence. Thither Franklin determined to follow him with two of his men, the others volunteering to remain until succour should be sent to them. Owing to an unfortunate accident to his snow-shoes, Franklin was obliged to return to camp the next day, sending on his companions alone.

The poor wretches that had been left at Fort Enterprise were in such a weakened state that it was with difficulty that Franklin could rouse them to any exertion.

"We saw," writes Franklin, "a herd of reindeer sporting on the river, about half a mile from the house; they remained there a long time, but none of the party felt themselves strong enough to go after them, nor was there one of us who could have fired a gun without resting it."

Eighteen long days passed slowly by, during which they endured frightful privations, when Dr. Richardson and Hepburn reached them, greatly enfeebled and emaciated. "The doctor particularly remarked the sepulchral tones of our voices, which he requested of us to make more cheerful, if possible, unconscious that his own partook of the same key." Hepburn divided a partridge he had shot and, says Franklin, "I and my three companions ravenously devoured our shares, as it was the first morsel of flesh any of us had tasted for thirty-one days, unless, indeed, the small, gristly particles which we found occasionally adhering to the pounded bones may be called flesh."

Dr. Richardson then told of the tragic death of Hood, who had been murdered by the Iroquois, Michel, whose threatening demeanour they had noted for some days, and whom they afterwards

suspected of having put an end to two other members of the party. Under the circumstances, as a matter of self-preservation, it was deemed necessary to end the Indian's life, and this Dr. Richardson did with a pistol-shot.

The day after the arrival of Richardson and Hepburn, two of the party died. Finally, early in November, Indian messengers sent by Back brought the longed-for relief, the Indians "evincing humanity that would have done honor to the most civilized people." When the party were sufficiently restored to health with food and kind nursing, they started for Fort Chipewyan, where they remained until June of the following year. In July they reached York Factory, whence three years before they had started out.

In this remarkable journey of over five thousand five hundred and fifty miles, human endurance and patience had been put to the uttermost test; the wonderful courage and fortitude with which these heroes braved a fate that threatened them at every step, make this one of the most remarkable feats in Arctic history.

FRANKLIN'S SECOND JOURNEY

A more cheerful picture presents itself in Franklin's second voyage, and, though fortunately not so tragic as the first, it nevertheless demonstrates his remarkable leadership.

In conjunction with the Beechey expedition in the *Blossom* and Parry's expedition with the *Hecla* and *Fury*, a third expedition was promoted and, upon request of Franklin, put under his charge. The outline of operations was for this party to descend the Mackenzie River to the sea, and there to divide the force, one section to explore the coast east to the Coppermine, while the other should take a westerly course and round Ice Cape and, if possible, Behring Strait. Profiting by past experience, the party were amply provisioned from the outset; in fact, a delay of some months was required to secure the necessary amount of pemmican.

Undaunted by the hardships endured on the previous voyage, Back and Richardson volunteered again to accompany Franklin; Mr. Kendall, a mate in the navy, and Mr. T. Drummond, a naturalist, were also of the party. Four carefully constructed boats were sent ahead in one of the Hudson Bay Company's ships, and in July, 1825, the Franklin party reached Fort Chipewyan.

They reached Great Bear Lake without incident, and there erected winter quarters under the direction of Back and Dease, the latter being detailed by the Hudson Bay Company to assist the expedition. Although the season was well advanced, Franklin set out, with a small party, to make a six-day journey down the Mackenzie for the purpose of examining the state of the Polar Sea. They reached an island to which he gave the name of Garry Island, and ascended the summit, from which "the sea appeared in all its majesty, entirely free from ice, and without any visible obstructions to its navigation, and never was a prospect more gratifying than that which lay open to us." Here the silken Union Jack made by the hands of Anne Porden was unfurled, the news of whose death had but lately reached her husband.

"I will not," writes Franklin, "attempt to describe my emotions as it expanded to the breeze."

By the 7th of September the party had returned to Fort Franklin, and the long winter was passed in comparative comfort. Every effort was made to amuse and interest the men, the entire number consisting of nearly fifty, including guides, interpreters, Canadian voyageurs, and Indians.

DESCENT OF THE MACKENZIE RIVER

The following June, 1826, preparations were made for the important work of the expedition. Descending the Mackenzie in four boats to the Polar Sea, the party here divided, Captain Franklin and Lieutenant Back with fourteen men pushing to the westward, Dr. Richardson with Mr. Kendall assisted by ten men in two boats going in an easterly direction toward the Coppermine River.

Soon after parting, Franklin's party had an unfortunate encounter with Eskimos, who pillaged their stores and caused them considerable annoyance. Making his way westward, he encountered dirty weather and penetrating fogs, which kept the poor shivering men perpetually enveloped in moisture. However, he reached latitude 70° 24′ N., longitude 149° 37′ W., which point of land he named after Lieutenant Back. He had surveyed three hundred and seventy-four miles of coast.

It was now deemed advisable to return, and by September 31 the party reached Fort Franklin, where Richardson and his party had returned some days earlier after a successful voyage of five hundred miles, or nine hundred and two by the coast-line.

The party under Richardson had been favoured with good weather, and, though detained by an occasional storm, were on the whole most fortunate. One of these shelters, Refuge Cove, Dr. Richardson describes:—

"Myriads of mosquitoes, which reposed among the grass, rose in clouds when disturbed, and gave us much annoyance. Many snow birds were hatching on the point; and we saw swans, Canada geese, eider, king, Arctic, and surf ducks; several glaucous, silvery, black-headed, and ivory gulls, together with terns and northern divers. Some laughing geese passed to the northward in the evening, which may be considered as a sure indication of land in that direction."

During the second winter passed at Fort Franklin, the thermometer fell as low as 58° below zero. The Englishmen spent their time in making scientific observations and completing their data and records. Food and warmth, combined with good health, made it pass comparatively quickly, and in the spring the party made their way back to England.

Honours of the most distinguished character awaited Franklin upon his return. To the map of North America he had added no less than twelve hundred miles, for which the nation rendered him enthusiastic applause. In 1829 he was knighted, Oxford conferred on him the degree of D.C.L., and the Geographical Society of Paris awarded him a gold medal.

LAST JOURNEY OF SIR JOHN FRANKLIN

In his second marriage Franklin was most fortunate in winning a cultured, travelled woman of wealth, Jane Griffin, whose sympathies were entirely in harmony with his own, and whose devotion to his memory kept alive for twelve years the interest of the world in ceaseless efforts to ascertain his fate. The succeeding years until the last ill-fated voyage were most happily divided between a cruise on the Mediterranean, in which Franklin commanded the *Rainbow* with such pleasure to the crew and officers that the ship won the cheerful sobriquet of *Celestial Rainbow* and the *Paradise of Franklin*, and the governorship of the colony of Van Diemen's Land, or Tasmania, a post he held for seven years with admirable success. Franklin had only been a few months in England when the Admiralty, through Sir John Barrow, for many years an enthusiastic promoter of Arctic enterprise, decided upon another expedition to effect the discovery of the Northwest Passage. It is recorded that the First Lord of the Admiralty, Lord Haddington, in conversing with Sir Edward Parry upon the advisability of offering Franklin the post of commanding officer, remarked:—

"I see Franklin is sixty years old. Ought we to let him go?" to which Parry answered,—

"My lord, he is the best man for the post I know, and if you don't let him go, he will, I am certain, die of disappointment."

In an interview with Franklin, Lord Haddington spoke again of his age being sixty, and added,—

"You might be content with your laurels, after having done so much for your country," to which Franklin replied with all the eagerness of youth,—

"No, no! my lord, only fifty-nine!"

Lord Brougham, when told that the command had been accepted by Franklin, remarked,—

"Arctic work gets into the blood of these men. They *can't help* going again if they get a chance."

The *Erebus* and *Terror* were both ships that had seen many years' service in Arctic and Antarctic seas. They were provisioned for three years and supplied with every facility for scientific and geographical observations. The combined crews and officers number one hundred and thirty-eight souls. In company with the transport, *Barreto Junior*, the expedition sailed from Greenhithe on the 19th of May, 1845.

The 4th of July, they reached Whale Fish Island, near Disco, in Greenland, and here the *Barreto Junior* transferred to the *Erebus* and *Terror* her extra stores, returning to England with the last message from Franklin ever received by the Admiralty.

"The ships are now complete with supplies of every kind for three years; they are therefore very deep, but happily we have no reason to expect much sea as we proceed further."

With confidence and enthusiasm, John Franklin turned to the north, "much better in health," Lieutenant Fairholme had written, "than when we left home, and really looks ten years younger. He takes an active part in everything that goes on, and his long experience in such service makes him a most valuable adviser."

On the 26th of July, the *Prince of Wales*, a whaling vessel, saw the two ships in Melville Bay, waiting a favourable opportunity for pushing through the "middle ice." Signals were exchanged and an invitation extended to Franklin to dine with the captain of the whaling ship. A breeze springing up, the *Erebus* and *Terror* parted company with the *Prince of Wales*.

As if alluringly beckoned by that fatal enchantress, the "Lady of the Mists," Sir John Franklin and his gallant crew silently glided into the unknown, and from that hour were lost to the world forever.

CHAPTER VII

Search for Sir John Franklin.—Captain Kellett.—Captain Moore.—Dr. Richardson.—Dr. Rae.—Sir J. C. Ross.—Mr. Parker.—Dr. Goodsir.—Collinson and M'Clure.—The *Felix*.—*Prince Albert*.—Commanded by Charles C. Forsyth.—Captain Austin's squadron.—Captain Ommaney.—Lieutenant Sherard Osborn.—Commander Cator.—Grinnell expedition under De Haven.

No tidings of the *Erebus* and *Terror* having reached England by the close of 1847, great anxiety was felt as to the whereabouts and fate of the missing ships. The government immediately took measures to outfit three searching parties. The first was to go westward to Behring Strait, and there meet the ships with assistance, should they have been successful in making the object of their voyage, and for this purpose Captain Henry Kellett commanding the *Herald* and Captain Moore in the ship *Plover* left England in January, 1848.

The second was to be an overland and boat expedition with its object to explore the coast of the Arctic Sea between the Mackenzie and Coppermine rivers, under the leadership of that faithful companion and friend of Sir John Franklin, Dr. Sir John Richardson, accompanied by Rae, who had but lately returned from his memorable journey of 1846-1847.

The third expedition was under Sir James Clark Ross in the ships *Enterprise* and *Investigator*, with instructions to make for Lancaster Sound and Barrow Strait, examine all tracks of the missing ships westward and render relief if the ships should be discovered imprisoned in the ice.

Owing to the poor sailing qualities of the *Plover* and *Herald*, the ships were unable to reach high latitudes in time to penetrate to the northward that season, and not until the following July, in company with the *Nancy Dawson*, a pleasure yacht belonging to Robert Sheldon, Esq., did they pursue the main object of their expedition. July 18, 1849, they left Chamisso, and on the 20th they were off Cape Lisburn; five days later they passed Icy Point. Here they despatched the *Herald's* pinnace and three other boats, with a party of twenty-five men with three months' provisions, under command of Lieutenant Pullen, whose instructions were to connect with the Richardson party, one division in two whale-boats to extend the search to the Mackenzie River, ascend that river, and return homeward by Fort Hope and York Factory; the remaining division to return to the rendezvous of the ships at Chamisso Island.

The *Herald* and *Plover* cruised northward as far as the ice would permit, then explored the coast-line in detail. On the 7th of August, the *Herald* sighted new territory. Running close to the island, they found it barren, and for the most part of inaccessible granite cliffs.

The *Nancy Dawson* and the return boats under Lieutenant Pullen rejoined the *Herald* by the 24th of August. They had parted company with the two whale-boats at Dease Inlet. They had found no traces of the Franklin expedition, but had left deposits of provisions at intervals along the route.

The following months were spent in winter quarters, and, as soon as the weather permitted, in careful examination of the inlets and coast from Icy Cape to Point Barrow in the hope of finding traces of the missing party. Disappointed at a fruitless voyage, the ships returned to England in October, 1850.

RICHARDSON'S REPORT

In his official report to the Secretary of the Admiralty, Sir John Richardson gives an excellent summary of the results of the second expedition. He says in part:—

"In the voyage between the Mackenzie and Coppermine, I carefully executed their lordships' instructions with respect to the examination of the coast-line, and became fully convinced that no ships had passed within view of the mainland. It is, indeed, nearly impossible that they could have done so unobserved by some of the numerous parties of Eskimos on the look-out for whales. We were, moreover, informed by the Eskimos of Back's Inlet, that the ice had been pressing on their shore nearly the whole summer; and its closely packed condition when we left it on the 4th of September made it highly improbable that it would open for ship navigation later in the season. I regretted extremely that the state of the ice prevented me from crossing to Wollaston Land, and thus completing, in one season, the whole scheme of their lordships' instructions. The opening between Wollaston and Victoria Lands has always appeared to me to possess great interest, for through it the flood-tide evidently sets into Coronation Gulf, diverging to the westward by the Dolphin and Union Strait, and to the eastward round Cape Alexander. By the fifth clause of Sir John Franklin's instructions, he is directed to steer southwestward from Cape Walker, which would lead him nearly in the direction of the strait in question. If Sir John found Barrow Strait as open as when Sir Edward Parry passed it on four previous occasions, I am convinced that (complying as exactly as he could with his instructions and without looking into Wellington Sound, or other openings either to the south or north of Barrow Strait) he pushed directly west to Cape Walker, and from thence southwestwards. If so, the ships were probably shut up on some of the passages between Victoria, Banks, and Wollaston Lands.

"Being apprehensive that the boats I left on the coast would be broken up by the Eskimos, and being, moreover, of opinion that the examination of the opening in question might be safely and efficiently performed in the only remaining boat I had fit for the transport from Bear Lake to the Coppermine, I determined to entrust this important service to Mr. Rae, who volunteered, and whose ability and zeal in the cause I cannot too highly commend. He selected an excellent crew, all of them experienced voyageurs and capable of finding their way back to Bear Lake without guides, should any unforeseen accident deprive them of their leader.

"In the month of March (1849) a sufficient supply of pemmican, and other necessary stores, with the equipments of the boat, were transported over the snow on dog-sledges to a navigable part of the Kendall River, and left there under the charge of two men. As soon as the Dease broke up in June, Mr. Rae would follow, with the boat, the rest of the crew, and a party of Indian hunters, and would descend the Coppermine River about the middle of July, at which time the sea generally begins to break up. He would then, as soon as possible, cross from Cape Krusenstern to Wollaston Land, and endeavor to penetrate to the northward, erecting signal-columns, and making deposits on conspicuous headlands, and especially on the north shore of Banks' Land, should he be fortunate enough to attain that coast. He was further instructed not to hazard the safety of his party by remaining too long on the north side of Dolphin and Union Strait, and to be guided in his movements by the season, the state of the ice, and such intelligence as he might obtain from the Eskimos. He was also requested to engage one or more families of Indian hunters to pass the summer of 1805 on the banks of the Coppermine River, to be ready to assist any party that may direct their course that way."

Upernavik

SIR JAMES CLARK ROSS

The 6th of July, 1848, found the *Enterprise* and *Investigator* of the third expedition, at the Danish settlement of Upernavik; from this port Sir James Clark Ross wrote a letter to the British Admiralty stating that after passing a second winter near Port Leopold, should no traces of Sir John Franklin's party be discovered, he would send the *Investigator* under Captain Bird back to England and proceed with the search alone.

This caused great uneasiness at the Admiralty, and the *North Star* was at once despatched with a supply of extra stores and instruction to Ross to remain in company with the *Investigator* and not follow out the design expressed in his letter. The *North Star* was further instructed that should she fail to reach the ships, stores were to be left at the farthest point she could reach in safety, and then she should return to England. Though explicitly warned against getting beset in the ice, the season of 1849 passed, and the *North Star* did not return, thus causing great anxiety in England as to her safety.

To return to the *Enterprise* and *Investigator*, these two ships, after leaving Upernavik, had found very unfavourable conditions in the ice, which necessitated towing the ships or proceeding slowly under light winds and calms. By the 23d of August, the ships had reached Pond Bay, having sustained severe shocks through ice pressure and other discouraging conditions. They kept close to the shore, firing guns and sending up signals at frequent intervals, but no sign of Eskimos or other human beings were discovered.

Upon reaching Possession Bay, a party was sent on shore to search for traces of the expedition, but nothing was found except a paper left there by Sir Edward Parry on the same day (August 30) in 1819. Again at Cape York another party went ashore, and, though no traces were found, a conspicuous mark was erected for the benefit of any other party that might reach there. The ships then proceeded.

"We stood over," writes Sir James Ross, "toward Northeast Cape until we came in with the edge of a pack, too dense for us to penetrate, lying between us and Leopold Island, about fourteen miles broad; we therefore coasted the north shore of Barrow Strait, to seek a harbour further to the westward, and to examine the numerous inlets of that shore. Maxwell Bay, and several smaller indentations, were thoroughly explored, and, although we got near the entrance of Wellington Channel, the firm barrier of ice which stretched across it, and which had not broken away this season, convinced us all was impracticable in that direction. We now stood to the southwest to seek for a harbour near Cape Rennell, but found a heavy body of ice extending from the west of Cornwallis Island. Coasting along the pack during stormy and foggy weather, we had difficulty in keeping the ships free during the nights, for I believe so great a quantity of ice was never before seen in Barrow Strait at this period of the season."

By the 11th of September, the ships found winter quarters in the harbour of Port Leopold, and almost immediately the ice pack closed in and formed a complete barrier for the remainder of the winter. Various exploring and surveying journeys were undertaken during this winter and the coast carefully examined in all directions, but no trace of Franklin or his ships was discovered.

The crew caught in traps a number of white foxes, and knowing how far these animals will roam in search of food, the men clasped round the animals' necks copper collars, on which were written the position of the ships and depots of provisions, and the creatures were set at liberty in the hope they would be caught by some of the ill-fated party.

During April and May, Captain Ross, accompanied by Lieutenant M'Clintock and a party of twelve men, carefully explored the coast-line of the northern and western coast of Boothia Peninsula.

"The examination of the coast," writes Captain Ross, "was pursued until the fifth of June, when, having consumed more than half our provisions, and the strength of the party being much reduced, I was reluctantly compelled to abandon further operations, as it was, moreover, necessary to give the men a day of rest. But that the time might not be wholly lost, I proceeded with two hands to the extreme south point in sight from our encampment, distant about eight or nine miles."

During the absence of Captain Ross, other parties had explored the vicinity of Cape Hind, and another along the western shore. This last party under Lieutenant Robinson reached as far as Cresswell Bay, a few miles to the southward of Fury Beach. He found the house in which Sir John Ross had wintered in 1832-1833, with a quantity of stores and provisions of the *Fury*, that had been there since 1827, and were in excellent state of preservation.

Preparations were now made for leaving Port Leopold, Captain Ross's object being to examine Wellington Channel and, if feasible, to penetrate as far as Melville Island. To this end it was necessary to set to work with ice-saws and cut a channel of over two miles that the ships might be freed. This tedious work was accomplished by the last of August, but before leaving, a shelter was built on land, twelve months' provisions, a steam-launch, belonging to the *Investigator*, and such other stores being left behind as would be found welcome to Sir John Franklin's party should they reach that spot. Hardly had the ships got under way when a strong wind brought the ice down on them, and they were soon beset.

For some days it seemed as if the ships were hard fast for a dreary winter, but the wind shifted to the westward, the whole body of ice being driven to the eastward, and in the centre of a field of ice more than fifty miles in circumference, the ships were carried along the southern shore of Lancaster Sound. After passing its entrance, they drifted along the western shore of Baffin Bay until abreast of Pond Bay, when, with a suddenness that was all but miraculous, the field broke into innumerable fragments, and the ships were freed.

"At once all sail was set, warps were run out from all quarters, to assist the ship through the heavy floes, and at last the *Investigator* and *Enterprise* found themselves in open water."

"It is impossible," writes Ross, "to convey any idea of the sensation we experienced when we found ourselves once more at liberty; many a heart poured forth its praises and thanksgivings to Almighty God for this unlooked-for deliverance.

"The advance of winter had now closed all the harbours against us; and as it was impossible to penetrate to the westward through the pack from which we had just been liberated, I made the signal to the *Investigator* of my intention to return to England."

Thus the three expeditions so far sent out had not met with success, and the anxiety in England over the fate of the *Erebus* and *Terror* was increasing. In March, 1848, the Admiralty offered the sum of one hundred guineas or more to the crews of any whaling ships that should bring accurate tidings of the missing ships and of Franklin.

In March, 1849, the British government offered another reward of twenty thousand pounds "to such private ship, or by distribution among such private ships, or to any exploring party or parties, of any country, as might, in the judgment of the Board of Admiralty, have rendered efficient assistance to Sir John Franklin, his ships, or their crews, and might have contributed directly to extricate them from the ice."

THE LADY FRANKLIN EXPEDITION

Lady Franklin, whose devotion and courage had won the admiration of the world, offered two thousand pounds and three thousand pounds to officers and crew of any ship that should render assistance to her husband and, if necessary, bring Sir John Franklin and the party back to England.

In the spring of 1849, she sent out provisions and coal for the use of the missing ships, and these were carried in the whaling ship *Truelove*, in charge of Mr. Parker, and were landed at Cape Hay on the south side of Lancaster Sound.

In 1849, Dr. Goodsir, whose brother had sailed in the *Erebus* as assistant surgeon, went north on the whaling ship *Advice*, under Captain Penny, and penetrated to Lancaster Sound, but was debarred from entering Prince Regent Inlet by the ice. The *Advice* closely skirted the shores, and deposited provisions, but found no traces of the missing ships, and returned to England. In the meantime, the *Enterprise* and *Investigator*, the gallant ships of the third government expedition previously described, were being refitted and provisioned for the purpose of going by way of South America to Behring Strait. Sailing from Plymouth Sound January 20, 1850, the *Enterprise* under the command of Captain Richard Collinson, and the *Investigator* under Commander M'Clure, made a comparatively fast run to the Pacific. By the middle of August the *Enterprise* fell in with the ice. At Grantly Harbor, communication with the *Plover* and *Herald* determined Captain Collinson to proceed to Hongkong, there to replenish his stores and not attempt to penetrate the ice until the following April.

In the meantime the *North Star* with her provisions and despatches had spent the winter in North Star Bay, in Wolstenholme Sound, 76° 33′ north latitude and 68° 56′ west longitude. Not until August, 1850, did she get free of her retreat, and some days later in Lancaster Sound she spoke the *Lady Franklin* and *Sophia* under the command of Mr. Penny. These ships had been equipped mainly at the expense of Lady Franklin; had sailed early in the spring and, though independent of the government expeditions, were to coöperate with them as circumstances demanded. Later the *North Star* fell in with the *Felix*, a schooner-rigged vessel of one hundred and twenty tons, provisioned for eighteen months and under that veteran sea captain and explorer, Sir John Ross. The *Felix* had been equipped by public subscription and sent out for the purpose of searching the west side of the entrance of Wellington Channel from Cape Hotham to Banks Land.

The *North Star* deposited a quantity of provisions at a point the commander named Navy Board Inlet, on the mainland behind Wollaston Island, and erected a cairn and flagstaff, having first made an unsuccessful attempt to reach Port Bowen and Port Neale. In Possession Bay she spoke the *Prince Albert*, that gallant little craft, equipped in greater part by the devoted Lady Franklin, who had raised the necessary funds by selling out all personal securities which she could legally touch. Commander Charles C. Forsyth and Mr. W. P. Snow had volunteered their services without compensation, and the object of this expedition was to examine the shores of Prince Regent Inlet and the Gulf of Boothia and send out travelling parties to examine the west side of Boothia down to Dease and Simpson straits.

Shortly after this, the *North Star* turned homeward, reaching Spithead, England, September 28, 1850.

The British government had by now outfitted two strong teak-built ships, the *Resolute* and the *Assistance*, and two steam vessels, the *Pioneer* and *Intrepid*. The object of this expedition was to renew the search by way of Baffin Bay and Lancaster Sound. Captain H. T. Austin commanded the *Resolute*, Captain Ommaney the *Assistance*, Lieutenant Sherard Osborn the *Pioneer*, and Lieutenant Commander Cator the *Intrepid*. Of what they accomplished, we shall speak later.

As early as April 4, 1849, Lady Franklin had made a heartrending appeal to the President of the United States, in which she called on the American nation, as a "kindred people, to join heart and hand in the enterprise of snatching the lost navigators from a dreary grave." Such an eloquent appeal could not help but rouse the country to the strongest feeling of sympathy and interest. But the prolonged delays incident to our national legislation threatened to defeat her request, until a generous philanthropist, Mr. Henry Grinnell, a New York merchant of great wealth, stepped forward with the munificent offer of two well-equipped vessels, the *Advance* of one hundred and forty tons, and the *Rescue* of ninety tons, which he placed at the disposition of the government. Congress accepted this generous gift, and the ships were placed under the direction

of the Navy Board. The command was given to Lieutenant E. De Haven, a most zealous and able naval officer; Mr. Murdock was sailing master, with Dr. E. K. Kane, that remarkable man "weak in body but great in mind," whose succeeding journeys contributed so much to solving the mystery surrounding the fate of the lost ships.

FIRST GRINNELL EXPEDITION

The Grinnell expedition left New York on May 23, 1850, and was absent about sixteen months.

It will thus be seen that the Arctic seas had never been so replete with expeditions, whose heroic object was the search for missing comrades; and the year 1850-1851 was one of unparalleled adventure, exploration, and discovery, but alas! only the most meagre traces of the brave mariners were found, whose deplorable fate stirred the sympathy of the civilized world.

The unfavourable conditions of the "middle ice" in Baffin Bay and the Melville Bay barrier caused the searching expeditions great difficulties and discouraging delays. So strenuous were the conditions at times that the officers and crews of the smaller vessels made every preparation to leave the ships at a moment's notice, should these vessels be crushed in the ice. By boring, tracking, and cutting, and by one ship towing the other through loose ice as the occasion demanded, slow but steady advance was made to the desired latitudes. Most interesting are the experiences of the little *Prince Albert*, Lady Franklin's ship.

In describing a daring attack of this little craft upon ice-floes, Mr. Snow writes most graphically:—

"It was determined by Captain Forsyth boldly to try and break through the impediment, by forcing the ship under a press of canvas. Accordingly, all sail was set and the ship was steering direct for the narrowest and most broken part of the neck. As this was the first and only time the Prince Albert was made to come direct upon the ice to break it with the force she would derive from a press of sail, we were all anxious to see how she would stand it; and right well did she bear the test. The two mates were aloft in the 'crow's nest' to *con* the vessel; I was standing on the extreme point of her bow and holding on by the fore-stay to direct her movement when immediately upon the ice; and Captain Forsyth was by the side of the helmsman. Every man was at some particular station, and ready to perform anything that was instantly required of him. Cook and steward were also on deck; and throughout the ship an almost breathless anxiety prevailed; for, it must be remembered, it was not a large and powerful ship, but a small, and comparatively fragile one, that was now about to try of her own accord, and with her own strength, to break a piece of ice some feet thick, though not very broad. On either side of her were heavy floes and sconce pieces; and it required the greatest nicety in guiding her, that she might, in her strongest part, the bow, hit the precise spot where the neck was weakest, and not come upon any other part where she could do nothing but severely injure herself.

"On she came, at a rate of full five miles per hour; gaining, as she proceeded, increased impetus, until she rushed towards it with a speed of at least eight miles in the hour. The distance from the neck was about a mile, and the breeze blew steadily upon it. The weakest and narrowest part was that close to the starboard floe, and to *that* our eyes were all directed.

"'Port! starboard! So—O—steady!' was every now and then bawled out with stentorian lungs from aloft, and as energetically and promptly repeated, by the captain below, to the man at the wheel. Presently she came close to—she was almost upon it—a mistaken hail from aloft would have put her helm *a-port*, and sent her *crushing* upon the heavy floe. I heard the order '*a-port*,' and, before it had been repeated, shouted loudly, with the men around me, who also saw the mistake, 'starboard! *starboard! hard a-starboard!*' and in the next instant, with a tremendous blow, that for the moment made her rebound and tremble, she struck the ice in the exact point, and caused it to rend apart in several fragments. Ice poles and boat hooks were immediately in request; and myself and half a dozen men sprang instantly over the bows, working with hands and feet and with all our might in removing the broken pieces by pushing them ahead of the vessel; in which labour, she, herself, materially aided us by her own power pressing upon them. In a moment or two it was effected, and throwing ourselves aboard again like so many wild cats, we prepared for the next encounter.

"This, however, proved nothing like the other. The first blow sent the whole of it flying in all directions, and the little *Prince*, as if in haughty disdain, passed through without once stopping, pushing aside the pieces, as they came against her. In another moment or two we were in a larger sheet of water, though to our disappointment blocked up at the extreme end by small bergs and huge hummocks, which latter had, apparently, been thus thrown up in consequence of some late severe squeeze there. We were, therefore, again obliged to make fast."

Thursday, August 15, Mr. Snow makes the entry, "We were, now, fairly in what is called by Arctic seamen, the 'North Water,' and all seemed clear before us."

By the 21st the little *Prince Albert* found herself off Port Leopold. Here a party made a difficult landing in a gutta-percha boat and found the house constructed by Sir James C. Ross, somewhat rent by the winter storms, but the provisions were in excellent condition and the little steam-launch ready to carry any shipwrecked crew to safety.

The *Prince Albert* now made for Prince Regent Inlet, and soon after stood off Fury Beach. From this point the outlook was discouraging, as an expanse of hummocky ice without the slightest sign of an opening extended as far as the eye could reach.

It was now found necessary to abandon the main object of the expedition; that is, the examination of the shores of Boothia, and the ship turned with the purpose of closely scanning the shores and headlands at the throat of Barrow Strait and a short distance up Wellington Channel. In Barrow Strait, they spoke the American brig *Advance*; by the 24th they neared Cape Hind. On this day they saw the *Lady Franklin* and *Sophia*, and later observed three more ships in Wellington Channel.

The next day, while off Cape Spencer, the officers of the *Prince Albert* saw that to push further into the ice-pack through the few lanes still open might mean, in case of a sudden nip, being shut up for the winter, so it was reluctantly decided to make for home.

CAPTAIN OMMANEY

Leaving behind them that noble fleet of searching vessels, including the *Assistance*, the *Lady Franklin*, the *Sophia*, the *Rescue*, and, though not visible, the *Advance* and *Intrepid*, the *Prince Albert* turned her bow homeward. At Cape Riley the officers noticed a signal-post and immediately sent a boat ashore to discover what it meant.

"As the boat touched the shelving rocks," writes Mr. Snow, "I hastily sprang out into the water, leaving the men to secure her; and ran to the signal-post about fifty yards off. I was there in a moment, with Grate close at my heels. A few paces off I observed another and a rougher post erected, but this one had a small flag flying, and was evidently the principal. I really cannot tell whether the cylinder handed to me in the course of a second or two had been buried or merely tied to the post, so intent was I upon conjecturing what news I should receive. My hands trembled with eagerness, and I could hardly read the paper. It was as follows:—

"'Her Majesty's Arctic Searching Expedition.

"'This is to certify that Captain Ommaney, with the officers of her Majesty's ships *Assistance* and *Intrepid*, landed at Cape Riley on the 23d of August, 1850, where he found traces of an encampment, and collected the remains of materials which evidently prove that some party belonging to her Majesty's ships have been detained on this spot. Beechey Island was also examined, where traces were found of the same party.

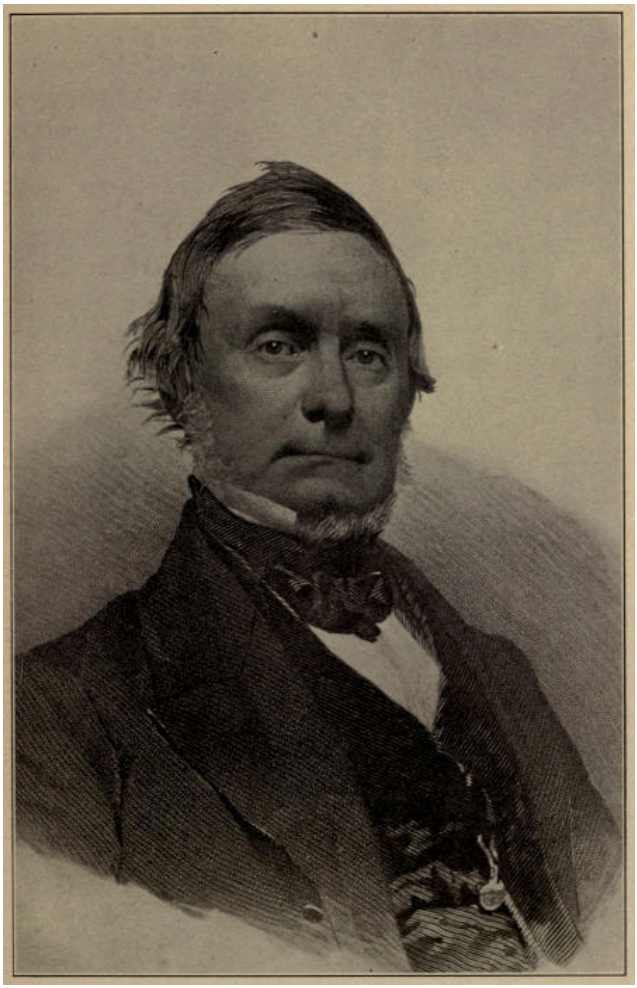
"'This is also to give notice that a supply of provisions and fuel is at Port Leopold. Her Majesty's ships, *Assistance* and *Intrepid*, were detached from the squadron under Captain Austin, off Wolstenholme, on the 15th inst., since when they have examined the north shores of Lancaster Sound and Barrow Strait, without meeting any other traces. Captain Ommaney proceeds to Cape Hotham and Cape Walker in search for further traces of Sir John Franklin's expedition.

"'Dated on board her Majesty's ship *Assistance*, off Cape Riley, August 23, 1850.

"'ERASMUS OMMANEY.'"

"After the other signal-post had been examined," continues Mr. Snow, "I made a careful observation of everything around me, and commenced as close an investigation as the hurried nature of my visit, according to my orders, permitted me. The men had also, previously to my telling them and with an alacrity that did them credit, commenced a most prying search. One in a short time brought me about an inch and a half square piece of canvas well bleached; another, the second mate, more fortunate, discovered a piece of rope, as I supposed a ratlin, and which was found to contain the Chatham Dock-yard Navy mark;[2] a third found a piece of bone, with two holes bored in it. Beef bones, and other unmistakable marks of the place having been used within some very few years by a party of Europeans, for some purpose or other, were discovered. The ground presented very much the appearance of having been turned into an encampment, for certain stones were so placed as to lead to the inference that tents had been erected within some of their enclosures, and in others a fire might have been made, but no marks of fire were visible.

"Four of these circular parcels of stones I counted, and observed another which might or might not have been a fifth."



Henry Grinnell

Continuing her homeward voyage with her precious relics, the *Prince Albert* reached Aberdeen, October 1. The Admiralty identified the bit of rope as being navy-yard manufacture of not later than 1841. The canvas was also believed to be of British manufacture. The meat bones seemed to bear exactly the marks of the ship's provisions used about five years back, and the relics were identified as belonging to the ill-fated *Erebus* and *Terror*.

As soon as it was known among the other searching parties that Captain Ommaney had found traces of the missing expedition, Ross, Austin, Penny, and De Haven began a minute investigation of the surrounding locality and proved that Cape Spencer and Beechey Island at the entrance of Wellington Channel had been without doubt the site of Franklin's first winter quarters. At Cape Spencer, some ten miles above Cape Riley, a ground place for a tent was found, the floor paved with small stones. About the tent birds' bones and meat canisters were found. Numerous sledge tracks along the shore were also noticed.

LIEUTENANT OSBORN

Of the examination of Beechey Island, Lieutenant Osborn writes:—

"A long point of land slopes gradually from the southern bluffs of this now deeply interesting island, until it almost connects itself with the land of North Devon, forming on either side of it two good and commodious bays. On this slope a multitude of preserved-meat tins were strewed about; and near them, and on the ridge of the slope, a carefully constructed cairn was discovered; it consisted of layers of fitted tins, filled with gravel, and placed to form a firm and solid foundation. Beyond this, and along the northern shore of Beechey Island, the following traces were then quickly discovered: the embankment of a house, with carpenters' and armorers' working places, washing tubs, coal-bags, pieces of old clothing, rope, and, lastly, the graves of three of the crew of the *Erebus* and *Terror*, bearing date of the winter of 1845-1846. We, therefore, now had ascertained the first winter-quarters of Sir John Franklin.

"On the eastern slope of the ridge of Beechey Island, a remnant of a garden (for remnant it now only was, having been dug up in the search) told an interesting tale; its neatly-shaped, oval outline, the border carefully formed of moss lichen, poppies, and anemones, transplanted from

some more genial part of this dreary region,—contrived still to show symptoms of vitality; but the seeds which, doubtless, they had sowed in the garden had decayed away.

"Nearer to the beach, a heap of cinders and scraps of iron showed the armorer's working-place; and, along an old water-course, now chained up by frost, several tubs, constructed of the ends of salt-meat casks, left no doubt as to the washing-places of the men of Franklin's squadron. Happening to cross a level piece of ground, which as yet no one had lighted upon, I was pleased to see a pair of cashmere gloves laid out to dry, with two small stones on the palms to prevent their blowing away; they had been there since 1846. I took them up carefully, as melancholy mementoes of my missing friends. In another spot a flannel was discovered; and this, together with some things lying about, would, in my ignorance of wintering in the Arctic regions, have led me to suppose that there was considerable haste displayed in the departure of the *Erebus* and *Terror* from the spot, had not Captain Austin assured me that there was nothing to ground such a belief upon, and that, from experience, he could vouch for these being nothing more than the ordinary traces of a winter station; and this opinion was fully borne out by those officers who had, in the previous year, wintered in Port Leopold, one of them asserting that people left winter quarters too well pleased to escape to care much for a handful of shavings, an old coal-bag, or a washing tub."

The Graves on Beechey Island

On the headstones of the three graves resting in that bleak and desolate shore were the following inscriptions:—

Sacred
to the
Memory
of
W. Braine, R. M.
H. M. S. Erebus,
Died April 3rd, 1846,
Aged 32 years.
"Choose ye this day whom ye will serve."
Joshua, ch. XXIV. 15.

Sacred to the Memory of
John Hartwell, A. B. of H. M. S.
Erebus,
Aged 23 years.
"Thus saith the Lord, consider your ways."
Haggai, I. 7.

Sacred
to
The Memory
of
John Torrington,
Who departed this life,

January 1st, A.D., 1846,
On board of
H. M.'s Ship Terror,
Aged 20 years.

No other written record was found. The lost expedition had seemingly folded its tents, in the mysterious gloom of the Arctic night, and silently crept away.

Now, just as the searchers had struck the trail, and were hot upon the scent, the icy clutch of the long winter arrested their endeavours, imperiously demanded of them patience, courage, endurance, and enforced upon them the weariness of months of waiting. Thus the squadron took up winter quarters at the southern extremity of Cornwallis Land; the Grinnell expedition, following its instruction, made an attempt to return home; but was soon shut up in Wellington Channel, where the *Advance* and *Rescue* drifted backward and forward at the mercy of the ice. Of their attempts to escape being ice-bound for the winter, Dr. Kane draws a lively picture.

"September 13.

"The navigation is certainly exciting. I have never seen a description in my Arctic readings of anything like this. We are literally running for our lives, surrounded by the imminent hazards of sudden consolidation in an open sea. All minor perils, nips, bumps, and sunken bergs are discarded; we are staggering along under all sail, forcing our way while we can. One thump, received since I commenced writing, jerked the time-keeper from our binnacle down the cabin hatch, and, but for our strong bows, seven and a half solid feet, would have stove us in. Another time, we cleared a tongue of the main jack by riding it down at eight knots."

"We were obliged," he continues, "several times the next day to bore through the young ice; for the low temperature continued, and our wind lulled under Cape Hotham. The night gave us now three hours of complete darkness. It was danger to run on, yet equally danger to pause. Grim water was following close upon our heels; and even the Captain, sanguine and fearless in emergency as he always proved himself, as he saw the tenacious fields of sludge and pancake thickening around us, began to feel anxious. Mine was a jumble of sensations. I had been desirous to the last degree that we might remain on the field of search, and could hardly be satisfied at what promised to realize my wish. Yet I had hoped that our wintering would be near our English friends, that in case of trouble or disease we might mutually sustain each other. But the interval of fifty miles between us, in these inhospitable deserts, was as complete a separation as an entire continent; and I confess that I looked at the dark shadows closing around Barlow Inlet, the prison from which we cut ourselves on the seventh, just six days before, with feelings as sombre as the landscape itself. The sound of our vessel crunching her way through the new ice is not easy to describe. It was not like the grinding of the old formed ice, nor was it the slushy scraping of sludge. We may all of us remember in the skating frolics of early days, the peculiar reverberating outcry of a pebble, as we tossed it from us along the edges of an old mill-dam, and heard it dying away in echoes almost musical. Imagine such a tone as this, combined with the whir of rapid motion, and the rasping noise of close-grained sugar. I was listening to the sound in my little den, after a sorrowful day, close upon zero, trying to warm up my stiffened limbs. Presently it grew less, then increased, then stopped, then went on again, but jerking and irregular, and then it waned, and waned, and waned away to silence.

"Down came the captain: 'Doctor, the ice has caught us; we are frozen up.'"

In describing the discovery of new territory, Dr. Kane says:—

"On the 22d (September, 1850), our latitude was 75° 24′ 21′′. I now saw land to the north and west; its horizon that of rolling ground, without bluffs, terminating at its northern end. Still further on to the north came a strip without visible land, and then land again with mountain tops distant and 'rising above the clouds.' This last was the land which received from Captain De Haven the name of Mr. Grinnell."

ALBERT LAND

The following year (1851) this same land was seen by Captain Penny, and named by him Albert Land. The Americans naturally supposed that when it was made known that this land had been discovered by De Haven about eight months before it was reached by Captain Penny, the name "Albert" would be dropped, and that of "Grinnell" substituted. This, however, was not done. A strange, and certainly not very honourable, feeling of jealousy seems to have induced the Admiralty and Geographical Society to shut their eyes to the fact that the discovery of the land was due to the Americans. This famous controversy resulted in bitter condemnation of the English authorities for injustice and partiality.

DE HAVEN EXPEDITION

But to return to Dr. Kane's journal. On September 23, he pictures a fatal break-up of the ice:—

"How shall I describe to you this pressure, its fearfulness and sublimity! Nothing I have seen or read of approaches it. The voices of the ice and the heavy swash of the overturned hummock-tables are at this moment dinning in my ears. 'All hands' are on deck fighting our grim enemy.

"Fourteen inches of solid ice thickness, with some half dozen of snow, are, with the slow uniform advance of a mighty propelling power, driving in upon our vessel. As they strike her, the semi-plastic mass is impressed with a mould of her side, and then, urged on by the force behind, slides upward, and rises in great vertical tables. When these attain their utmost height, still pressed on by others, they topple over, and form a great embankment of fallen tables. At the same time, others take a downward direction, and when pushed on, as in the other case, form a similar pile underneath. The side on which one or the other of these actions takes place for the time varies with the direction of the force, and the strength of the opposite or resisting side, the inclination of the vessel, and the weight of the superincumbent mounds; and as these conditions follow each other in varying succession, the vessel becomes perfectly imbedded after a little while in crumbling and fractured ice."

"We are lifted bodily eighteen inches out of water," continues Dr. Kane. "The hummocks are reared up around the ship, so as to rise in some cases a couple of feet above our bulwarks—five feet above our deck. They are very often ten and twelve feet high. All hands are out, laboring with picks and crowbars to overturn the fragments that threaten to overwhelm us. Add to this darkness, snow, cold, and the absolute destitution of surrounding shores."

"October 6, Sunday. 12 Midnight. They report us adrift. Wind, a gale from the northward and westward. An odd cruise this! The American expedition fast in a lump of ice about as big as Washington Square, and driving, like a shanty on a raft, before a howling gale.

"November 25.

"Our daylight to-day was a mere name, three and a half hours of meagre twilight. I was struck for the first time with the bleached faces of my mess-mates.

"Seventy-seven days more without a sunrise! twenty-six before we reach the solstitial point of greatest darkness!

“December 22, Sunday. The solstice!—the midnight of the year!

“December 23, Monday. Perfect darkness! Drift unknown. Winds nearly at rest with the exception of a little gasp from the westward.

“December 24, Tuesday. ‘Through utter darkness borne.’

“December 25. ‘Ye Christmas of ye Arctic cruisers!’

“Our Christmas passed without a lack of the good things of this life. ‘Goodies’ we had galore; but that best of earthly blessings, the communion of loved sympathies, these Arctic cruisers had not. It was curious to observe the depressing influences of each man’s home thoughts, and absolutely saddening the effort of each man to impose upon his neighbor and be very boon and jolly. We joked incessantly, but badly, too; ate of good things, and drank up a moiety of our Heidsieck; and then we sang negro songs, wanting only time, measure, and harmony, but abounding in noise; and after a closing bumper to Mr. Grinnell, adjourned with creditable jollity from table to the theatre.”

“Never,” writes Dr. Kane, “had I enjoyed the tawdry quackery of the stage half so much.

“The ‘Blue Devils’: God bless us! but it was very, very funny. None knew their parts, and the prompter could not read glibly enough to do his office. Everything, whether jocose, or indignant, or commonplace, or pathetic, was delivered in a high-tragedy monotone of despair; five words at a time, or more or less, according to the facilities of the prompting. Megrim, with a pair of seal-skin boots, bestowed his gold upon the gentle Annette; and Annette, nearly six feet high, received it with mastodonic grace. Annette was an Irishman named Daly, and I might defy human being to hear her, while balanced on the heel of her boot, exclaim, in rich masculine brogue, ‘Och, feather,’ without roaring.

“After this followed *The Star Spangled Banner*; then a complicated Marseillaise by our French cook, Henri; then a sailor’s hornpipe by the diversely talented Bruce; the orchestra—Stewart playing out the intervals on the Jew’s-harp from the top of a lard-cask. In fact, we were very happy fellows. We had had a foot race in the morning over the midnight ice for three purses of a flannel shirt each, and a splicing of the main brace. The day was night, the stars shining feebly through the mist.

“December 28, Saturday.

“From my very soul do I rejoice at the coming sun. Evidences not to be mistaken convince me that the health of our crew, never resting upon a very sound basis, must sink under the continued influences of darkness and cold. The temperature and foulness of air in the between-deck Tartarus, cannot be amended, otherwise it would be my duty to urge a change. Between the smoke of lamps, the dry heat of stoves, and the fumes of the galley, all of them unintermitting, what wonder that we grow feeble. The short race of Christmas Day knocked up all our officers except Griffen. It pained me to see my friend Lovell, our strongest man, fainting with the exertion. The symptoms of scurvy among the crew are still increasing, and more general. Faces are growing pale; and an indolence akin to apathy seems to be creeping over us. I long for the light. Dear, dear sun, no wonder you are worshipped!”

It may be imagined with what rejoicings they welcomed the glowing disk when on February 18 they first beheld it. Three cheers went up, and Kane himself fired a salute. Though the dawn increased, the cold twilight still continued, and the perils of their situation were ever present. Many times the conditions of the ice threatened their destruction, but not until June 5 did its appalling disruption free them. In twenty minutes the ice, as far as the eye could reach, was a vast field of moving floes. Five days later they emerged into the open water and made for Godhaven on the coast of Greenland.

Here they underwent repairs, and, undaunted by the recent perils, again turned their prows to the north. Skirting the coast of Greenland as far as the 73d degree, they sailed to the westward and spoke an English whaling ship near the Dutch Island about the 7th and 8th of July. By the 11th they were pushing their way through the accumulations of ice in Baffin Bay, and here the gallant little *Prince Albert*, on her way back to join the searching squadron, continued in their company until the 3d of August, when she hove off to the westward to try a more southern passage.

Pushing bravely against the odds of impenetrable ice barriers; blocked at every manœuvre to force a passage; nine more months of winter threatening the enfeebled crew; the brave De Haven determined to give up the unequal battle, and Dr. Kane makes this entry:—

“August 19, Tuesday:

“*Rescue* is close astern of us; she got through about noon yesterday. Our commodore has resolved on an immediate return to the United States.”

CHAPTER VIII

Search for Sir John Franklin *continued*.—Sledge journey of Captain Austin's squadron.—Return of *Prince Albert* under command of Captain Kennedy.—Bellot.

SEARCH FOR SIR JOHN FRANKLIN

The British searching squadron, including the *Resolute*, the *Assistance*, the *Pioneer*, and the *Intrepid*, while wintering in the vicinity of Cornwallis Island and Griffith Island, had held frequent communication and planned for exploration journeys on sledges to be undertaken as early as possible the following spring. Before the winter became too severe, depots of provisions were established to be used by the sledging parties, and the men trained in sledge dragging and walking exercises that they might be in good physical condition when the time for a test of endurance should arrive. Under the direction of Captain Austin, detailed plans were formed for careful exploration of islands and lands along Parry Strait. To Captain Penny was entrusted the thorough search of Wellington Channel.

As early as the 12th of April, 1851, the parties intended for the westward explorations, numbering one hundred and four men, proceeded under the command of Captain Ommaney to the northwest end of Griffith Island, and there the entire encampment was closely inspected by Captain Austin.

E. K. Kane

The extraordinary records of the six "extended" parties, those with instructions to go the farthest possible distance, were as follows: First, the sledge *Reliance*, under Captain Ommaney, travelled on south shore, was absent sixty days, and covered four hundred and eighty miles, two hundred and five of which was previously unknown coast. Second, the sledge *True Blue*, under Lieutenant Osborn, travelled on the south shore,

was absent fifty-eight days, covered five hundred and six miles, and discovered seventy miles of coast. The third sledge, *Enterprise*, under Lieutenant Brown, travelled on south shore, was absent forty-four days, and covered three hundred and seventy-five miles, including one hundred and fifty of previously unknown coast. The *True Blue*, making the most western point reached 103° 25′ west longitude, a point about halfway between Leopold Island and Point Turnagain on the American continent.

Of the three parties designed for the search of the north shore, the first sledge, *Lady Franklin*, under command of Lieutenant Aldrich, was absent sixty-two days, covered five hundred and fifty miles, and discovered seventy miles of coast. The second sledge, *Perseverance*, under Lieutenant M'Clintock, was absent eighty days, and covered seven hundred and sixty miles, forty miles of which was previously undiscovered coast. The third sledge, *Resolute*, under Surgeon Bradford, was absent eighty days, and covered six hundred and sixty-nine miles, and discovered one hundred and thirty-five miles of coast.

To Lieutenant M'Clintock was due the honour of reaching the farthest west, 74° 38′ north latitude, and 114° 20′ west longitude. On this journey M'Clintock reached Bushman Cove, Melville Island, where Parry had encamped June 11, 1820. Traces of his stay were found by M'Clintock and later, upon crossing to Winter Harbor, on a large stone boulder he found the following inscription:—

His Britannic Majesty's
Ships Hecla and Griper,
Commanded by
W. C. Parry and Mr. Liddon,
Wintered in the adjacent
Harbor 1819-20.
A. Tisher. Sculpt.

It was evident that no man had visited the spot since that early date, and a hare was found near the rock so tame that she would almost allow the men to touch her. M'Clintock added the figures 1851 to the inscription and prepared to return to the ships, which he reached July 4.

The parties organized for the purpose of depositing provisions, setting up marks, and making observations, were absent from the ships during periods of from twelve to thirty-four days. Strange as it may seem, they underwent greater hardship and suffered more than the "extended parties," which returned in excellent condition, whereas no less than twenty-eight men were frost-bitten, and one died from exhaustion, of those sharing the shorter excursions.

The six parties designated for the exploration of Wellington Channel were under the command of Captain Stuart, Messrs. Marshall, J. Stewart, and Reid, and Surgeons Sutherland and Goodsir.

From the outset, April 17, they encountered disagreeable weather, which considerably delayed their progress. However, Captain Penny, who had general supervision, was fortunate enough to discover "a wide westward strait of open water, lying along the further side of the lands which flank Barrow's Strait and Parry's Strait." Entering the ice lanes with a boat, he penetrated up Queen's Channel as far as Baring Island and Cape Beecher. Being able to proceed no further, he returned to the ships. At this point "a fine open sea stretched invitingly away to the north, but his fragile boat was ill-equipped for a voyage of discovery. Fully persuaded that Franklin must have followed this route, he failed, however, in convincing Captain Austin of the truth of his theory, and as, without that officer's coöperation, nothing could be effected, he was compelled to follow the course pointed out by the Admiralty squadron, which, after two ineffectual attempts to enter Smith and Jones sounds, returned to England."

An unlikely tale told to old Sir John Ross by the Eskimos near Cape York, to the effect that in the winter of 1846 two ships were wrecked in the ice off Cape Dudley Digges and afterwards ransacked and burned by the natives, and the crew massacred, determined Sir John to investigate the story as closely as possible and then return in the *Felix* to England. Even after his return home, he seems to have been firm in the belief that Sir John Franklin and the crew of the *Erebus* and *Terror* perished in Baffin Bay.

Having made a close inspection of this bay before his return, he describes the results of his search as follows: "Many important corrections and valuable additions were made to the charts of the much frequented eastern side of Baffin Bay, which has been more closely observed and navigated by this than any former expedition; and, much to my satisfaction, confirming the latitude and longitude of every headland I had the opportunity of laying down in the year 1818."

We turn now to continue the story of another expedition.

The little *Prince Albert*, which spoke the *Advance* and *Rescue* in Baffin Bay, July 12, 1851, on her return trip to northern waters, had been most carefully overhauled and refitted for her arduous enterprise. Her commander was Captain Kennedy, and second in command was Lieutenant J. Bellot, a young French officer noted for his adventurous spirit and charming personality, who had volunteered his services. Among the crew, all of whom were picked men, was John Hepburn, who had accompanied Sir John Franklin on that first land expedition which came near proving fatal to the entire party. Another of the men had accompanied Dr. Rae on his first journey to Repulse Bay, and a third had accompanied Sir John Richardson in his boat journey through the interior of America.

Discouraging conditions of ice and weather met the gallant crew in Prince Regent Inlet. Ploughing a way through a tortuous course, the *Prince Albert* succeeding in reaching Elwin Bay only to find it ice-bound and impassable. Batty Bay and Fury Beach were also impossible of access, and now the condition of the ice becoming so alarming, they gave up an attempt at the west side of the inlet and made a hasty retreat to Port Bowen,—where traces of Sir Edward Parry's party, which wintered there in 1825, were still discernible.

To avoid wintering at so great a distance from the scene of the explorations planned for the following spring, they recrossed the strait and approached the shore for the purpose of making a landing. Captain Kennedy, accompanied by four of the crew, cast off in a gutta-percha boat and made for the beach. Upon landing, Captain Kennedy ascended the cliffs of Cape Seppings, and decried Port Leopold free from ice. Hoping to put the *Prince Albert* in this safe harbour, he at once made an attempt to rejoin his ship, but, upon reaching the shore, found to his consternation that, owing to the sudden moving of the ice-pack, he could not rejoin her and that she was being merrily carried down-stream in spite of every effort of the men on board to stop her progress. The shadows of night came upon them rapidly, and the tempestuous roaring, grinding, and tossing of the ice was all that could be seen or heard.

A most uncomfortable night followed their unlucky adventure. Their boat was the only available shelter, and this served for a covering under which one man at a time took an hour's uncomfortable rest, while the others exercised to keep their bodies from freezing. The next morning at

dawn, upon mounting the cliffs once more, their alarm was increased by the melancholy fact that the ship had completely disappeared from view.

No more forlorn castaways can be imagined. The only mitigating circumstance in their sorry condition was the knowledge that on the other side of the harbour at Whaler Point, Sir James Ross had left a deposit of provisions about two years before. To this point their steps were now directed, and upon reaching the depot their hopes revived somewhat when they found the condition of the provisions excellent. The house left by Sir James Ross was in fair condition, the flag and record were easily found, and, resigned to their fate, Kennedy and his companions determined to face the possibility of passing the long Arctic winter with the best possible grace.

"It was now," says Kennedy, "the 10th of September. Winter was evidently fast setting in, and, from the distance the ship had been carried during that disastrous night, whether out to sea or down the inlet we could not conjecture—there was no hope of our being able to rejoin her, at least during the present season. There remained, therefore, no alternative but to make up our minds to pass the winter, if necessary, where we were. The first object to be attended to was the erecting of some sort of shelter against the daily increasing inclemency of the weather; and for this purpose, the launch, left by Sir James Ross, was selected. Her main mast was laid on supports at the bow and stern, about nine feet in height, and by spreading two of her sails over this a very tolerable roof was obtained. A stove was set up in the body of the boat, with the pipes running through the roof; and we were soon sitting by a comfortable fire, which, after our long exposure to the wet and cold, we stood very much in need of."

RETURN OF THE PRINCE ALBERT

It was the intention of Captain Kennedy to make sledge journeys to distant points in the hope of sighting the *Prince Albert* or discovering traces of the *Erebus* and *Terror*,—but before the necessary preparations were completed, some five weeks after their separation from the ship, a shot echoed through the stillness, and Lieutenant Bellot and seven of the crew of the *Prince Albert* came to their rescue. After two previous attempts to find their long-lost comrades, they had succeeded in dragging the jolly-boat all the way from Batty Bay, where the *Prince Albert* was securely moored. Of this happy reunion, Captain Kennedy writes:—

"It can hardly be a matter of surprise that the reaction in the state of our feelings, consequent upon this unexpected meeting with our long-lost friends, should have been striking and immediate, and in direct proportion to our former solicitude and dejection.

"It was but five weeks 'by the chime' since our disastrous separation from the *Prince Albert*; but they were five *years* of dreary anxiety and despondency fast merging into something like despair. We had a jovial evening, let the reader be well assured, in our little launch that 17th of October, and a jovial housewarming, out of Her Majesty's stores at Port Leopold, enjoyed none the less from the absence of any grim vision of a long reckoning to discharge with 'mine host' on the morrow. And we kept it up, too, let me tell you, with long yarns of our adventures, and rough old sea songs; and in brimming cups of famous chocolate, 'cheering but not inebriating,' drank most loyally (at Her Majesty's expense) a happy meeting with H. M. S. *Erebus* and *Terror*, and their gallant crews.

"It was some days after this before our preparations for returning to the ship were completed. At last, on Wednesday, the 22d, exactly six weeks after our first detention at Whaler Point, we set out; after depositing a paper in the cylinder, containing information of our proceedings up to this date, and placing all the loose stores in proper order and security for the use of any party that should come after us.

"Our provisions and 'traps' of all kinds were stowed on a strong sleigh. A mast was then set, and a sail hoisted in the jolly-boat, and away we went before a spanking fair wind over the smooth ice of Leopold Harbor at a rate which 'all the King's horses' could hardly have been equal to. We had not gone half across the bay, however, before our sleigh, wholly unused to this style of locomotion, broke down, and it cost us the best part of the day, before we could repair our damage and start afresh."

"In our endeavor to reach Mr. Bellot's encampment of the 16th," continues Mr. Kennedy, "we continued on foot longer than we should have done, and the consequence was, that being overtaken by night before looking for camping ground, we found ourselves, before we were aware or had time to reflect on the predicament we had got into, groping about, in the darkness, and with a heavy shower of snow falling, for some bit of terra firma, (for we had been all day upon the ice), where we could pitch the tent. We stumbled at last, after making our shins more freely acquainted than was altogether agreeable with the sharp edges of the broken ice, into a fine square of clear beach, between some heavy masses of stranded ice. Choosing out the softest part of a shelving rock of limestone of which the beach was composed, we pitched the tent, spread the oilcloth, and with some coals, which we had brought with us from Whaler Point, boiled a good kettle of tea for all hands.

"All these preparations were, however, but introductory to another, which we found a most difficult problem indeed—namely, to contrive how we were all to pass the night in the single little tent we had brought with us. We all got in, certainly, and got the kettle in the middle; but as for lying down to sleep it was utterly out of the question. A London omnibus on a racing day after five o'clock, was the only parallel I could think of to our attempt to stow thirteen men, including our colossal carpenter, into a tent intended for six. At last, after some deliberation, it was arranged that we should sit down six in a row, on each side, which would leave us about three feet clear to stretch our legs. Mr. Bellot, who formed the thirteenth, being the most compact and stowable of the party, agreed to squeeze in underneath them, stipulating only for a clear foot square for his head alongside the tea-kettle. Being unprovided with a candlestick, even if there had been room to place one anywhere, it was arranged that each of us should hold the candle in his hand for a quarter of an hour, and then pass it to his neighbor, and thus by the aid of our flickering taper, through the thick steam of the boiling kettle, we had just enough light to prevent us putting our tea into our neighbor's mouth, instead of our own.

"'Well, boys,' suggests our ever jovial first mate, Henry Anderson, 'now we are fairly seated, I'm thinking, as we can do nothing else, we had best make a night of it again. What say you to a song, Dick?' Whereupon, nothing loath, Mr. Richard Webb strikes up, in the first style of forecastle execution, 'Susannah, don't you cry for me,' which is, of course, received by the company with the utmost enthusiasm, 'Mr. Webb, your health and song,' and general applause, and emptying of tea-cans, which Mr. John Smith, pleading inability to sing, undertakes to replenish for the night.

"'Irvine, my lad, pass the candle, and give us the "Tailor."' Mr. Irvine, you must understand, gentle reader, has distinguished himself by some extraordinary performances on the blanket-bags, during our late detention at Whaler Point, in virtue of which he has been formally installed 'Tailor of the Expedition.'

"'The Tailor' is accordingly given, *con amore*, and is a remarkable history of knight of the thimble, who, burying his goose, like Prospero his books, 'beyond the reach of plummet,' becomes a 'Sailor bold,' and in that capacity enslaves the heart of a lovely lady of incalculable wealth, who, etc., etc. We all know the rest. 'Kenneth, you monster, take that clumsy foot of yours off my stomach, will you?' cried out poor Mr. Bellot, smothered beneath the weight of four-and-twenty legs, upon which the carpenter, in his eagerness to comply, probably drives his foot into Mr.

Bellot's eye. And so, passing the song and the joke around, Mr. Bellot, occasionally making a sudden desperate effort to get up, and sitting down again in despair,—with a long 'blow' like a grampus, we make what Anderson calls 'a night of it.' No management, however, can make our solitary candle last beyond twelve o'clock, or thereabouts. Notwithstanding this extinguisher to the entertainments of the evening, Mr. Anderson, while some are dozing and hob-a-nobbing in their dreams, may still be heard keeping it up with unabated spirit in the dark, wakening every sleeper now and then with some tremendous chorus he has contrived to get up among his friends, for the 'Bay of Biscay,' or some favourite Greenland melody, with its inspiriting burthen of 'Cheeri-lie, ah! cheeri-lie!'"

The "Rescue" in Melville Bay

A warm welcome awaited the lost ones, when a few days later they reached the ship.

"With our return to the vessel," writes Mr. Kennedy, "may be said to have closed all our operations, as far as the ship was concerned, in the Arctic seas for the year 1851. There remained now only to make our arrangements for the vessel passing the next six or eight months where we were, and for preparing for our own winter journeys."

Preparations were completed by January 5, 1852, and the morning of that day the men on snow-shoes, with dogs dragging the sledges, started off amid the cheers of their comrades and the yelping and barking of the dogs.

"The first object of the journey," continues Mr. Kennedy, "was, of course, to ascertain whether Fury Beach had been a retreating point to any of Sir John Franklin's party since it was visited by Lieutenant Robinson, of the *Enterprise*, in 1849. A secondary object, should our expectations in this respect not be realized, was to form a first depot of provisions here, with the view of carrying out a more extended search as soon as circumstances would permit. It was desirable at the same time to ascertain the state of the roads, by which, of course, I mean the yet untrodden surface of the snow or ice, in the direction in which we meant to go, before commencing any transport, on a large scale, between the ship and Fury Beach; and it was thought advisable, therefore, to go comparatively light. A small supply of pemmican was all we took with us in addition to our travelling requirements, consisting of a tent and poles, blanketing and provisions for a week, some guns and ammunition, fuel, and a cooking apparatus, in all weighing from two hundred to two hundred and fifty pounds."

From the outset the travelling was difficult and arduous. "... not infrequently after toiling to the top of an incline, a lurch of the sleigh would send us careening in a very lively and unexpected manner to the bottom. Here follows an incident in our first day's journey, which caused us some amusement at the time, and carried a lesson with it, whenever we had to encounter any of these obstacles afterward.

"We had got about halfway up one of those villainous steeps, when our entire cortège gave unmistakable signs of a tendency to seek a sudden descent. There was just time for us to cast off the traces, all but poor Mr. Bellot, who was not sufficiently alert in disengaging his, when away went the sleigh and dogs, and Mr. Bellot after them into an abyss at the bottom, where the only indication of the catastrophe that could be seen was some six inches of Mr. Bellot's heels above the surface of the snow. We dug him out 'a wiser and a better man' for the rest of the journey, whenever any of these pestilent slopes had to be encountered thereafter."

CAPTAIN KENNEDY—BELLOT

On the 8th, the distance to Fury Beach being very short, Mr. Kennedy decided to leave the sledge and two of the men, and press on with Mr. Bellot, and one man unencumbered.

"It may be imagined with what feelings," says Kennedy, "when we really had come upon it, we approached a spot round which so many hopes and anxieties had so long centred. Every object, distinguished by the moonlight in the distance, became animated to our imaginations, into the forms of our long-absent countrymen; for had they been imprisoned anywhere in the Arctic Seas, within a reasonable distance of Fury Beach, here we felt assured some of them at least would have been now. But alas! for these fond hopes! How deeply, though perhaps

unconsciously cherished, none of us probably suspected, till standing under the tattered covering of Somerset House, and gazing silently upon the solitude around us, we felt as we turned to look mournfully on each other's faces, that the last ray of hope as to this cherished imagination had fled from our hearts. It is perhaps necessary for the vigorous prosecution of any difficult object that for the moment, some particular circumstance in the chain of operations by which it is to be effected, should seem to us so vitally important that the eye is blinded to all beyond. The spot on which we now stood had so long been associated in our minds with some clue to the discovery of the solution of the painful mystery which hung over the fate of Franklin, and had so long unconsciously perhaps coloured all our thought, that it was not without a pang, and a feeling as if the main purpose of our expedition had been defeated, that we found all our long-cherished anticipations shattered at a blow by the scene which met our eyes. Thus my friend and I stood paralyzed at the death-like solitude around us. No vestige of the visit of a human being was here since Lieutenant Robinson had examined the depot in 1849. The stores, still in the most perfect preservation, were precisely in the well-arranged condition, described in the clear report of that energetic officer."

"His own notice of his visit," continues Mr. Kennedy, "was deeply buried in the snow, and the index staff he had placed over it was thrown down and gnawed by the foxes. Wearied with a long and fruitless examination we took up our quarters for a repose of a few hours in Somerset House, the frame of which was still standing entire, but the covering blown to rags by the wind, and one end of the house nearly filled with snow. We lighted a fire on the stove which had heated the end occupied by Sir John Ross's crew during the dreary winter of 1832-33.

"After refreshing ourselves with a warm supper, and nodding for a few hours over the fire, we set out about 11 P.M. on our return to our encampment, which we reached by 2 A.M. of the following morning. Our return from this point to the ship, which we reached about 5 P.M. of Saturday the 10th, was not marked by any incident worthy of notice.

"We had deposited at our encampment a 90-pound case of pemmican, a bag of coals, two muskets, and some ammunition, which, while it served as a reserve for future explorations in this direction, materially lightened the labour of the dogs, and allowed us time for a more minute examination of the coast than we had been able to make during the outward journey. The result, however, was not in any respect more successful. No traces of any kind were discovered which could throw light on the objects of our search.

"Thus ended our first journey to Fury Beach, and its results satisfied us that, in the present state of the ice in Prince Regent's Inlet, the more extended explorations of the coastline, which we had calculated on being able to commence on our return to the ship, could not now be safely undertaken, and must for the present be postponed. We were most reluctantly compelled, therefore, to pass the next month in the ship, occupied in the same general routine duties as those on which we had been during the earlier part of the winter."

Captain Kennedy gives a vivid description of Arctic gales and the dangers of travel during a tempest. "About eight A.M. in the morning of the 13th February," he writes, "Mr. Bellot, the carpenter, Andrew Irvine, Henry Anderson (the first mate), and myself left the ship, taking with us two cases of pemmican, and three tin jars, each containing two gallons of spirits of wine, on a sledge, drawn by five Eskimo dogs, for the purpose of depositing them a short distance on the way to Fury Beach, and returning in the evening. After proceeding for a few hours, and making very fair progress along a tolerably good path, a strong wind arose, which by one P.M. had increased to a perfect hurricane, so thickly charged with snow that, in attempting to cross a bay on our return, we lost sight of the land by which our course homeward had been guided. In short, after wandering about for some time, scarcely able to distinguish each other at the distance of a few paces, we found that we had fairly lost our way. In this dilemma, we set two of the five dogs loose from the sledge, in the hope that they would act as guides better than when drawing; but this proved to be a mistake, as they would not leave the others. At last, however, they all set off together, taking the sledge with them and leaving us to our fate. As we afterwards found, they reached the ship without any difficulty, and, as may readily be supposed, put every one on board in a perfect fever of terror and anxiety as to what had become of us. In the meantime, we had gone on floundering over broken ice, until we had once more stumbled on the land, but where or what the land was we had fallen upon, nobody knew. It was something certainly to know we were not marching over the Inlet or out to sea, in which case we would have marched on, and in all probability never returned; but in other respects we had rather lost than gained by getting on terra firma. With an atmosphere as thick as pea-soup, and no sun, moon, or stars to be seen, there was no keeping the shore (and to go on one side or the other was to incur the certainty of losing ourselves again, either on the Inlet or on the land) without hugging close up and into a break-neck line of stranded fragments of ice, which indicated the direction of the beach.

"Along this formidable path we floundered on—now coming bump up against some huge fragment of ice, or pitching over the top of it into a hole, excavated in the snow at the bottom, by the whirling eddies of the wind; now walking, now crawling, occasionally tumbling into the snow, until we were all brought up by a cry of pain from one of the men who had met a '*bouleversement*' over the edge of a bank of ice. It was a sad accident, but the worst of it was, that after setting him on his legs, nothing could induce him to move a step farther. Here he was, and here he maintained he must remain '*coute qui coute*.' There was no reasoning with the poor fellow, who certainly had sustained a very severe injury, but not anything like so bad as he had imagined it, and it would never do to leave him lying here. So feigning to take him at his word, we proposed to bundle him up in a buffalo-robe and bury him in the snow for the night—comforting him with the assurance that we would certainly come back for him in the morning. This Arctic prescription had a magical effect upon our patient—the back and the broken bones were speedily forgotten, and in a short time he was on his legs again, and we all trudging on once more in the old rough and tumble style of progression, till about midnight, we found ourselves standing under the lee of something which looked like a bank of snow, but which, to our great gratification, proved to be the powder house we had erected on shore in the beginning of the winter. A consultation was now held whether we should cut our way into it and pass the night here, 'accoutred as we were,' or make for the ship, which we now knew could not be far off. Our decision was for the latter, and the only question now was, how to steer for the vessel. This, too, was decided upon at last, by each of the party pointing in turn, in the direction in which he thought the vessel lay, and then taking the mean of the bearings. To prevent our separating in the drift (for some of the party had by this time got so benumbed with cold, as to be unable to use their hands to clear their eyelids, and had thus become literally blind with the accumulation of the snow on their eyes), it was agreed that at certain intervals we should call and answer each other's names, and that those whose eyes had suffered least should take the others in tow. In this order, we proceeded for the vessel, and fortunately by the guidance of a solitary star, that could be faintly distinguished through the drift, got near enough to the ship to hear the wind whistling through the shrouds and were thus guided, rather by the ear than by the eye, to her position, and soon afterwards found ourselves on board, where we were received once more as those from the dead.

"These short journeys, however arduous, in which caches were established for future use, were only preliminary skirmishes to the 'grand journey' planned by Captain Kennedy with much forethought and in preparation for which days had been occupied in making suitable apparel, trappings, and sledges. It was expected that the journey would take at least three months. The particular direction our route ought to assume, was, of course, a matter to be regulated very much by the nature of the circumstances that might arise in the course of it. On one point only we

were decided, viz. that it should embrace Cape Walker to which, as the point of departure of Sir John Franklin for the unknown regions to the W. and S.W., had he decided upon this course, and not gone up Wellington Channel, much interest naturally attached.

"There were fourteen of the crew disposable in the ship," continues Captain Kennedy, "of whom four picked men were to go with Mr. Bellot and myself to Cape Walker, while the rest were to accompany us, as a fatigue party, as far as Fury Beach, which was to form the starting-point of the journey. Parties sent out on different occasions during the last two months, had taken in advance six cases of pemmican, six muskets, and a bag of coals. One case of pemmican, as already mentioned, had been deposited in January a few miles north of Fury Point. Our provisions, clothing, and bedding, drawn upon two Indian sleighs by our five dogs, had, of course, been reduced to whatever was strictly indispensable. Five gallons of spirits of wine were taken as a substitute for fuel. With proper management and economy, we hoped to make this last us till the spring, when, by the plan we proposed adopting, of travelling during the night instead of the day, we trusted, should a necessity arise for so doing, to be able to dispense with the use of fuel altogether.

"On the morning of the 20th of February, a scene of general bustle and excitement showed that all our arrangements had been completed, and that the long-deferred start for the grand journey was about to take place. A detachment of five men, Mr. Bellot, and myself, were all that could leave the ship at this time; the others appointed to join us being still under the doctor's attendance for slight and temporary inconvenience, frost-bites, etc. The whole crew, however, had mustered to see us as far as the south point of Batty Bay, all but our dear Hepburn, who, unable to control his manly emotion at parting with so many old friends, and above all at being unable to accompany us, took a touching farewell of us at the vessel: 'God bless you,' said he, grasping my hand with affectionate warmth, 'I cannot accompany you, and I cannot let all these men witness my emotion: let me part with you here, and may God grant that we meet in life and health, after the long and hazardous journey you are about to undertake.' Though this veteran hero saw much hardship and hazard in store before us, he would have seen none whatever had he been allowed to accompany us, but I could not for a moment entertain the idea of employing him on a journey, when there were so many younger men all emulous to be engaged on it, and more particularly when his services on board ship were so indispensable; and, by his kindly consenting to remain, I was relieved of all anxiety as respected the *Prince Albert*.

"Reaching the south point of Batty Bay, with our friendly escort, our two parties once more separated with many kindly and touching farewells and then, with three hearty cheers, diverging in our different routes, we were soon lost to each other in the mist and snow."

The fury of the equinoctial gales greatly impeded the advance of the party, frequently detaining them for several days at a time.

Sledges, moccasins, and snow-shoes were greatly damaged under the hard conditions of travel, and it was found necessary when the whole party had assembled at Fury Beach to send back to the ship for additional supplies. They also made use of the excellent stores found at the Fury Beach which had been left there thirty years before. It was decided, after careful calculation, that six men could carry provisions for the proposed journey of three months' duration; that fourteen men should travel as far as Brentford Bay, at which point eight would return to the ship, the remaining six to proceed, carrying with them all provisions and necessaries for the remainder of the trip.

The total dead weight of this equipment, including sledges and tackling, might be estimated at about two thousand pounds. "The whole was lashed down," writes Kennedy, "to the smallest possible compass on four flat-bottomed Indian sleighs, of which our five Eskimo dogs, assisted by two men to each sleigh, took two, while the rest of the men took the other two."

The day of their start proved mild and pleasant, and at first the travelling was good, the ice being sufficiently smooth to make easy and rapid progress. But such good fortune did not remain with them long, and the inevitable gales made travelling most difficult and painful. The usual snow huts were erected at night, under which they took such comfort as their short hours of rest afforded them. Frost-bites caused them much suffering, and to protect their faces they resorted to curious expedients.

"For the eyes," writes Kennedy, "we had goggles of glass, of wire-gauze, of crape, or of plain wood with a slit in the centre, in the manner of Eskimos. For the face, some had cloth-masks, with neat little crevices for the mouth, nose, and eyes; others were muffled up in the ordinary chin-cloth, and, for that most troublesome of the facial members, the nose, a strong party, with our always original carpenter at their head, had gutta-percha noses, lined with delicate soft flannel." Though admirable in theory, these contrivances proved failures in practice, and were all discarded except the chin-cloths and goggles.

On the 6th of April they reached Brentford Bay, and the fatigue party began their retrograde journey to the ship. At this point Kennedy discovered a strait running westward, separating North Somerset from Boothia Felix. This he named Bellot Strait, in honour of the brave young officer who had secured the affectionate regard of commander and crew. From here the party crossed Victoria Strait to Prince of Wales Land, naming many of the prominent headlands, bays, and islands.

On April 17 the thermometer stood at plus 22, "a temperature," writes Kennedy, "which, to our sensations, was absolutely oppressive. One of our dogs, through over-exertion, fainted in his traces, and lay gasping for breath for a quarter of an hour; but after recovering, went on as merrily as ever. These faithful creatures were perfect treasures to us throughout the journey. They were all suffering, like ourselves, from snow-blindness, but did not in the least relax their exertions on this account. The Eskimo's dog is, in fact, the camel of these northern deserts; the faithful attendant of man, and the sharer of his labors and privations."

The flat country over which they were travelling, and the close proximity of the Magnetic Pole, which rendered their compass of little use, made it particularly difficult to keep a westerly course. It was hoped that this direction would lead to a sea which would conduct them northward to Cape Walker. From this point they hoped to ascertain if there was any westward channel or strait through which Sir John Franklin might have penetrated. After marching for thirteen days, and reaching the hundredth degree of west longitude, without coming to a sea, Kennedy decided to turn northward to Cape Walker.

"Being now satisfied," he writes, "that Sir James Ross had, in his land journey along the western shore of North Somerset, in 1849, mistaken the very low level land over which we had been travelling for a western sea, I felt no longer justified in continuing a western course. Whatever passage might exist to the south-west of Cape Walker, I felt assured must now be on our north. I determined therefore, from this time forward, to direct our course northward, until we should fall upon some channel which we knew must exist not far from us, in this direction, by which Franklin might have passed to the southwest."

The channel for which they were in search could not be found. Boisterous gales still pursued them, and the men began to show the effects of exhaustion and exposure in the form of the dreaded scurvy. They, therefore, turned eastward again and, reaching Cape Burney, they made next for Cape Walker, which first loomed in the distance the 4th of May. Their disappointment was great at finding no trace of Franklin's expedition.

“Wearied and dispirited beyond description,” writes Captain Kennedy, “at the fruitless result of our long and anxious labours, we returned to our encampment, guided through a heavy snow-storm by the report of guns, which I had directed to be fired every fifteen minutes, to make preparation for our return homeward. This could be effected either by pushing directly for Batty Bay, across North Somerset, a distance in a straight line of not more than six days’ journey, or by following the coast round to Whaler Point, and thence to the ship.” The latter route was chosen, though the distance was nearly double that of the other, and after an absence of ninety-seven days and covering about eleven hundred miles, they at last reached the ship May 30. A remarkable journey “for six men and five dogs, dragging for most of the way two thousand pounds’ weight, and sleeping in snowhouses, encamping on frozen seas, and rarely having a fire when they halted to recruit.”

Preparations for the return to England were now commenced. June and July passed without the vessel becoming free from the ice, but by the 6th of August, after sawing and blasting, the little craft was liberated. At Beechey Island, which Captain Kennedy reached the 19th, he found the depot ship *North Star*, now attached to Sir E. Belcher’s expedition, engaged in sawing into winter quarters. Proceeding in her course, the *Prince Albert* reached England, after an uneventful voyage, October 7, 1853.

CHAPTER IX

Search for Sir John Franklin *continued*: Sir Edward Belcher's squadron.—Inglefield.—Rae's journey.—Discovery of Northwest Passage by Captain M'Clure.—Death of Bellot.

Interest in the mysterious fate of Sir John Franklin was in no wise lessened by the unexpected return to England of the searching squadron in 1851. Dr. Rae's land journey of over-eight hundred miles, including a thorough examination of the east and north coast of Victoria Land, had thrown no new light on the tragic situation. The American coast had now been diligently examined from the entrance of Behring Strait to the head of Hudson Bay, and it was generally believed that Franklin had never reached so low a latitude.

On April 28, 1852, a thoroughly equipped squadron of five vessels—the *Assistance*, the *Resolute*, and the *North Star*, and two steamers, the *Pioneer* and *Intrepid*—sailed from England under the command of Sir Edward Belcher. The *Assistance* and *Pioneer* were to sail up Wellington Channel. The *Resolute* and *Intrepid*, under command of Captain Kellett, were to proceed to Melville Island, there to deposit provisions for the use of Captain Collinson and Commander M'Clure, should they succeed in making the passage from Behring Strait, for which, as we have seen, they had set sail in January, 1850. The *North Star* was to remain at Beechey Island as a depot store ship.

By the 6th of July the squadron was in Baffin Bay, accompanied by a fleet of whalers. The ice conditions proved exasperating; the *Assistance*, *Pioneer*, and *Resolute* were beset and detained for a time, while the rest of the fleet, accompanied by the whalers, stretched in a long train of some three quarters of a mile in length and slowly pushed their way through a narrow lane of water.

The American whaler, *McLellan*, had the lead; the *North Star* of the English squadron followed the *McLellan*. The weather conditions were most favourable; no anxiety was felt for the safety of the vessels, in spite of the fact that the lane of water gradually closed and prevented the ships from advancing or retreating until July 7, when the report was made that the *McLellan* was nipped in the ice and her crew making ready to abandon her. Carpenters, under orders of Sir Edward Belcher, put a few charges of powder in the ice, to relieve the pressure.

Admiral Sir Edward Belcher.

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SIR EDWARD BELCHER'S SQUADRON

The next day, however, the *McLellan* was nipped harder than ever with the water pouring into her in a steady stream. While drifting unmanageable, first into one ship and then into another, she was boarded by English whalemen who proceeded to ransack and plunder her, until, at the Captain's request, Sir Edward Belcher placed sentries on board to prevent further loot, and working parties proceeded to take inventory of her stores, and remove them to a safe distance. In a day or two the *McLellan* had sunk to the water's edge, and for the safety of the rest of the fleet, a charge or two of powder put her out of the way.

The squadron reached its headquarters at Beechey Island, August 10. Wellington Channel and Barrow Strait were found free from ice, and on the 14th, Sir Edward Belcher, with the *Pioneer* and *Assistance*, proceeded up the Channel. The next day Captain Kellett, with the *Resolute* and *Intrepid*, sailed in open water for Melville Island.

INGLEFIELD

While Sir Edward Belcher's squadron was making its arduous passage to Beechey Island, Lady Franklin had refitted the screw-steamer *Isabel* and placed it under Commander Inglefield, R. N., with instructions to investigate the rumour brought home by Sir John Ross to the effect that Franklin and his crew had been murdered by natives at Wolstenholme Sound.

Setting sail from England, July 6, 1852, the little *Isabel* made for the northern shores of Baffin Bay, reached a higher latitude up Whale Sound than any previous vessel, and later pushed through Smith Sound as far as latitude 78° 28′ 21′′ N., without discovering any opposing land. Captain Inglefield discovered that Smith Sound, generally supposed to be narrow, was at least thirty-six miles across, expanding considerably to the northward. The shore seemed comparatively free from snow, and the rocks appeared of their natural colour.

Ice was met in considerable quantities, and though Captain Inglefield was ambitious to steam through, a fortunate gale arose which blew with such violence that the *Isabel* was forced back, thus saving her in all probability from a dreary winter in the ice.

By the 7th of September, the *Isabel* sighted the *North Star* at Beechey Island.

"When we were near enough to see from our crow's-nest the mast heads of the *North Star*, I had ordered one of the twelve pounders to be fired, and the people who were working on shore were greatly puzzled at hearing such a sound, as they believed that nothing human but their own party could be within hundreds of miles of them."

Captain Inglefield soon "waited upon" Captain Pullen, and the letters for Sir Edward Belcher's squadron brought out by the *Isabel* were placed upon the *North Star*. A few hours later the *Isabel* put off to sea, carrying letters from officers and crew of the *North Star* to relatives and friends in England.

By the 12th the *Isabel* stood off Mount Possession, by the 14th Cape Bowen, and here Captain Inglefield landed to look for traces and erect a cairn; nothing was discovered but the bold footprint of a huge bear and the tiny tracks of an Arctic fox. The 23d found them in Davis Strait. Here a terrific gale was encountered, which lasted four days and "accompanied," writes Captain Inglefield, "with the heaviest sea I had ever seen, even off Cape Horn...."

As soon as the storm abated, they put for the nearest port to undergo necessary repairs, and by October 2 they made a settlement off Hunde Islands, a little south of Whalefish Islands. The governor came on board to see what was wanted, and, the next day being Sunday, the crew were given shore leave, and a general day of rest was enjoyed.

On the 5th, he writes, "I received a message from the governor, that it was the King of Denmark's birthday, the Eskimos would assemble at his house, and have a dance, and the pleasure of my company was solicited for the occasion; accordingly at six o'clock I repaired to the wooden palace of his Excellency, and there found, crammed into a smallish chamber, as many Eskimos as could conveniently stand.

"I had prepared myself with certain bottles by which punch could be quickly made; and several officers and crew joining the party, by their assistance, each of the Eskimo ladies was first supplied with a glass full of the beverage, and afterward the gentlemen, when I made them understand that they were to give three cheers for the King of Denmark, which was done with a vigour and goodheartedness, that made the wooden walls echo again.

"I had prepared another treat for them, which I am quite sure was to many the most agreeable of the two. My coxswain came in to tell me when all was ready, and then I begged the governor would tell the party to go outside where I had something to show them.

"When all were assembled, the booming of one of our guns, which by signal was fired from the vessel, not a little alarmed some of the most timid, and their fear was not much allayed, when, from under their very noses, a shower of rockets flew into mid-air, with a whirl that startled some of the more ancient sages amongst them, though when no damage was found to accrue to any of the party, the shouts of joy overpowered the noise of the rockets. The blue lights and white lights, which were burnt to enliven the performance, were objects of great curiosity, and I could see some enquiring faces, eagerly watching our movements, as the port-fires were placed to ignite them."

"Dancing was afterwards commenced," continues Captain Inglefield, "and feeling that it was my duty to lead off with the governor's wife, who was an Eskimo, I begged the honour of her hand, for a dance, in the best Eskimo of which I was master, and to the scraping of a disabled fiddle bound round with twine and splints, I launched into the mysteries of an Eskimo quadrille, which, but for the strenuous exertions of my partner, to keep me right, I should certainly have set into utter confusion.

"It was composed of a *chaine des dames* and a reel, complex to a wonderful degree, and exhausting to a frightful extent; and yet it appeared to be the determination of the whole party to continue at this one figure till tired nature sunk.

"Unaccustomed to this kind of violent exercise, I was soon knocked up, and tried, though unsuccessfully, to make my escape; but at last I had the gratification of observing an elderly lady opposite beginning to falter, and out of compliment to her I presume this dance was terminated.

"The Eskimos seem to think it is impossible to be too warm, so the doors and windows were tightly closed, and certain lamps and tallow candles (with which I had supplied his Excellency) soon brought the temperature up to blood heat.

"After resting from my labour, I determined to try their waltz, which I found was not very unlike ours, being performed somewhat in the same manner, and the fair ladies with whom I now alternately figured instructing me in the mysteries of the measure. Some of my sailors having obtained permission to attend the ball, they were now solicited to give a specimen of their skill, and accordingly a sailor's hornpipe and reel, with the usual heel and toe accompaniment, met with great applause. I had had sufficient fun by nine o'clock, but the party did not break up till after twelve; before I went away, however, at my special request, some Eskimo melodies were sung by the party, and afterwards a Danish national hymn by the governor. When the officers and men were returning in their boat to the ship they were serenaded by the ladies of the party, who joining hand-in-hand walked along the rocks towards the ship, singing a plaintive air, which might well have been taken for their evening hymn. And such it may have been, for these poor people, semi-civilized and instructed as they have been by the Danes, are full of fervour and zeal for their religion, the Lutheran, and show more real moral principle than any nation I ever visited."

By the 7th of October the *Isabel* was ready for sea, but encountered terrific gales. Upon the advice of the ice-masters, Captain Inglefield determined to return to England in spite of a strong desire to winter and complete the search of the west coast of Baffin Bay by sledge journeys in the spring and the survey of Davis Strait from Cape Walsingham south, as far as Newfoundland. However, a continuance of bad weather made such a course impracticable, and by November 4 the *Isabel* anchored at Stromness; by the 10th of November she made Peterhead by way of Pentland Firth.

Admiral Sir Edward Inglefield, R. N.

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"Besides penetrating one hundred and forty miles further than previous navigators, and finding an open sea stretching northwards, from Baffin's Bay, to at least the latitude of 80°, Captain Inglefield discovered a strait in about 77½°, which he named Murchison Strait, and which he supposed to form the northern boundary to Greenland." His careful survey of the eastern side of Baffin Bay, from Carey Islands to Cape Alexander, and his approach to Jones Sound, all contributed interesting data to geographical knowledge, but though the natives with whom he met were carefully interrogated, no light was thrown on the fate of Sir John Franklin or his men, and the utter falsity of the story told by Sir John Ross's interpreter was satisfactorily established.

Early in the year 1853, three expeditions were fitted out, to assist Sir Edward Belcher's squadron already in the field, and to continue the search for Sir John Franklin.

The *Rattlesnake*, under Commander Trollope, and the *Isabel*—again refitted by Lady Franklin, and put in command of Mr. Kennedy—set out with instructions to sail for Behring Strait and carry supplies to Captains Collinson and M'Clure. Dr. Rae set out again for the further examination of the coast of Boothia, and Captain Inglefield was sent to Barrow Strait in command of the *Phœnix* and *Lady Franklin*, for the purpose of reënforcing Sir Edward Belcher.

In America the second Grinnell expedition was fitted out about the same time for the purpose of exploring the passages leading out of Baffin Bay into the unknown oceans around the Pole, and was placed under the command of Dr. E. K. Kane, U. S. N., who had sailed under Lieutenant De Haven in the first Grinnell expedition.

CAPTAIN M'CLURE

In the autumn of 1853, the deep interest of the British nation was aroused by the return of Captain Inglefield of the *Phœnix* with despatches from the Arctic regions, containing the news that the Northwest Passage had at length been successfully accomplished by Captain M'Clure of the *Investigator*, who had passed through Behring Strait and sailed within a few miles of the most westerly discoveries made from the eastern side of America, at which point he had been frozen up for more than two years.

Parties from the *Investigator* had walked over the frozen ocean; and Lieutenant Cresswell, the bearer of the despatches from Captain M'Clure, had sailed to England, by the Atlantic Ocean, having thus passed through the far-famed, much-sought-after, and, at length, discovered Northwest Passage.

It will be remembered that Captains Collinson and M'Clure sailed for Behring Strait in 1850, through which, in company with the *Plover* and *Herald*, they endeavoured to pass.

The *Investigator*, Captain M'Clure, was last seen on August 4, 1850, bearing gallantly into the heart of the "Polar Pack."

Captain Collinson, in the *Enterprise*, had concluded to winter at Hongkong, and not until May, 1851, did he return to Behring Strait, which he succeeded in entering. In the meantime, the *Herald* had returned to England, while the *Plover* remained some time at Port Clarence as a reserve for the vessels to fall back upon.

On parting company with the *Herald* in Behring Strait in July, 1850, Captain M'Clure stood north-northwest with a fresh breeze. For several days the *Investigator* struggled with the ice pack, now boring through the masses, or winding among the lanes of open water. By the 7th of August they had rounded Point Barrow, at which point clear water was seen from the "crow's nest."

"The wind," writes M'Clure, "almost immediately failing, the boats were all manned, and towing commenced amid songs and cheers, which continued with unabated good humour for six hours, when this laborious work was brought to a successful termination. Being in perfectly clear water in Smith's Bay, a light air springing up, we worked to the eastward. At two A.M. of the 8th, being off Point Drew, sent Mr. Court (second mate) on shore to erect a cairn, and bury a notice of our having passed. Upon landing, we were met by three natives, who at first were very

timid; but upon exchanging signs of friendship, which consisted of raising the arms three times over the head, they approached the boat, and after the pleasant salutation of rubbing noses, became very communicative, when, by the assistance of our valuable interpreter, Mr. Miertsching, we found the tribe consisted of ten tents (this being the only approach to their numbers he could obtain), that they had arrived only three days previously, and that they hold communication with a party inland, who trade with the Russian Fur Company. The evening before, they had observed us, but could not imagine what large trees were moving about (our masts) and all the tribe had assembled on the beach to look at them, when they agreed that it was something very extraordinary, and left the three men who met the boat, to watch! They also gave the pleasing intelligence that we should find open water along the coast from about three to five miles distant during the summer, that the heavy ice very seldom came in, or never left the land farther than at present, that they did not know if there were any islands as they found it impossible to go in their kayaks, when in pursuit of seals, farther than one day's journey to the main ice, and then the lanes of water allowed of their proceeding three quarters of a day farther, which brought them to very large and high ice, with not space enough in any part of it to allow their kayaks to enter. The probable distance, Mr. Miertsching therefore estimates, from his knowledge of the Eskimo habits, to be about forty miles off shore, and, from what I have seen of the pack, I am inclined to think this is perfectly correct, for a more unbroken mass I never witnessed."

These natives, whose entire lives had been spent between the Coppermine River and Point Barrow, knew nothing of Franklin's party, and it was therefore concluded by Captain M'Clure that the *Erebus* and *Terror* had not been lost on these shores.

For the next four or five hundred miles they skirted slowly the coast, part of the time in such shallow water that they ran aground, but fortunately without damage to the ship. The narrow lanes opening in the ice made it often necessary to retrace their course, but by the 21st of August they had passed the mouth of the Mackenzie River, and made the Pelly Islands.

Upon reaching Warren Point, natives were seen on shore, and Captain M'Clure, desiring, if possible, to send despatches by them to the Hudson Bay Company's posts on the Mackenzie, the boats were ordered out.

It was found that these Eskimos had no communication with the Mackenzie, being at war with the neighbouring tribes, and having had several skirmishes with the Indians of that quarter. A chief of the tribe had a flat brass button suspended from his ear, and in explanation of where he got it, he replied: "It had been taken from a white man, who had been killed by one of his tribe. The white man belonged to a party which had landed at Point Warren, and there built a house; nobody knew how they came, as they had no boat, but they went inland. The man killed had strayed from the party, and he (the chief) and his son had buried him upon a hill at a little distance." It could not be ascertained just when this event occurred, and though Captain M'Clure tried to investigate the matter, only two very old wooden huts were found, and no grave of the white man was discovered.

Natives were constantly encountered as the *Investigator* proceeded, and though they seemed at first hostile and disinclined to open communication, they invariably became friendly and gratefully accepted the various presents bestowed upon them.

On September 5, Captain M'Clure writes:—

"The weather, which had been squally, accompanied by a thick fog during the early part of the day, cleared towards noon, when a large volume of smoke was observed about twelve miles south-west.... As divers opinions were in circulation respecting its probable cause, and the ice-mate having positively reported that from the crow's nest he could distinguish several persons moving about, dressed in white shirts, and observed some white tents in the hollow of the cliff, I certainly had every reason to imagine they were a party of Europeans in distress, convinced that no travellers would remain for so long a period as we had remarked the smoke. For their pleasure, therefore, to satisfy myself, equally as others, I determined to send a boat on shore, as it was now calm. The first whale-boat, under Lieutenant Cresswell, with Dr. Armstrong, and Mr. Miertsching, was despatched to examine into the cause, who, on their return, reported the smoke to emanate from fifteen small mounds of volcanic appearance, occupying a space of about fifty yards, the place strongly impregnated with sulphur, the lower mounds being about thirty feet above the sea-level, the highest about fifty feet. The land in its vicinity was blue clay, much intersected with ravines and deep water-courses, varying in elevation from three hundred to five hundred feet. The mark of a reindeer was traced to a small pond of water immediately above the mounds. Notice of our having landed was left, which would not long remain, as the cliff is evidently crumbling away. Thus the mystery of the white shirts and tents was most satisfactorily explained."

Early in the morning of the 6th of September they were off the small islands near Cape Parry; on the same day high land was observed on the port bow. Up to this time they had been sailing along a shore which had been surveyed by Franklin, Back, Dease, Simpson, and others, although theirs was the first *ship* that had sailed in these waters.

The discovery of new territory was therefore joyfully received, and, landing in the whale-boat and cutter, formal possession was taken in the name of "Her Most Gracious Majesty" and the name "Baring's Island" bestowed upon it in honour of the first lord of the Admiralty. After depositing a record, they returned to the ship and sailed along the eastern coast, as it was more free of ice than that on the west. Later it was found that the island was one whose extreme northeastern shore had been faintly seen by Parry in 1820 and given by him the name of "Banks' Land."

"We observed," writes Captain M'Clure, "numerous traces of reindeer, hare, and wild-fowl; moss and divers species of wild-flowers were also in great abundance; many specimens of them, equally as of the object of interest to the naturalist, were selected with much care by Dr. Armstrong. From an elevation obtained of about five hundred feet, we had a fine view towards the interior, which was well clothed with moss, giving a verdant appearance to the ranges of hills that rose gradually to between two thousand and three thousand feet, intersected with ravines, which must convey a copious supply of water to a large lake situated in the centre of a wide plain, about fifteen miles distant; the sight to seaward was favourable in the extreme: open water, with a very small quantity of ice, for the distance of full forty miles towards the east, insured good progress in that direction. The weather becoming foggy, our lead was the only guide until ten A.M. of the 9th; it then cleared for a short time, when land was observed to the eastward, about fifteen miles distant, extending to the northward as far as the eye could reach.

"The mountains in the interior are lofty and snow-covered, while the low ground is quite free. Several very remarkable peaks were discernible, apparently of volcanic origin. This discovery was named Prince Albert's Land. The wind becoming fair, and the weather clearing, all the studding sails were set, with the hope of reaching Barrow's Strait, from which we were now distant about seventy miles. The water was tolerably clear in that direction, although much ice was lying against the western land; ... much loose ice was also in motion, and while endeavoring to run between two floes, at the rate of four knots, they closed so rapidly, one upon either beam, that our way was instantly stopped, and the vessel lifted considerably; in this position we were retained a quarter of an hour, when the pressure eased, and we proceeded. Our advance was of short duration, as at two P.M. the wind suddenly shifted to the northeast, and began to freshen; the water, which a few hours

previous had excited sanguine hopes of a good run, became soon so thickly studded with floes, that about four P.M. there was scarcely sufficient to keep the ship freed; this by much exertion was however effected until two A.M. of the 14th, when we were beset."

From now on, baffling winds and impenetrable floes made progress almost impossible. The total destruction of the *Investigator* was daily threatened by the rushes of ice that assailed them in the narrow strait along which they were endeavouring to proceed.

On the 17th of September, "There were several heavy floes in the vicinity; one, full six miles in length, passed at the rate of two knots, crushing everything that impeded its progress, and grazed our starboard bow. Fortunately, there was but young ice upon the opposite side, which yielded to the pressure; had it otherwise occurred, the vessel must inevitably have been cut asunder. In the afternoon, we secured to a moderately sized piece, drawing eight fathoms, which appeared to offer a fair refuge, and from which we never afterwards parted."

The smallest pools now became covered with ice; the last Arctic bird to take flight was the eider-duck, which turned south by the 23d. By the 27th of September the thermometer stood at zero, and every preparation was being made to house the ship for the winter. The ice was in constant and violent motion. "The crushing, creaking, and straining," writes Captain M'Clure, "is beyond description; the officer of the watch, when speaking to me, is obliged to put his mouth close to my ear, on account of the deafening noise."

DISCOVERY OF THE NORTHWEST PASSAGE

Clinging with the "tenacity of a bosom-friend" to the ice-floe to which they were secured, "it conveyed us," continues M'Clure, "to our farthest northeast position, latitude 73° 7′ north, longitude 117° 10′ west, back round the Princess Royal Islands, passed the largest within five hundred yards to latitude 72° 42′ north, longitude 118° 42′ west, returning along the coast of Prince Albert's Land, and finally freezing in at latitude 72° 50′ north, longitude 117° 55′ west, upon the 30th of September, during which circumnavigation we received many severe nips, and were frequently driven close to the shore, from which our deep friend kept us off. To avoid separation, we had secured with two stream-cables, one chain, two six, and two five hawsers. As our exposed position rendered every precaution necessary, we got upon deck twelve months' provisions, with tents, warm clothing, etc., and issued to each person a pair of carpet-boots and a blanket-bag, so that in the event of any emergency rendering it imperative to quit the vessel, we might not be destitute. On the 8th of October, our perplexities terminated with a nip that lifted the vessel a foot, and heeled her 4° to port, in consequence of a large tongue getting beneath her, in which position we quietly remained." Here the *Investigator* passed the winter of 1850-1851, during which season a journey was made over the ice to the shores of Barrow Strait, which they found connected with the strait in which they wintered, thus establishing the fact of a northwest passage.

The journey undertaken on the morning of October 21, 1850, came near proving fatal to Captain M'Clure. On the return trip a week later about 2 P.M. one afternoon, having seen the Princess Royal Isles and knowing the position of the ship, he decided to leave his sledge and push ahead, that a warm meal might be made ready for the rest of the party upon their arrival at the ship. Night overtook him when still at least six miles from the vessel, and a dense mist, accompanied by heavy snow, obscured every object.

"I now," writes M'Clure, "climbed on a mass of squeezed-up ice, in the hope of seeing my party, should they pass near, or of attracting the attention of some one on board the vessel by firing my fowling-piece. Unfortunately, I had no other ammunition than what it was loaded with; for I had fancied, when I left the sledge, that two charges in the gun would be all I should be likely to require. After waiting for an hour patiently, I was rejoiced to see through the mist the glaring of a blue light, evidently burnt in the direction in which I had left the sledge. I immediately fired to denote my position; but my fire was unobserved, and, both barrels being discharged, I was unable to repeat the signal. My only hope now rested upon the ship's answering, but nothing was to be seen; and, although I once more saw, at a greater distance, the glare of another blue light from the sledge, there seemed no probability of my having any other shelter for the night than what the floe afforded. Two hours elapsed; I endeavored to see the face of my pocket compass by the light of a solitary lucifer match, which happened to be in my pocket; but in this hope I was cruelly disappointed, for it fizzed and went out, leaving me in total darkness. It was now half-past eight; there were eleven hours of night before me, a temperature of 15° below zero, bears prowling about, and I with an unloaded gun in my hands. The sledge-party might, however, reach the ship, and, finding I had not arrived, search would be made, and help be sent; so I walked to and fro upon my hummock until, I suppose, it must have been eleven o'clock, when that hope fled likewise. Descending from the top of the slab of ice upon which I had clambered, I found under its lee a famous bed of soft, dry snow; and thoroughly tired out, I threw myself upon it and slept for perhaps three hours, when, upon opening my eyes, I fancied I saw the flash of a rocket. Jumping upon my feet, I found that the mist had cleared off, and that the stars and aurora borealis were shining in all the splendor of an Arctic night. Although unable to see the islands or the ship, I wandered about the ice in different directions until daylight, when, to my great mortification, I found I had passed the ship fully the distance of four miles."

Sledge journeys along the shores of Baring Island and Prince Albert Land were undertaken, but no trace of Franklin or his party was discovered. Traces of Eskimos were found, but only one party met with; however, deer, musk-oxen, and bears were encountered. A bear was killed, and, when opened, its stomach was found to contain raisins, tobacco, pork, and adhesive plaster! This extraordinary medley led Captain M'Clure to the conclusion that the *Enterprise* was in the vicinity, and a diligent search was instituted, but the only result was the discovery of a preserved meat canister, which contained similar articles, probably the same from which the bear had obtained his unusual meal. By the 13th of June, 1851, all the sledge parties having returned in safety to the ship, everything was made ready to set sail the moment the huge barriers of ice should permit.

"The first indication of open water," writes Captain M'Clure, "occurred to-day (July 7th) extending some distance along the shore of Prince Albert's Land, about a mile in width; the ice in every direction is so rapidly decaying, being much accelerated by sleet and rain, with the thermometer standing at 45°, that, by the 14th, that which for the last few days had been slightly in motion, with large spaces of water intervening, suddenly and noiselessly opened around the vessel, leaving her in a pond of forty yards; but seeing no possibility of getting without its limits, we were compelled to secure to the floe which had for ten months befriended us, and, with the whole of the pack, gradually drifted to the southward, toward the Princess Royal Islands, which we passed on the eastern side within half a mile.

"Upon the 17th, at 10 A.M., being among loose ice, we cast off from the floe and made sail, with the hope of getting upon the western shore where the water appeared to be making, but without shipping the rudder, in consequence of being in the vicinity of several large floes, and at 2 P.M. again secured to a floe between the Princess Royal and Baring islands (we passed over a shoal having nineteen fathoms). On the 20th, at half-past eleven A.M., a light air sprang up from the southwest, which, slacking the ice, gave hopes of making progress to the northeast, in which direction I was anxious to get for the purpose of entering Barrow Strait, that, according to circumstances, I might be enabled to carry out my original intentions of proceeding to the northward of Melville Island, as detailed in my letter to the secretary of the Admiralty, of July 20, 1850; or, should such not be practicable, return to England through the strait. After most persevering efforts to penetrate into Barrow Strait, Captain

M'Clure was obliged to abandon the attempt. On the 16th of August he determined to coast round the western shores of the island and make the passage, if possible, to the northward of Banks Land.

"At 4 P.M. on the 18th," he writes, "being off a very low spit of sand (Point Kellet) which extended to the westward for about twelve miles, in the form of a horseshoe, having a seaside thickly studded with grounded ice, while the interior was exempt from any, I sent Mr. Court (second master) to examine it, who reported an excellent and commodious harbour, well sheltered from north-west to south, carrying five fathoms within ten yards of the beach, which was shingle, and covered with driftwood. A set of sights was obtained, and a cask, containing a notice, was left there. Upon the morning of the 19th, we left this low coast, and passed between two small islands lying at the entrance of what appeared a deep inlet, running east-south-east, and then turning sharp to north-east. It had a barrier of ice extending across, which prevented any communication. Wishing to keep between the northernmost of these islands and the mainland, to avoid the pack, which was very near it, we narrowly escaped getting on shore, as a reef extended from the latter to within half a mile of the island. Fortunately, the wind being light, we rounded to with all the studding-sails set, and let go the anchor in two and a half fathoms, having about four inches to spare under the keel, and warped into four, while Mr. Court was sent to find a channel in which he succeeded, carrying three fathoms, through which we ran for one mile, and then continued our course in eight, having from three to five miles between the ice and land. At 8 P.M., we neared two other islands, the ice resting upon the westernmost, upon which the pressure must have been excessive, as large masses were forced nearly over its summit, which was upwards of forty feet. Between these and the main we ran through a channel in from nine to fifteen fathoms, when an immediate and marked change took place in the general appearance and formation of the land: it became high, precipitous, sterile, and rugged; intersected with deep ravines and water courses, having six-five fathoms at a quarter of a mile, and fifteen fathoms one hundred yards from the cliffs, which proved exceedingly fortunate as the whole pack, which had apparently only just broken from the shore, was within half a mile, and, in many places, so close to it, that to avoid getting beset, we had nearly to touch the land; indeed, upon several occasions, the boats were compelled to be topped-up, and poles used to keep the vessel off the grounded ice; which extends all along this coast; nor could we round to, fearful of carrying the jib-boom away against the cliffs, which here run nearly east and west. The cape forming its western extreme I have called Prince Alfred, in honour of his Royal Highness. On the morning of the 20th, our further progress was impeded by finding the ice resting upon a point, which formed a slight indentation of shore, and was the only place where water could be seen. To prevent being carried away with the pack, which was filling up its space, we secured to the inshore side of a small but heavy piece of ice, grounded in twelve fathoms seventy-four yards from the beach—the only protection against the tremendous Polar ice (setting a knot per hour to the eastward before a fresh westerly wind), which at 9 P.M. placed us in a very critical position, by a large floe striking the piece we were fast to, and causing it to oscillate so considerably, that a tongue which happened to be under our bottom, lifted the vessel six feet; but, by great attention to the anchors and warps, we succeeded in holding on during the conflict, which was continued several minutes, terminating by the floe being rent in pieces, and our being driven nearer the beach. From this until the 29th, we lay perfectly secure, but at 8 A.M. of that day, the ice began suddenly to move, when a large floe, that must have caught the piece to which we were attached under one of its overhanging ledges, raised it perpendicular by thirty feet, presenting to all on board a most frightful aspect. As it ascended above the foreyard, much apprehension was felt, that it might be thrown completely over, when the ship must have been crushed beneath it. This suspense was but for a few minutes, as the floe rent, carrying away with it a large piece from the foundation of our asylum, when it gave several fearful rolls, and resumed its former position; but, no longer capable of resisting the pressure, it was hurried onward with the drifting mass. Our proximity to the shore compelled, as our only hopes of safety, the absolute necessity of holding to it; we consequently secured with a chain, stream and hemp cable, three, six, and two five-inch hawsers, three of which were passed round it. In this state we were forced along, sinking large pieces beneath the bottom, and sustaining a heavy strain against the stern and rudder; the latter was much damaged, but to unship it at present was impossible. At 1 P.M., the pressure eased, from the ice becoming stationary, when it was unhung and laid upon a large floe piece, where, by 8 P.M., owing to the activity of Mr. Ford, the carpenter, who is always ready to meet any emergency, it was repaired, just as the ice began again to be in motion; but as the tackles were hooked, it was run up to the davits without further damage." Continuing his exciting narrative, Captain M'Clure writes:—

"We were now setting fast upon another large piece of a broken floe, grounded in nine fathoms upon the débris formed at the mouth of a large river. Feeling confident that, should we be caught between this and what we were fast to, the ship must inevitably go to pieces, and yet being aware that to cast off would certainly send us on the beach (from which we were never distant eighty yards), upon which the smaller ice was hurled as it came in contact with these grounded masses, I sent John Kerr (gunner's mate) under very difficult circumstances, to endeavor to reach it and effect its destruction by blasting; he could not, however, find a sufficient space of water to sink the charge, but remarking a large cavity upon the sea face of the floe, he fixed it there, which so far succeeded, that it slightly fractured it in three places, which, at the moment was scarcely observable, from the heavy pressure it was sustaining. By this time, the vessel was within a few feet of it, and every one was on deck in anxious suspense, awaiting what was apparently the crisis of our fate; most fortunately, the stern post took it so fairly, that the pressure was fore and aft, bringing the whole strength of the ship to bear, a heavy grind, which shook every mast, and caused beams and decks to complain, as she trembled to the violence of the shock, plainly indicated that the struggle would be but of short duration. At this moment, the stream-cable was carried away, and several anchors drew; thinking that we had now sufficiently risked the vessel, orders were given to let go the warps, and with that order I had made up my mind that in a few minutes she would be on the beach; but, as it was sloping, conceived she might still prove an asylum for the winter, and possibly be again got afloat; while, should she be crushed between these large grounded pieces, she must inevitably go down in ten fathoms, which would be certain destruction to all; but before the orders could be obeyed, a merciful Providence interposed, causing the ice, which had previously weakened, to separate into three pieces, and it floated onward with the mass, our stern still tightly jammed against, but now protected by it. The vessel, which had been thrown over fifteen degrees, and risen bodily one foot eight inches, now righted and settled in the water; the only damage sustained was several sheets of copper ripped off and rolled up like a sheet of paper, but not a fastening had given way, nor does any leakage indicate the slightest defect. By midnight, the ice was stationary, and everything quiet, which continued until the 10th of September; indeed, from the temperature having fallen to sixteen degrees, with all appearance of the setting in of the winter, I considered our farther progress stopped until next year."

Until the end of September, their course was one unvarying scene of battling against difficulties similar to those just described. Having reached the western extremity of Banks Land, "I determined," writes Captain M'Clure, "to make this our winter quarters, and, having remarked upon the south side of the bank on which we had grounded, a well-protected bay, Mr. Court was despatched to sound it; and, shortly making the signal there was sufficient water, we bore up, and at forty-five minutes past 7 A.M. we anchored in four and a half fathoms, and that night were firmly frozen in, in what has since proved a most safe and excellent harbor, which, in grateful remembrance of the many perils that we had escaped during the passage of that terrible Polar Sea, we have named the 'Bay of Mercy'; thus finally terminating this short season's operations, having been actually only five entire days under way." From now on every preparation was made to spend the winter as comfortably as conditions would admit.

"As there appeared much game in the vicinity," writes Captain M'Clure, "and the weather continued mild, shooting parties were established in different directions between the 9th and 23d of October; so that, with what was killed from the ship, our supply of fresh provisions at the commencement of the winter consisted of nine deer, fifty-three hares, and forty-four ptarmigan, all in fine condition, the former having from two to three inches of fat."

"In consequence of our favored position," he continues, "the crew were enabled to ramble over the hills almost daily in quest of game, and their exertions happily supplied a fresh meal of venison three times a fortnight, with the exception of about three weeks in January, when it was too dark for shooting. The small game, such as ptarmigan and hares, being scarce, were allowed to be retained by the sportsmen as private property. This healthy and exhilarating exercise kept us all well and in excellent spirits during another tedious winter, so that on the 1st of April we had upwards of a thousand pounds of venison hanging at the yard-arms."

The exciting experience of Sergeant Woon, a marine, while out hunting, is interesting. While pursuing a wounded deer, he suddenly and unexpectedly met a couple of musk-bulls, which he succeeded in wounding. Infuriated with pain, one of the musk-oxen rushed towards him. Having expended his shot, the sergeant fired his "worm" at the animal, but, this having little or no effect, the bull, though weakened from the loss of blood, when within six feet, put his head to the ground as if for a final rush. With quick action the sergeant fired his iron ramrod, which, entering behind the animal's left shoulder, passed through the heart and out at the right flank, dropping him lifeless.

On another occasion, the presence of mind of Sergeant Woon saved the life of a companion, a coloured man and member of the crew. It was in January and bitterly cold; the coloured man had been out hunting and lost his way. He began to fancy himself frozen to death, and from sheer terror lost his wits. The sergeant met him, but could not induce the poor fellow to follow him. The coloured man stood dazed and shivering, and finally fell in a fit. Waiting until he was somewhat revived, the sergeant either carried or rolled him down hills or hummocks for ten long hours, until he got him within a mile of the ship. The sergeant was by this time thoroughly exhausted and tried to persuade the negro to walk, but the poor demented creature only begged to be "let alone to die." Being unable to persuade him, the only thing left was to place him in a bed of deep snow, and then, with all his remaining strength, the sergeant hastened to the ship for assistance. Returning as soon as possible to the spot where the poor negro had been left, they found him with his arms stiff and raised above his head, his eyes open, and his mouth so firmly frozen that it required considerable force to open it and pour down restoratives. He still lived, however, and eventually recovered, with no more serious results than frost-bites to his hands, feet, and face.

The second Christmas was passed cheerfully and with a bounteous supply of good things. "As it was to be our last," writes Captain M'Clure, "the crew determined to make it memorable, and their exertions were completely successful; each mess was gayly illuminated and decorated with original paintings by our lower-deck artists, exhibiting the ship in her perilous positions during the transit of the polar sea, and divers other subjects; but the grand features of the day were the enormous plum puddings (some weighing twenty-six pounds), haunches of venison, hares roasted, and soup made of the same, with ptarmigan and sea pies. Such dainties in such profusion I should imagine never before graced a ship's lower deck; any stranger, to have witnessed the scene, could but faintly imagine that he saw a crew which had passed upwards of two years, in these dreary regions, and three entirely upon their own resources, enjoying such excellent health—so joyful, so happy; indeed, such a mirthful assemblage, under any circumstances, would be most gratifying to any officer; but in this lonely situation, I could not but feel deeply impressed as I contemplated the gay and plenteous sight, with the many and great mercies, which a kind and beneficent Providence had extended towards us, to whom alone is due the heart-felt praises as thanksgivings of all for the great blessings which we have hitherto experienced in positions the most desolate which can be conceived."

In the autumn of 1852, Captain M'Clure had made known his intentions of sending to England, the following spring, half of the officers and crew *via* Baffin Bay (taking the boat from Cape Spencer) and the Mackenzie. The remainder of the crew were to stand by the ship in the hope of releasing her in the summer of 1853, should they fail in this they would proceed with sledges in 1854 by Port Leopold, "our provisions admitting of no other arrangement." In the despatch prepared by Captain M'Clure which he sent home by the land party in 1853, occurs the following passage:—

"Should any of her Majesty's ships be sent for our relief, and we have quitted Port Leopold, a notice containing information of our route will be left on the door of the house at Whaler's Point, or on some conspicuous position. If, however, no intimation should be found of our having been there, it may at once be surmised that some fatal catastrophe has happened, either from our being carried into the Polar Sea, or smashed in Barrow's Strait, and no survivors left. If such be the case,—which, however, I will not anticipate,—it will then be quite unnecessary to penetrate further to the westward for our relief, as, by the period that any vessel could reach that port, we must, from want of provisions, all have perished. In such a case, I would submit that the officers may be directed to return, and by no means incur the danger of losing other lives in quest of those who will then be no more."

The thrilling adventures in the American wilderness told by Franklin, Richardson, Back, and others, foretold that this sledge journey proposed by M'Clure would be long and hazardous in the extreme. The weaker ones were to undertake it, thirty of the healthiest men being retained to stand by the ships with the captain.

The curse of scurvy had long since stricken many of the crew; these could not hope to brave another Arctic winter, and their only chance was to penetrate the wilderness to civilization, however difficult and dangerous the undertaking. But while M'Clure and his gallant comrades were making every preparation for this last attempt to communicate with England, relief came unexpectedly to hand.

CAPTAIN KELLET

It will be remembered that Captain Kellett of Sir Edward Belcher's squadron had sailed the previous August to Melville Island with relief supplies for the *Investigator* and *Enterprise*, in case these vessels or members of their crews should have succeeded in making their way from Behring Strait to that place. Upon reaching Winter Harbour, they at once discovered a notice deposited there the beginning of the year by Captain M'Clure, conveying the assurance of the safety of the *Investigator* and its crew in Mercy Bay. It may be imagined with what enthusiasm such news was received by Captain Kellett and his crew, and immediately preparations were made for an expedition to let them know that aid was at hand.

The unique meeting of Captain M'Clure from the west, and Lieutenant Pim from the east, with a party from the *Resolute*, is graphically described in a private letter from Captain Kellett.

"This is really a red-letter day in our voyage, and shall be kept as a holiday by our heirs and successors forever. At nine o'clock of this day, our lookout man made the signal for a party coming in from the westward; all went out to meet them, and assist them in. A second party was then seen. Dr. Domville was the first person I met. I cannot describe my feelings when he told me that Captain M'Clure was among the next party. I was not long in reaching him, and giving him many hearty shakes—no purer were ever given by two men in this world. M'Clure looks

well, but is very hungry. His description of Pim's making the Harbour of Mercy would have been a fine subject for the pen of Captain Marryat, were he alive.

"M'Clure and his first lieutenant were walking on the floe. Seeing a person coming very fast towards them, they supposed he was chased by a bear, or had seen a bear. Walking towards him, on getting onwards a hundred yards, they could see from his proportions that he was not one of them. Pim began to screech and throw up his hands (his face as black as my hat); this brought the captain and lieutenant to a stand, as they could not hear sufficiently to make out his language.

"At length Pim reached the party, quite beside himself, and stammered out, on M'Clure asking him,—

"'Who are you, and where are you come from?'

"'Lieutenant Pim, *Herald*, Captain Kellett.'

"This was the more inexplicable to M'Clure, as I was the last person he shook hands with in Behring's Strait. He at length found that this solitary stranger was a true Englishman—an angel of light. He says: 'He soon was seen from the ship; they had only one hatchway open, and the crew were fairly jammed there, in their endeavor to get up. The sick jumped out of their hammocks, and the crew forgot their despondency; in fact, all was changed on board the *Investigator*.'

"M'Clure had thirty men and three officers fully prepared to leave for the depot at Point Spencer. What a disappointment it would have been to go there and find the miserable *Mary* yacht, with four or five casks of provisions, instead of a fine large depot!

"Another party of seven men were to have gone by the Mackenzie, with a request to the Admiralty to send out a ship to meet them at Point Leopold, in 1854. The thirty men are on their way over to me now. I shall, if possible, send them on to Beechey Island, and about ten men of my own crew, to be taken home the first opportunity."

Captain Kellett was at first inclined to favour M'Clure's efforts to save the *Investigator*, but, on the 2d of May, Lieutenant Cresswell reported to Captain Kellett that two more deaths had occurred. It was then deemed advisable that Dr. Domville should go back with Captain M'Clure and inspect the crew. Those unfitted to pass another winter in the Arctic were to be ordered home, and the healthy should be given their option of going or remaining. Only four of the crew were willing to remain, although all of the officers volunteered to stand by the vessel.

Preparations were therefore made to abandon the ship. A depot of provisions and stores was landed for the use of Collinson, Franklin, or any other person that might find them, and on June 3, 1853, the colours were hoisted to the masthead, and officers and crew bade farewell to the *Investigator*. Upon arriving at Dealy Island, they were accommodated on board the *Resolute* and *Intrepid*.

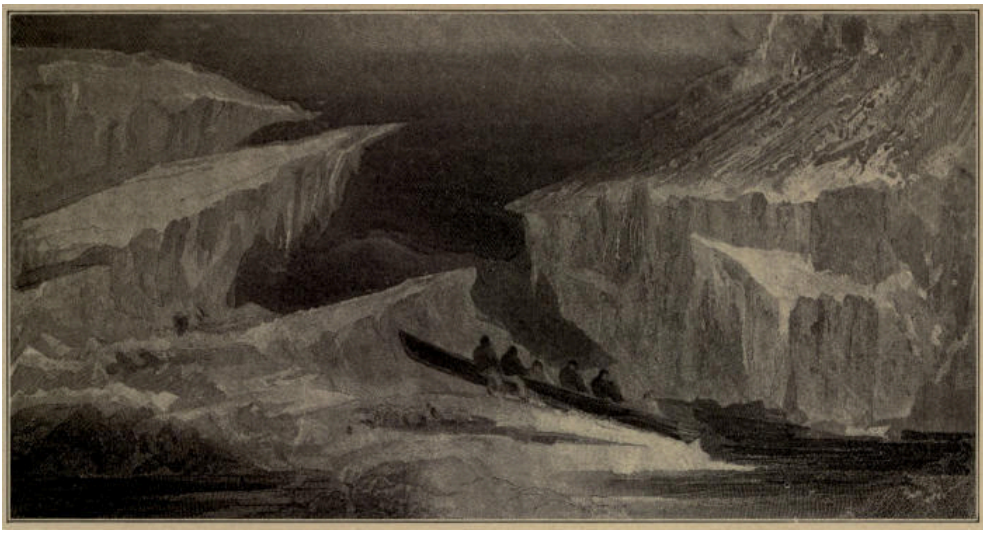
DEATH OF BELLOT

In connection with the glorious report of the discovery of the Northwest Passage and the safety of M'Clure, Captain Inglefield brought home news of a sad and tragic character; the death of that gallant Frenchman, Lieutenant Bellot. He had returned to the north in the *Phœnix* drawn by the fatal lure of the Arctic which to his adventurous soul was irresistible. In August, 1853, he had volunteered to lead a party to Sir Edward Belcher's squadron near Cape Beecher in Wellington Channel. They started on a Friday, the 12th, from Beechey Island,—Harvey, Johnson, Madden, and Hook, with Lieutenant Bellot in the lead,—carrying despatches from Captain Pullen of the *North Star*.

The rottenness of the ice at this season makes travel particularly dangerous, and Bellot was cautioned to keep close to the eastern shore of Wellington Channel. They were provided with a light India-rubber boat, which was easily dragged upon the sledge. The evening of the 12th, they encamped about three miles from Cape Innes. The following day they made considerable progress, and that night encamped upon the broken ice, over which they had been plodding all day, near Cape Bowden. On Sunday they noticed a crack about four feet wide running across the channel. No special concern was felt at this discovery, and Lieutenant Bellot cheered and encouraged the men to make for a cape in the distance which he called Grinnell Cape. Upon reaching this cape, a broad belt of water was found between the ice and the shore. An unfortunate wind raised a rough sea, but Lieutenant Bellot made an attempt to reach the shore alone in the boat, intending to convey a line by which the remainder of the party and provisions might be brought across. The violence of the gale drove him back, and Harvey and Madden were ordered into the boat, and successfully made the crossing. After this the boat was passed and repassed by means of lines, and three loads from the sledge were landed in safety. The party on shore were hauling off for a fourth when Madden, who had hold of the shore-line and stood up to his middle in water, called out that the ice was on the move, and driving offshore.

Bellot saw that if Madden held on to the line much longer he would be dragged into deep water, so he called to him to let go, which he did. Lieutenant Bellot and his two men then hauled the boat on to the sledge and ran it up to the windward side of the ice, intending to launch it at once and make for the shore. Before this could be accomplished, the ice had rapidly increased its motion and drifted so far from the shore as to make it impossible for them to reach it. Madden and Harvey, with indescribable feelings of alarm, hastened to an eminence, and for two long hours watched their comrades drifting out to sea in the teeth of a bitter breeze—amid the turbulent icebergs. As the mists and driving snow finally closed upon their view, the two men were seen standing by the sledge, Lieutenant Bellot on the top of a hummock.

Madden and Harvey descended to the shore and at once began their return journey to the ship. With very little provisions, they walked round Criffen Bay and hence to Cape Bowden, where they remained to rest. While there, great was their joy to recognize Johnson and Hook hastening toward them. The party now made for the ship, which they reached with considerable difficulty and privation. The fate of poor Lieutenant Bellot is described by William Johnson, who was with him on the ice at the time of his death.

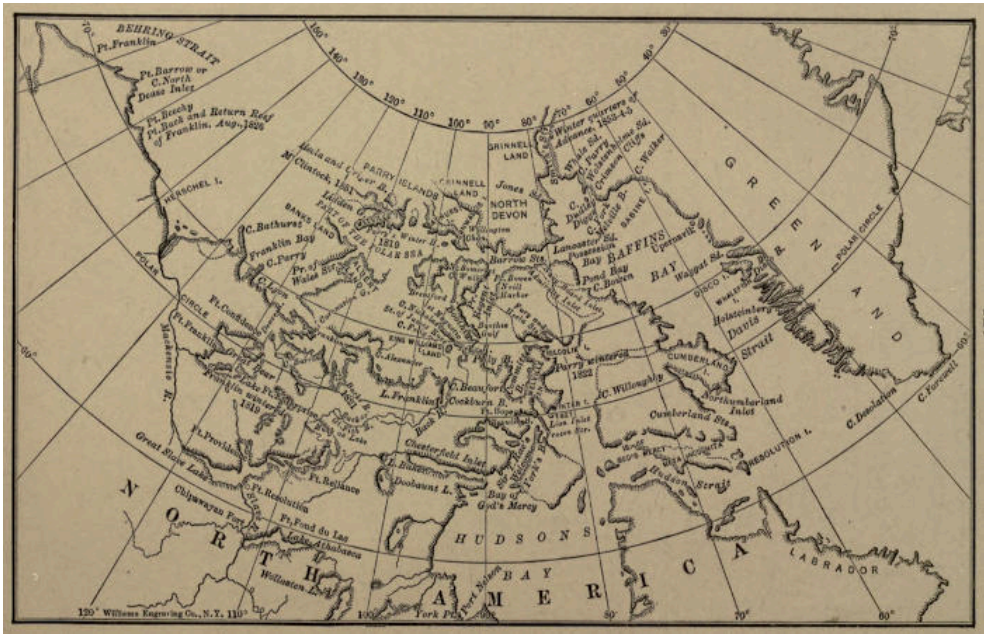


Landing near Grinnell Cape

"We got the provisions on shore on Wednesday, the 17th. After we had done that, there remained on the ice David Hook, Lieutenant Bellot, and myself, having with us the sledge, mackintosh awning, and little boat. Commenced trying to draw the boat and sledge to the southward, but found the ice driving so fast, that we left the sledge and took the boat only; but the wind was so strong at the time that it blew the boat over and over. We then took the boat with us, under shelter of a piece of ice, and Mr. Bellot and ourselves commenced cutting an ice-house with our knives for shelter. Mr. Bellot sat for half an hour in conversation with us, talking on the danger of our position. I told him I was not afraid and that the American Expedition was driven up and down this channel by the ice. He replied, 'I know they were; and when the Lord protects us, not a hair of our heads shall be touched.' I then asked Mr. Bellot what time it was. He said, 'About a quarter past 8 A.M.' (Thursday, the 18th), and then lashed his hooks, and said he would go and see how the ice was driving. He had only been gone about four minutes, when I went round the same hummock, under which we were sheltered to look for him, but could not see him; and on returning to our shelter, saw his stick on the opposite side of a crack, about five fathoms wide, and the ice all breaking up. I then called out, 'Mr. Bellot,' but no answer (at this time blowing very heavy). After this I again searched round, but could see nothing of him. I believe when he got from the shelter, the wind blew him into the crack, and his south-wester being tied down, he could not rise. Finding there was no hope of again seeing Lieutenant Bellot, I said to Hook, 'I'm not afraid: I know the Lord will always sustain us.' We commenced travelling, to try to get to Cape de Haven, or Port Phillips; and, when we got within two miles of Cape de Haven, could not get on shore, and returned for this side, endeavoring to get to the southward, as the ice was driving to the northward. We were that night and the following day in coming across, and came into the land on the eastern shore, a long way to the northward of the place where we were driven off. We got into the land at what Lieutenant Bellot told us was Point Hogarth.

"In drifting up the Straits towards the Polar Sea we saw an iceberg lying close to the shore, and found it on the ground. We succeeded in getting on it and remained for six hours. I said to David Hook, 'Don't be afraid, we must make a boat of a piece of ice.' Accordingly, we got on to a piece passing, and I had a paddle belonging to the India-rubber boat. By this piece of drift ice we managed to reach the shore, and then proceeded to where the accident happened. Reached it on Friday. Could not find our shipmates, or any provisions. Went on for Cape Bowden, and reached it on Friday night."

Poor Bellot—too brave—too young to die—beloved by comrades, mourned by the simple Eskimos he had befriended—cherished in tender memory by the nation that gave him birth and by Great Britain for whom he gave his life,—his honoured name is linked in immortality with those brave heroes of the Arctic, whose sepulchre is the frozen deep, whose monuments are the eternal snows of the Great White North.


BEHRING STRAIT
Pt. Franklin
Pt. Barrow or C. North
Dease Inlet
Pt. Beechy
Pt. Back and Return Reef of Franklin, Aug., 1826
HERSCHEL I.
Mackenzie R.
Great Slave Lake
Chipewyan Fort
Lake Athabasca
Wellington Channel
Franklin Bay
C. Parry
C. Bathurst
Pr. of Wales Str.
Pt. Franklin
Pt. Confusion
Pt. Providence
Pt. Reliance
Pt. Resolution
Pt. Find du Lac
Lake Winnipeg
Dubawnt L.
Chesterfield Inlet
Bay of God's Mercy
Repulse Bay
Frozen Strait
Southampton I.
Fox Channel
Foxe Channel
Baffin's Bay
Davis Strait
Cumberland Sta.
Northumberland Inlet
Cumberland Inlet
Desolation I.
C. Desolation
C. Farewell
Holsteinborg
Upernavik
Pond Bay
C. Bowen
Lancaster Sd.
Jones Sd.
Smith Sd.
Wolstenholme Sd.
Cape Walker
Winter quarters of Adventure, 1859-60
Winter quarters of Parry, 1819-20
Winter quarters of Parry, 1822
Winter quarters of Franklin, 1845
Winter quarters of Ross, 1829-30
Winter quarters of Franklin, 1825
Winter quarters of Hall and Tyson, 1864
Winter quarters of M'Clintock, 1857
Winter quarters of Parry, 1820
Winter quarters of Parry, 1821
Winter quarters of Parry, 1823
Winter quarters of Parry, 1824
Winter quarters of Parry, 1825
Winter quarters of Parry, 1826
Winter quarters of Parry, 1827
Winter quarters of Parry, 1828
Winter quarters of Parry, 1829
Winter quarters of Parry, 1830
Winter quarters of Parry,

CHAPTER X

Sledging parties of Sir Edward Belcher's squadron.—Desertion of the ships.—Return to England.—Story of the *Resolute*.—Traces of Sir John Franklin discovered by Dr. Rae.—Anderson's journey.—The voyage of the *Fox* under Commander M'Clintock.—Sledge journeys.—Record and relics of Franklin's expedition.—*Fox* returns to England.

CAPTAIN COLLINSON

The sledge parties sent out by Sir Edward Belcher's squadron, though numerous and extended, had succeeded in finding no trace of Franklin or his crews; thus the winter of 1853-1854 passed. The following April, Lieutenant Mecham found in Prince of Wales Strait and, later on, Ramsay Island, records bearing the date of August 27, 1852, giving full intelligence of Captain Collinson, since his separation from the *Investigator*. All that Collinson knew of the position of M'Clure after parting with him in 1850 in the Pacific Ocean, was a report from the *Plover* that the *Investigator* had been seen, steering northward, off Wainwright Inlet.

To verify certain rumours connected with this report, Captain Collinson ordered a young officer, Lieutenant Barnard, and certain members of the crew to land at a Russian settlement in northwest America. The result was a sad tragedy; Barnard was brutally murdered by Indians in February, 1851, at a post called Darabin, near Norton Sound.

By the last of July, 1851, Collinson had rounded Point Barrow, and had steered up Prince of Wales Strait. On Princess Royal Island, he discovered a depot deposited by M'Clure and a cairn containing information of the *Investigator's* movements up until June 15, 1851. Collinson proceeded in exactly the course taken by the *Investigator*, and to his surprise found at Cape Kellett, on September 3, another record of M'Clure placed there on August 18.

Collinson now found it necessary to seek winter quarters. These he secured toward the eastern side of the entrance to Prince of Wales Strait.

As conditions would allow, he pursued his explorations in the vicinity of Banks Land, Albert Land, Wollaston Land, and Victoria Land, gaining much valuable geographical information, but no trace of Franklin, except for the finding in the possession of the Eskimos a piece of an iron doorway or hatch frame which might have belonged to the *Erebus* or *Terror*. This was found at Cambridge Bay, in Wollaston Land, where Collinson wintered in 1852-1853.

Collinson's sledge parties explored the west side of Victoria Strait, but, owing to lack of coal, Captain Collinson decided not to try to force a passage through the channel, but to return the way he had come. He did not get round Barrow Point, however, without passing a third winter in the northern coast of America.

The best part of the summer of 1853 was passed by the *Resolute* and *Intrepid* with their crews and that of the *Investigator* shut up in the ice at Dealy Island. Every preparation was made to advance at a moment's notice should the ice favour the opportunity, and at last, on the 18th of August, they got under way, a strong gale from offshore having disruptured the ice.

Hardly were officers and men congratulating themselves that at last they were homeward bound, when they were arrested by the pack off Byam Martin Channel, where they lay, unable to make Bathurst Island and thence to Beechey Island. Winter was advancing; the situation was disheartening; day after day passed without the prospect of escape. The men occupied themselves with securing game, against the possible detention of the ships for another gloomy winter. Ten thousand pounds of meat, principally musk-ox, was obtained and frozen. By the 9th of September, newly formed ice surrounded them in such quantities that they were fairly beset and drifted at the mercy of the pack until the 12th of November, when, to the joy of all, the ships were at rest at a point due east of Winter Harbor, Melville Island, in longitude 101° W. Here the long winter months passed slowly by, with no greater casualty than the death of one officer, and the spring of 1854 found Captain Kellett planning to continue the search, while M'Clure and his crew departed April 14, with sledges, for Beechey Island.

While engaged in preparations for his proposed sledge journeys, Captain Kellett received a communication from Sir Edward Belcher, admiral of the squadron, suggesting that rather than run the risk of passing another winter in the Arctic, he should abandon his ships and meet Sir Edward at Beechey on or before August 26. To this Captain Kellett remonstrated, stating that his ships were in a favourable situation for escape, that the health of the crew was excellent, and they had provisions in plenty, and that those concerned in deserting ships under such circumstances "would deserve to have the jackets taken off their backs." To this strong appeal came positive orders for the abandonment of the ships.

Acting under these orders, Captain Kellett reluctantly prepared to desert the *Resolute* and *Intrepid*. Both ships were stored with provisions, the engines of the *Intrepid* put in such good order that she could be got under steam in two hours, the hatches calked down, and notices placed at proper points for the guidance of two sledging parties that were away from the ships at this time. On the 15th of May, 1854, the captain and crew said farewell to their trusty crafts and started, with sledges, for Beechey Island, where M'Clure and his men were greatly surprised by their arrival.

CAPTAIN BELCHER

Since Sir Edward Belcher had parted with Captain Kellett August 14, 1852, parties from the *Assistance* and *Pioneer* had been diligently exploring Wellington Channel. Having anchored near Cape Beecher, in latitude 76° 52′ and longitude 37° W., boat and sledge expeditions were sent northward as early as the 23d of August. On the 25th remains of several well-built Eskimo houses were discovered, of which, says Captain Belcher:—

"They were not simply circles of small stones, but two lines of well-laid wall in excavated grounds, filled in between by about two feet of fine gravel, well paved, and, withal, presenting the appearance of great care—more, indeed, than I am willing to attribute to the rude inhabitants of migratory Eskimos. Bones of deer, wolves, seals, etc., were numerous, and coal was found."

New lands discovered were given the names of North Cornwall, Victoria Archipelago, and to an island of this group forming a channel to the Polar Sea was given the name of North Kent.

Other sledging parties intended for the search of the northeast section left the ship May 2, 1853, and soon reached the limit of their discoveries the previous year.

Belcher reached Cape Disraeli, an elevation of six hundred and eighty feet above the sea, and later made his way to the entrance of Jones Channel, where he had an extended view of successive beetling headlands on either side of the channel. The roughness of the frozen pack

compelled the party to take to the land, but progress was again impeded by an abrupt glacier. Other attempts to continue the land journey proved futile, and by the 20th of May the party could advance no farther.

Of the return journey Belcher writes:—

"Our progress was tantalizing and attended with deep interest and excitement. In the first place, I discovered, on the brow of a mountain about eight hundred feet above the sea, what appeared to be a recent and a very workmanlike structure. This was a dome,—or rather, a double cone, or ice-house,—built of very heavy and tubular slabs, which no single person could carry. It consisted of about forty courses, eight feet in diameter, and eight feet in depth, when cleared, but only five in height from the base of the upper cone as we opened it.

"Most carefully was every stone removed, every atom of moss or earth scrutinized; the stones at the bottom also taken up; but without finding a trace of any record, or of the structure having been used by any human being. It was filled by drift snow, but did not in any respect bear the appearance of having been built more than a season. This was named 'Mount Discovery.'"

A little later he writes:—

"Leaving our crew, pretty well fatigued, to pitch the tent and prepare the customary pemmican meal, I ascended the mountain above us, and discovered that we really were not far from our old position of last year, on Cape Hogarth, and had Cape Majendie and Hamilton Island to the west, about twenty miles.

"My surprise, however, was checked suddenly by two structures rather in European form, and apparently graves; each was similarly constructed; and, like the dome, of large selected slabs, having at each end three separate stones, laid as we should place head and foot stones. So thoroughly satisfied was I that there was no delusion, I desisted from disturbing a stone until it should be formally done by the party assembled.

"The evening following—for where the sun is so oppressive to the eyes by day we travel by night—we ascended the hill, and removed the stones. Not a trace of human beings!"

DESERTION OF THE SHIPS

After a second winter (1853-1854) spent at the southern horn of Baring Bay, Sir Edward Belcher turned his entire exertions to getting his crews safely back to England. The *Assistance* and *Pioneer* were released from their winter quarters August 6, 1854, and proceeded slowly down the channel. The ice had broken up in Barrow Strait, and by August 22 the floe in Wellington Channel was open for fifteen miles north of the strait. There was only a belt some twenty miles in extent, and this much cracked, remaining between the ships and the water communicating with the Atlantic Ocean. In spite of these favourable conditions, Sir Edward Belcher and his crews deserted the *Assistance* and *Pioneer* on August 26, 1854, and made their way to the place of rendezvous at Beechey Island.

The *North Star* accordingly set sail with all the officers and men of the *Assistance*, *Pioneer*, *Resolute*, *Intrepid*, and *Investigator*, but meeting the *Phœnix* and *Talbot*, under Captain Inglefield (who had again returned to the search), a distribution of the crews was made among the three vessels, and on the 28th of September, 1854, all were safely landed in England.

The report of five ships deserted in the Arctic regions, and no tidings of the *Erebus* and *Terror*, gave rise to the court-martial of Sir Edward Belcher and his officers, all of whom, with the exception of Sir Edward, were honourably acquitted, as a matter of course, in consequence of their having acted under orders, and their swords were returned to them with very flattering expressions of approbation. Sir Edward Belcher was also acquitted, but was reproved for not having consulted sufficiently with his officers, and his sword was returned to him in significant silence.

The British government now decided to abandon the search for Sir John Franklin, and his name was erased from the books of the Admiralty, —a sad token that all hope of his return was gone forever.

A strange and romantic chapter in the history of Sir Edward Belcher's squadron was added in the month of September, 1855. The whaler, *George Henry*, Captain Buddington, hailing from New London, Connecticut, was beset by ice in Baffin Bay. On looking through his glass one morning, Captain Buddington saw a large ship fifteen or twenty miles away, working her way slowly toward him. For several days he watched her gradually approach, and on the seventh day, the mate, Mr. Quail, and three men were sent out to find out what she was.

STORY OF THE RESOLUTE

"After a hard day's journey over the ice,—jumping from piece to piece, and pushing themselves along on isolated cakes, they were near enough to see that she was lying on her larboard side, firmly imbedded in the ice. They shouted lustily as soon as they got within hailing distance; but there was no answer. Not a soul was to be seen. For one moment, as they came alongside, the men faltered, with a superstitious feeling, and hesitated to go on board. A moment after, they had climbed over the broken ice, and stood on deck. Everything was stowed away in order—spars hauled up and lashed to one side, boats piled together, hatches calked down. Over the helm, in letters of brass, was inscribed the motto, 'England expects every man to do his duty.' But there was no man to heed the warning."

Nipped in the Ice

The whalemen broke open the companionway, and descended into the cabin. All was silence and darkness. Groping their way to the table, they found matches and candles, and struck a light. There were decanters and glasses on the table, chairs and lounges standing around, books scattered about—everything just as it had been last used. Looking curiously from one thing to another, wondering what this deserted ship might be, at last they came upon the log-book. It was indorsed, "*Bark Resolute*, 1st September, 1853, to April, 1854." One entry was as follows: "H. M. S. *Resolute*, 17th January, 1854, nine A.M. Mustered by divisions. People taking exercise on deck. Five P.M. Mercury frozen."

At last the *Resolute* had broken her icy bonds and was free. While the Yankee whalemen were examining her, a gale started up and night came on; for two days these four men remained aboard her. By the 19th of September they had returned to their own ship and told their story.

For ten days these two ships had gradually neared one another, and on the 19th Captain Buddington was able to board the *Resolute* himself and carefully note her condition. Her hold was pretty well filled with ice, and her tanks had burst from the extreme cold, filling her full of water almost to the lower deck.

"Everything that could move from its place had moved. Everything between decks was wet; everything that would mould was mouldy. 'A sort of perspiration' had settled on the beams and ceilings. The whalemen made a fire in Kellett's stove, and soon started a sort of shower from the vapor with which it filled the air. The *Resolute* had, however, four force pumps. For three days the Captain and six men worked fourteen hours a day on one of these, and had the pleasure of finding that they freed her of water,—that she was tight still. They cut away upon the masses of ice; and on the 23d of September, in the evening, she freed herself from her encumbrances, and took an even keel. This was off the west shore of Baffin's Bay, in latitude 67°. On the shortest tack, she was twelve hundred miles from where Kellett left her.

"There was work enough still to be done. The rudder was to be shipped, and rigging to be made taut, sail to be set."

In another week she was ready to make sail—and though both the whaler and *Resolute* still drifted in the ice-pack, Captain Buddington resolved to bring her home; however, by October 21, after a gale, the *Resolute* was free. Ten men were selected from the *George Henry*, and with rough tracings of the American coast, his lever watch and quadrant for his instruments, Captain Buddington undertook a perilous and remarkable journey. The ship's ballast was gone, she was top-heavy and undermanned. Heavy gales and head winds drove them as far as the Bermudas. The water left in the ship's tanks was brackish—and the men suffered from thirst.

"For sixty hours at a time," says Captain Buddington, "I frequently had no sleep."

In the meantime, he had communicated with an English whaling bark, and by her sent to Captain Kellett his epaulets and word to his owners that he was coming.

On Sunday morning, December 24, with the British ensign flying from her shorn masts, the *Resolute* anchored opposite New London. It will be remembered that Great Britain generously released all claims in favour of the sailors, and that Congress resolved to purchase the vessel and restore it as a gift to England. The *Resolute* was taken to a dry dock in Brooklyn, and there put in complete repair. Everything on board, even the smallest article, was placed in its original position, and at last when this work was completed, she was manned and officered by the United States Navy, and with sails all set and streamers all flying started for England. On December 12, 1856, after a tempestuous voyage, she anchored at Spithead, flying the British and United States ensigns. After an enthusiastic welcome, the *Resolute*, with an escort of two other steamers, was taken to Cowes, near Queen Victoria's private palace. December 16, the Queen, accompanied by Prince Albert, the Prince of Wales, and a distinguished suite, paid an official visit to the American officers on board ship.

The next morning she was towed up to the harbour of Portsmouth, escorted by the steam frigate *Retribution*, and, on arriving at her anchorage, was received with a royal salute, and such an outburst of popular applause as was never known before.

On the 30th of December, 1856, the American flag was hauled down on board the *Resolute*, amid a salute from the *Victory* of twenty-one guns. The Union Jack was hoisted up, and the formal transfer of the *Resolute* to the British authorities was completed. The following day the American officers and crew left England for the United States.

TRACES OF SIR JOHN FRANKLIN

Though the fate of Sir John Franklin was still a mystery, news of a melancholy character had reached England through the *Montreal Herald* of October 21, 1854, in which a letter was published written by Dr. Rae of York Factory, August 4 of the same year, and addressed to the governor of the Hudson Bay Company. August 15, 1853, Rae had reached his old quarters at Repulse Bay, where he wintered; the end of the following March he undertook his spring journey. At Pelly Bay he fell in with Eskimos from whom he secured several articles that he recognized as belonging to various members of Sir John Franklin's expedition. "On the morning of the 20th" (April), he writes in his journal, "we were met by a very intelligent Eskimo driving a dog-sledge laden with musk-ox beef. This man at once consented to accompany us two days' journey, and in a few minutes had deposited his load on the snow, and was ready to join us. Having explained to him my object, he said that the road by which he had come was the best for us; and, having lightened the men's sledges, we travelled with more facility. We were now joined by another of the natives, who had been absent seal-hunting yesterday; but, being anxious to see us, had visited our snow-house early this morning, and then followed up our track. This man was very communicative and, on putting to him the usual questions as to his having seen 'white man' before, or any ships or boats, he replied in the negative; but said that a party of 'Kabloomans' had died of starvation a long distance to the west of where we then were, and beyond a large river. He stated that he did not know the exact place, that he never had been there, and that he could not accompany us so far. The substance of the information then and subsequently obtained from various sources was to the following effect:—

"In the spring, four winters past (1850), while some Eskimo families were killing seals near the north shore of a large island, named in Arrowsmith's charts King William's Land, about forty white men were seen travelling in company southward over the ice, and dragging a boat and sledges with them. They were passing along the west shore of the above-named island. None of the party could speak the Eskimo language so well as to be understood, but by signs the natives were led to believe that the ship or ships had been crushed by ice, and they were now going to where they expected to find deer to shoot. From the appearance of the men—all of whom, with the exception of an officer, were hauling on the drag-ropes of the sledge, and looked thin—they were then supposed to be getting short of provisions; and they purchased a small seal, or piece of seal, from the natives. The officer was described as being a tall, stout, middle-aged man. When their day's journey terminated, they pitched tents to rest in.

"At a later date, the same season, but previous to the disruption of the ice, the corpses of some thirty persons and some graves were discovered on the continent, and five dead bodies on an island near it, about a long day's journey to the northwest of the mouth of a large stream, which can be no other than Back's Great Fish River (named by the Eskimos Oot-doo-hi-ca-lik), as its description and that of the low shore in the neighborhood of Point Ogle and Montreal Island agree exactly with that of Sir George Back. Some of the bodies were in a tent, or tents; others were under the boat, which had been turned over to form a shelter; and some lay scattered about in different directions. Of those seen on the island, it was supposed that one was that of an officer (chief), as he had a telescope strapped over his shoulders, and a double-barrelled gun lay underneath him.

"From the mutilated state of many of the bodies and the contents of the kettles, it is evident that our wretched countrymen had been driven to the dread alternative of cannibalism as a means of sustaining life. A few of the unfortunate men must have survived until the arrival of the wild-fowl (say until the end of May), as shots were heard, and fresh bones and feathers of geese were noticed near the scene of the sad event.

"There appears to have been an abundant store of ammunition, as the gunpowder was emptied by the natives in a heap on the ground out of the kegs or cases containing it, and a quantity of shot and ball was found below high-water mark, having probably been left on the ice close to the beach before the spring commenced. There must have been a number of telescopes, guns (several of them double-barrelled), watches, compasses, etc., all of which seem to have been broken up, as I saw pieces of these different articles with the natives, and I purchased as many as possible, together with some silver spoons and forks, an Order of Merit in the form of a star, and a small silver plate engraved 'Sir John Franklin, K.C.B.'"

Following closely upon the return of Dr. Rae to England, a land journey was undertaken by Mr. James Anderson of the Hudson Bay Company to follow up the trail. He descended the Great Fish River in June, 1855, and at the rapids below Lake Franklin, three Eskimo huts were seen and various articles were found which the Eskimos claimed were obtained from a boat owned by white men who had died of starvation. These articles consisted of tent-poles, paddles, copper and sheet-iron boilers, tin soup tureens, and tools of various kinds.

Anderson pushed on to Point Beaufort, and finally reached Montreal Island. There other articles were found, such as chain, hooks, tools, rope, bunting; the name "Mr. Stanley" (surgeon of the *Erebus*) was rudely carved on a stick, and a piece of board had on it *Terror*. No signs of human remains were found, however. After a search at Point Ogle, where similar articles were found, Anderson's party returned home.

Though the British government no longer desired to pursue the search, Lady Franklin, whose remarkable tenacity of purpose and loyal devotion had awakened so much admiration and respect, decided to expend the last remnant of her fortune to outfit the small screw steamer *Fox* under the able direction of the gallant M'Clintock, aided by Lieutenant Hobson, and send it to solve the mystery that still clung about the fate of her beloved husband.

At first it seemed as if all the elements had conspired to make this expedition a failure, for in the summer of 1857 the *Fox* found herself drifting at the mercy of the ice off Melville Bay, and after a dreary winter the pack had carried her nearly twelve hundred geographical miles in the Atlantic. Not until April 25, 1858, did the *Fox* get free, and then, securing such stores and provisions as could be procured at the small Danish settlement of Holstenburg, she sailed into Barrow Strait.

Early the following spring parties under M'Clintock and Lieutenant Hobson undertook two sledge journeys. At Cape Victoria on the southwest coast of Boothia, they fell in with Eskimos, who informed them that some years back a large ship had been crushed in the ice out in the sea west of King William Land.

On April 20, they again met these same Eskimos, who informed them with great reluctance that a second ship had been forced on shore, where they supposed she still remained, but much broken. They added that it was in the fall of the year, that is, August or September, when the ships were destroyed; that all the white people landed safely and went away to the Great Fish River, taking a boat or boats with them. The following year their bones were found upon the trail. M'Clintock and Hobson separated upon reaching Cape Victoria, and the former took up the search of the east coast in a southerly direction, while Hobson made a diligent examination of the western coast.

THE FOX'S VOYAGE UNDER M'CLINTOCK

On May 7, 1859, M'Clintock writes:—

"To avoid snow-blindness, we commenced night marching. Crossing over from Malty Island towards the King William Land shore, we continued our march southward until midnight, when we had the good fortune to arrive at an inhabited snow-

village. We found here ten or twelve huts and thirty or forty natives of King William Island; I do not think any of them had ever seen white people alive before, but they evidently knew us to be friends. We halted at a little distance, and pitched our tent, the better to secure small articles from being stolen whilst we bartered with them.

"I purchased from them six pieces of silver plate, bearing the crests or initials of Franklin, Crozier, Fairholme, and McDonald; they also sold us bows and arrows of English woods, uniform and other buttons, and offered us a heavy sledge made of two short stout pieces of curved wood, which no mere boat could have furnished them with, but this, of course, we could not take away; the silver spoons and forks were readily sold for four needles each.

"Having obtained all the relics they possessed," continues M'Clintock, "I purchased some seal's flesh, blubber, frozen venison, dried and frozen salmon, and sold some of my puppies. They told us it was five days' journey to the wreck, one day up the inlet still in sight, and four days overland; this would carry them to the western coast of King William Land; they added that but little now remained of the wreck which was accessible, their countrymen having carried almost everything away. In answer to an inquiry, they said she was without masts; the question gave rise to some laughter amongst them, and they spoke to each other about fire, from which Peterson thought they had burnt the masts through close to the deck in order to get them down.

"There had been *many books*, they said, but all have long ago been destroyed by the weather; the ship was forced on shore in the fall of the year by the ice. She had not been visited during the past winter, and an old woman and a boy were shown to us who were the last to visit the wreck; they said they had been at it during the winter of 1857-1858. Peterson questioned the woman closely, and she seemed anxious to give all the information in her power. She said many of the white men dropped by the way as they went to the Great River; that some were buried and some were not; they did not themselves witness this; but discovered their bodies during the winter following.

"We could not arrive at any approximation of the numbers of the white men nor of the years elapsed since they were lost. This was all the information we could obtain."

Visiting the shore along which the retreating crews must have marched, he came shortly after midnight May 24, when slowly walking along a gravel ridge near the beach which the winds kept partially bare of snow, upon a human skeleton, partly exposed, with here and there a few fragments of clothing appearing through the snow. "The skeleton—now perfectly bleached—was lying upon its face, the limbs and smaller bones either dissevered or gnawed away by small animals."

"A most careful examination of the spot," writes M'Clintock, "was, of course, made, the snow removed, and every scrap of clothing gathered up. A pocket-book afforded strong grounds of hope that some information might be subsequently obtained respecting the unfortunate owner and the calamitous march of the lost crews, but at the time it was frozen hard. The substance of that which we gleaned upon the spot may thus be summed up:—

"This victim was a young man slightly built, and perhaps above the common height; the dress appeared to be that of a steward or officer's servant, the loose bow-knot in which his neck-handkerchief was tied not being used by seamen or officers. In every particular the dress confirmed our conjectures as to his rank or office in the late expedition,—the blue jacket with slashed sleeves and braided edging, and the pilot-cloth great-coat with plain covered buttons. We found, also, a clothes-brush near, and a horn pocket-comb. This poor man seems to have selected the bare ridge top, as affording the least tiresome walking, and to have fallen upon his face in the position in which we found him. It was a melancholy truth that the old woman spoke when she said 'they fell down and died as they walked along.'"

At Cape Herschel a cairn was found all but demolished by the natives, and greatly to the disappointment of M'Clintock no record of any kind was discovered.

"I noticed with great care," he writes, "the appearance of the stones, and came to the conclusion that the cairn itself was of old date, and had been erected many years ago, and that it was reduced to the state in which we found it by people having broken down one side of it; the displaced stones, from being turned over, looking far more fresh than those in that portion of the cairn which had been left standing. It was with a feeling of deep regret and much disappointment that I left this spot without finding some certain record of those martyrs to their country's fame. Perhaps in all the wide world there will be few spots more hallowed in the recollection of English seamen than this cairn on Cape Herschel.

"A few miles beyond Cape Herschel the land becomes very low; many islets and shingle-ridges lie far off the coast; and as we advanced we met with hummocks of unusually heavy ice, showing plainly that we were now travelling upon a far more exposed part of the coast-line. We were approaching a spot where a revelation of intense interest was awaiting me.

"About twelve miles from Cape Herschel I found a small cairn built by Hobson's party, containing a note for me. He had reached this his extreme point, six days previously, without having seen anything of the wreck, or of natives, but he had found a record—the record so ardently sought for—of the Franklin expedition—at Point Victory, on the northwest coast of King William Land. That record is indeed a sad and touching relic of our lost friends, and, to simplify its contents, I will point out separately the double story it so briefly tells.

"In the first place, the record paper was one of the printed forms usually supplied to discovery ships for the purpose of being enclosed in bottles and thrown overboard at sea, in order to ascertain the set of the currents, blanks being left for the date and position; any person finding one of these records is requested to forward it to the Secretary of the Admiralty, with a note of time and place; and this request is printed upon it in six different languages. Upon it was written, apparently by Lieutenant Gore, as follows:—

"'28 of May, 1847

"'H. M. ships *Erebus* and *Terror* wintered in the ice in lat. 70° 05′ N.; long. 98° 23′ W.

"'Having wintered in 1846-7, at Beechey Island, in lat. 74° 43′ 28′′ N., long. 91° 39′ 15′′ W., after having ascended Wellington Channel to lat. 77° and returned by the west side of Cornwallis Island.

"'Sir John Franklin commanding the expedition.

"'All well.

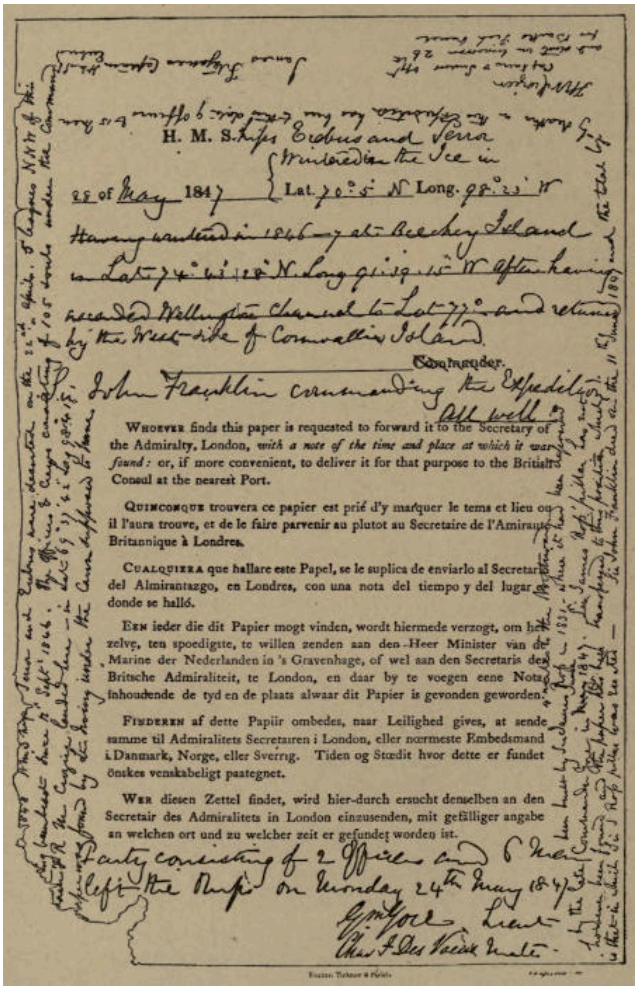
"'Party consisting of 2 officers and 6 men left the ships on Monday, 24th May, 1847.

"'Gm. Gore, Lieut.
"'Chas. F. Des Vœux, Mate.'

"There is an error in the above document, namely, that the *Erebus* and *Terror* wintered at Beechey Island in 1846-7, the correct dates should have been 1845-6; a glance at the date at the top and bottom of the record proves this, but in all other respects the tale is told in as few words as possible, of their wonderful success up to that date, May, 1847.

"We find that after the last intelligence of Sir John Franklin was received by us (bearing date of July, 1845), from the whalers in Melville Bay, that his expedition passed on to Lancaster Sound, and entered Wellington Channel, of which the southern entrance had been discovered by Sir Edward Parry in 1819. The *Erebus* and *Terror* sailed up that strait for one hundred and fifty miles, and reached in the autumn of 1845 the same latitude as was attained eight years subsequently by H. M. S. *Assistance* and *Pioneer*. Whether Franklin intended to pursue this northern course, and was only stopped by ice in that latitude of 77° north, or purposely relinquished a route which seemed to lead away from the known seas off the coast of America, must be a matter of opinion; but this document assures us that Sir John Franklin's expedition, having accomplished this examination, returned southward from latitude 77° north, which is at the head of Wellington Channel, and re-entered Barrow's Strait by a new channel between Bathhurst and Cornwallis Islands.

"Seldom has such success been accorded to an Arctic navigator in a single season, and when the *Erebus* and *Terror* were secured at Beechey Island for the coming winter of 1845-6, the results of their first year's labor must have been most cheering. These results were the exploration of Wellington and Queen's Channel, and the addition to our charts of the extensive lands on either hand. In 1846, they proceeded to the southwest, and eventually reached within twelve miles of the north extreme of King William Land, when their progress was arrested by the approaching winter of 1846-7. That winter appears to have passed without any serious loss of life, and when in the spring, Lieutenant Gore leaves with a party for some especial purpose, and very probably to connect the unknown coast-line of King William Land between Point Victory and Cape Herschel, those on board the *Erebus* and *Terror* were 'all well,' and the gallant Franklin still commanded.



H. M. S. Ships Erebus and Terror
Wintered in the Ice in
28 of May 1847 Lat. 70° 5' N Long. 98° 23' W
Having wintered in 1846-7 at Beechey Island
in Lat. 74° 43' 28" N. Long. 91° 39' 15" W after having
ascended Wellington Channel to Lat. 77° and returned
by the West side of Cornwallis Island.
Commander.
Sir John Franklin commanding the Expedition
All well

WHOEVER finds this paper is requested to forward it to the Secretary of the Admiralty, London, *with a note of the time and place at which it was found:* or, if more convenient, to deliver it for that purpose to the British Consul at the nearest Port.

QUINCONQUE trouvera ce papier est prié d'y marquer le tems et lieu ou il l'aura trouve, et de le faire parvenir au plutot au Secretaire de l'Amirauté Britannique à Londres.

CUALQUIERA que hallare este Papel, se le suplica de enviarlo al Secretario del Almirantazgo, en Londres, con una nota del tiempo y del lugar donde se halló.

EEN ieder die dit Papier mogt vinden, wordt hiermede verzogt, om het zelve, ten spoedigste, te willen zenden aan den Heer Minister van de Marine der Nederlanden in 's Gravenhage, of wel aan den Secretaris der Britsche Admiraliteit, te London, en daar by te voegen eene Nota inhoudende de tyd en de plaats alwaar dit Papier is gevonden geworden.

FINDEREN af dette Papiir ombedes, naar Leilighed gives, at sende samme til Admiralitets Secretairen i London, eller nœrmeste Embedsmand i Danmark, Norge, eller Sverrig. Tiden og Stœdit hvor dette er fundet önskes venskabeligt paategnet.

WER diesen Zettel findet, wird hier-durch ersucht denselben an den Secretair des Admiralitets in London einzusenden, mit gefälliger angabe an welchen ort und zu welcher zeit er gefundet worden ist.

Party consisting of 2 Officers and 6 Men left the Ships on Monday 24th May 1847
Gm Gore Lieut
Chas F Des Vœux Mate

RECORD OF FRANKLIN'S EXPEDITION

"But, alas! round the margin of the paper upon which Lieutenant Gore in 1847 wrote those words of hope and promise, another hand had subsequently written the following words:—

"'April 25, 1848.—H. M. ships *Terror* and *Erebus* were deserted on the 22d April, 5 leagues N.N.W. of this, having been beset since 12th September, 1846. The officers and crews, consisting of 105 souls, under the command of Captain F. R. M. Crozier, landed here in lat. 69° 37′ 42′′ N., long. 98° 41′ W. Sir John Franklin died on the 11th June, 1847; and the total loss by deaths in the expedition has been to this date 9 officers and 15 men.

"'(Signed)

"'F. R. M. Crozier, Captain and Senior Officer,
"'James Fitzjames, Captain H. M. S. Erebus,

"'and start (on) tomorrow, 26th for Back's Fish River.'

"This marginal information was evidently written by Captain Fitzjames, excepting only the note stating when and where they were going, which was added by Captain Crozier.

"There is some additional marginal information relative to the transfer of the document to its present position (viz. the site of Sir James Ross's pillar) from a spot four miles to the northward near Point Victory, where it had been originally deposited by the *late* Commander Gore. This little word *late* shows that he, too, within the twelvemonth had passed away.

"In the short space of twelve months, how mournful had become the history of Franklin's expedition; how changed from the cheerful 'All well' of Graham Gore! The spring of 1847 found them within 90 miles of the known sea off the coast of America; and to men who had already in two seasons sailed over 500 miles of previously unexplored waters, how confident must they have felt that that forthcoming navigable season of 1847 would see their ships pass over so short an intervening space! It was ruled otherwise. Within a month after Lieutenant Gore placed the record on Point Victory, the much-loved leader of the expedition, Sir John Franklin, was dead; and the following spring found Captain Crozier, upon whom the command had devolved at King William Land, endeavoring to save his starving men, 105 souls in all, from a terrible death by retreating to Hudson Bay territories up the Back or Great Fish River.

"A sadder tale was never told in fewer words. There is something deeply touching in their extreme simplicity, and they show in the strongest manner that both the leaders in this retreating party were actuated by the loftiest sense of duty and met with calmness and decision the fearful alternative of a last bold struggle for life, rather than perish without effort on board their ships; for we well know that the *Erebus* and *Terror* were only provisioned up to July, 1848."

M'Clintock's party were now running short of provisions, but the finding of such important relics determined the leader to pursue the search to the uttermost limits of his powers.

On May 30 he writes: "We encamped alongside a large boat—another melancholy relic which Hobson had found and examined a few days before, as his note left here informed me; but he had failed to discover record, journal, pocket-book, or memorandum of any description. A vast quantity of tattered clothing was lying in her, and this we first examined. Not a single article bore the name of its former owner. The boat was cleared out and carefully swept that nothing might escape us. The snow was then removed from about her, but nothing whatever was found."

SLEDGE JOURNEYS

After a detailed description of this boat, its weight, construction, and marks, etc., M'Clintock continues:—

"But all these were after observations; there was that in the boat which transfixed us with awe. It was portions of two human skeletons. One was that of a slight young person; the other of a large, strongly made, middle-aged man. The former was found in the bow of the boat, but in too much disturbed a state to enable Hobson to judge whether the sufferer had died there; large and powerful animals, probably wolves, had destroyed much of this skeleton, which may have been that of an officer. Near it we found the fragments of a pair of worked slippers, of which I give the pattern, as they may possibly be identified. The lines were white, with a black margin; the spaces white, red, and yellow. They had originally been 11 inches long, lined with calf-skin with the hair left on, and the edges bound with red silk ribbon. Besides these slippers there were a pair of small strong shooting half-boots.

"The other skeleton was in somewhat more perfect state, and was enveloped with clothes and furs; it lay across the boat, under the after-thwart. Close beside it were found five watches; and there were two double-barrelled guns—one barrel in each loaded and cocked—standing muzzle upwards against the boat's side. It may be imagined with what deep interest these sad relics were scrutinized, and how anxiously every fragment of clothing was turned over in search of pockets and pocket-books, journals, or even names. Five or six small books were found, all of them scriptural or devotional works, except the 'Vicar of Wakefield.' One little book, 'Christian Melodies,' bore an inscription upon the title page from the donor to G. G. (Graham Gore?). A small Bible contained numerous marginal notes, and whole passages underlined. Besides these books, the covers of a New Testament and Prayerbook were found.

"Quantities of clothing and other articles were of one description and another truly astonishing in variety and such as, for the most part, modern sledge-travellers in these regions would consider a mere accumulation of dead weight."

The only provisions that were discovered were a little tea and nearly forty pounds of chocolate; a small portion of tobacco was also found.

The position of the abandoned boat was about fifty miles as a sledge would travel from Point Victory, and therefore sixty-five miles from the position of the ships, also seventy miles from the skeleton of the steward, and one hundred and fifty miles from Montreal Island. "A little reflection," writes M'Clintock, "led me to satisfy my own mind at least, that the boat was returning to the ships; and in no other way can I account for two men having been left in her, than by supposing the party were unable to drag the boat further, and that these two men, not being able to keep pace with their shipmates, were therefore left by them supplied with such provisions as could be spared to last until the return of the others from the ship with a fresh stock.

"Whether it was the intention of the retroceding party to await the result of another season in the ships, or to follow the track of the main body to the Great Fish River, is now a matter of conjecture. It seems highly probable that they had purposed revisiting the boat, not only on account of the two men left in charge of it, but also to obtain the chocolate, the five watches, and many other articles which would otherwise scarcely have been left in her.

“The same reasons which may be assigned for the return of this detachment from the main body, will also serve to account for their not having come back to their boat. In both instances they appear to have greatly overrated their strength, and the distance they could travel in a given time.

“Taking this view of the case, we can understand why their provisions would not last them for anything like the distance they required to travel, and why they would be obliged to send back to the ships for more, first taking from the detached party all provisions they could possibly spare. Whether all or any of the remainder of this detached party ever reached their ships is uncertain; all we know is, that they did not revisit the boat, which accounts for the absence of more skeletons in its neighborhood; and the Esquimos report that there was no one alive in the ship when she drifted on shore, and that but one human body was found by them on board of her.

“After leaving the boat we followed an irregular coast-line to the N. and N.W., up to a very prominent cape, which is probably the extreme of land seen from Point Victory by Sir James Ross, and named by him Point Franklin, which name, as a cape, it still retains.”

“I need hardly say,” concludes M’Clintock, “that throughout the whole of my journey along the shores of King William Land I caused a most vigilant lookout to be kept to seaward for any appearance of the stranded ship spoken of by the natives; our search was, however, fruitless in that respect.”

Of Lieutenant Hobson’s most careful and thorough search, M’Clintock writes: “He exercised his discretionary power with sound judgment, and completed his search so well, that in coming over the same ground after him, I could not discover any trace that had escaped him.”

On the 19th of June, M’Clintock once more reached the *Fox*, where he found Hobson, who had preceded him by five days, sick and unable to walk, having been dragged upon the sledge for the best part of his return journey.

A third sledging party under Captain Young, which had left the 7th of April, was still in the field, and M’Clintock began to feel so great anxiety for their safety that by the 25th of June he set out with four men to search for them. “On the 27th,” he writes, “I sent three of the men back to the ship, and with Thompson and the dogs went on to Pemmican Rock, where, to our great joy, we happily met Young and his party, who had but just returned there, after a long and successful journey.”

It may be briefly stated that Young was in the field seventy-eight days under most trying circumstances. Crossing Franklin Strait to Prince of Wales Land, he traced its shores to its southern termination at Cape Swinburne. He failed in an attempt to cross M’Clintock Channel, owing to the rough ice, but he completed the explorations of this coast beyond Osborn’s farthest to nearly 73° N., also exploring both shores of Franklin Strait between the *Fox* and Ross’s farthest in 1849 and Brown’s in 1851.

The return of the *Fox* to England was not accomplished without difficulty, owing to the death of the engineer, which obliged M’Clintock to stand by the engine no less than twenty-four consecutive hours, on one occasion. However, they reached Portsmouth, September 24, 1859.

“The relics we have brought home,” writes Captain M’Clintock, in conclusion, “have been deposited by the Admiralty in the United Service Institution, and now form a national memento—the most simple and most touching—of those heroic men who perished in the path of duty, but not until they had achieved the grand object of their voyage,—the Discovery of the North-West Passage.”

CHAPTER XI

The second Grinnell expedition. Commanded by Dr. Elisha K. Kane.—Winter quarters in Rensseläer Harbour.—Sledging trips.—To the rescue.—Effects of exhaustion and cold.—Dr. Kane's journey.—Great Glacier of Humboldt.—Return and illness of Dr. Kane.—Second winter in the ice.—Privations and suffering.—Abandonment of the *Advance*.—Retreat and rescue.

Mention has already been made of the second Grinnell expedition, commanded by Dr. Kane and financed by Mr. Grinnell and Mr. Peabody of London. Dr. Kane's instructions from the Navy Department at Washington, dated November 27, 1852, read as follows:—

> "Sir:—Lady Franklin having urged you to undertake a search for her husband, Sir John Franklin, and his companions, and a vessel, the *Advance*, having been placed at your disposition by Mr. Grinnell, you are hereby assigned to special duty for the purpose of conducting an overland journey from the upper waters of Baffin's Bay to the shores of the Polar Seas.
>
> "Relying upon your zeal and discretion, the Department sends you forth upon an undertaking which will be attended with great peril and exposure. Trusting that you will be sustained by the laudable object in view, and wishing you success and a safe return to your friends, I am,
>
> "Respectfully, your obedient servant,
>
> "John P. Kennedy.
>
> "Passed Assistant Surgeon E. K. Kane,
> "United States Navy, Philadelphia."

The small brig *Advance*, one hundred and forty-tons' burden, with seventeen picked men besides the commander, sailed from New York on the 30th of May, 1853, "escorted by several noble steamers; and, passing slowly on to the Narrows amid salutes and cheers of farewell."

At the end of eighteen days the *Advance* had reached St. John's, Newfoundland, where Governor Hamilton, a brother to the secretary of the British Admiralty, and other officials, combined with the inhabitants to welcome the expedition. Upon sailing once more, Dr. Kane was presented with a noble team of Newfoundland dogs, the gift of the governor.

The *Advance* reached Baffin Bay without incident, and a few days later found her off the coast of Greenland, making her way to Fisdernaes, which was reached the 1st of July,—"amid the clamor of its entire population, assembled on the rock to greet us."

Here a native Eskimo, Hans Christiansen, was engaged as interpreter for the expedition. The *Advance* then proceeded across Melville Bay in the wake of vast icebergs, dodging to the rear of these huge floating masses, holding on to them when adverse winds became annoying, and pressing forward as opportunity offered. The promontory of Swartehuk was passed by the 16th. The following day the *Advance* anchored at Proven, where Dr. Kane was warmly welcomed by his old friend Christiansen, the superintendent. Here he made necessary purchases of furs, and these were speedily made into suitable garments by the superintendent's wife and her assistants. While the brig sailed leisurely up the coast, Kane set out in the whale-boat to make purchases of dogs among the natives of the different settlements. After a two days' stay at Upernavik, the *Advance* proceeded on her course and passed in succession the Eskimo settlement of Kingatok, the Kettle,—a mountain top so named from the resemblance of its profile, and finally Zottik, the farthest point of colonization.

THE SECOND GRINNELL EXPEDITION

Inclining more directly to the north, she sighted the landmark known as the Horse's Head, and later Ducks Islands, and made for Wilcox Point, which was passed on the 27th of July. The 2d of August found them well in the ice and harassed by fogs, but the floes opened at intervals, allowing the ship to make her slow progress through them. The north water was comparatively free from obstructions, and by the 5th they had passed the "Crimson Cliffs" described by Sir John Ross; two days later they doubled Cape Alexander, and passed in to Smith Sound. At Littleton Island they stopped to deposit a boat and supply of stores. On August 8 the ship closed with the ice and bored her way through the loose stream ice some forty miles beyond Life Boat Cove, when it became impossible to force her way any farther, and, says Kane: "A dense fog gathering round us, we were carried helplessly to the eastward. We should have been forced upon the Greenland coast, but an eddy close in shore released us for a few moments from direct pressure, and we were fortunate enough to get out a whale-line to the rocks and warp into a protecting niche."

The following day he writes: "It may be noted among our little miseries that we have more than fifty dogs on board, the majority of whom might rather be characterized as 'ravening wolves.' To feed this family upon whose strength our progress and success depend, is really a difficult matter. The absence of shore or land ice to the south in Baffin Bay has prevented our rifles from contributing any material aid to our commissariat. Our two bears lasted the cormorants but eight days; and to feed them upon the meagre allowance of two pounds of raw flesh every other day is an almost impossible necessity. Only yesterday they were ready to eat the caboose up, for I would not give them pemmican. Corn meal or beans, which Penney's dogs fed on, they disdain to touch; and salt junk would kill them.

"Accordingly, I started out this morning to hunt walrus, with which the Sound is teeming. We saw at least fifty of these dusky monsters, and approached many groups within twenty paces. But our rifle balls reverberated from their hides like cork pellets from a pop-gun target, and we could not get within harpoon distance of one. Later in the day, however, Ohlsen, climbing a neighboring hill to scan the horizon and see if the ice had slackened, found the dead carcass of a narwhale or sea-unicorn; a happy discovery, which has secured for us at least six hundred pounds of good, fetid, wholesome flesh. The length of the narwhale was fourteen feet, and his process, or 'horn,' from the tip to its bony encasement, four feet.... We built a fire on the rocks, and melted down his blubber: he will yield readily two barrels of oil."

DR. ELISHA K. KANE

The condition of the ice, furious gales, and the fast approaching winter all combined to dishearten the crew, who with one exception desired to return south and find winter quarters. Dr. Kane, however, determined to push northward, and finally located in Rensseläer Harbour 78° 37′ N., 71° W. By the 10th of September, the long "night in which no man can work" was close at hand; the thermometer stood at 14°; every preparation was made for wintering; a storehouse was erected at Butler Island; an astronomical observatory arranged at a short distance from the ship.

“Besides preparing our winter quarters,” writes Dr. Kane, “I am engaged in the preliminary arrangements for my provision depots along the Greenland coast. Mr. Kennedy is, I believe, the only one of my predecessors who has used October and November for Arctic field work; but I deem it important to our movements during the winter and spring, that depots in advance should be made before the darkness sets in. I purpose arranging three of them at intervals,—pushing them as far forward as I can,—to contain in all some twelve hundred pounds of provision, of which eight hundred will be pemmican.”

To this end one hundred and twenty-five miles of the Greenland coast was traced to the north and east; the largest of the three depots was located on an island in latitude 70° 12´ 6´´, and longitude 65° 25´.

By the 20th of November, the darkness made field work impossible, and for one hundred and twenty days the little band of Arctic explorers endured the weariness and bitter cold of the long night.

“On the 17th of January,” writes Dr. Kane, “our thermometers stood at forty-nine degrees below zero; and on the 20th the range of those at the observatory was at -64° to -67°. The temperature on the floes was always somewhat higher than at the island; the difference being due, as I suppose, to the heat conducted from the sea-water, which was at a temperature of +29°; the suspended instruments being affected by radiation.

“On the 5th of February, our thermometers began to show unexampled temperature. They ranged from 60° to 75° below zero, and one very reliable instrument stood upon the taffrail of our brig at -65°. The reduced mean of our best spirit-standards gave -67°, or 99° below the freezing-point of water.

“At these temperatures chloric ether became solid, and carefully prepared chloroform exhibited a granular pellicle on its surface. Spirit of naphtha froze at -54°, and oil of wintergreen was in a flocculent state at -56°, and solid at -63° and -65°.

“The exhalations from the surface of the body invested the exposed or partially clad parts with a wreath of vapor. The air had a perceptible pungency upon inspiration, but I could not perceive the painful sensation which has been spoken of by some Siberian travellers. When breathed for any length of time, it imparted a sensation of dryness to the air-passages. I noticed that, as it were involuntarily, we all breathed guardedly, with compressed lips.”

The depressing influence of such low temperatures affected both man and beast. The poor dogs suffered keenly, and many of them died of affections of the brain, which began with the same symptoms of fits, lunacy, and lockjaw. The loss of fifty-seven of these brave animals seriously affected Dr. Kane’s plans. The crew were greatly depleted by scurvy and almost unfit for the arduous work planned for the early spring.

“An Arctic night and an Arctic day,” remarks Dr. Kane, “age a man more rapidly and harshly than a year anywhere else in the world.”

Early in March a sledging party was organized to ascertain whether it were practicable to force a way over the crowded bergs and mountainous ice to the north. An advance corps was sent out to place a depot of provisions at a suitable distance from the brig.

WINTER QUARTERS IN RENSSELAER HARBOUR

March 20, Dr. Kane writes as follows:—

“I saw the depot party off yesterday. They gave the usual three cheers, with three for myself. I gave them the whole of my brother’s great wedding-cake and my last two bottles of Port, and they pulled the sledge they were harnessed to famously. But I was not satisfied. I could see it was hard work; and, besides, they were without the boat, or enough extra pemmican to make their deposit of importance. I followed them, therefore, and found that they encamped at 8 P.M. only five miles from the brig.

“When I overtook them, I said nothing to discourage them, and gave no new orders for the morning; but after laughing at good Ohlsen’s rueful face, and listening to all Petersen’s assurances that the cold and nothing but the cold retarded his Greenland sledge, and that no sledge of any other construction could have been moved at all through -40° snow, I quietly bade them good-night, leaving all hands under their buffaloes.

“Once returned to the brig, all my tired remainder men were summoned; a large sledge with board runners which I had built somewhat after the neat Admiralty model sent me by Sir Francis Beaufort, was taken down, scraped, polished, lashed, and fitted with track ropes and rue-raddies; the lines arranged to draw as near as possible in a line with the centre of gravity.

“We made an entire cover of canvas, with snugly adjusted fastenings; and by one in the morning we had our discarded excess of pemmican and the boat once more in stowage. Off we went for the camp of the sleepers. It was very cold, but a thoroughly Arctic night; the snow just tinged with the crimson stratus above the sun, which, equinoctial as it was, glared beneath the northern horizon like a smelting-furnace. We found the tent of the party by the bearings of the stranded bergs. Quietly and stealthily we hauled away their Eskimo sledge, and placed her cargo upon the *Faith*.

“Five men were then rue-raddied to the track-lines, and with the whispered word, ‘Now, boys, when Mr. Brooks gives his third snore, off with you!’ off they went, and the *Faith* after them, as free and nimble as a volunteer. The trial was a triumph. We awakened the sleepers with three cheers; and, giving them a second good-by, returned to the brig, carrying the dishonored vehicle along with us. And now, bating mishaps past anticipation, I shall have a depot for my long trip.

“The party were seen by McGary from aloft, at noon to-day, moving easily, and about twelve miles from the brig.”

Eleven days later, March 31, Dr. Kane writes:—

“We were at work cheerfully, sewing away at the skins of some moccasins by the blaze of our lamps, when, toward midnight, we heard the noise of steps above, and the next minute Sonntag, Ohlsen, and Petersen came down into the cabin. Their manner startled me even more than their unexpected appearance on board. They were swollen and haggard, and hardly able to speak.

“Their story was a fearful one. They had left their companions in the ice, risking their own lives to bring us the news: Brooke, Baker, Wilson, and Pierre were all lying frozen and disabled. Where? They could not tell: somewhere in among the hummocks to the north and east; it was drifting heavily round them when they parted. Irish Tom had stayed by to feed and care for the others; but the chances were sorely against them. It was in vain to question them further. They had evidently travelled a great distance, for they were sinking with fatigue and hunger, and could hardly be rallied enough to tell us the direction in which they had come.”

“My first impulse,” continues Dr. Kane, “was to move on the instant with an unencumbered party; a rescue to be effective or even hopeful, could not be too prompt. What pressed on my mind most was, where the sufferers were to be looked for among the drifts. Ohlsen seemed to

have his faculties rather more at command than his associates, and I thought that he might assist us as a guide; but he was sinking with exhaustion, and if he went we must carry him.

SLEDGING TRIPS

"There was not a moment to be lost. While some were still busy with the newcomers and getting ready a hasty meal, others were rigging out the *Little Willie* with a buffalo cover, a small tent, and a package of pemmican; and, as soon as we could hurry through our arrangements, Ohlsen was strapped on in a fur bag, his legs wrapped in dog-skins and eider-down, and we were off upon the ice. Our party consisted of nine men and myself. We carried only the clothes on our backs. The thermometer stood at -46°, 78° below the freezing-point.

"A well-known peculiar tower of ice, called by the men the 'Pinnacly Berg,' served as our first land-mark; other icebergs of colossal size, which stretched in long beaded lines across the bay, helped to guide us afterward; and it was not until we had travelled for sixteen hours that we began to lose our way.

"We knew that our lost companions must be somewhere in the area before us, within a radius of forty miles. Mr. Ohlsen, who had been for fifty hours without rest, fell asleep as soon as we began to move, and awoke now with unequivocal signs of mental disturbance. It became evident that he had lost the bearing of the icebergs, which in form and color endlessly repeated themselves; and the uniformity of the vast field of snow utterly forbade the hope of local landmarks.

"Pushing ahead of the party, and clambering over some rugged ice piles, I came to a long level floe, which I thought might probably have attracted the eyes of weary men in circumstances like our own. It was a light conjecture; but it was enough to turn the scale, for there was no other to balance it. I gave orders to abandon the sledge, and disperse in search of footmarks.

"We raised our tent, placed our pemmican in cache, except a small allowance for each man to carry on his person; and poor Ohlsen, now just able to keep his legs, was liberated from his bag. The thermometer had fallen by this time to -49° 3′, and the wind was setting in sharply from the northwest.

"It was out of the question to halt; it required brisk exercise to keep us from freezing. I could not even melt ice for water; and, at these temperatures, any resort to snow for the purpose of allaying thirst was followed by bloody lips and tongue; it burnt like caustic.

"It was indispensable then that we should move on, looking out for traces as we went. Yet when the men were ordered to spread themselves, so as to multiply the chances, though they all obeyed heartily, some painful impress of solitary danger, or perhaps it may have been the varying configuration of the ice-field, kept them closing up continually into a single group. The strange manner in which some of us were affected I now attribute as much to shattered nerves as to the direct influence of the cold. Men like McGary and Bonsall, who had stood out our severest marches, were seized with trembling-fits and short breath; and, in spite of all my efforts to keep up an example of sound bearing, I fainted twice on the snow.

TO THE RESCUE

"We had been nearly eighteen hours out without water or food, when a new hope cheered us. I think it was Hans, our Eskimo hunter, who thought he saw a broad sledge track. The drift had nearly effaced it, and we were some of us doubtful at first whether it was not one of those accidental rifts which the gales make in the surface-snow. But, as we traced it on to the deep snow among the hummocks, we were led to footsteps; and, following these with religious care, we at last came in sight of a small American flag fluttering from a hummock, and lower down a little Masonic banner hanging from a tent-pole hardly above the drift. It was the camp of our disabled comrades; we reached it after an unbroken march of twenty-one hours.

A Gale in the Arctic Sea

"The little tent was nearly covered. I was not among the first to come up; but, when I reached the tent-curtain, the men were standing in silent file on each side of it. With more kindness and delicacy of feeling than is often supposed to belong to sailors, but which is almost characteristic, they intimated their wish that I should go in alone. As I crawled in, and, coming upon the darkness, heard before me the burst of welcome

gladness that came from the four poor fellows stretched on their backs, and then for the first time the cheer outside, my weakness and my gratitude together almost overcame me. 'They had expected me: they were sure I would come!'

"We were now fifteen souls; the thermometer seventy-five degrees below the freezing-point; and our sole accommodation a tent barely able to contain eight persons; more than half our party were obliged to keep from freezing by walking outside while the others slept. We could not halt long. Each of us took a turn of two hours' sleep; and we prepared for our homeward march."

Continuing his spirited narrative, Dr. Kane describes the retreat:—

"It was fortunate indeed that we were not inexperienced in sledging over the ice. A great part of our track lay among a succession of hummocks; some of them extending in long lines, fifteen and twenty feet high, and so uniformly steep that we had to turn them by a considerable deviation from our direct course; others that we forced our way through far above our heads in height, lying in parallel ridges, with the space between too narrow for the sledge to be lowered into it safely, and yet not wide enough for the runners to cross without the aid of ropes to stay them. These spaces, too, were generally chocked with light snow, hiding the openings between the ice-fragments. They were fearful traps to disengage a limb from, for every man knew that a fracture or a sprain even would cost him his life. Besides all this, the sledge was top heavy with its load; the maimed men could not bear to be lashed down tight enough to secure them against falling off.

"Notwithstanding our caution in rejecting every superfluous burden, the weight, including bags and tent, was eleven hundred pounds.

"And yet our march for the first six hours was very cheering. We made by vigorous pulls and lifts nearly a mile an hour, and reached the new floes before we were absolutely weary. Our sledge sustained the trial admirably. Ohlsen, restored by hope, walked steadily at the leading belt of the sledge lines; and I began to feel certain of reaching our halfway station of the day before, where we had left our tent. But we were still nine miles from it, when, almost without premonition, we all became aware of an alarming failure of our energies.

EFFECTS OF EXHAUSTION AND COLD

"I was, of course, familiar with the benumbed and almost lethargic sensation of extreme cold; and once, when exposed for some hours in the midwinter of Baffin's Bay, I had experienced symptoms which I compared to the diffused paralysis of the electro-galvanic shock. But I had treated the *sleepy comfort* of freezing as something like the embellishment of romance. I had evidence now to the contrary.

"Bonsall and Morton, two of our stoutest men, came to me, begging permission to sleep: 'They were not cold; the wind did not enter them now; a little sleep was all they wanted.' Presently Hans was found nearly stiff under a drift; and Thomas, bolt upright, had his eyes closed, and could hardly articulate. At last, John Blake threw himself on the snow, and refused to rise. They did not complain of feeling cold; but it was in vain that I wrestled, boxed, ran, argued, jeered, or reprimanded; an immediate halt could not be avoided.

"We pitched our tent with much difficulty. Our hands were too powerless to strike a fire; we were obliged to do without water or food. Even the spirits (whiskey) had frozen at the men's feet, under all the coverings. We put Bonsall, Ohlsen, Thomas, and Hans, with the other sick men, well inside the tent, and crowded in as many others as we could. Then, leaving the party in charge of Mr. McGary, with orders to come on after four hours' rest, I pushed ahead with William Godfrey, who volunteered to be my companion. My aim was to reach the halfway tent, and thaw some ice and pemmican before the others arrived. The floe was of level ice, and the walking excellent. I cannot tell how long it took us to make the nine miles; for we were in a strange sort of stupor, and had little apprehension of time. It was probably about four hours. We kept ourselves awake by imposing on each other a continual articulation of words; they must have been incoherent enough. I recall these hours as among the most wretched I have ever gone through; we were neither of us in our right senses, and retained a very confused recollection of what preceded our arrival at the tent. We both of us, however, remember a bear, who walked leisurely before us and tore up as he went a jumper that Mr. McGary had improvidently thrown off the day before. He tore it into shreds and rolled it into a ball, but never offered to interfere with our progress. I remember this, and with it a confused sentiment that our tent and buffalo robes might probably share the same fate. Godfrey, with whom the memory of this day's work may atone for many faults of a later time, had a better eye than myself; and, looking some miles ahead, he could see that our tent was undergoing the same unceremonious treatment. I thought I saw it, too, but we were so drunken with cold that we strode on steadily, and, for aught I know, without quickening our pace. Probably our approach saved the contents of the tent; for when we reached it the tent was uninjured, though the bear had overturned it, tossing the buffalo robes and pemmican into the snow; we missed only a couple of blanket-bags. What we recollect, however, and perhaps all we recollect, is, that we had great difficulty in raising it. We crawled into our reindeer sleeping-bags, without speaking, and for the next three hours slept on in a dreamy and intense slumber. When I awoke, my long beard was a mass of ice frozen fast to the buffalo-skin; Godfrey had to cut me out with his jackknife. Four days after our escape, I found my woollen comfortable with a goodly share of my beard still adhering to it.

"We were able to melt water and get some soup cooked before the rest of our party arrived: it took them but five hours to walk the nine miles. They were doing well, and, considering the circumstances, in wonderful spirits. The day was most providentially windless, with a clear sun. All enjoyed the refreshment we had got ready. The crippled were repacked in their robes; and we sped briskly toward the hummock-ridges which lay between us and the Pinnacly Berg.

"The hummocks we had now to meet came properly under the designation of squeezed ice. A great chain of bergs stretching from northwest to southeast, moving with the tides, had compressed the surface-floes; and, rearing them up on their edges, produced an area more like the volcanic pedregal of the basin of Mexico than anything else I can compare it to.

"It required desperate efforts to work our way over it,—literally desperate, for our strength failed us anew, and we began to lose our self-control. We could not abstain any longer from eating snow; our mouths swelled, and some of us became speechless. Happily the day was warmed by a clear sunshine, and the thermometer rose to -4° in the shade: otherwise we must have frozen.

"Our halts multiplied, and we fell half-sleeping on the snow. I could not prevent it. Strange to say, it refreshed us. I ventured upon the experiment myself, making Riley wake me at the end of three minutes; and I felt so much benefited by it that I timed the men in the same way. They sat on the runners of the sledge, fell asleep instantly, and were forced to wakefulness when their three minutes were out. By eight in the evening we emerged from the floes. The sight of the Pinnacly Berg revived us. Brandy, an invaluable resource in emergency, had already been served out in tablespoonful doses. We now took a longer rest, and a last but stouter dram, and reached the brig at 1 P.M., we believe without a halt. I say *we believe*: and here perhaps is the most decided proof of our sufferings: we were quite delirious, and had ceased to entertain a sane apprehension of the circumstances about us. We moved on like men in a dream. Our footmarks seen afterwards showed that we had steered a bee-line for the brig. It must have been by a sort of instinct, for it left no impress on the memory. Bonsall was sent staggering ahead, and reached the brig, God knows how, for he had fallen repeatedly at the track-lines; but he delivered with punctilious accuracy the messages I had

sent by him to Dr. Hayes. I thought myself the soundest of all, for I went through all the formula of sanity, and can recall the muttering delirium of my comrades when we got back into the cabin of our brig. Yet I have been told since of some speeches and some orders, too, of mine, which I should have remembered for their absurdity if my mind had retained its balance.

"Petersen and Whipple came out to meet us about two miles from the brig. They brought my dog-team, with the restoratives I had sent for by Bonsall. I do not remember their coming. Dr. Hayes entered with judicious energy upon the treatment our condition called for, administering morphine freely, after the usual frictions. He reported none of our brain-symptoms as serious, referring them properly to the class of those indications of exhausted power which yield to generous diet and rest. Mr. Ohlsen suffered some time from strabismus and blindness: two others underwent amputation of parts of the foot, without unpleasant consequences; and two died in spite of all our efforts. This rescue party had been out for seventy-two hours. We had halted in all eight hours, half of our number sleeping at a time. We travelled between eighty and ninety miles, most of the way dragging a heavy sledge. The mean temperature of the whole time, including the warmest hours of three days, was at -41° 2′. We had no water except at our two halts, and were at no time able to intermit vigorous exercise without freezing."

Dr. Kane writes, April 4, Tuesday:—

"Four days have passed, and I am again at my record of failures, sound, but aching still in every joint. The rescued men are not out of danger, but their gratitude is very touching. Pray God that they may live!"

The Outlook from Cape George Russell

Shortly after these events, the ship was visited by Eskimos, a good-natured, childlike company, who disdained such dainties offered by the crew as wheat bread, corned pork, and lumps of white sugar, but gorged themselves on beef and blubber, and took opportunity to steal whatever they could lay their hands on. Dr. Kane purchased all the walrus meat they had to spare and some of their dogs, enriching them in return with needles and beads, and a treasure of old cask staves. Following his experience with the Eskimos, Dr. Kane gives an amusing anecdote of a seal hunt.

"On one occasion," he writes, "while working my way toward the Eskimo huts, I saw a large *Usuk* basking asleep upon the ice. Taking off my shoes, I commenced a somewhat refrigerating process of stalking, lying upon my belly and crawling along, step by step, behind the little knobs of floe. At last, when I was within long rifle-shot, the animal gave a sluggish roll to one side, and suddenly lifted his head. The movement was evidently independent of me, for he strained his neck in nearly the opposite direction. Then, for the first time, I found that I had a rival seal-hunter in a large bear, who was on his belly like myself, waiting with commendable patience and cold feet for a chance of nearer approach. 'What should I do?—the bear was doubtless worth more to me than the seal; but the seal was now within shot, and the bear a bird in the bush! Besides, my bullet once invested in the seal would leave me defenceless. I might be giving a dinner to a bear, and saving myself for his dessert.' These meditations were soon brought to a close; for a second movement of the seal so aroused my hunter's instincts that I pulled the trigger. My cap alone exploded. Instantly with a floundering splash, the seal descended into the deep, and the bear, with three or four rapid leaps, stood disconsolately by the place of his descent. For a single moment we stared each other in the face, and then, with that discretion which is the better part of valor, the bear ran off in one direction, and I followed his example in the other."

DR. KANE'S JOURNEY

Toward the end of April, Dr. Kane had completed his preparations for his grand sledge journey to the north.

"It was," he writes, "to be the crowning expedition of the campaign to attain the *ultima thule* of the Greenland shore, measure the waste that lay between it and the unknown west, and seek round the furthest circle of the ice for an outlet to the mysterious channels beyond."

"The worst thought I have now in setting out," writes Dr. Kane, April 26, "is that of the entire crew I can leave but two behind in able condition, and the doctor and Bonsall are the only two officers who can help Ohlsen. This is our force, four able-bodied and six disabled to keep the brig; the commander and seven men, scarcely better upon the average, out upon the ice. Eighteen souls, thank God! certainly not eighteen bodies!

"I am going this time to follow the ice-belt (*Eis-fod*) to the Great Glacier of Humboldt, and there load up with pemmican from our cache of last October. From this point I expect to stretch along the face of the glacier inclining to the west of north, and make an attempt to cross the ice of the American side. Once on smooth ice, near this shore, I may pass to the west, and enter the large indentation whose existence I can infer with nearly positive certainty. In this I may find an outlet, and determine the state of things beyond the ice-clogged area of this bay.

"I take with me pemmican and bread and tea, a canvas tent, five by six, and two sleeping-bags of reindeer skin. The sledge has been built on board by Mr. Ohlsen. It is very light, of hickory, and but nine feet long. Our kitchen is a soup kettle for melting snow and making tea, arranged so as to boil with either lard or spirits.

"For instruments I have a fine Gambey sextant, in addition to my ordinary pocket-instrument, an artificial horizon, and a Barrow's dip-circle. These occupy little room upon the sledge. My telescope and chronometer I carry on my person."

Ill equipped, enfeebled in health, discouraged by the failure of their caches which had been broken into by bears, the little party struggled on as long as strength and provisions lasted. "The most picturesque portion of the North Greenland coast," writes Dr. Kane, "is to be found after leaving Cape George Russell and approaching Dallas Bay. The red sandstones contrast most favorably with the blank whiteness, associating the cold tints of the dreary Arctic landscape with the warm coloring of more southern lands. The seasons have acted on the different layers of the cliff so as to give them the appearance of jointed masonry, and the narrow line of greenstone at the top caps them with well-simulated battlements. One of these interesting freaks of nature became known to us as the 'Three Brother Turrets.'

"The sloping rubbish at the foot of the coast-wall led up, like an artificial causeway, to a gorge that was streaming at noonday with the southern sun; while everywhere else the rock stood out in the blackest shadow. Just at the edge of the bright opening rose the dreamy semblance of a castle, flanked with triple towers, completely isolated and defined. These were the 'Three Brother Turrets.'

"I was still more struck with another of the same sort, in the immediate neighborhood of my halting ground beyond Sunny Gorge, to the north of latitude 79°. A single cliff of green stone, marked by the slaty limestone that once encased it, rears itself from a crumbled base of sandstones, like the boldly chiselled rampart of an ancient city. At its northern extremity, on the brink of a deep ravine which has worn its way among the ruins, there stands a solitary column or minaret-tower, as sharply finished as if it had been cast for the Place Vendome. Yet the length of the shaft alone is four hundred and eighty feet; and it rises on a plinth or pedestal itself two hundred and eighty feet high."

GREAT GLACIER OF HUMBOLDT

But by far the most remarkable feature of the Great White North visited by Dr. Kane was the "Great Glacier of Humboldt." "I will not attempt to do better by florid description," he writes. "Men only rhapsodize about Niagara and the ocean. My notes speak simply of the 'long evershining line of cliff diminished to a well-pointed wedge in the perspective'; and again, of 'the face of glistening ice, sweeping in a long curve from the low interior, the facets in front intensely illuminated by the sun.' But this line of cliff rose in solid glassy wall three hundred feet above the water-level, with an unknown, unfathomable depth below it; and its curved face, sixty miles in length from Cape Agassiz to Cape Forbes, vanished into unknown space at not more than a single day's railroad travel from the Pole. The interior with which it communicated, and from which it issued, was an unsurveyed *mer de glace*, an ice-ocean, to the eye of boundless dimensions.

"It was in full sight—the mighty crystal bridge which connects the two continents of America and Greenland. I say continents, for Greenland, however insulated it may ultimately prove to be, is in mass strictly continental. Its last possible axis, measured from Cape Farewell to the line of this glacier, in the neighborhood of the eightieth parallel, gives a length of more than twelve hundred miles,—not materially less than that of Australia from its northern to its southern cape. Imagine now the centre of such a continent, occupied through nearly its whole extent by a deep unbroken sea of ice, that gathers perennial increase from the water-shed of vast snow-covered mountains, and all the precipitation of the atmosphere upon its own surface. Imagine this moving onward like a great glacial river, seeking outlets at every fiord and valley, rolling icy cataracts and having at last reached the northern limit of the land that has borne it up, pouring out a mighty frozen torrent into unknown Arctic space.

"It is thus, and only thus, that we must form a just conception of a phenomenon like this Great Glacier. I had looked in my own mind for such an appearance, should I ever be fortunate enough to reach the northern coast of Greenland. But, now that it was before me, I could hardly realize it. I had recognized in my quiet library at home, the beautiful analogies which Forbes and Studen have developed between the glacier and the river. But I could not comprehend at first this complete substitution of ice for water.

Humboldt Glacier

"It was slowly that the conviction dawned on me that I was looking upon the counterpart of the great river system of Arctic Asia and America. Yet here were no water-feeders from the south. Every particle of moisture had its origin within the polar circle, and had been converted into ice. There were no vast alluvions, no forest or animal traces borne down by liquid torrents. Here was a plastic, moving, semi-solid mass, obliterating life, swallowing rocks and islands, and ploughing its way with irresistible march through the crust of an investing sea."

RETURN AND ILLNESS OF DR. KANE

By May 5, Dr. Kane became delirious and fainted every time he was taken from the tent. "My comrades would kindly persuade me that, even had I continued sound, we could not have proceeded on our journey. The snows were very heavy, and increasing as we went; some of the drifts perfectly impassable, and the level floes often four feet deep in yielding snow. The scurvy had already broken out among the men, with symptoms like my own; and Morton, our strongest man, was beginning to give way.

"It is the reverse of comfort to me that they shared my weakness. All that I could remember with pleasurable feeling is, that to five brave men, Morton, Riley, Hickey, Stephenson, and Hans, themselves scarcely able to travel, I owe my preservation. They carried me back by forced marches, after caching our stores and India-rubber boat near Dallas Bay, in lat. 79° 5′, long. 66°."

Such was the "failure" of the Grand Expedition!

The gentle hand of summer now extended much-needed relief to the stricken crew. Seals began to appear and in such large numbers that there was no want of fresh meat, which worked wonders in the health of those suffering with scurvy. Snow-buntings and gulls and eider-ducks came winging their way to their northern breeding places—and the warm sun brought out the welcome verdure with marvellous rapidity.

Dr. Kane's health improved, but he was obliged to give up further sledge journeys. To Dr. Hayes was intrusted a journey in which he reached the opposite coast of Grinnell Land, which he surveyed as far as Cape Frazer. On June 1, Morton left the brig with Hans, the Eskimo, for the purpose of surveying the Greenland coast beyond the Humboldt Glacier. The lateness of the season rendered much of the ice extremely unsafe.

On June 26, 1854, Morton reached the bold headland of Cape Constitution, where the surf dashed so furiously against the high, overhanging cliffs, that further progress was impossible. Climbing from rock to rock, in the hope of finding a pass, he stood at last at a height of three hundred feet and looked out upon a great waste of waters, stretching as far as the eye could reach into the unknown north. About him the flocks of sea-swallows, kittiwakes, and brent-geese blended their discordant notes with the thunderous roll of the sea. From Cape Constitution the coast of Washington Land trended to the east, but far to the northwest, beyond the open waters of the channel, a peak terminating a range of mountains was seen towering at a height of from twenty-five hundred to three thousand feet, and this remote landmark received the name of Mount Parry. On the 25th of June, Morton commenced his return and reached the brig on the 10th of July, "staggering by the side of the limping dogs, one of which was riding as a passenger upon the sledge."

Meanwhile, the brief summer was rapidly waning; there seemed no promise of the ice breaking up, and the alarming prospect of passing a second winter in the ice forced itself upon the gallant commander and his brave and suffering crew.

"We have no coal for a second winter here," he writes; "our stock of fresh provisions is utterly exhausted; and our sick need change, as essential to their recovery."

An unsuccessful attempt was made to reach Sir Edward Belcher's squadron at Beechey Island.

"The season travels on," writes Dr. Kane on August 15; "the young ice grows thicker, and my messmates' faces grow longer every day. I have again to play buffoon to keep up the spirits of the party. A raven! The snowbirds begin to fly to the south in groups; coming at night to our brig to hover on the rigging. Winter is hurrying upon us. The poppies are quite wilted."

Two days later we find the entry:—

"In five days the spring tides come back: should we fail in passing with them, I think our fortunes are fixed. The young ice bore a man this morning: it had a bad look, this man-supporting August ice! The temperature never falls below 28°; but it is cold o' nights with no fire."

"August 18, Friday," he writes, "reduced our allowance of wood to six pounds a meal. This, among eighteen mouths, is one-third of a pound of fuel each. It allows us coffee twice a day, and soup once. Our fare besides this is cold pork boiled in quantity and eaten as required. This sort of thing works badly; but I must save coal for other emergencies. I see 'darkness ahead'!

"I inspected the ice again to-day. Bad! Bad!—I must look another winter in the face. I do not shrink from the thought, but, while we have a chance ahead, it is my first duty to have all things in readiness to meet it. It is *horrible*—yes, that is the word—to look forward to another year of disease and darkness to be met without fresh food and without fuel. I should meet it with a more tempered sadness if I had no comrades to think for and protect."

"August 20, Sunday.—Rest for all hands. The daily prayer is no longer 'Lord, accept our gratitude and bless our undertaking,' but, 'Lord, accept our gratitude and restore us to our homes.' The ice shows no change; after a boat and foot journey around the entire southeastern curve of the bay, no signs!"

The future looked so gloomy, and Dr. Kane's apprehension for the ultimate safety of his party was so grave, that he determined to erect a cairn in a conspicuous spot upon a cliff looking out upon the icy desert, and on a broad face of rock the words—

"Advance

"A.D. 1853-54"

were painted in letters which could be read at a distance. A pyramid of heavy stones perched above it, was marked with the Christian symbol of the cross. "It was not without a holier sentiment than that of mere utility that I placed under this the coffins of our two poor comrades. It was our beacon and their gravestone. Near this a hole was worked into the rock, and a paper, enclosed in glass, sealed in with melted lead. This paper contained a careful record of the expedition up to date.

"The memory of the first winter quarters of Sir John Franklin, and the painful feelings with which, while standing by the graves of his dead, I had five years before sought for written signs pointing to the fate of the living, made me careful to avoid a similar neglect."

On August 24, the last hope of liberating the vessel vanished, and, calling his officers and crew together, Dr. Kane explained to them the full gravity of the situation, and though he was fully determined to stand by the brig and felt that an attempted retreat to the settlement of Upernavik so late in the season would certainly fail, he nevertheless gave his full permission to those desiring to leave, and the promise of a brother's welcome, should they be driven back. The roll was then called, and eight of the men out of the seventeen survivors of the party volunteered to remain in the ship. The rest made ready to abandon her, and with a generous division of stores and appliances left the ship on the 28th, "The party moved off with the elastic step of men confident in their purpose, and were out of sight in a few hours."

Reduced in numbers, many of them helpless, the waning efficiency of all, combined with the impending winter darkness and the scant supply of fuel and stores, tended sadly to depress the isolated group of despairing men. But their intrepid commander, realizing the necessity of immediate action, put all hands, sick and well, to work according to their strength, in preparation for the approaching of winter.

SECOND WINTER IN THE ICE

Dr. Kane had made a careful study of the Eskimos, and had come to the wise conclusion that their form of habitations and their peculiar diet, minus their unthrift and filth, was the safest and best method of existence under the unusual circumstances of an Arctic winter. He therefore determined to borrow a lesson from the natives and, as far as possible, turn the brig into an *igloë*. The quarter-deck was padded down with moss and turf, so as to form a nearly cold-proof covering. Below a space some eighteen feet square was packed from floor to ceiling with inner walls of the same material. The floor was carefully calked with plaster-of-Paris and common paste, covered a couple of inches deep with Manila oakum, and carpeted with canvas. A low moss-lined tunnel was arranged to connect with the hold, and divided with as many doors and curtains as possible to keep out the cold draughts.

Large banks of snow were also thrown up along the brig's sides to keep off the cold wind. These arduous labours in the open air greatly improved the health and spirits of the men.

Intercourse with the Eskimos at the winter settlements of Etah and Anoatok, distant some thirty and seventy miles, led to a treaty by which the Eskimos, for such presents as needles, pins, and knives, engaged to furnish walrus and fresh seal meat, to the ship. Common hunting parties were organized, and the white men were directed by the natives where to find the game. To these supplies of fresh meat, Kane and his companions owed their salvation, and the Eskimos on their part learned to regard the white men as their benefactors, and sincerely mourned their departure.

PRIVATIONS AND SUFFERINGS

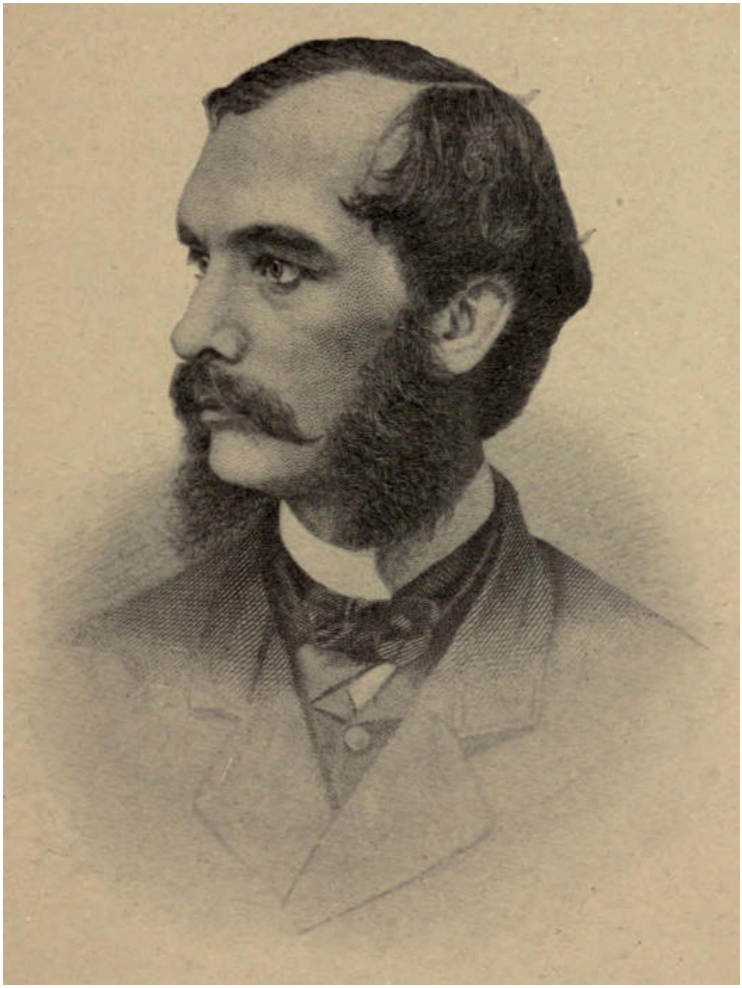
Before the darkness came on, Dr. Kane again nearly lost his life in an attempt to secure a seal—while out in the ice, Hans had just cried out, "*Pusey! pusey mut!* seal! seal!" "At the same instant," writes Dr. Kane, "the dogs bounded forward, and, as I looked up, I saw crowds of gray netsik, the rough or hispid seal of the whalers disporting in an open sea of water."

"I had hardly welcomed the spectacle when I saw that we had passed upon a new belt of ice that was obviously unsafe. To the right and left and front was one great expanse of snow-flowered ice. The nearest solid floe was a mere lump, which stood like an island in the white level. To turn was impossible; we had to keep up our gait. We urged on the dogs with whip and voice, the ice rolling like leather beneath the sledge-runners; it was more than a mile to the lump of solid ice. Fear gave to the poor beasts their utmost speed, and our voices were soon hushed to silence.

"This suspense, unrelieved by action or efforts, was intolerable; we knew that there was no remedy but to reach the floe, and that everything depended upon our dogs, and our dogs alone. A moment's check would plunge the whole concern into the rapid tideway; no presence of mind or resource, bodily or mental, could avail us. The seals—for we were now near enough to see their expressive faces—were looking at us with that strange curiosity which seems to be their characteristic expression; we must have passed some fifty of them, breast-high out of water, mocking us by their self-complacency.

"This desperate race against fate could not last: the rolling of the tough salt-water ice terrified our dogs; and when within fifty paces from the floe, they paused. The left-hand runner went through: our leader 'Toodlamick' followed, and in one second the entire left of the sledge was

submerged. My first thought was to liberate the dogs. I leaned forward to cut poor ‘Tood’s’ traces, and the next minute was swimming in a little circle of pasty ice and water alongside him. Hans, dear good fellow, drew near to help me, uttering piteous expressions in broken English; but I ordered him to throw himself on his belly with his hands and legs extended, and to make for the island by cogging himself forward with his jack-knife. In the meantime—a mere instant—I was floundering about with sledge, dogs, and lines, in a confused puddle around me.



I. I. Hayes

“I succeeded in cutting poor Tood’s lines and letting him scramble to the ice, for the poor fellow was drowning me with his piteous caresses, and made my way for the sledge; but I found that it would not buoy me, and that I had no resource but to try the circumference of the hole. Around this I paddled faithfully, the miserable ice always yielding when my hopes of a lodgment were greatest. During this process, I enlarged my circle of operations to a very uncomfortable diameter, and was beginning to feel weaker after every effort. Hans, meanwhile, had reached the firm ice, and was on his knees, like a good Moravian, praying incoherently in English and Eskimo; at every fresh crushing-in of the ice he would ejaculate ‘God!’ and when I recommenced my paddling he recommenced his prayers.

“I was nearly gone. My knife had been lost in cutting out the dogs; and a spare one which I carried in my trousers-pocket was so enveloped in the wet skins that I could not reach it. I owed my extrication at last to a newly broken team-dog, who was still fast to the sledge and in struggling carried one of the runners chock against the edge of the circle. All my previous attempts to use the sledge as a bridge had failed, for it broke through, to the much greater injury of the ice. I felt it was a last chance. I threw myself on my back, so as to lessen as much as possible my weight, and placed the nape of my neck against the run or edge of the ice; then with caution slowly bent my leg, and, placing the ball of my moccasined foot against the sledge, I pressed steadily against the runner, listening to the half-yielding crunch of the ice beneath.

“Presently I felt that my head was pillowed by the ice, and that my wet fur jumper was sliding up the surface. Next came my shoulders; they were fairly on. One more decided push and I was launched up on the ice and safe. I reached the ice-floe, and was frictioned by Hans with

frightful zeal. We saved all the dogs, but the sledge, kayack, tents, guns, snow-shoes, and everything besides, were left behind. The thermometer at 8° will keep them frozen fast in the sledge till we can come and cut them out.

"On reaching the ship, after a twelve-mile trot, I found so much of comfort and warm welcome that I forgot my failure. The fire was lit up, and one of our few birds slaughtered forthwith. It is with real gratitude that I look back upon my escape, and bless the great presiding Goodness for the very many resources which remain to us."

On December 12, the party which had deserted the ship returned; they had had a bitter experience struggling for more than four months among the hummocks and snow-drifts, and were in a pitiable condition.

"The thermometer was at -50°", writes Dr. Kane; "they were covered with rime and snow, and were fainting with hunger. It was necessary to use caution in taking them below; for after an exposure of such fearful intensity and duration as they had gone through, the warmth of the cabin would have prostrated them completely. They had journeyed three hundred and fifty miles; and their last run from the bay near Etah, some seventy miles in a right line, was through the hummocks at this appalling temperature. Poor fellows! as they threw open their Eskimo garments by the stove, how they relished the scanty luxuries which we had to offer them. The coffee, and the meat-biscuit soup, and the molasses, and the wheat bread, even the salt pork, which our scurvy forbade the rest of us to touch—how they relished it all! For more than two months they had lived on frozen seal and walrus-meat."

To Dr. Kane's determination to stand by the brig was due the preservation of the entire party, for had he been less firm in his resolution, the entire expedition would undoubtedly have perished on the ice.

"February closes," writes the heroic leader; "thank God the lapse of its twenty-eight days! Should the thirty-one of the coming March not drag us further downward, we may hope for a successful close to this dreary drama. By April 10 we should have seals; and when they come, if we remain to welcome them, we can call ourselves saved. But a fair review of our prospects tells me that I must look the lion in the face. The scurvy is steadily gaining on us. I do my best to sustain the more desperate cases, but as fast as I partially build up one, another is stricken down. Of the six workers of our party, as I counted them a month ago, two are unable to do out-door work, and the remaining four divide the duty of the ship among them. Hans musters his remaining energies to conduct the hunt. Petersen is his disheartened, moping assistant. The other two, Bonsall and myself, have all the daily offices of household and hospital.

"We chop five large sacks of ice, cut six fathoms of eight-inch hawser into junks of a foot each, serve out the meat when we have it, hack at the molasses, and hew out with crow-bar and axe the pork and dried apples; pass up the foul slop and cleansings of our dormitory, and in a word, cook, *scullionize*, and attend the sick.

"Added to this, for five nights running, I have kept watch from 8 P.M. to 4 A.M., catching such naps as I could in the day without changing my clothes, but carefully waking every hour to note thermometers."

The sufferings endured during the month of March are painfully interesting. Had Dr. Kane's strength given way at this juncture, the whole party, deprived of their leading spirit, must have perished. He attributes his comparative immunity from scurvy to "rat-soup." These rodents, surviving the bleak winter, had overrun the ship; but he was the only man who would eat them. Having no fuel, the only method of heating was the Eskimo method of lamps; the soot and fatty carbon blacking everything on which it rested.

Heroic methods were made to keep in touch with the friendly natives, and Hans, on more than one occasion, saved the life of the party by securing fresh meat from them.

To add to their troubles, two men attempted to desert at this critical juncture; only one succeeded—Godfrey—who joined the Eskimos. But strange as it may seem, this man returned with a supply of meat for his desperate comrades, while refusing to return on board ship. Fearing Godfrey might have done bodily harm to Hans, who was absent, Dr. Kane determined to follow the man and bring him back. To this end he made a journey along with a dog sledge of over eighty miles to the Eskimo settlement, and returned with his man.

ABANDONMENT OF THE "ADVANCE"

There was no other alternative but to prepare for abandoning the *Advance*, as early in the spring as the weather would permit, and hope to reach the Danish settlements at Upernavik. Before the boats could be transferred to the open water, much labour in preparation must be expended, and the most of the party were bedridden and unable to move.

Not until May 20, 1855, were they able to bid farewell to the brig, and the retreat was started under the most trying experiences of sickness and famine. By June 17, they stood beside open sea, but not for fifty-six more days did they reach Upernavik.

Before the open water was reached, a sad and tragic accident had befallen one of the ablest men. "I had left the party on the floe," writes Dr. Kane, "with many apprehensions for their safety, and the result proved they were not without cause. While crossing a 'tide-hole' one of the runners of the *Hope's* sledge broke through, and, but for the strength and presence of mind of Ohlsen, the boat would have gone under. He saw the ice give way, and, by a violent exercise of strength, passed a capstan-bar under the sledge, and thus bore the load till it was hauled on to safer ice. He was a very powerful man, and might have done this without injuring himself, but it would seem his footing gave way under him, forcing him to make a still more desperate effort to extricate himself. It cost him his life; he died three days afterwards.

"I was bringing down George Stephenson from the sick-station, and, my sledge being heavily laden, I had just crossed, with some anxiety, near the spot at which the accident occurred. A little way beyond we met Mr. Ohlsen, seated upon a lump of ice and very pale. He pointed to the camp about three miles farther on, and told us in a faint voice, that he had not detained the party: he 'had a little cramp in the small of his back,' but would soon be better.

"I put him at once in Stephenson's place, and drove him on to the *Faith*. There he was placed in the stern sheets of the boat, and well muffled up in our best buffalo robes. During all that night he was assiduously attended by Dr. Hayes; but he sank rapidly. His symptoms had from the first a certain obscure but fatal resemblance to our winter's tetanus and filled us with forebodings."

The strength of the stricken band was gradually reaching its minimum. The exertion of bailing the unseaworthy boats required all the strength left to the enfeebled party. They breathed heavily, their limbs swelled, and they suffered from insomnia, so that each day rendered their weakened efforts less promising. At this crisis of their fortunes, they saw a large seal floating on a small patch of ice, and seemingly asleep.

"Trembling with anxiety," writes Dr. Kane, "we prepared to crawl down upon him. Petersen, with a large English rifle, was stationed in the bow, and stockings were drawn over the oars as mufflers. As we neared the animal, our excitement became so intense that the men could hardly

keep stroke. He was not asleep; for he reared his head when we were almost within rifle-shot; and to this day I can remember the hard, careworn, almost despairing expression of the men's thin faces as they saw him move; their thin lives depended on his capture. I depressed my hand nervously, as a signal for Petersen to fire. McGary hung upon his oar, and the boat seemed to me within certain range. Looking at Petersen, I saw that the poor fellow was paralysed by his anxiety, trying vainly to obtain a rest for his gun against the cut-water of the boat. The seal rose on his fore flipper, gazed at us for a moment with frightened curiosity, and coiled himself for a plunge. At that instant, simultaneously with the crack of our rifle, he relaxed his long length on the ice, and, at the very brink of the water, his head fell helpless to one side. I would have ordered another shot, but no discipline could have controlled the men. With a wild yell, each vociferating according to his own impulse, they urged their boats upon the floes. A crowd of hands seized the seal, and bore him up to safer ice. The men seemed half crazy. I had not realized how much we were reduced by absolute famine. They ran over the floe, crying and laughing, and brandishing their knives. It was not five minutes before every man was sucking his bloody fingers, or mouthing long strips of raw blubber. Not an ounce of this seal was lost."

A few days later the familiar cadence of a "halloo" fell upon the ears.

"Listen, Petersen! oars, men!" "What is it?"—and he listened quietly at first and then, trembling said, in a half whisper, "Danne markers!"

"I remember this," writes Kane, "the first tone of Christian voice which had greeted our return to the world. How we all stood up and peered into the distant nooks; and how the cry came to us again, just as, having seen nothing, we were doubting whether the whole was not a dream; and then how, with long sweeps, the white ash cracking under the spring of the rowers, we stood for the cape that the sound proceeded from, and how nervously we scanned the green spots which our experience, grown now into instinct, told us would be the likely camping ground of wayfarer. By-and-by—for we must have been pulling a good half hour—the single mast of a small shallop showed itself; and Petersen, who had been very quiet and grave, burst out into an incoherent fit of crying, only relieved by broken exclamations of mingled Danish and English. ''Tis the Upernavik oil-boat! the Fräulein Flaischer! Carlie Mossyn, the assistant cooper, must be on his road to Kingatok for blubber. The *Mariane* (the one animal ship) has come, and Carlie Mossyn—' and here he did it all over again, gulping down his words and wringing his hands."

Another halt, a night's rest, and the settlement was reached, where a generous welcome awaited the weary explorers.

Five Members of the Grinnell Expedition

Bonsall Brooks Dr. Kane Dr. Hayes Ohlsen

"For eighty-four days," says Kane, "we had lived in the open air. Our habits were hard and weather-worn. We could not remain within the four walls of a house without a distressing sense of suffocation. But we drank coffee that night before many a hospitable threshold, and listened again and again to the hymn of welcome, which, sung by many voices, greeted our deliverance."

The Danish vessel was not ready for her homeward journey till the 4th of September. On the 6th, Dr. Kane and his party left Upernavik, in the *Mariane*, whose captain had promised to convey them to the Shetland Islands; on the 11th they touched at Godhaven, the inspectorate of North Greenland, and later at Disco, where the *Mariane* remained a few days.

As early as February 3, 1855, a resolution had passed Congress authorizing the Secretary of the Navy to despatch a suitable steamer and tender for the relief of Dr. Kane. The *Release* and *Arctic* were accordingly equipped and put in command of Lieutenant Hartstein, accompanied by a brother of Dr. Kane. By July 5, the relief expedition had reached Lievely, Isle of Disco, Greenland, and from this point Lieutenant Hartstein

says in a letter to the Secretary of the Navy: “To avoid further risk of human life, in a search so extremely hazardous, I would suggest the impropriety of making any efforts to relieve us if we should not return; feeling confident that we shall be able to accomplish all necessary for our own release, under the most extraordinary circumstances.”

Having forced a passage through the closely packed ice into the north water, they proceeded to examine the coast from Cape York to Wolstenholme Island, also Cape Alexander and Sutherland Island.

A few stones heaped together near Point Pellam gave assurance of Kane’s having been there, but no other clew was secured. Taking a retrograde course, they examined Cape Hatherton and Littleton Island, finally reaching a point some fifteen miles northwest of Cape Alexander. Here they were surprised to fall in with some Eskimos, in whose possession were found certain articles known to have belonged to Dr. Kane. After diligent inquiries, they learned of the abandonment of the ship and the retreat to the south of Dr. Kane’s party.

RETREAT AND RESCUE

After some further reconnoitring in the hope of finding the party should they be in the vicinity, Lieutenant Hartstein decided to make for Upernavik. A furious gale drove them out of their course adrift in the ice pack.

“After this gale,” writes Dr. Kane’s brother, “we had little or no more troubles with the ice; one or two trifling detentions of a few days brought us to open water. We had drifted so far to the south that Lievely was nearer than Upernavik, and Captain Hartstein determined to put in there. We had a heavy gale the night after we left the ice; but so glad were we all to get clear of it, that I heard no complaints about rough weather. It cleared away beautifully towards morning, and we were all on the deck, admiring the clear water, and the fantastic shapes of the water-washed icebergs. All hands were in high spirits; the gale had blown in the right direction, and in a few hours we should be in Lievely. The rocks of its land-locked harbor were already in sight. We were discussing our news by anticipation, when the man in the crow’s nest cried out: ‘A brig in the harbor!’ and the next minute, before we had time to congratulate each other on the chance of sending letters home, that she had hoisted American colors—a delicate compliment, we thought, on the part of our friends, the Danes. I believe our captain was about to return it, when to our surprise, she hoisted another flag, the veritable one which had gone out with the *Advance*, bearing the name of Mr. Henry Grinnell. At the same moment, two boats were seen rounding the point, and pulling towards us. Did they contain our lost friends? Yes, the sailors had settled that. ‘Those are Yankees, sir; no Danes ever feathered their oars that way.’

“For those who had friends among the missing party, the few minutes that followed were of bitter anxiety; for the men in the boats were long-bearded and weather-beaten; they had strange wild costumes; there was no possibility of recognition.”

In Dr. Kane’s own words, let us conclude the chapter:—

“Presently we were alongside. An officer whom I shall ever remember as a cherished friend, Captain Hartstein, hailed a little man in a ragged flannel shirt. ‘Is this Dr. Kane?’ and with the ‘Yes!’ that followed, the rigging was manned by our countrymen, and cheers welcomed us back to the social world of love which they represented.”

Dr. Kane and his party reached New York, October 11, 1855, and received an enthusiastic welcome, after an absence of thirty months. Honours of the most flattering kind awaited him on both sides of the Atlantic, but his health was completely broken by the trials of his wonderful journey. On February 16, 1857, he died at Havana, in the thirty-seventh year of his age.

"Tennyson Monument"

The tall shaft, of pale green granite, was discovered by Dr. Kane

CHAPTER XII

Dr. Hayes's expedition. Winter quarters at Port Foulke.—Greenland coast.—Death of Sonntag.—Dr. Hayes's journey.—Attempt to cross Smith Sound.—Hayes's farthest.—"Open Polar Sea."—Homeward bound.

DR. HAYES'S EXPEDITION

In 1860, Dr. Hayes, who had accompanied the second Grinnell expedition and rendered much valuable service to Dr. Kane and his party, once more sailed from America for the purpose of completing the survey of the north coasts of Greenland and Grinnell Land and to make such explorations as he might find practicable in the direction of the North Pole.

"My proposed base of operations," writes Dr. Hayes, "was Grinnell Land, which I had discovered on my former voyage, and had personally traced beyond latitude 80°, far enough to satisfy that it was available for my design."

On the morning of July 8, 1860, the *United States* was fairly on her way, and, by July 30, Dr. Hayes had the satisfaction of being once more within the Arctic Circle.

"We had some rough handling in Davis' Strait," he writes. "Once I thought we had surely come ingloriously to grief. We were running before the wind and fighting a wretched cross-sea under reefed fore and mainsail and jib, when the fore-rail was carried away;—down came everything to the deck; and there was left not a stitch of canvas on the schooner but the lumbering mainsail. It was a miracle that we did not broach to and go to the bottom. Nothing saved us but a steady hand at the helm."

After several narrow escapes in the ice field, the *United States* was at length compelled to take up her winter quarters at Port Foulke, on the Greenland coast, about twenty miles to the south of Rensseläer harbour. An abundant commissariat, amply supplied by fresh meat, kept up the general health of the party during the long night, and they escaped scurvy, which had proved so fatal to Dr. Kane's crew.

A great catastrophe was the death by freezing of Sonntag, the astronomer, who had been a valuable member of Dr. Kane's expedition, and a much-beloved friend of Dr. Hayes. Accompanied by Hans Hendrik, he had started on a sledge journey to the Etah Eskimo. On February 1, Dr. Hayes writes:—

"Hans has given me the story of his journey, and I sit down to record it with very painful emotions. The travellers rounded Cape Alexander without difficulty, finding the ice solid; they did not halt until they had reached Sutherland Island, where they built a snow hut and rested for a few hours. Continuing thence down the coast, they sought the Esquimaux at Sorfalik without success. The native hut at that place being in ruins, they made for their shelter another house of snow; and, after being well rested, they set out directly for Northumberland Island, having concluded that it was useless to seek longer for natives on the north side of the Sound. They had proceeded on their course about four or five miles as nearly as I can judge from Hans' description, when Sonntag, growing a little chilled, sprang off the sledge and ran ahead of the dogs to warm himself with the exercise. The tangling of a trace obliging Hans to halt the team for a few minutes, he fell some distance behind, and was hurrying to catch up, when he suddenly observed Sonntag sinking. He had come upon the thin ice, covering a recently open tide-crack, and, probably not observing his footing, he stepped upon it unawares. Hans hastened to his rescue, and aided him out of the water, and then turned back for the shelter which they had recently abandoned. A light wind was blowing at the time from the northeast, and this, according to Hans, caused Sonntag to seek the hut without stopping to change his wet clothing. At first he ran beside the sledge, and thus guarded against danger; but after a while he rode, and when they halted at Sorfalik, Hans discovered that his companion was stiff and speechless. Assisting him into the hut with all possible despatch, Hans states that he removed the wet and frozen clothing, and placed Sonntag in the sleeping-bag. He next gave him some brandy which he found in a flask on the sledge; and, having tightly closed the hut, he lighted the alcohol lamp, for the double purpose of elevating the temperature and making some coffee; but all of his efforts were unavailing, and, after remaining for nearly a day unconscious, Sonntag died. He did not speak after reaching the hut, and left no message of any kind. After closing up the mouth of the hut, so that the body might not be disturbed by bears or foxes, Hans again set out southward, and reached Northumberland Island without inconvenience."

Early in April, 1861, Dr. Hayes left the ship "to plunge into the wilderness." Having previously ascertained that an advance along the Greenland shore was utterly impossible, he resolved to cross the sound, and to try his fortunes along the coast of Grinnell Land.

"By winding to the right and left," he writes, "and by occasionally retracing our steps, we managed to get over the first few miles without much embarrassment, but further on the track was rough, past description. I can compare it to nothing but a promiscuous accumulation of rocks piled up over a vast plain in great heaps and endless ridges. The interstices between these closely accumulated ice-masses are filled up to some extent with drifted snow."

It is not surprising that after such difficult travel, at the end of twenty-five days they had not yet reached halfway across the sound.

"My party are in a very sorry condition," writes Dr. Hayes. "One of the men has sprained his back from lifting; another has sprained his ankle; another has gastritis; another a frosted toe; and all are thoroughly overwhelmed with fatigue. The men do not stand it as well as the dogs."

And the next day, April 26, he writes:—

"I feel to-night that I am getting rapidly to the end of my rope. Each day strengthens the conviction, not only that we can never reach Grinnell Land, with provisions for a journey up the coast to the Polar Sea, but that it cannot be done at all. I have talked to the officers, and they are all of this opinion. They say the thing is hopeless. Dodge put it thus: 'You might as well try to cross the city of New York over the house-tops.'"

Though disheartened, their bold leader was not discouraged, and, sending the main party back to the schooner, he continued to plunge into the hummocks. After fourteen days of almost superhuman exertion, he reached the coast, May 11, when he writes:—

"In camp at last, close under the land; and as happy as men can be who have achieved success and await supper. As we rounded to in a convenient place for our camp, McDonald looked up at the tall Cape, which rose above our heads; and, as he turned away to get our furnace to prepare a much-needed meal, he was heard to grumble in a serio-comic tone: 'Well, I wonder if that is land, or only "Cape Fly-away" after all?'"

But though land was reached, the trials of the journey along the coast were none the less harassing. With untiring energy, Dr. Hayes pushed on until the 18th of May, when further progress became impossible, owing to a deep bay, mottled with a white sheet and dark patches, these

latter being either soft decaying ice or places where the ice had wholly disappeared.

"And now," writes Dr. Hayes, "my journey was ended, and I had nothing to do but make my way back to Port Foulke. The advancing season, the rapidity with which the thaw was taking place, the certainty that the open water was eating into Smith Sound as well as through Baffin Bay from the south, as through Kennedy Channel from the north, thus endangering my return across to the Greenland shore, warned me that I had lingered long enough.

"It now only remained for us to plant our flag in token of our discovery, and to deposit a record proof of our presence. The flags were tied to the whip-lash, and suspended between two tall rocks, and while we were building a cairn, they were allowed to flutter in the breeze; then, tearing a leaf from my note-book, I wrote on it as follows:—

"'This point, the most northern land that has ever been reached, was visited by the undersigned, May 18th, 19th, 1861, accompanied by George T. Knorr, travelling dog-sledge. We arrived here after a toilsome march of forty-six days from my winter harbor near Cape Alexander, at the mouth of Smith Sound. My observations place us in latitude 81° 35′, longitude 70° 30′ W. Our further progress was stopped by rotten ice and cracks. Kennedy Channel appears to expand into the Polar Basin; and, satisfied that it is navigable at least during the months of July, August, and September, I go hence to my winter harbor, to make another trial to get through Smith Sound with my vessel, after the ice breaks up this summer.

"'I. I. Hayes.

"'May 19, 1861.'"

"I quit the place with reluctance," he writes. "It possessed a fascination for me, and it was with no ordinary sensations that I contemplated my situation, with one solitary companion, in that hitherto untrodden desert; while my nearness to the earth's axis, the consciousness of standing upon land beyond the limits of previous observations, the reflections which crossed my mind respecting the vast ocean which lay spread out before me, the thought that these ice-girdled waters where dwell human beings of an unknown race, were circumstances calculated to invest the very air with mystery, to deepen the curiosity, and to strengthen the resolution to persevere in my determination to sail upon this sea and to explore its furthest limits; and as I recalled the struggles which had been made to reach this sea,—through the ice and across the ice,—by generations of brave men, it seemed as if the spirits of these Old Worthies came to encourage me, as their experience had already guided me; and I felt that I had within my grasp 'the great and notable thing' which had inspired the zeal of sturdy Frobisher, and that I had achieved the hope of matchless Parry." The much-discussed "open polar sea," in which Dr. Hayes had implicit faith, has since been found to be only the south half of Kennedy Channel, which freezes late and opens early, owing to the very high tides, that sometimes rise thirty feet. Dr. Hayes reached the schooner, June 3, after an absence of two months, in which he travelled not less than 1300 miles. After careful examination of his ship, Dr. Hayes found she had greatly suffered from her experience in the ice, and that, for the safety of his party, great care had to be exercised in her navigation.

"By dint of much earnest exertion," he writes, "and the use of bolts and spikes,—by replacing the torn cut-water, careful calking, and renewal of the iron plates,—it seemed probable that the schooner would be sea-worthy; but I was forced to agree with my sailing master, that to strike the ice again was sure to sink her."

Dr. Hayes awaited with some anxiety the breaking up of the ice, and the liberation of the schooner. Not until July 14, 1861, did the *United States* glide out to sea under full sail, and by August 10 she was in latitude 74° 19′, longitude 66°. By the 12th they made land which proved to be Horse's Head, and three days later found the schooner at anchor in Upernavik harbour.

"While the chain was yet clinking in the hawse-hole," writes Dr. Hayes, "an old Dane, dressed in seal-skins, and possessing a small stock of English and a large stock of articles to trade, pulled off to us with an Eskimo crew, and with little ceremony, clambered over the gangway. Knorr met him, and, without any ceremony at all, demanded the news.

"'Oh! dere's plenty news!'

"'Out with it, man! What is it?'

"'Oh! de Sout States dey go agin de Nort' States, and dere's plenty fight!'

"I heard the answer, and wondering what strange complication of European politics had kindled another Continental war, called this Polar Emmæus to the quarter deck. Had he any news from America?

"'Oh! 'tis 'merica me speak! De Sout' States, you see? and dere's plenty fight!'

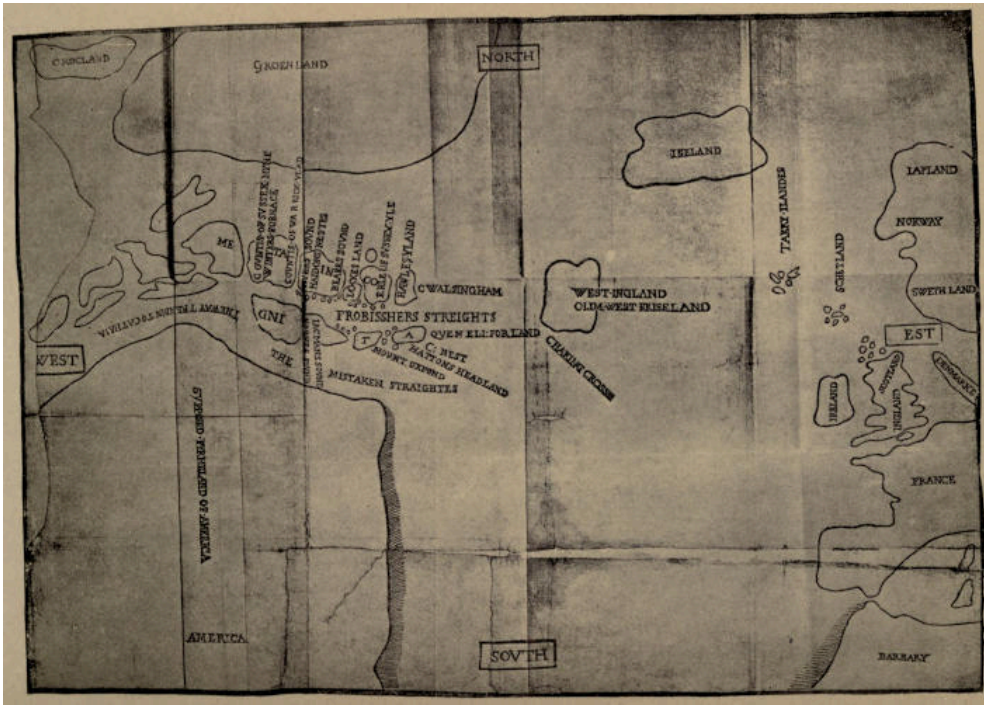
"Yes, I did see! but I did not believe that he told the truth, and awaited letters which I knew must have come out with the Danish vessel, and which were immediately sent for to the Government House."

The condition of the schooner necessitated putting in at Halifax for repairs, and, four days after leaving, they made the Boston Lights. "We picked up a pilot," writes Dr. Hayes, "out of the thickest fog that I have ever seen south of the Arctic Circle, and with a light wind stood into harbor. As the night wore on the wind fell away almost to calm; the fog thickened more and more, if that were possible, as we sagged along over the dead waters toward the anchorage. The night was filled with an oppressive gloom. The lights hanging at the mast-heads of the vessels which we passed had the ghastly glimmer of tapers burning in a charnel-house. We saw no vessel moving but our own, and even those which lay at anchor seemed like phantom ships floating in the murky air. I never saw the ship's company so lifeless, or so depressed, even in times of real danger."

"I landed on Long Wharf," he continues, "and found my way into State Street. Two or three figures were moving through the thick vapors, and their solemn foot-fall broke the worse than Arctic stillness. I reached Washington Street, and walked anxiously westward. A newsboy passed me. I seized a paper, and the first thing which caught my eye was the account of the Ball's Bluff battle, in which had fallen many of the noblest sons of Boston; and it seemed as if the very air had shrouded itself in mourning for them, and that the heavens wept tears for the city's slain. I was wending my way to the house of a friend, but I thought it likely that he was not there. I felt like a stranger in a strange land, and yet every object which I passed was familiar. Friends, country, everything seemed swallowed up in some vast calamity, and, doubtful and irresolute, I turned back sad and dejected, and found my way on board again through the dull, dull fog."

Dr. Hayes made another journey beyond the Arctic Circle in 1869, in the *Panther*, as the guest of the artist Bradford. Over a thousand miles of the Greenland coast was visited, terminating a good way beyond the last outpost of civilization on the globe, in the midst of the much-

dreaded “ice-pack” of Melville Bay.



Frobisher’s Map of Meta Incognita

CHAPTER XIII

Charles Francis Hall.—Early life.—Interest in fate of Sir John Franklin.—First journey to Greenland.—Discovery of Frobisher relics.—Experiences and study of the Eskimos.—Second journey.—Delays and disappointments.—Sledging trips.—King William's Land at last.—Franklin relics.—Return of Hall to United States.—*Polaris* expedition.—Reaches high northing.—Hall's sledge journey.—Return and death.—*Polaris* winters. No escape.—*Polaris* is wrecked.—Part of crew adrift on the ice-floe.—Remainder build winter hut.—Final rescue and return to United States.

CHARLES FRANCIS HALL

The personality of Charles Francis Hall is singularly interesting. Born in Rochester, New Hampshire, in 1821, he received a common school education and pursued the vocation of blacksmith, journalist, stationer, and engraver.

In 1850, while living in Cincinnati, Ohio, he became deeply interested in the fate of Sir John Franklin, and for over nine years made a thorough study of Arctic history and, especially, of the Franklin search expeditions. Unconvinced by the admirable report of Captain M'Clintock in 1859 of the death of Franklin and the fate of his companions, Hall maintained the opinion that survivors of the unfortunate expedition must still be living among the Eskimos, and could be found. By the aid of public subscriptions and the liberal patronage of Mr. Henry Grinnell, Hall undertook a journey, May 29, 1860, sailing from New London, on the whaler, *George Henry*, commanded by Captain S. O. Buddington.

Forty days later (7th of July, 1860), the *George Henry* dropped anchor at Holsteinborg, Greenland. Hall was unsuccessful in the main object of his undertaking (his proposed journey to King William Land) and spent the best part of two years near Frobisher Bay, where he acquired much knowledge of the speech, habits, and life of the Eskimos, and discovered a quantity of relics left by Frobisher's expedition of 1577-1578.

Of the first traditionary history gained from the Eskimos relative to Frobisher's expedition, Hall says in notes under date of April 9, 1861:—

"Among the traditions handed down from one generation to another, there is this: that many—very many years ago, some white men built a ship on one of the islands of Frobisher Bay and went away.

"I think I can see through this in this way: Frobisher, in 1578, assembled a large part of his fleet in what he called 'Countess of Warwick Sound' (said to be in that bay below us), when a council was held on the 1st of August, at which it was determined to send all persons and things on shore upon 'Countess of Warwick Island'; and on August 2d orders were proclaimed, by sound of trumpet, for the guidance of the company during their abode thereon. For reasons stated in the history, the company did not tarry here long, but departed for '*Meta Incognita*,' and thence to England, how may not the fact of timbers, chips, etc., etc., having been found on one of the islands (within a day's journey of here) many years ago, prove that the said materials were of this Frobisher's company, and that hence the Innuit tradition? In a few days I hope to be exploring Frobisher Bay."

Describing the circumstances of his interesting discovery on Countess of Warwick Island, Hall writes:—

"We continued on around the island, finding, every few fathoms in our progress, numerous Innuit relics. At length we arrived at a plain that extended back a considerable distance from the coast.

Here we recognized, at our right, about sixty rods distant, the point to which we first directed our steps on reaching the high land after leaving the boat.

"I was several fathoms in advance of Koo-ou-le-arng, hastening on, being desirous to make as extended a search as the brief remaining daylight would allow, when, lifting my eyes from the ground near me, I discovered, a considerable distance ahead, an object of an unusual appearance. But a second look satisfied me that what I saw were simply stones scattered about and covered with black moss. I continued my course, keeping as near the coast as possible. I was now nearing the spot where I had first descried the black object. It again met my view; and my original thought on first seeing it resumed at once the ascendency in my mind. I hastened to the spot. 'Great God! Thou hast rewarded me in my search!' was the sentiment that came overwhelmingly into my thankful soul. On casting my eyes all around, seeing and feeling the character (moss-aged, for some of the pieces I saw had pellicles of black moss on them) of the relics before and under me, I felt as—I cannot tell what my feelings were—what I saw before me was *sea-coal* of Frobisher's expedition of 1578, left here near three centuries ago!"

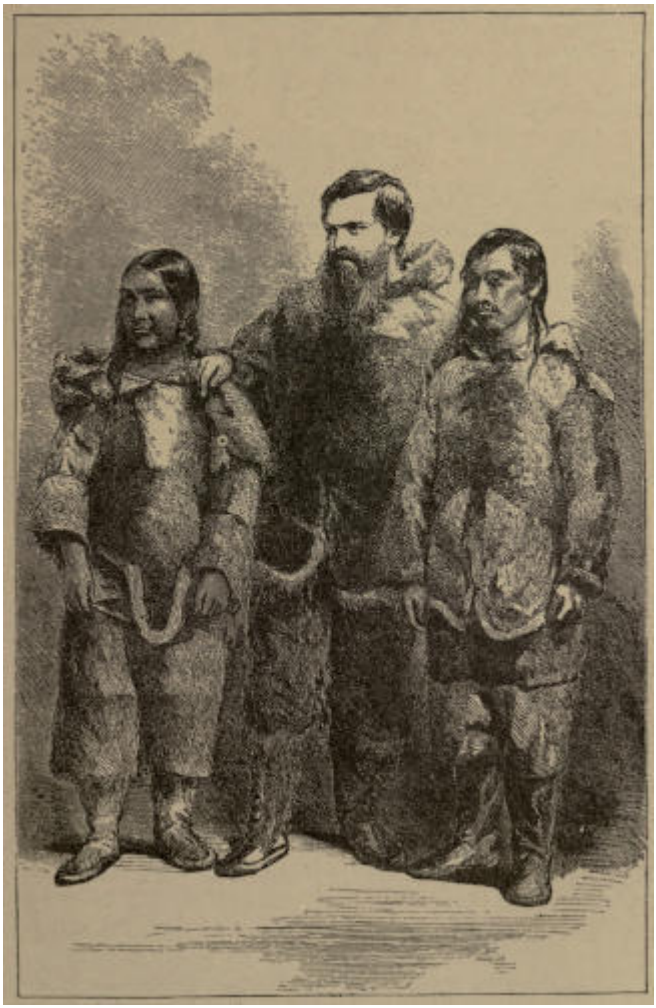
A more thorough search in the vicinity undertaken at a later period resulted in the finding of flint-stone; fragments of tile, glass, pottery, an excavation which Hall called an abandoned mine, the ruins of three stone houses, one of which was twelve feet in diameter, with palpable evidence of its having been erected on a foundation of stone cemented together with lime and sand; large pieces of iron time-eaten and weather-worn, which "the rust of three centuries had firmly cemented to the sand and stones in which it had lain."

It will be remembered that of the one hundred men sent out from England with Frobisher in 1578, the majority were miners sent for the express purpose of digging for the rich ore of which Frobisher had carried specimens home on his return from his second voyage, and which was supposed to be very valuable. The miners made "proofs," as they are called, in various parts of the regions discovered by him. Some of these "proofs" are doubtless what Captain Hall found, and, in connection with other circumstances, evidenced the exact location of Frobisher's "Countess of Warwick Mine." Captain Hall presented many of the relics he brought home to the British government through the Royal Geographical Society of London.

HALL'S SECOND JOURNEY

Upon his return to New London (September 13, 1862), Hall immediately endeavoured, through lectures and personal appeals, to equip another expedition to the Arctic. The unsettled state of the nation, plunged into the horrors of a great civil war, made his efforts practically futile; undaunted by the discouraging response, he nevertheless sailed July 1, 1864, and in August was landed, with his meagre equipment, boat and provisions, on Depot Island, Hudson Bay, 64° N., 90° W. Adopting the habits and life of the Eskimos, Hall spent five years in pursuing his researches, receiving occasionally supplies from whalers.

The first year was spent in unsuccessful efforts to secure Eskimo aid. The winter of 1865-1866, Hall had his headquarters at Fort Hope, Repulse Bay, and in the spring reached Cape Weyton, 68° N., 89° W. The Eskimos refused to accompany him farther, but he had the good fortune to meet with natives who had visited the deserted ships, and had seen Franklin. Hall secured from these Eskimos considerable silver bearing the crest of Franklin and other officers.



Captain Hall and Eskimos

In February, 1867, Hall visited Igloolik, the winter quarters of Parry in 1822. He improved the next year by following up the west side of Melville Peninsula, completing and surveying the short gap between Rae's farthest, 1846, and Parry's farthest in Fury Strait, 1825. The winter of 1868-1869 was spent at Fort Hope, where he at last succeeded in securing Eskimo aid for the final attempt to reach King William Land. He started in March, 1869, in company with ten Eskimos and dog sledges.

Crossing Rae Peninsula to Committee Bay and *via* Boothia Isthmus, the party reached James Ross Strait, distant some sixty miles from King William Land. Here he had difficulty in persuading the natives to continue, but at Simpson Island the success of a musk-ox hunt restored their good humour, and they consented to proceed. On the 12th of May, 1869, Hall reached the mainland; his stay was necessarily very brief, as his native companions could not be persuaded to linger in such a desolate country.

Upon his return to Repulse Bay, Captain Hall, in a letter to Mr. Henry Grinnell, dated June 20, 1869, writes in part:—

"The result of my sledge journey to King William's Land may be summed up thus: None of Sir John Franklin's companions ever reached or died on Montreal Island. It was late in July, 1848, that Crozier and his party of about forty or forty-five passed down the west coast of King William's Land in the vicinity of Cape Herschel. The party was dragging two sledges on the sea-ice, which was nearly in its last stage of dissolution; one a large sledge laden with an awning-covered boat, and the other a small one laden with provisions and camp material. Just before Crozier and party arrived at Cape Herschel, they were met by four families of natives, and both parties went into camp near each other. Two Eskimo men, who were of the native party, gave me much sad, but deeply interesting, information. Some of it stirred my heart with sadness, intermingled with rage, for it was a confession that they, with their companions, did secretly and hastily abandon Crozier and his party to suffer and die for need of fresh provisions, when in truth it was in the power of the natives to save every man alive. The next trace of Crozier and his party is to be found in the skeleton which M'Clintock discovered a little below, to the southward and eastward of Cape Herschel. This was never found by the natives. The next trace is a camping place on the sea-shore of King William's Land, about three miles eastward of Pfeffer River, where two men died and received Christian (?) burial. At this place fish-bones were found by the natives, which showed them that Crozier and his party had caught while there a species of fish excellent for food, with which the sea there abounds. The next trace of this party occurs about five or six miles eastward, on a long point of King William's Land, where one man died and was buried. Then about south-southeast two and a half miles further, the next trace occurs on Todd's Islet, where the remains of five men lie. The next certain trace of this party is on the west side of the islet, west of Point Richardson, on some low land that is an island or part of the mainland, as the tide may be. Here the awning-covered boat and the remains of about thirty or thirty-five of Crozier's party were found by the native Poo-yet-ta, of whom Sir John Ross has given a description in the account of his voyage in the *Victory* in 1829-'34. In the spring of 1849, a large tent was found by the natives whom I saw, the floor of which was completely covered with the remains of white men.

"Close by were two graves. This tent was a little way inland from the head of Terror Bay. In the spring of 1861, when the snow was nearly all gone, an Eskimo party, conducted by a native well known throughout the northern regions, found two boats, with many skeletons in and about them. One of these boats had been previously found by M'Clintock; the other was found lying from a quarter to a half mile distant, and must have been completely entombed in snow at the time M'Clintock's parties were there, or they most assuredly would have seen it. In and about this boat, beside the skeletons alluded to, were found many relics, most of them similar in character to those M'Clintock has enumerated as having been found in the boat he discovered. I tried hard to accomplish far more than I did, but not one of the company would on any account whatever consent to remain with me in that country and make a summer search over that island, which, from information I had gained from the natives, I had reason to suppose would be rewarded by the discovery of the whole of the manuscript records that had been accumulated in that great expedition, and had been deposited in a vault, a little way inland or eastward of Cape Victory. Knowing as I now do the character of the Eskimos in that part of the country in which King William's Land is situated, I cannot wonder at nor blame the Repulse Bay natives for their refusal to remain there as I desired. It is quite probable that, had we remained there as I wished, no one of us would ever have got out of the country alive. How could we expect, if we got into straitened circumstances, that we would receive better treatment from the Eskimos of that country than the 105 souls who were under the command of the heroic Crozier some time after landing on King

William's Land? *Could* I and my party with reasonable safety have remained to make a summer search on King William's Land, it is not only probable that we should have recovered the logs and journals of Sir John Franklin's Expedition, but have gathered up and entombed the remains of nearly 100 of his companions; for they lie about the places where the three boats have even been found and at the large camping-place at the head of Terror Bay and the three other places that I have already mentioned. In the cove, west side of Point Richardson, however, nature herself has opened her bosom and given sepulture to the bones of the immortal heroes who died there. Wherever the Eskimos have found the graves of Franklin's companions, they have dug them open and robbed the dead, leaving them exposed to the ravages of wild beasts. On Todd's Island, the remains of five men were *not* buried; but, after the savages had robbed them of every article that could be turned to account for their use, their dogs were allowed to finish the disgusting work. The native who conducted my native party in its search over King William's Land is the same individual who gave Dr. Rae the first information about white men having died to the westward of where he (Dr. Rae) then was (Pelly Bay) in the spring of 1854. His name is In-nook-poo-zhe-jook, and he is a native of Neitchille, a very great traveller and very intelligent. He is, in fact, a walking history of the fate of Sir John Franklin's Expedition. This native I met when within one day's sledge journey of King William's Land—off Point Dryden; and after stopping a few days among his people, he accompanied me to the places I visited on and about King William's Land.

"I could have readily gathered quantities—a very great variety of relics of Sir John Franklin's expedition, for they are now possessed by natives all over the Arctic Regions that I visited or heard of—from Pond's Bay to Mackenzie River. As it was, I had to be satisfied with taking upon our sledges about 125 pounds total weight of relics from natives about King William's Land. Some of these I will enumerate: 1. A portion of one side (several planks and ribs fast together) of a boat, clinker-built and copper-fastened. This part of a boat is of the one found near the boat found by M'Clintock's party. 2. A small oak sledge-runner, reduced from the sledge on which the boat rested. 3. Part of the mast of the Northwest Passage ship. 4. Chronometer-box, with its number, name of the maker, and the Queen's broad arrow engraved upon it. 5. Two long heavy sheets of copper, three and four inches wide, with countersunk holes for screw-nails. On these sheets, as well as on most everything else that came from the Northwest Passage ship, are numerous stamps of the Queen's broad arrow. 6. Mahogany writing-desk, elaborately finished and bound in brass. 7. Many pieces of silver-plate, forks, and spoons, bearing crests and initial of the owners. 8. Parts of watches. 9. Knives and very many other things which you, Mr. Grinnell, and others interested in the fate of the Franklin Expedition, will take a sad interest in inspecting on their arrival in the States. One entire skeleton I have brought to the United States."

Hall, some time after his return, placed the carefully preserved remains in charge of Mr. Brevoort, of Brooklyn, who transferred them to Admiral Inglefield, R. N., to be forwarded to England. Subsequently (by the plug of a tooth) the skeleton was identified as the remains of Lieutenant Veconte, of the *Erebus*.

The same year that the *Erebus* and *Terror* were abandoned, one of them consummated the Great Northwest Passage, having five men aboard. The evidence of the exact number is circumstantial. Everything about this Northwest Passage ship was in complete order. It was found by the Ood-joo-lik natives near O'Reilly Island, latitude 68° 30′ N., longitude 99° W., early in the spring of 1849, frozen in the midst of a floe of only one winter's formation.

HALL'S RETURN TO THE UNITED STATES

With the unwilling consciousness that he could accomplish nothing further of research in the Frozen Regions, Captain Hall had now to think of a return to the United States; purposing there to collate and publish the

result of his protracted Arctic experience, then to make his long meditated voyage to the Pole, and, if possible, afterward revisit King William's Land.

In regard to his plans he writes:—

"I hope to start next spring with a vessel for Jones' Sound, and thence toward the North Pole as far as navigation will permit. The following spring, by sledge journey, I will make for the goal of my ambition, the North Pole. I do hope to be able to resume snow-hut and tent encampment very near the Pole by the latter part of 1870, and much nearer, indeed at the very Pole, in the spring following, to wit, in 1871. There is no use in man's saying, it cannot be done—that the North Pole is beyond our reach. By judicious plans, and by having a carefully selected company, I trust with a Heaven-protecting care to reach it in less time, and with far less mental anxieties, than I have experienced to get to King William's Land. I have always held to the opinion that whoever would lead the way there should first have years of experience among the wild natives of the North: and this is one of my reasons for submitting to searching so long for the lost ones of Franklin's Expedition."

The expression of such purposes, including that of a subsequent return to King William's Land, is certainly remarkable, as coming from one whose sledge journeys only, during the five years which now closed upon him, exceeded the aggregate of four thousand miles. A willingness "to resume snow-hut and tent" would seem explicable only by supposing that next to the lofty ideas with which his mind enthusiastically invested everything Arctic, was the extreme of a strange fascination with the uncouth life he had been leading. He says himself, at about this same date, that there was nothing in the way of food in which the natives delighted that he did not delight in, and that this may appear strange to some, but was *true*. He had that day "a grand good feast on the kind of meat he had been longing for—the deer killed last fall; rotten, strong, and stinking, and for these qualities, excellent for Innuits and for the writer."

Hall, accompanied by his faithful Eskimo friends, Joe, Hannah, and her adopted child Pun-na, returned to New Bedford, Massachusetts, September 26, 1869. When off the lighthouse of Nantucket, Massachusetts, Hannah and her child dropped their native dresses and put on those of a civilized land.

Immediately upon his return to the States, Captain Hall endeavoured to arouse public interest in his long-cherished plan for an expedition to the Pole. By untiring personal efforts and the support of enthusiastic friends, he succeeded in engaging the attention of Congress, which authorized "An Expedition to the North Pole, the only one in the history of the nation." Fifty thousand dollars was appropriated for expenses and a vessel selected from the navy, which was thoroughly fitted out at an expense of ninety thousand more.

"Never was an Arctic expedition more completely fitted out," wrote Hall, at Godhaven, in a letter home August 22.

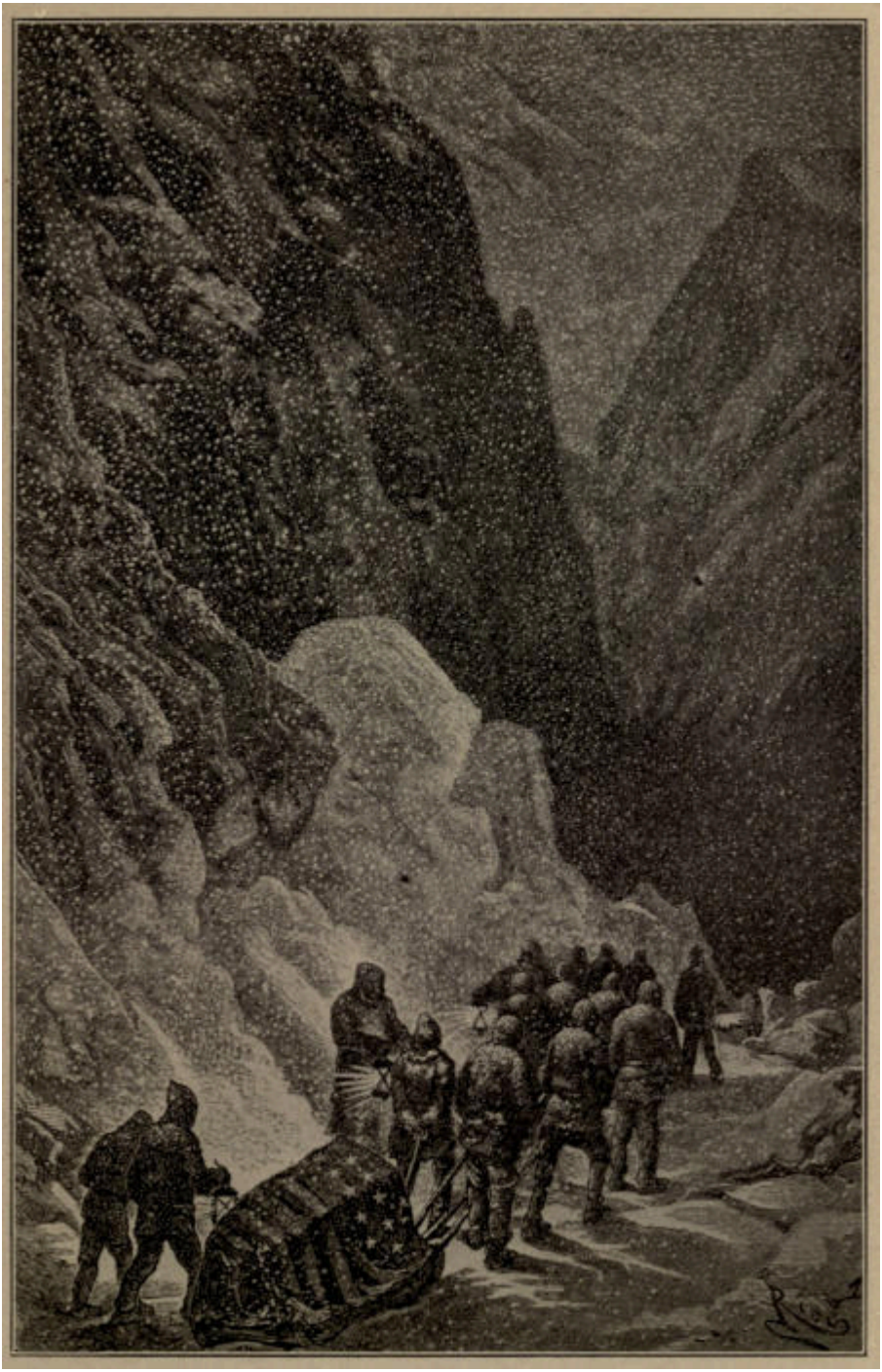
The *Polaris*, in command of Captain Hall, with S. O. Buddington as sailing-master, Dr. Emil Bessels in charge of the scientific work, and twenty-four others, sailed from New London, Connecticut, July 3, 1871. At Proven, Hans, the dog driver, who had served with Kane and Hayes, accompanied by his wife and three children, was taken aboard.

The *Polaris* encountered a great deal of ice at the entrance of Wolstenholme Sound, so that the passage through it was effected with much difficulty. Steaming through the leads, she was compelled to stop for the first time off the western shore of Hakluyt Island on August 27.

By August 29, she stood in latitude 82° 11′ N., having successfully navigated Kane Basin, Kennedy Channel, Hall Basin, and Robeson Channel, and into the Polar Sea. Unable to retain her

position by the force of the current, she returned southward and went into winter quarters in 81° 38′ north latitude at Thank God Harbor, Greenland.

Captain Hall was very desirous of making a sledge journey before the winter set in, for the purpose of reconnoitring and selecting the best route for his great journey in the spring toward the Pole.



Funeral of Captain Hall

By the 28th of September, the final preparations for this journey were complete. The dogs were selected and carefully fed. The Eskimos had put the sledge in order, and those selected to accompany Captain Hall were busy making their personal preparations. Not until the 10th of October was the start finally made, Hall being accompanied by Mr. Chester and the Eskimos, Joe and Hans.

DEATH OF HALL

On the 24th of October, the sledge party returned, having reached as far north as Cape Brevoort, 82° N. They had all been well, during their two weeks' absence, with the exception of Captain Hall, who had complained that he did not feel his wonted vigour and endurance; and for the last three days had not felt at all well.

He had frequently expressed his surprise during the journey that he was not able to run before the sleds and encourage the dogs, as on former expeditions, but had been compelled to keep on the sled. Captain Hall had not been aboard half an hour before he was taken violently ill, and by 8 P.M. his entire left side was paralyzed as the result of an apoplectic attack. By the evening of the 25th, he was delirious; on November 7, he sank into a comatose state, breathing heavily; he remained in this condition until 3:25 A.M. of the 8th, when he died.

The sad news was broken to the ship's company, and none felt his loss more than the Eskimos, Joe and Hannah, who had been his constant companions for nearly ten years. These faithful friends had looked upon him as a father, and were now heart-broken.

On November 11, Captain George Tyson, assistant navigator of the expedition, wrote in his diary: —

"As we went to the grave this morning, the coffin hauled on a sledge, over which was spread, instead of a pall, the American flag, we walked in procession. I walked on with my lantern a little in advance; then came the captain and officers, the engineer, Dr. Bessel, and Meyers; and then the crew, hauling the body by a rope attached to the sledge, one of the men on the right holding another lantern. Nearly all are dressed in skins, and, were there other eyes to see us, we should look like anything but a funeral cortège. The Eskimos followed the crew. There is a weird sort of light in the air, partly boreal or electric, through which the stars shone brightly at 11 A.M., while on our way to the grave.

"Thus end poor Hall's ambitious projects; thus is stilled the effervescing enthusiasm of as ardent a nature as I ever knew. Wise he might not always have been, but his soul was in this work, and had he lived till spring, I think he would have gone as far as mortal man could go to accomplish his mission. But with his death I fear that all hopes of further progress will have to be abandoned."

The death of Captain Hall proved to be fatal to the main object of the expedition—the attainment of the Pole; if possible—or the absolute proof of its inaccessibility. The command of the expedition now devolved upon Captain Buddington.

Several unsuccessful boat journeys to the north were followed by a sledge journey under Dr. Bessels, to Petermann Fiord. Another boat journey by Mr. Chester reached Newman Bay, but it was left to Sergeant F. Meyer, Signal Corps, U. S. Army, to reach on foot the most northerly land at that time ever reached by civilized man, near Repulse Harbor, 82° 09′ N.

"POLARIS" ADRIFT AMONG THE ICEBERGS

On the 11th of August, 1872, the ice of the straits was observed to be in motion, drifting to the south. With the hope of releasing the ship and returning home, Captain Buddington, after an examination of the ice, decided it would be safe to force the vessel through. At 4:30 P.M. the engines were started, and the *Polaris* left Thank God Harbor; with great care the vessel was piloted between the heavy floes, changing her course frequently, but always gaining ground. By the 18th, she stood 79° 44′ 30′′ N.

On the 27th, every preparation was made for a possible abandonment of the vessel. A house was built on the floe, as a retreat in case the ship should be destroyed. For nearly two months the *Polaris* drifted southward at the mercy of the ice-pack, and was nipped near Little Island by October 13.

"At 5 A.M. of the 15th (October)," writes Admiral Davis in his "Narrative of the North Polar Expedition," "a very heavy snow began to fall, and continued until 8 A.M., when the wind blew so hard that it was impossible to distinguish between the falling and drifting snow. The gale increased all day, driving the vessel with its surrounding ice with great rapidity. It commenced to blow from the S. E., but shifted to the S., and finally to the S. W. During its prevalence, the air was so completely filled with the flying snow that one could not see more than 20 or 30 feet. The ship had remained fast to the floe so long, and drifted with it so far, that no particular anxiety was felt as to the result.

"The captain had, however, always said that if the vessel passed through Smith Strait, he would not feel easy until the ice in which she lay, had joined the regular Baffin's Bay pack.

"The 'north-water,' as it is called by whalemen, is always found in the northern part of Baffin Bay, and he knew that, were this safely crossed, the ship would float quietly down with the pack all winter, and be released in the spring far to the south.

"The direction in which the vessel was moving was a matter of speculation; the fact of her moving was admitted. The daily work being done, after dinner the men settled themselves down as usual for the enjoyments of the evening. At 6 P.M., it was reported that the starboard side of the vessel was free from ice. The captain turned out the crew, and secured the ship by an additional hawser to the floe. This extra hawser was over the stern and led from a large ice-anchor, sunk in the floe to the main-mast. Two hawsers had served during the whole of the drift to hold the *Polaris* to the floe, one over the bows and one over the stern. Final preparations were made to abandon the vessel, nearly everything had been got ready on deck; the seamen still had their clothes and personal effects to look after.

"The *Polaris* was driven along at a very rapid rate. Many eager faces looked over the rail and peered into the darkness and the gloom, wondering what would happen next. The sky was threatening. The moon struggled in vain to break through the clouds. Two icebergs were passed in close proximity. Some judgment could be formed by means of them as to the rapidity with which the vessel was moving. One could scarcely help shuddering as he thought of the consequences of running into one of those gigantic ice-mountains. One or two persons thought the land was visible, but it was very uncertain.

THE WRECK OF THE "POLARIS"

"At 7:30 the vessel ran among some icebergs, which brought up the floe to which she was attached; at the same time, the pack closed up, jamming her heavily; it was then the vessel secured her severest nip. It is hard to describe the effect of that pressure. She shook and trembled. She was raised up bodily and thrown over on her port side. Her timbers cracked with loud report, especially about the stern. The sides seemed to be breaking in. The cleat to which one of the after hawsers was attached snapped off, and the hawser was secured to the mast. One of the firemen, hurrying on deck, reported that a piece of ice had been driven through the sides. Escape from destruction seemed to be impossible. The pressure and the noise increased together. The violence of the night, and the grinding of the ice, added to the horror of the situation. Feeling it was extremely doubtful whether the ship would stand, Captain Buddington ordered provisions and stores to be thrown upon the ice. Then followed a busy scene. Each one was deeply impressed with the exigency of the moment, and exerted himself to the utmost. Boxes, barrels, cans, etc., were thrown over the side with extraordinary rapidity. Men performed gigantic feats of strength, tossing with apparent ease, in the excitement of the moment,

boxes which at other times they would not have essayed to lift. Forward, coal and more substantial provisions and bags of clothing were thrown overboard; abaft, the lighter boxes of canned meats and tobacco, with all the musk-ox skins and fresh seal-meat, were transported to and fro. The cabin was entirely emptied, beds and bedding, clothes and even ornaments, were carried out. Messrs. Bryan and Meyer placed upon the floe the boxes containing all their note-books, observations, etc. This was done deliberately and after mutual consultation. The boxes were too large to be carried about, and, in the actual condition of things, the floe appeared to be decidedly the best place.

"The Eskimo women and children took refuge on the ice, and two boats were lowered and with a scow placed on the floe.

"The pressure had now become so great that the great floe itself had cracked in several places, and the vessel was gradually breaking its edge and bearing down the pieces. Many articles had been thrown in a heap near the ship, and it was found that some of the lower things in the pile were dropping through between the vessel and the ice. It was also seen that should the ship be cut through and sink, many, if not all these articles, would sink with her. A call was therefore made for these men to carry these articles to a safer place on the floe. There was no special designation for that duty; but Captain Tyson, taking several persons with him, at once entered on it. After laboring about one hour and a half, the decks were cleared and the men on board ship had finished their work. At 9:30 P.M., by some change in the ice, the starboard side was again clear; the vessel was free from pressure, and the cracks in the floe began to open.

THE SEPARATION OF THE CREW

"Unfortunately, two of these cracks ran through the places where the stern anchors had been planted, breaking their hold. The wind, still strong, now drove the vessel from the floe, and, the anchors dragging under the strain, she swung round to the forward hawser. The latter slipped, and the vessel was carried rapidly away from the ice. The night was black and stormy, and in a few moments the floe and its precious freight could no longer be seen through the drifting snow. Before the separation, it had been noticed that the floe was much broken on its edge; that the provisions and stores were separated from each other by rapidly widening cracks; that the men also were on different pieces of ice; that active efforts were being made to launch boats in order to bring the scattered people together. Several men were seen rushing toward the ship as she was leaving, but they failed to reach her. The voice of the steward, John Herron, was heard calling out, 'Good-by, *Polaris*!'

"Nineteen persons were thus separated from the ship, including eight Eskimos and the baby of Hans and Hannah—fourteen men remained on board—'This remnant of a crew, so suddenly reduced, gazed on each other for a few moments in silence—when the order was given to station the lookouts; the duties of the ship were resumed.'

"A few moments after the separation, a fireman who was below getting up steam reported that the vessel was leaking badly. Upon examination it was found that the water was pouring in so rapidly that it was feared that the fires would be put out before steam could be raised to work the pumps.

"All hands were immediately ordered to the large deck pumps, and a few pails of hot water started the four pumps. The captain called out, 'Work for your lives, boys,' and the crew set to work with a will. In spite of their utmost efforts, the leak still gained upon them. The engineers and firemen were urged to their utmost. Everything of a combustible character, including seal blubber, was thrown upon the fire, and at the end of an hour and ten minutes of the severest labor, the steam pumps were at last in working order. Nor was this a moment too soon, for at the moment the pumps began to work, the water was lapping over the floor of the fire-room."

Captain Buddington awaited a favourable opportunity to beach the *Polaris*, and this was accomplished a few days later near Life-Boat Cove, where a comfortable house was built of the vessel for the winter.

Some Eskimos rendered them considerable assistance, and received suitable gifts in return.

"We have taken stock of our ammunition," writes Captain Buddington in his journal, "and find that we can avail ourselves of about eight pounds of powder, which some of the men had stored away in their chests and powder-flasks. This is all we have on board, the powder-can having been also put off on the ice during the fearful night of the 15th; also all our Sharp's cartridges, except some open (loose) ones which were found amongst the men's things. One box of musket-cartridges we have, and plenty of shot and lead; also several shot guns. In fact, we are not altogether as bad off as we first supposed, and the only thing that we are short of is clothing. This, if we cannot get any game, we may feel considerably before spring comes on."

The Eskimos from Etah made frequent visits, but could give them no information of the lost members of the party. The general opinion with Captain Buddington and his men was that Tyson had been able to effect a landing with his men, somewhere to the south, and that he would probably use his dogs, sleds, and boats to travel up the coast and rejoin the main party.

In the spring of 1873 two boats were carefully constructed from the material of the *Polaris*, and the party made preparations to reach Upernavik. On June 3, the boats, having been freighted and manned, got under way, and after an exciting journey of two hundred miles were picked up near Cape York by the Scotch whaler *Ravenscraig*.

One of the boats used on this retreat was brought back to civilization and presented to the Smithsonian Institution at Washington. It was exhibited at the International Exhibition, Philadelphia, May 10, 1876, by the side of Kane's boat *Faith*, and formed part of the Arctic Collection furnished for the Centennial by the United States Naval Observatory.

THE HARDSHIP OF THE CREW

To return to the nineteen souls adrift on the ice-floe; of the moment of parting from the *Polaris*, Captain Tyson writes:—

"The ice exploded and broke in many places, and the ship broke away in the darkness, and we lost sight of her in a moment.

"Gone!
But an ice-bound horror
Seemed to cling to air.

"It was snowing at the time also; it was a terrible night. On the 15th of, October it may be said that the Arctic night commences; but in addition to this the wind was blowing strong from the south-east; it was snowing and drifting, and was fearfully dark; and the wind was exceedingly heavy, and so bad was the snow and sleet that one could not even look to the windward. We did not know who was on the ice or who was on the ship; but I knew some of the children were on the ice, because almost the last thing I had pulled away from the crushing heel of the ship were some musk-ox skins; they were lying across a wide crack in the ice, and as I pulled them toward me to save them, I saw that there were two or three of Hans' children rolled up in one of the skins; a slight motion of the ice, and in a moment more they would either have been in the water and drowned in the darkness, or crushed between the ice.

“It was nearly ten o’clock when the ship broke away, and we had been at work since six; the time seemed long, for we were working all the time. Hannah was working, but I did not see Joe or Hans. We worked till we could scarcely stand. They were throwing things constantly over to us till the vessel parted.

“Some of the men were on small pieces of ice. I took the ‘little donkey’—a small scow—and went for them; but the scow was almost instantly swamped; then I shoved off one of the whale-boats, and took off what men I could see, and some of the men took the other boat and helped their companions, so that we were all on firm ice at last.

“We did not dare to move about much after that, for we could not see the size of the ice we were on, on account of the storm and darkness. All the rest but myself, the men, women and children, sought what shelter they could from the storm by wrapping themselves in the musk-ox skins, and so laid down to rest. I alone walked the floe all night.”

The following morning an inventory was taken of the stores on the floe, and they were found to be: fourteen cans of pemmican, eleven and a half bags of bread, one can of dried apples, and fourteen hams. “If the ship did not come for us,” writes Tyson, “we might have to support ourselves all winter, or die of starvation. Fortunately, we had the boats.”

Captain Tyson made an effort to reach Little Island, in order to secure the assistance of the Eskimos living in the neighbourhood in procuring food and shelter for his party during the winter. This he was unable to accomplish, and soon after the *Polaris* was seen rounding a point. Signals were made by hoisting the colours and showing an India-rubber cloth, but neither the signals nor the men were seen by the *Polaris*.

Another futile attempt was made to attract the attention of those on the ship, and Captain Tyson endeavoured to launch the boats and reach her, but without success. Gales now forced the floe out of sight of the ship, and the forlorn men set to work to make the best of a desperate situation.

By late November, the effects of exposure and want of food began to show themselves; some of the men trembled when they tried to walk; the children often cried with hunger, although all was given to them that could possibly be spared. The seals brought in were received with gratitude; the invaluable success of Joe and Hans was fully appreciated; without them, the chances of life would have been very much diminished. So keen had the appetites of the party become that the seal-meat was eaten uncooked with the skin and hair on.

December 25, Captain Tyson records:—

“Our Christmas dinner was gorgeous. We had each a small piece of frozen ham, two whole biscuits of hard bread, a few mouthfuls of dried apples, and also a few swallows of seal’s blood! The last of the ham, the last of the apples, and the last of our present supply of seal’s blood! So ends our Christmas feast!”

“New Year’s dinner. I have dined to-day on about two feet of *frozen entrails* and a little blubber; and I only wish we had plenty even of that, but we have not.”

On January 23, 1873, Captain Tyson makes the following observation:—

“I was thinking the other evening how strange it would sound to hear a good hearty laugh; but I think there never was a party so destitute of every element of merriment as this. I cannot remember ever having seen a smile on the countenance of any one on this floe, except when Herron came out of his hut and saw the sun shining for the first time.”

The months of February and March passed dismally enough, with varying fortune with the hunters. Toward the end of March, the condition of the party was growing rapidly worse. On March 3, Joe shot a monster *oogjook*—a large kind of seal.

It was, indeed, a great deliverance to those who had been reduced to one meal of a few ounces a day.

"Hannah had but two small pieces of blubber left," continues Captain Tyson, "enough for the lamp for two days; the men had but little, and Hans had only enough for one day—and now, just on the verge of absolute destitution, comes along this monstrous *oogjook*, the only one of the seal species seen to-day; and the fellow, I have no doubt, weighs six or seven hundred pounds, and will furnish, I should think, thirty gallons of oil. Truly we are rich indeed!"

"April 1st. We have been the 'fools of fortune' now for five months and a half."

On this day it was found necessary to abandon the floe, which had now become wasted to such an extent that it was no longer safe; at 8 A.M., therefore, the party took to their boat. This boat, intended to carry six or eight men, was crowded with twelve men, two women, and five children, with the tent and skins and some provisions. There was so little room that it was difficult to handle the oars and yoke-ropes. After making fifteen or twenty miles to the south and west in the pack, a landing was effected, the tent pitched with the intention of remaining all night. For the next twenty-eight days the party advanced to the south by boat, camping upon the ice at night, undergoing the most perilous hardships from the upheavals of the ice, through gales and storms.

THE RESCUE AND RETURN TO UNITED STATES

At 4:30 P.M. of April 28, a steamer hove in sight, right ahead, and at one time appeared to be bearing down upon the boat. The American colours were hoisted, and the boat pulled for her. She was recognized as a sealer returning southwest, and apparently working through the ice. For a few moments the hearts of the shipwrecked party were thrilled with joy, but the steamer failed to see them, and night coming on, she soon disappeared. That night the boat was again hauled upon the ice and fires lighted to attract the attention of passing vessels.

At daylight, a steamer was seen eight miles off. The boat was launched and headed for the ship, —but after two hours' pulling, she was so beset by ice that she could make no headway. The party landed on a small piece of ice, hoisted their colours, mounted the highest point of the floe, collected all the rifles and pistols, and fired them together to attract attention. After three rounds, the steamer fired three shots, and, changing her course, headed toward the floe. The party gave a shout of delight, but soon after the steamer again changed her course, and steamed away.

"Again in the morning of the 30th, when the fog opened, a steamer was seen close to the floe; the guns were fired, the colors were set on the boat's mast, and loud shouts were uttered. Hans shoved off in his kayak, of his own accord, to intercept her, if possible; the morning was foggy, but the steamer's head soon turned towards them and in a few moments, she was alongside of the floe."

The three cheers given by the shipwrecked people were returned by a hundred men on deck and aloft. The vessel proved to be the barkentine *Tigress*, sealer, Captain Bartlett, of Conception Bay, Newfoundland. Her small seal boats were very soon in the water; but the shipwrecked party did not wait for them. They threw everything out of their own boat, launched her, and in a few moments were on board the *Tigress*, where they became objects of extreme curiosity, as well as of the most devoted attention. When the time during which they had been on the ice was mentioned, they were regarded with astonishment, and warmly congratulated upon their miraculous escape. They were picked up in latitude 53° 35′ N., off Grady Harbor, Labrador.

Thus ended one of the most remarkable escapes on record. For five months the little band of shipwrecked men and women had drifted at the mercy of the Arctic ice-pack, a distance of 1300 miles.

CHAPTER XIV

Captain Thomas Long.—Discovery of Wrangell Land.—Captain Carlsen and Captain Palliser sail across the Sea of Kara.—Captain Johannsen circumnavigates Nova Zembla.—First German expedition.—Second German expedition.—*Germania*, Captain Koldewey commanding.—*Hansa*, Captain Hegemann.—Departure from Bremen.—Crossing the Arctic Circle.—Island of Jan Mayen.—The ice line.—Separation from the *Hansa*.—Adrift on the ice-floe.—Winter.—Final rescue.—*Germania* beset.—Winter.—Sledging parties.—Lieutenant Payer's remarkable journey.—77° 1′ north latitude.—Return of the *Germania*.

CAPTAIN THOMAS LONG

Other important discoveries followed the journeys of Dr. Hayes and Captain Hall, including that of Captain Thomas Long, an American whaler, who in 1867 discovered "a mountainous country of considerable extent in the Polar Ocean, beyond Behring Strait," supposed at that time to be the western prolongation of Plover Island.

The same year Captain Carlsen and Captain Palliser sailed across the generally inaccessible Sea of Kara to the mouths of the Obi,—and Captain Johannsen succeeded in circumnavigating the whole archipelago of Nova Zembla. In 1868 the first German north polar expedition was fitted out through the exertions of the scientist Dr. A. Peterman of Gotha. The yacht *Greenland*, commanded by Captain Koldewey, sailed to Spitzbergen, reaching 84° 05′ N. off the north coast, and, passing down Henlopen Strait, sighted Wiche Land, returning home the fall of the same year.

SECOND GERMAN EXPEDITION

In 1869 and 1870, the Germans made a more successful attempt to enter the lists of Arctic discovery by exploring a considerable part of the previously unvisited coast of East Greenland. The ship *Germania* was chosen for this purpose, being expressly adapted for ice navigation; the *Hansa* of nearly the same size was to accompany her. Captain Karl Koldewey and Captain Fr. Hegemann were first and second in command respectively.

"The departure of the expedition from Bremerhaven," writes Captain Koldewey, "took place on the 15th of June, 1869, in the presence of his Majesty, the King of Prussia, whose warm interest in this great national undertaking showed itself in this solemn hour in a manner never to be forgotten. Amongst the numerous gentlemen in attendance on his Majesty were his Royal Highness, the Grand Duke of Mecklenburg Schwerin, Count Bismarck, the Minister of War and Marine, von Roon, General von Moltke, and Vice-Admiral Jackman. The ships lay at the entrance of the new harbour just outside the sluice. The king, having been introduced to the scientific gentlemen and the commander of the expedition, and having greeted them with a hearty shake of the hand, the President of the Bremen Committee, Herr A. G. Mosle, requested his Majesty's permission to speak a few parting words; and in an earnest and impressive manner the speaker referred to the greatness and importance of the object, the self-denial, difficulties, and dangers which lay before them, but which they all willingly braved for the honour of their native land, for the honour of the German navy, and of German science."

July 1 found the expedition in 61° north latitude, passing the entrance between Norway and the Shetland Isles. "With that the German Ocean was left behind and the open sea reached, which already made itself felt by the peculiar 'Atlantic swell.'"

On the 5th of July, at fifty minutes past eleven, the *Germania* passed the Arctic Circle, nearly under the meridian of Greenwich.

"A violent wind was blowing," writes Captain Koldewey, "and with a speed of nine knots we entered the Arctic Ocean, which was to be our quarters for a whole year. The *Hansa* was some miles

in advance of us, and was the first to unfurl the North German flag; at the same time firing one gun. We followed. Conformably to the custom, as on crossing the equator, Neptune came on board to welcome us, and wish us success on our voyage; of course not without all those who had not yet crossed the Arctic Circle having to undergo the rather rough shaving and christening customary on such occasions. The ceremony closed (as is usual on such occasions) with a good glass of wine, to wash away the evil effects of the cold water."

On board the *Hansa* the proceeding was carried out much more scrupulously. Describing the frolic, Dr. Laube writes thus:—

"We entered into the spirit of the fun willingly, knowing that our sailors were decent fellows, and would not carry things too far, even had we not entered on the ship's books with them in Breman, and become seamen. Our carpenter went about the whole day with a sly, laughing face, and towards evening had quite lost his usual chattiness. We ourselves kept in the cabin, so as not to witness the preparations. At midnight we were called on deck. A gun was fired, and as its thunder died away, we heard the well-known cry, 'Ship ahoy!' Three wonderful figures climbed over the bowsprit; Neptune first, in an Eskimo's dress, with a great white cotton beard, a seven-pronged dolphin harpoon for a trident in one hand, and a speaking-trumpet in the other. A tarpaulin was spread on the quarter-deck, and a stool placed upon it. It looked like a judge's bench. Here each of us was seated with eyes bound, while the masked followers of the northern Ruler went through the customary proceedings. I was soaped and shaved; god Neptune was most favorable to me; he knows what good cigars are, and has great respect for those to whom they belong. Then came the christening, which in this case was not applied to the head (as is usual) but to the throat and stomach. Neptune put some questions to me through his speaking-trumpet, desiring me to answer. I saw his object, answered with a short 'Yes' and then closed my lips. The mischievous waterfall rattled over me, causing universal merriment. They then took the bandage from my eyes, that I might see my handsome face in the glass; but instead of a looking glass, it was the combing of the wooden hatchway, which with great gravity was held before my face by the barber's assistant. I was now absolved, and could laugh with the others, whilst seeing my comrades obliged to go through the same course one after the other."

By the 9th of July, the expedition came in sight of the island of Jan Mayen. The midnight hours had now become perceptibly lighter; even in the cabin a lamp was no longer needed, and at twelve o'clock at night it was possible to read and write without difficulty. Fog and snow had already begun their rule of terror, and Captain Koldewey records three hundred and sixty-eight hours of fog from the 10th of July to the 1st of August.

The island of Jan Mayen lies in the middle of the wide, deep sea between Norway and Greenland, Iceland and Spitzbergen; and is distant about sixty geographical miles from the coast of Greenland. It was discovered and named after a Dutchman who visited it in the year 1611. It is nine miles in length and one mile in breadth, rocky and mountainous, with only two spots of flat beach suitable for landing-places. The northeast part rises to a height of six thousand eight hundred sixty-three feet, in the lofty Beerenberg, which has a large crater. In the year 1732, Burgomaster Anderson, of Hamburg, reported a decided eruption from a small side crater, and in 1818, Scoresby and another captain saw great pillars of smoke rising from the same place. Of this wonderful isolated, snow-covered peak, Lord Dufferin, in "Letters from High Latitudes," wrote,—

"My delight was of an anchorite catching a glimpse of the seventh heaven."

Jan Mayen lies so near the edge of the ice-fields, that from 1612 to 1640 it afforded the English and Dutch whale-fishers a comfortable station for their train-oil preparation. One ship is reported to have brought home one hundred and ninety-six thousand gallons of oil in a single year.

The ice line was reached July 15. “After a foggy day, a light southerly breeze got up, the sails filled, the ship answered the helm once more, and we moved in a north-westerly course between small floes and brashes. A practised ear might now notice a peculiar distant roar, which seemed to come nearer by degrees. It was the sea singing against the still hidden ice.

“Nearer and nearer comes the rushing noise. Every man is on deck; when, as with the touch of a magic wand, the mist divides, and a few hundred yards before us lies the ice, in long lines like a deep indented rocky coast, with walls glittering blue in the sun, and the foaming of the waves mounting high, with the top covered with blinding white snow. The eyes of all rested with amazement on this grand panorama; it was a glorious but serious moment, stirred as we were by new thoughts and feelings, by hopes and doubts, by bold and far-reaching expectations.”

ADRIFT ON THE ICE FLOE

Up to this time the *Germania* and *Hansa* had stood well together with occasional separation in the fogs, and on the 18th of July the officers of the two ships exchanged hospitalities. The next day, through a fatal misunderstanding of signals, the *Hansa* separated from the *Germania*, and they never met again.

Jan Mayen Island

On the 28th of July, the *Hansa* stood in 72° 56′ north latitude and 16° 54′ west latitude. The dark rock coast of East Greenland was visible for the first time from Cape Broer Ruys to Cape James.

By sailing, towing, and warping, the *Hansa* made slow progress through the ice. The captain and two officers and two sailors made an attempt to land on August 24, but were obliged to return to the ship without having accomplished their mission. On the 25th of August the *Hansa* reached within thirty-five nautical miles of Sabine Island. The ship was continually subjected to dangerous ice pressure, and often forced southward by the drifting ice-fields. By the 6th of September, she lay between two promontories of a large ice-field, which eventually proved a raft of deliverance. By the 14th of September, she was completely frozen up in 73° 25.7′ north latitude and 18° 39.5′ west latitude. At the mercy of the drifting currents, the *Hansa* stood in imminent peril of total destruction. Between October 5 and 14 the drift had carried the ship seventy-two nautical miles to the south-southwest. The nights were cold, sometimes 4° F. below zero. The only sign of animal life to be seen were ravens, which were doubtless wintering on the coast; once a gull and a falcon made the ship a visit. A severe storm from the north-northwest on the 19th brought disastrous pressure upon, the *Hansa*.

"Shortly before one o'clock, the deck seams sprang, but still she seemed tight. Mighty blocks of ice pushed themselves under the bow, and, although they were crushed by it, they forced the ship up no less than seventeen feet. The rising of the ship was an extraordinary and awful, yet splendid spectacle, of which the whole crew were witnesses from the ice."

Realizing the gravity of the situation, Captain Hegemann at once ordered clothing, nautical instruments, and stores to be removed from the ship to a safe distance. The pumps were put in action to free her from water, but to the horror of all, it was discovered before many hours that the *Hansa* was doomed.

"Calmly, though much moved, we faced this hard fact."

There was not a minute's time to lose; while one-half of the men stayed by the pumps, the others were busily engaged bringing the most necessary articles from the vessel to the floe. Gradually the ship filled with water, and by eight in the morning the men who were busy in the fore-peak getting out firewood came with anxious faces to say that the wood was already floating below. At three o'clock the water in the cabin had reached the table, and all movable articles were floating.

"Round about the ship lay a chaotic mass of heterogeneous articles, and groups of feeble rats struggling with death, and trembling with cold."

On the morning of the 21st, a last trip was made to the *Hansa* for fuel and her masts sacrificed to the stress of need. She was then cut away from the ice that she might not endanger the lives of those on the floe when she sank.

WINTER

The shipwrecked crew, in the miserable shelter of the coal house, settled themselves to meet the exigencies of their frightful position. In the far distance Halloway Bay and Glasgow Island were distinctly visible, but nowhere a way through the icy labyrinth. Slowly, steadily, the ice-field drifted to the south. By November 3 the Liverpool coast had been passed, and the picturesque formation of the coast surrounding Scoresby Sound was distinctly visible.

The health of the party remained good; a monotonous routine of daily duties occupied officers and men. The capture of a walrus and bear gave a welcome supply of fresh meat. Christmas was cheerfully celebrated by these shipwrecked mariners in the coal-hut on their Greenland floe. A tree artistically manufactured of pine wood and birch broom was gayly decorated with paper rings and candles,—nor were gifts wanting, and finally, wrote Dr. Laube in his day-book:—

"In quiet devotion the festival passed by; the thoughts which passed through our minds (they were much alike with all) I will not put down. If this should be the last Christmas we were to see, it was at least bright enough. If, however, we were destined for a happy return home, the next will be a brighter one; may God grant it!"

The months of January and February were fraught with many anxious hours, owing to the numerous and severe storms which threatened destruction to the floe. The horrors of such an experience are vividly described as follows:—

On the 11th of January, "At six in the morning, Hildebrandt, who happened to have the watch, burst in with the alarm, 'All hands turn out.' An indescribable tumult was heard without. With furs and knapsacks all rushed out. But the outer entrance was snowed up; so to gain the outside quickly, we broke through the snow-roof of the front hall. The tumult of the elements which met us there was beyond anything we had already experienced. Scarcely able to leave the spot, we stood huddled together for protection from the bad weather. Suddenly we heard, 'Water on the floe close by.' The floe surrounding us split up; a heavy sea arose. Our field began to break on all sides. On the spot between our house and the piled-up store of wood which was about twenty-five paces distant, there suddenly opened a huge gap. Washed by the powerful waves, it seemed as if the piece just broken off was about to fall upon us; and at the same time we felt the rising and falling of our now greatly reduced floe. All seemed lost. From our split-up ice-field all the firewood was drifting into the raging sea. And in like manner we had nearly lost our boat *Bismarck*; even the whale-boat was obliged to be brought for safety into the middle of the floe. The large boat, being too heavy to handle, we were obliged to give up entirely. All this in a temperature of -9½°, and a heavy storm, was an arduous piece of work. The community were divided into two parts. We bade each other good-by with a farewell shake of the hands, for the next moment we might go down. Deep despondency had taken hold of our scientific friends; the crew were still and quiet. Thus we stood or cowered by our boats the whole day, the fine pricking snow penetrating through the clothes to the skin. It was a miracle that just that part of the floe on which we stood should from its soundness keep together. Our floe, now only 150 feet in diameter, was the 35 to 40 feet nucleus of the formerly extensive field to which we had entrusted our preservation. Towards evening the masses of ice became closely packed again. At the same time the heavy sea had subsided and immediate danger seemed past. Relieved, we partook of something in the house and lay down, after setting a good watch. It was past midnight, when we were roused from our sleep by the cry of terror; the voice of the sailor on watch, exclaiming, 'Turn out, we are drifting on to a high iceberg!' All rushed to the entrance; dressed as we always were; we had no time to run through the long snow passage, but burst open the roof, climbed on to the door and so out. What a sight! Close upon us, as if hanging over our heads, towered a huge mass of ice, of giant proportions. 'It is past,' said the captain. Was it really an iceberg, or the mirage of one, or the high coast? We could not decide the question. Owing to the swiftness of the drift, the ghastly object had disappeared the next moment."

Again on the evening of the 14th a frightful storm raged, which set the ice once more in motion.

"In the immediate neighbourhood of the house, our floe burst; and the broken ice flew high around us. It was high time to bring the boat *Bismarck* and the whale-boat more into the middle. This we did; but they were far too heavily laden to bring further. On this account, furs, sacks of bread, and clothing were taken out and packed on two sledges, which were, however, soon completely snowed up. All our labour was rendered heavier by the storm, which made it almost impossible to breathe. About eleven, we experienced a sudden fissure which threatened to tear our house asunder; with a thundering noise an event took place, the consequences of which, in the first moments, deranged all calculations. God only knows how it happened that, in our flight into the open, none came to harm. But there in the most fearful weather we all stood roofless on the ice,

waiting for daylight, which was still ten hours off. The boat *King William* lay on the edge of the floe, and might have floated away at any moment. Fortunately the fissure did not get larger. As it was somewhat quieter at midnight, most of the men crept into the Captain's boat, when the thickest sail we had was drawn over them; some took refuge in the house. But there, as the door had fallen in, they entered by the skylight, and in the hurry broke the panes of glass, so that it was soon full of snow. This night was the most dreadful one of our adventurous voyage on the floe."

For five nights the men slept in the boats; the days were employed in raising their settlement from its ruins. A wooden kitchen was built and a dwelling house, exactly like the one destroyed, but half as large (14 feet long by 10 broad and 1½ high in the middle).

In spite of such frightful experiences, the men kept cheerful, undaunted, and exalted; in fact, the cook kept a right seaman-like humour, having exclaimed while repairing the coffee kettle, during the frightful pressure of the ice which destroyed the floe, "if the floe would only hold together until he had finished his kettle! he wished so to make the evening tea in it, so that, before our departure, we might have something warm."

February and March found them helplessly drifting to the southward, and by Easter (17th of April) they lay floating backwards and forwards in the Bay of Unbarbik. Linnets and snow-buntings soon made their appearance, so fearless and confiding that, "Some of them," so says Bade's day-book, "will almost perch upon our noses, and in five minutes allowed themselves to be caught three times."

On the 7th of May the agreeable sight of open water in the direction of land cheered both officers and men. The captain now decided that an attempt would be made to leave the floe and reach the coast. The little community, divided amid three boats, bade farewell to the ice-floe which had been their home for two hundred days.

During several days of bad weather, small progress was made. The men suffered considerably from exhaustion, snow-blindness, and want of proper shelter and food—the latter problem was occasioning considerable concern, and already the men were "almost looking their eyes out after a seal." There was but six weeks' short provisions on hand and a long distance to travel over a barren and uninhabited coast before the settlement could be reached.

The ice remaining unnavigable, it was decided to make the island of Illuidlek, dragging the heavy boat-loads over the all but impassable ice hummocks.

By the 24th of May, Mr. Hildebrandt and the sailors Philipp and Paul, set foot on firm ground. Their encouraging report cheered the others to similar exertions, but the progress was slow and exhausting. Not until the 4th of June were the entire party landed at Illuidlek. The island proved of rocky formation, naked, and bare of vegetation.

"Everywhere we find nothing," writes one of the party, "but bare barren cliffs, the higher the wilder, sparingly clothed with moss and stunted willows. But no trace of human inhabitants."

Two days later (June 6) they started once more; their object was to make for Friedricksthal, the nearest colony on the southwest coast of Greenland. On June 13, 1870, after passing through the Straits of Torsudatik, and skirting the coast, the longed-for bay was reached. "A few hundred steps from the shore on the green ground, stood a rather spacious red house, topped by a small tower. It was the mission house. Groups of natives from the shore speedily welcomed the wanderers and the cheerful greeting of the Moravian missionaries: 'That is the German flag! They are our people! Welcome, welcome to Greenland!' fell like music in their ears. After partaking of the generous hospitality extended by the missionaries, and taking a much-needed rest, they pushed on in the hopes of reaching the settlement of Julianeshaab, distant some eighty miles, where the Danish

Constance was expected at any moment, and would be their only means of reaching Europe that year."

By the 25th of July, the officers and crew of the *Hansa* weighed anchor for the homeward voyage. By the 31st of July they were on the high sea in Davis Strait. "No more ice! Set southwards, and—O heavenly music of the word—homewards!"

"GERMANIA" BESET

It will be remembered that on July 20, 1869, the two ships had parted company, the *Germania* proceeding on her course with officers and crew, under the impression that the *Hansa* would rejoin her within a short time. When this did not take place, much concern was felt for her fate. By the 27th of July, the *Germania* stood 73° 7′ north latitude, and 16° 4′ west longitude. Two days later an interesting note is made of the peculiar condition of the atmosphere.

"The weather was clear and still, and we had a good opportunity of observing the refraction of light and the mirage. The whole atmosphere was quivering with a kind of wavy motion, so that the exact outline of the object was often so distorted as to be unrecognizable. It may be imagined that pictures of things far beyond our range of sight could thus be seen. Scoresby relates, and it afterwards proved true, that he once saw and recognized his father's ship perfectly in the mirage when it was thirty miles distant. The effects of this phenomenon on the distant ice was wonderful; sometimes it appeared like a mighty wall, and sometimes like a town rich in towers and castles."

Carefully pushing a way between the floes, the *Germania* stood within thirty miles of Sabine Island by August 4. Sailing straight for Griper Roads, she at last anchored in a small bay which was afterward her winter harbour.

On the 5th of August, anchor was dropped, and the German flag hoisted on Greenland soil, amid loud cheers. Sabine Island forms a part of the group known as Pendulum Islands, discovered by Clavering in 1823. Sabine's observatory was carefully searched for, but no indications of its remains were found. Traces of Eskimo summer huts were discovered, however, giving evidence of long habitation.

On the 15th of August, the *Germania* sailed as far as 75° 31′ north latitude, some distance beyond Shannon Island, the extreme point discovered by Clavering and Sabine. At Shannon Island, First Lieutenant Payer, accompanied by seven companions, and provisioned for six days, made a try of investigation. Lieutenant Payer's description of the plateau to the southwest of Shannon is interesting. Tell-platte, as it is called, is six hundred and seventy feet above the sea. "Here on the broad mountain top were masses of rubbish of gneiss formation resembling those on Pendulum Island. We were also astonished by the sight of a large flat promontory (south of Haystack) which is not distinctly marked on Clavering's charts. The view of the front coast of Greenland was full of majestic beauty."

Having taken up winter quarters at Sabine Island, September 13, Captain Koldewey and Lieutenant Payer undertook a sledge journey to Flegely Fiord. They returned to the ship September 21, after an absence of seven days, having travelled 133½ miles. The long winter passed in the usual monotonous fashion, and in preparation for the spring sledge journeys. A thrilling incident, however, occurred early in March, which is almost unprecedented in Arctic adventure.

"We were sitting," writes Lieutenant Payer, "fortunately silent in the cabin, when Koldewey suddenly heard a faint cry for help. We all hurriedly tumbled up the companion-ladder to the deck, when an exclamation from Borgen, 'A bear is carrying me off!' struck painfully on our ears. It was dark; we could scarcely see anything, but we made directly for the quarter whence the cry proceeded, armed with poles, weapons, etc., over hummocks and drifts, when an alarm-shot, which

we fired in the air, seemed to make some little impression, as the bear dropped his prey, and ran forward a few paces. He turned again, however, dragging his victim over the broken shore-ice, close to a field which stretched in a southerly direction. All depended upon our coming up with him before he should reach this field, as he would carry his prey over the open plain with the speed of a horse, and thus escape. We succeeded. The bear turned upon us for a moment, and then, scared by our continuous fire, let fall his prey. We lifted our poor comrade up on to the ice, to bear him to his cabin,—a task which was rendered somewhat difficult by the slippery and uneven surface of the ice. But after we had gone a little way, Borgen implored us to make as much haste as possible. On procuring a light, the coldest nature would have been shocked at the spectacle which poor Borgen presented. The bear had torn his scalp in several places, and he had received injuries in other parts of his body. His clothes and hair were saturated with blood. We improvised a couch for him in the rear of our cabin, as his own was not large enough. The first operation was performed upon him on the cabin table. And here we may briefly notice the singular fact that, although he had been carried more than 100 paces with his skull almost laid bare, at a temperature of -13° Fahrenheit, his scalp healed so perfectly that not a single portion was missing."

Borgen describes the sudden attack of the bear as follows: "About a quarter before nine P.M. I had gone out to observe the occultation of a star, which was to take place about that time, and also to take the meteorological readings. As I was in the act of getting on shore, Captain Koldewey came on to the ice. We spoke for a few moments, when I went on shore, while he returned to the cabin. On my return from the observatory, about fifty steps from the vessel, I heard a rustling noise to the left, and became aware of the proximity of a bear. There was no time to think, or use my gun. The grip was so sudden and rapid, that I am unable to say how it was done; whether the bear rose and struck me down with his fore-paws, or whether he ran me down. But from the character of the injuries I have received (contusions and a deep cut on the left ear), I conclude that the former must have been the case. The next thing I felt was the tearing of my scalp, which was only protected by a skull cap. This is their mode of attacking seals, but, owing to the slipperiness of their skulls, the teeth glide off. The cry for help which I uttered frightened the animal for a moment; but he turned again and bit me several times on the head. The alarm had meanwhile been heard by the Captain, who had not yet reached the cabin. He hurried on deck, convinced himself that it was really an alarm, roused up the crew and hastened on to the ice, bringing assistance to his struggling comrade. The noise evidently frightened the bear, and he trotted off with his prey, which he dragged by the head. A shot fired to frighten the creature effected its purpose, inasmuch as he dropped me, and sprang a few steps aside; but he immediately seized me by the arm, and, his hold proving insufficient, he seized me by the right hand, on which was a fur glove, and this gave the pursuers time to come up with the brute, which had by its great speed left them far behind. He was now making for the shore, and would certainly have escaped with his prey, had he succeeded in climbing the bank. However, as he came to the edge of the ice, he turned along the coast side, continuing on the rough and broken ice, which greatly retarded his speed, and thus allowed his pursuers upon the ice to gain rapidly upon him. After being dragged in this way for about 300 paces, almost strangled by my shawl, which the bear had seized at the same time, he dropped me, and immediately afterwards Koldewey was bending over me, with the words 'Thank God! he is still alive.' The bear stood a few paces on one side evidently undecided what course to pursue, until a bullet gave him a hint that it was high time to take himself off."

LIEUT. PAYER'S REMARKABLE JOURNEY

Preparations having been completed for an extended sledge journey to examine the bays and inlets of the mainland, the party started March 8, 1870, and were absent until April 27 after twenty-three days of most arduous labours. Lieutenant Payer had the satisfaction of reaching 77° 1′ north latitude, at that time

the most northerly point ever reached on the east coast of Greenland. From an elevated sight the sea appeared covered with an unbroken field of hummocks, and land was seen to stretch out in a northerly direction as far as the eye could reach.

Other journeys which followed at close intervals greatly added to the geographical knowledge of the coast. On the return from one of these, they discovered (9th of August) the entrance to a magnificent fiord to the south of Cape Franklin (73° 10′ north latitude), into which they penetrated to a distance of seventy-two nautical miles. As they advanced into the interior, a decided change in the temperature was noticed, the atmosphere and water became warmer, and herds of reindeer and musk-oxen were seen; butterflies, bees, and other insects fluttered over the green earth. Nothing could exceed the grandeur of the scenery.

"Numerous glaciers and cascades descended from the mountains, which rose higher and higher as they advanced towards the west. Lieutenant Payer and Doctor Copeland having climbed a peak 7000 feet high saw the fiord still branching out in the distance, and towards the west a remote chain of mountains, situated about 32° W. long., rising to an altitude of at least 14,000 feet, terminated the magnificent prospect. The interior of Greenland thus proved itself to be not a mere naked plateau covered with perpetual ice-fields, but in some parts at least a country of Alpine grandeur."

RETURN OF THE "GERMANIA"

On the 24th of August, the *Germania* steered her course for home; as the ship cleared the last of the Greenland ice, Captain Koldewey quoted the words of old Scoresby under similar conditions. "My watch is over!" he used to say—and turning to Mr. Sengstache, Captain Koldewey exclaimed, "My watch is over!" and retired to his cabin with a feeling of security that he had not enjoyed for many a day.

Pursuing a course past Iceland between the Faroe and Shetland isles, they stood off Heligoland, September 10. "At daybreak, though we had seen no pilot, we recognized Wangerooge, and steered along the South wall to the mouth of the Weser. No sign of a ship! The Weser seemed to have died out. Where are the pilots hidden? Are they lying *perdu* on account of yesterday's storm? Well, then, we must run into the Weser without them, the wind is favorable, the weather clear, the outer buoy will be easy to find; there is the church-tower of Wangerooge. Suspecting nothing, we steered on; the tower bears south-southwest, southwest by south, southwest, but no buoy in sight. The Captain and steersman look at each other in astonishment. Can we have been so mistaken and out of our reckoning? But, no! That is certainly Wangerooge; the depth of water agrees, our compass is correct. No doubt about it, we are in the Weser; something unusual must have happened! Still no sail in sight! But what is that? Yonder are the roads. There are several large vessels under steam; they at least can give us some information. So we make for them. We saluted the German flag, and soon the cry was heard, 'War, war with France; Napoleon a prisoner! France has declared a Republic; our armies are before Paris!' And then, '*Hansa* destroyed in the ice, crew saved.' We thought we were dreaming, and stood stiff with astonishment at such grand and heart-stirring news. Not until a loud hurrah for King William sounded from a hundred German throats did we regain our speech, and answer with another 'Hurrah!'"

CHAPTER XV

Austrian expedition, 1871.—Payer and Weyprecht.—The *Tegetthoff* adrift in the Polar pack.—Discovery of Franz Josef Land.—Payer's sledge journeys.—Payer's farthest 82° 5′ north latitude.—Cape Fligely.—Abandonment of the *Tegetthoff*.—Retreat of officers and crew.—Picked up by Russian fishermen.—"Home."

AUSTRIAN ARCTIC VOYAGES

Having gained much distinction for his valuable services in the second German expedition, Lieutenant Payer was resolved to continue in the path of polar discovery. The following year, in company with his colleague and friend, Lieutenant Weyprecht of the Austrian-Hungarian Navy, he equipped the Norwegian schooner *Isbjorn* and examined the edge of the ice between Spitzbergen and Nova Zembla, reaching 78° 43′ north latitude, and 42° 30′ east longitude, on the 1st of September, 1871.

The zealous endeavours of Payer and Weyprecht succeeded in calling into existence a still larger Austrian expedition in 1872. Their plan was to select a route by the north end of Nova Zembla with a view to making the Northeast Passage.

"Weyprecht was to command the ship, *Tegetthoff*, while Lieutenant Payer was to conduct the sledge parties. The *Tegetthoff* sailed from Bremerhaven June 13, 1872, bearing in her course to Tromsoe. Her equipment was liberal and carefully selected, the total expense of the expedition amounting to £18,333. The officers and crew numbered twenty-four souls.

"Delayed by storms among the Loffoden Isles, they did not reach Tromsoe until July 3. Ten days later the *Tegetthoff* turned her prow to the north; the Norwegian coast with its many glaciers was in full view on July 16, North Cape loomed in the blue distance. By July 25, while in lat. 74° 0′ 15′′ N., the ice was sighted; proceeding with careful navigation through opens in the frozen ocean, the ship moved in her course until the end of August, when she became beset near Cape Nassan, at the northern end of Nova Zembla, having just parted with the *Isbjorn* near Barentz Isle, where Count Wilczek was placing supplies for their possible retreat."

"Ominous were the events of that day," writes Payer, "for immediately after we had made fast the *Tegetthoff* to that floe, the ice closed in upon us from all sides and we became close prisoners in its grasp. No water was to be seen around us, and *never again were we destined to see our vessel in water*. Happy is it for men that inextinguishable hope enables them to endure all the vicissitudes of fate, which are to test their powers of endurance, and that they can never see, at a glance, the long series of disappointments in store for them! We must have been filled with despair, had we known that evening that we were henceforward doomed to obey the caprices of the ice, that the ship would never again float on the waters of the sea, that all the expectations with which our friends, but a few hours before, saw the *Tegetthoff* steam away to the north, were now crushed; *that we were in fact no longer discoverers, but passengers against our will on the ice*. From day to day, we hoped for the hour of our deliverance! At first we expected it hourly, then daily, then from week to week; then at the seasons of the year and changes of the weather, then in the chances of new years! *But that hour never came*, yet the light of hope, which supports man in all his suffering, and raises him above them all, never forsook us, amid all the depressing influence of expectations cherished only to be disappointed."

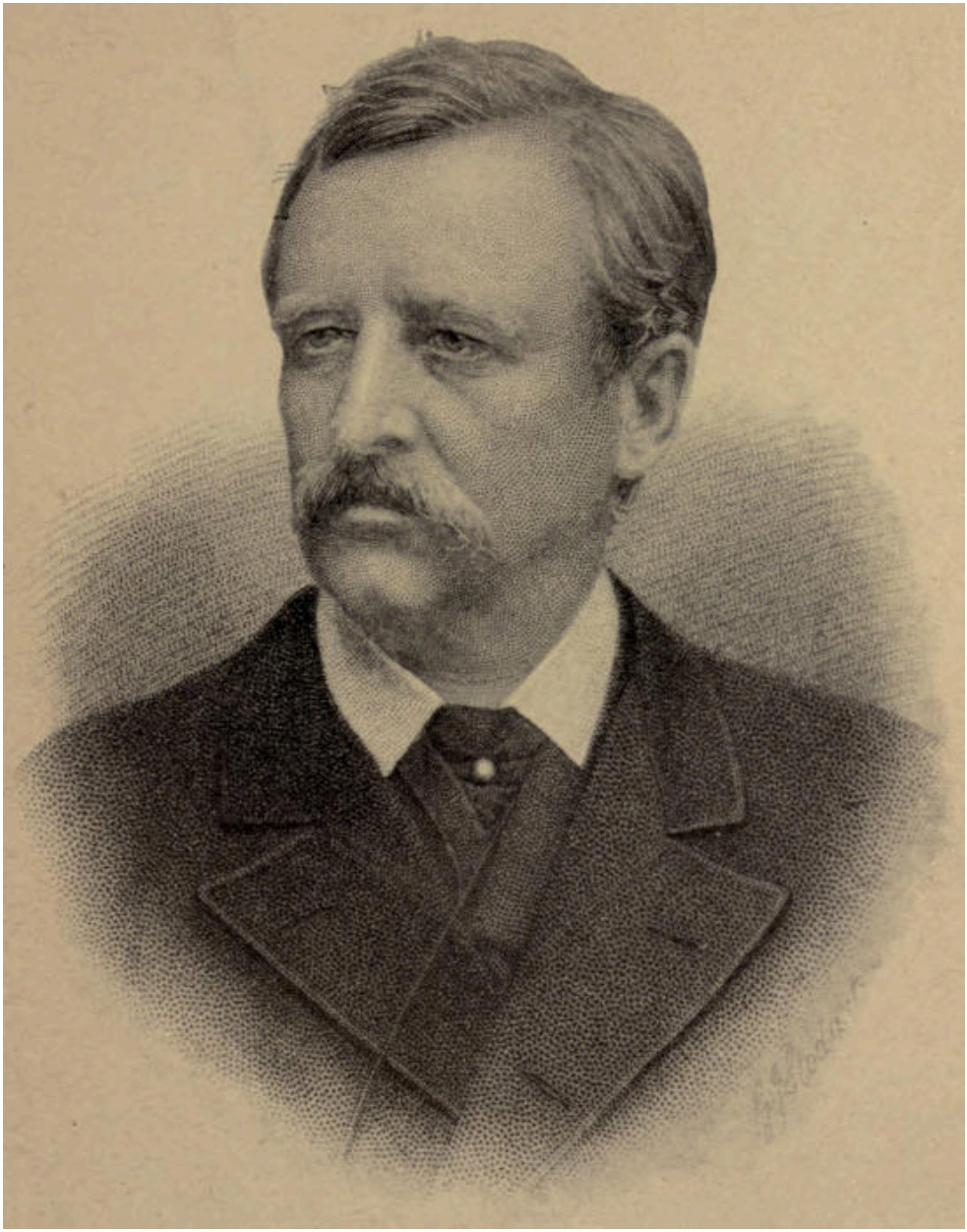
To reach the coast of Siberia under these circumstances had become an impossibility, and even in case the ship became liberated, the search for a winter harbour in Nova Zembla would be a matter of peril and difficulty.

Drifting, not with the current, but in the direction of the prevailing wind, the land of Nova Zembla receded until it faded out of sight and only a desert of ice surrounded them. The frightful ice convulsions which frequently threatened their destruction, determined the men to build a house on the main floe, where supplies of coal, fuel, and provisions were stored. Lieutenant Payer comments on the terrible conditions under which they existed.

"One of us, to-day, remarked very truly, that he saw perfectly well how one might lose his reason with the continuance of these sudden and incessant assaults. It is not dangers that we fear, but worse far; we are kept in a constant state of readiness to meet destruction, and know not whether it will come to-day or to-morrow, or in a year. Every night we are startled out of sleep, and, like hunted animals, up we spring to await amid an awful darkness, the end of an enterprise from which all hope of success has departed. It becomes at last a mere

mechanical process to seize our rifles and our bag of necessaries and rush on deck. In the daytime, leaning over the bulwarks of the ship, which trembles, yea, almost quivers the while, we look out on a continual work of destruction going on, and at night, as we listen to the loud and ever-increasing noises of the ice, we gather that the forces of our enemy are increasing."

The hours of these dark and disheartening days were passed in taking observations, exercise, and occasional bear and sledge journeys. In spite of this the time crept away with indescribable monotony. During February the ship drifted first northwest and then north, the greatest longitude attained being 71° E., in 79° N.; and the summer of 1873 advanced without any signs of freeing them.



A. E. Nordenskjöld

From "The Voyage of the Vega," Macmillan & Co., Ltd., London

With sad resignation the officers and crew looked forward to passing another winter in the ice, although plenty of birds, seal, and bears insured them fresh meat, so essential for the preservation of health in high latitudes.

DISCOVERY OF FRANZ JOSEF LAND

"A memorable day," writes Payer, "was the 31st of August, 1873, in 79° 43′ Lat., and 59° 33′ E. Long. That day brought a surprise, such as only the awakening to a

new life can produce. About midday, as we were leaning on the bulwarks of the ship and scanning the gliding mists, through which the rays of the sun broke ever and anon, a wall of mist, lifting itself up suddenly, revealed to us, afar off in the northwest, the outlines of bold rocks, which in a few minutes seemed to grow into a radiant Alpine land! At first we all stood transfixed and hardly believing what we saw. Then, carried away by the reality of our good fortune, we burst forth into shouts of joy—'Land, land, land at last!' There was now not a sick man on board the *Tegetthoff*. The news of the discovery spread in an instant. Every one rushed on deck, to convince himself with his own eyes, that the expedition was not after all a failure,—there before us lay the prize that could not be snatched from us. Yet not by our own action, but through the happy caprice of our floe and as in a dream had we won it, but when we thought of the floe, drifting without intermission, we felt with redoubled pain, that we were at the mercy of its movements. As yet we had secured no winter harbour, from which the exploration of the strange land could be successfully undertaken. For the present, too, it was not within the verge of possibility to reach and visit it. If we had left our floe, we should have been cut off and lost. It was only under the influence of the first excitement that we made a rush over our ice-field, although we knew that numberless fissures made it impossible to reach the land. But, difficulties notwithstanding, when we ran to the edge of our floe, we beheld from a ridge of ice the mountains and glaciers of the mysterious land. Its valleys seemed to our fond imagination clothed with green pastures, over which herds of reindeer roamed in undisturbed enjoyment of their liberty, and far from all floes.

"For thousands of years this land had lain buried from the knowledge of men, and now its discovery had fallen into the lap of a small band, themselves almost lost to the world, who far from their home remembered the homage due their sovereign, and gave to the newly discovered territory the name Kaiser Franz Josef Land. With loud hurrahs we drank to the health of our Emperor in grog hastily made on deck in an iron coffee-pot, and then dressed the *Tegetthoff* with flags. All cares, for the present, at least, disappeared, and with them the passive monotony of our lives. There was not a day, there was hardly an hour, in which this mysterious land did not henceforth occupy our thoughts and attention."

In October the vessel drifted within three miles of an island lying off the main mass of land. Lieutenant Payer landed on it, and found it to be in latitude 79° 54′ N. It was named after Count Wilczek, whose deep interest in the expedition had won for him the affection of all.

PAYER'S SLEDGE JOURNEYS

A second winter settled upon the *Tegetthoff* and her crew at this point, the chief diversion being bear hunts, in which no less than sixty-seven bears were killed. On the 10th of March, 1874, Payer made a preliminary sledge journey, the object of which was to determine the position and general relations of the new land. A large sledge was used and was equipped for a week; it carried an extra quantity of provisions, which were intended to form depots, for the more extended sledge journey contemplated for later on. Thirty-nine pounds of hard bread, five pounds of pemmican, sixteen pounds of boiled beef, one pound of pea-sausage, one-half pound of salt and pepper, six pounds of rice, two pounds of grits, five pounds of chocolate, five gallons of rum, one pound of extract of meat, two pounds of condensed milk, and eight gallons of alcohol. The party consisted of Payer and six men, with three dogs.

Intense cold and violent snow-storms, the thermometer falling as low as -59°, caused great suffering to the men from frost bites. This frightful temperature was experienced March 14. On that day Payer with a Tyrolese mountain climber stood on the summit of the precipitous face of the Sonklar-Glacier, whose broad terminal front overhangs the frozen bay of Nordenskjöld Fiord.

After making deposits of provisions, the party were obliged to return to the ship, after an absence of five days.

On March 26, Lieutenant Payer with ten men and three dogs started on a more extended journey of thirty days. The equipment for this second trip consisted of:—

	lbs.
the large sledge	150
the provisions, including packing	620
the dog sledge	37
the tent, sleeping bags, tent-poles, and Alpine stock	320
alcohol and rum	128
fur coats and fur gloves	140

instruments, rifles, ammunition	170
shovel, 2 cooking-machines, drag-ropes, dog-tent, etc.	1565

Each of the four sacks of provisions—calculated for seven days and seven men—contained fifty-one pounds of boiled beef, forty-eight pounds of bread, eight pounds of pemmican, seven pounds of bacon, two pounds of extract of meat, four pounds of condensed milk, two pounds of coffee, four pounds of chocolate, seven pounds of rice, three pounds of grits, one pound of salt and pepper, two pounds of pea-sausage, four pounds of sugar, besides a reserve bag with twenty pounds of bread. Boiled beef was taken as food for the dogs, and it was hoped that game would supplement the general rations.

From almost the first hour violent blizzards, intense cold, and the uneven condition of the ice made the journey disheartening and laborious. By April 1 they penetrated by Cape Hausa into a newly discovered passage, covered with heavy ice, to which Payer gave the name of Austria Sound. By the 7th of April they advanced into Rawlinson Sound, over a track between hummocks some of which were forty feet high, the depressions between them filled with deep layers of snow.

The noble mountain forms and mighty glaciers of Crown Prince Rudolf Land could be seen in the distance. Pursuing their course in a westerly direction they reached Hohenlohe Island the next day, where the expedition encamped, and the party divided, the smaller continuing to the north for the purpose of examining the glaciers of Rudolf Land.

A disaster occurred the first day after their departure which nearly proved fatal to the success of their undertaking. While crossing the Middendorf glacier, the snow gave way beneath a sledge, which precipitated one of the men, Zaninovich by name, the dogs and sledge, into a crevasse. “From an unknown depth,” writes Payer, “I heard a man’s voice mingled with the howling of dogs. All this was the impression of a moment, while I felt myself dragged backwards by the rope. Staggering back, and seeing the dark abyss beneath me, I could not doubt that I should be precipitated into it the next instant. A wonderful Providence arrested the fall of the sledge; at a depth of about thirty feet it stuck fast between the sides of the crevasse, just as I was being dragged to the edge of the abyss by its weight. The sledge having jammed itself in, I lay on my stomach close to the awful brink, the rope which attached me to the sledge tightly strained, and cutting deep into the snow. The situation was all the more dreadful as I, the only person present accustomed to the dangers of glaciers, lay there unable to stir. When I cried down to Zaninovich that I would cut the rope, he implored me not to do it, for if I did, the sledge would turn over, and he would be killed. For a time I lay quiet, considering what was to be done. By and by it flashed into my memory, how I and my guide had once fallen down a wall of ice in the Irtler Mountains, eight hundred feet high, and had escaped. This inspired me with confidence to venture on a rescue, desperate as it seemed under the circumstances. Orel had now come up, and, although he had never been on a glacier before, this gallant officer dauntlessly advanced to the edge of the crevasse, and laying himself on his stomach, looked down into the abyss, and cried to me, ‘Zaninovich is lying on a ledge of snow in the crevasse, with precipices all round him and the dogs are still attached to the traces of the sledge, which has stuck fast.’ I called to him to throw me his knife, which he did with such dexterity, that I was able to lay hold of it without difficulty, and as the only means of rescue, I severed the trace which was fastened round my waist. The sledge made a short turn, and then stuck fast again. I immediately sprang to my feet, drew off my canvas boots, and sprang over the crevasse, which was about ten feet broad. I now caught sight of Zaninovich and the dogs, and shouted to him, that I would run back to Hohenlohe Island to fetch men and ropes for his rescue, and that rescued he would be, if he could contrive for four hours to keep himself from being frozen. I heard his answer: ‘Fate, Signore, fate pure!’ and then Orel and I disappeared. Heedless of the crevasses which lay in our path, or of the bears which might attack us, we ran down the glacier back to Cape Schrotter, six miles off. Only one thought possessed us—the rescue of Zaninovich, the jewel and pride of our party, and the recovery of our invaluable store of provisions, and of the book containing our journals, which, if lost, could never be replaced. But even apart from my personal feeling for Zaninovich, I keenly felt the reproaches to which I should be exposed of incautious travelling on glaciers; and it gave me no comfort to think that my previous experiences in this kind of travelling over the glaciers of Greenland appeared to justify my proceedings. Stung with these reflections, I pressed on at the top of my speed, leaving Orel far behind me. Bathed with perspiration, I threw off my bird-skin garments, my boots, my gloves, and my shawl, and ran in my stockings through the deep snow. After passing the labyrinth of icebergs I saw the rocky pyramid of Cape Schrotter before me in the distance. The success of my venture depended on the weather. If snow driving should set in, and the footprints should be obliterated, it would be impossible to find

Hohenlohe Island. All around me it was fearfully lonely. Encompassed by glaciers, I was absolutely alone. At last I saw Klotz emerge from behind an iceberg at some distance off, and though I continued to shout his name till I almost reached him, I failed to rouse him from his usual reverie. When at last he saw me breathlessly pushing on, scarcely clothed, and constantly calling, his sack slipped from his back, and he stared at me as if he had lost his senses. When the hardy son of the mountains came to understand that Zaninovich with the sledge was buried in the crevasse, he began to weep, in his simplicity of heart taking the blame of what had happened on himself. He was so agitated and disturbed, that I made him promise that he would do himself no mischief, and then, leaving him to his moody silence, I ran on again towards the island. It seemed as if I should never reach Cape Schrotter; with head bent down I trudged on, counting my steps through the deep snow; when I raised it again, after a little time, it was always the same black spot that I saw on the distant horizon. At last I came near it, saw the tent, saw some dark spots creep out of it, saw them gather together, and then run down the snow-slope. These were the friends we had left behind. A few words of explanation, with an exhortation to abstain from idle lamentations, were enough. They at once detached a second rope from the large sledge, and got hold of a long tent-pole. Meanwhile I had rushed upon the cooking-machine, quickly melted a little snow to quench my raging thirst, and then we all set off again—Haller, Sussick, Lukinovich, and myself—to the Middendorf glacier. Tent and provisions were left unwatched; we ran back for three hours and a half; fears for Zaninovich gave such wings to my steps, that my companions were scarcely able to keep up with me. Ever and anon, I had to stop to drink some rum. At the outset, we met Orel, and rather later Klotz, both making for Cape Schrotter, Klotz to remain behind there, and Orel to return with us at once to Middendorf glacier. When we came among the icebergs under Cape Habermann, I picked up, one by one, the clothes I had thrown away. Reaching the glacier, we tied ourselves together with a rope. Going before the rest I approached with beating heart the place, where the sledge had disappeared four hours and a half ago. A dark abyss yawned before us; not a sound issued from its depths, not even when I lay on the ground and shouted. At last I heard the whining of a dog, and then an unintelligible answer from Zaninovich. Haller was quickly let down by a rope; he found him still living, but almost frozen, on a ledge of snow forty feet down the crevasse. Fastening himself and Zaninovich to the rope, they were drawn up after great exertion. A storm of greetings saluted Zaninovich, stiff and speechless though he was, when he appeared on the surface of the glacier. I need not add that we gave him some rum to stimulate his vital energies. It was a noble proof how duty and discipline assert themselves, even in such situations, that the first word of this sailor, saved from being frozen to death, was not a complaint, but thanks, accompanied with a request that I would pardon him if he, in order to save himself from being frozen, had ventured to drink a portion of the rum, which had fallen down in its case with the sledge to his ledge of snow. Haller again descended, and fastened the dogs to a rope. The clever animals had freed themselves from their traces in some inexplicable way, and had sprung to a narrow ledge, where Haller found them, close to where Zaninovich had lain. It was astonishing how quickly they discerned the danger of the position and how great was their confidence in us. They had slept the whole time, as Zaninovich afterwards told us, and he had carefully avoided touching them lest they should fall down deeper into the abyss. We drew them up with some difficulty, and they gave expression to their joy, first by rolling themselves vigorously in the snow, and then by licking our hands. We then raised Haller by the rope some ten feet higher than the ledge on which Zaninovich had lain, so that he might be able to cut the ropes which fastened the loading of the firmly wedged in sledge. At this moment, Orel arrived, and with his help we raised one by one the articles with which the sledge was loaded. It was ten o'clock before we were convinced that we had lost nothing of any importance in the crevasse."

CAPE FLIGELY

On April 12, 1874, Payer and his companions attained their farthest north, 82° 5′ north latitude; on that day they stood on a promontory about one thousand feet high, to which the name of Cape Fligely was given.

"Rudolf Land still stretched in a northeasterly direction," writes Payer, "to wards a Cape, Cape Sherard Osborne—though it was impossible to determine its further course and connection."

In the distant north, blue mountain ranges indicated masses of land and to these the names of King Oscar Land and Petermann Land were given. "Proudly we planted the Austro-Hungarian flag," continues Payer, "for the first time in the high North. A document we enclosed in a bottle and deposited in a cleft of rock." The return to the ship was rendered doubly hazardous by the insecurity of the ice, and the increasing water holes.

The results of the journey may be summed up as follows—Payer found the newly discovered country to be about the size of Spitzbergen, and consisting of two large masses, Wilczek Land to the East, and Zichy Land to the west, intersected by numerous fjords and skirted by many islands. Austria Sound divides the two main

masses of land and extends to 82° N., where Rawlinson Sound forks off to the northeast. The mountains reach a height of two thousand to three thousand feet; glaciers abound in the ravines, and even the islands are covered with a glacial cap.

A third sledge journey was undertaken by Lieutenant Payer on April 29 to explore a large island named after M'Clintock.

HOME

The momentous day, May 20, on which the *Tegetthoff* was abandoned, came at last. Three boats were selected by the return expedition. Two of these were Norwegian whale-boats, twenty feet long, five feet broad, and two and one-half deep; the third was somewhat smaller.

The hummocks rendered their advance discouragingly slow. It was necessary to pass over the same short distance many times in the course of a day, and after two months of indescribable efforts, the distance reached by the party was not more than two German miles. An occasional bear, shot by the men, restored the waning strength and courage, but not until August 14, did the welcome sound of the open water reach their ears, and in 77° 40′ north latitude, they launched their boats. Nine days later they were picked up by Russian fishermen off the coast of Nova Zembla.

CHAPTER XVI

Baron A. E. von Nordenskjöld.—First voyage 1858.—Accompanies succeeding Swedish expeditions.—Spitzbergen.—Voyage of *Sofia*.—1868.—Nordenskjöld's journey to Greenland.—Voyage of the *Polhem*.—Attempt to reach the Pole by reindeer sledge.—Unexpected discouragements and disasters.—Voyage of the *Proven*.—1875.—The Kara Sea.—Journey repeated the following year.—In the *Ymer*.—Voyage of the *Vega*.

The career of Baron A. E. von Nordenskjöld is one of the most distinguished in Arctic history. Born in Helsingfors, Finland, November 18, 1832, he learned at an early age the thrill of adventure and the joys of research while accompanying his distinguished father on his mineralogical tours in the Ural Mountains. After graduating at Helsingfors in 1857, Nordenskjöld was himself appointed a professor of mineralogy at Stockholm. Baron Nordenskjöld's scientific interest in polar research began as early as 1858, when he accompanied Otto Torell, chief geologist of Sweden, who sailed on the *Frithrop* for Spitzbergen. This was the beginning of a series of Swedish expeditions that covered a quarter of a century, in which Nordenskjöld had a most valuable and active part. Two months were spent on the west coast of Spitzbergen, in dredging the sea, studying the land formation and its botanical and glacial conditions.

Nordenskjöld's chief contribution to science on this expedition was the discovery of a fossil-bearing rock in carboniferous formations.

SPITZBERGEN

Another journey beyond the Arctic circle was undertaken by Torell in 1861, for a more thorough survey and study of the natural history and geology of Spitzbergen. On this journey, Torell, Nordenskjöld and Petersen undertook a boat journey to Hinlopen Strait and later visited the coast of Northeast Land. Passing North Cape and visiting Seven Islands, they reached their farthest, 80° 42′ N., August 5, at Phipps Island.

Prince Oscar Land was reached a week later, and from a mountain two thousand feet high near Cape Wrede, two islands could be seen in the distance, to which were given the names of Charles XII and Drabanten. Pushing their way east of Cape Platen, the ice conditions forced their return.

In 1863 Nordenskjöld again visited Spitzbergen, and again in 1864, when he was placed in charge of the Swedish expedition, and was accompanied by Dunér and Malmgren. In a small boat of twenty-six tons burden, and provisioned for less than six months, they entered Safe Harbor at the entrance of the magnificent Ice Fiord. After rounding the southern cape of Spitzbergen, they entered Store Fiord, and visited Edges Land and Barentz Land. After entering Helis Sound and ascending White Mountain, they again rounded South Cape with the intention of following the west coast as far north as the ice would permit. On this journey while off Charles Foreland, they rescued some shipwrecked sailors, whose vessels had become beset off Seven Islands, and who had journeyed in open boats some two hundred miles in fourteen days. An immediate return was thus made necessary, but the results of the summer's work was a map, executed by Nordenskjöld and Dunér, which delineates Spitzbergen with great accuracy.

In 1868 the Swedish expedition had for its objective point the Pole. The *Sofia* was chosen for this purpose and commanded by Captain (Count) F. W. von Otter, with Nordenskjöld as scientific chief. Smeerenberg Bay at the north end of Spitzbergen was decided upon as a place of rendezvous and from this point the *Sofia* made two attempts for a high northing. In the second she was rewarded by reaching on September 19, 1868, 81° 42′ N., and 17° 30′ E., at that time the farthest north attained by any ship. A third attempt to push the *Sofia* through the impenetrable pack resulted in her becoming disabled and necessitated the return of the expedition to Sweden.

In 1870 Nordenskjöld made a journey to Greenland, accompanied by Dr. Berggren, the noted professor of botany at Lund. The object of the expedition was to penetrate the unexplored interior from a point at the northern arm of a deep inlet called Aulaitsivik Fiord, some sixty miles south of the discharging glacier at Jakobshaven and two hundred and forty north of the glacier at Godthaab. He commenced his inland journey on the 19th of July. Besides Dr. Berggren, he was assisted by two Eskimos, but the disheartening difficulties of travel over the inland ice of Greenland, caused by the slow movement of the glaciers, which produce chasms and clefts of almost bottomless depth, soon caused the party to abandon their sledge, and later the two natives refused to proceed. Undaunted by their desertion, Nordenskjöld and Dr. Berggren continued their explorations alone and advanced thirty miles over the glaciers to a height of twenty-two hundred feet above the sea. One of the most important results of this remarkable journey was the discovery of two meteorites, the largest ever known.

VOYAGE OF THE "POLHEM"

In 1871 Nordenskjöld again set out for Spitzbergen. His object was to reach the Pole by reindeer-sledging. Sailing in the ship *Polhem* commanded by Lieutenant Palander of the Swedish Navy, and accompanied by two convoys, the *Gladen* and *Onkle Adam*, they reached Mussel Bay, and there established winter quarters. In an attempt to return, the convoys were beset in a violent storm. Unable to extricate themselves and not being provisioned for winter the crews, numbering forty-three men, were suddenly forced upon Nordenskjöld's party for fuel and supplies.

To distribute food intended for twenty-four persons among a party of sixty-seven was a serious problem, and was only accomplished by reducing the rations of all one-third. Hardly had this blow fallen upon the prospects of the expedition, when they were visited by four men with the overwhelming news that six walrus-vessels had been frozen in at Point Grey and Cape Welcome. By hunting it was hoped that the fifty-eight unfortunate men would manage to avoid starvation until the first of December, after that their only salvation rested with the generosity of Nordenskjöld. The only relief to the appalling situation was in the fact that a Swedish colony had that year worked a phosphatic deposit at Cape Thorsden, Ice Fiord, and the manager after abandoning the work had returned to Norway, leaving behind him a considerable amount of stores. Cape Thorsden was distant two hundred miles, but seventeen of the walrus-hunters determined to undertake it. These men succeeded in reaching the depot, where an ample supply of all the necessaries of life awaited them—including a house, fuel, preserved and dried vegetables, and fresh potatoes. Huddling in one room, living on salt-beef and pork, rather than go to the exertion of availing themselves of the ample diet at hand—these men were attacked by scurvy and not one survived the rigours of the winter. At Mussel Bay the food conditions were deplorable, but were eked out by the utilization of reindeer moss mixed with rye flour, which produced a very bitter bread.

This sacrifice of the food of the reindeer greatly crippled Nordenskjöld's cherished plans for his spring journeys, and to add to his disappointments, the reindeer themselves were carelessly allowed to escape by the Lapps during a violent snow-storm. A fortunate opening of the ice early in November allowed two vessels to escape, and these vessels took the crews of the four others.

The Arctic night was passed by the expedition in making scientific observations, dredging under the ice, and in mental and physical exercise. In spite of every precaution against the dreaded foe, scurvy broke out among the men, but was overcome under a strict diet régime.

In spite of the disastrous loss of his reindeer and the depleted state of his stores and provisions, Nordenskjöld attempted his northern journey the following spring. At Seven Islands he was stopped by the ice, but in spite of this disappointment he concluded to visit North East Land for the purpose of geographical research. A journey of five days over impassable hummocks resulted in his making Cape Platen—and later Otter Island.

The increased dangers of travel and the presence of water holes determined him to abandon the coast route and strike across the inland ice. This arduous journey was over hard-packed blinding white snow, "glazed and polished," he writes, "so that we might have thought ourselves to be advancing over an unsurpassably faultless and spotless floor of white marble." Blinding storms, blizzards, or ice fogs, marked each step of their fifteen days' journey. Snow bridges covered treacherous chasms, some of which were forty feet in depth. On June 15, they descended into Hinlopen Strait at Wahlenberg Bay, and finally the party reached Mussel Bay after an absence of sixty days.

In the early summer, they had the good fortune to be visited by Mr. Leigh Smith, the veteran Arctic navigator and scientist, in his private yacht *Diana*, through whose generosity the expedition was liberally supplied with fresh provisions, which removed the pending anxiety for the future.

VOYAGE OF THE "PROVEN"

In 1875 Nordenskjöld turned his attention to the possibility of navigating the seas along the northern coast of Siberia. This route had already been opened by Captain Wiggins of Sunderland, who in 1874, 1875, and 1876, opened the way to trade between Europe and the mouth of the Yenisei River. Nordenskjöld sailed from Tromsoe, in the *Proven*, June, 1875, and successfully navigating the Kara Sea reached an excellent harbour on the eastern side of the mouth of the Yenisei, to which he gave the name of Port Dickson, in honour of Mr. Oscar Dickson, of Gothenburg, for many years the liberal supporter of the Swedish expeditions.

To demonstrate that the Kara Sea had not been more free of ice than usual in the summer of 1875 and that the route would be practicable another season, Nordenskjöld repeated his voyage in the *Ymer* the following year.

His long Arctic experience had by this time convinced him of the feasibility of the northeast passage. To demonstrate this conviction, he enlisted the patronage of the king of Sweden, Mr. Oscar Dickson, and Mr. Sibiriakoff, a Siberian proprietor of vast wealth, and the result was the purchase of the *Vega*, which was liberally equipped for a successful expedition.

The Vega had been used for whale-fishing in the north polar sea, her register was three hundred and fifty-seven tons gross, or two hundred and ninety-nine net. Her dimensions were as follows:—

	metres
Length of keel	37.6
Length over deck	43.4
Beam extreme	8.4
Depth of hold	4.6

She had a sixty horse-power engine, which required ten cubic feet of coal per hour, developing an average speed of six or seven knots per hour. The vessel was a full-rigged bark, with pitch pine masts, iron wire rigging and patent reefing top sails; under sail alone she was able to attain a speed of nine or ten knots. She carried the Swedish man-of-war flag with a crowned "O" in the middle, and bore this triumphantly throughout a voyage which stands in history as the first circumnavigation of Asia and Europe.

VOYAGE OF THE "VEGA"

With Nordenskjöld as leader, Lieutenant Palander commander of the ship, and an efficient staff of officers and scientists, which included such men as Lieutenant Horgaard of the Royal Danish Navy, for superintendent of the magnetical and meteorological work, F. R. Kjellman, Ph.D., Docent in Botany in the University of Upsala, and Lieutenant G. Bore, of the Royal Italian Navy, superintendent of the hydrographical work, the *Vega* sailed from Gothenburg July 4, 1878, in company with her convoy, the *Lena*. Port Dickson was reached on the morning of August 10, and nine days later Cape Serero or Chelyuskin in 77° 41′ north latitude. Of this, the most northern point of Siberia, Nordenskjöld writes:—

"We had now reached a great goal, which for centuries had been the object of unsuccessful struggles. For the first time a vessel lay at anchor off the northernmost cape of the old world. No wonder then that the occurrence was celebrated by a display of flags and the firing of salutes, and when we returned from our excursion on land, by festivities on board, by wine and toast."

"The north point of Asia forms a low promontory, which a bay divides into two, the eastern arm projecting a little farther to the north than the western. A ridge of hills with gently sloping sides runs into the land from the eastern point, and appears within sight of the western to reach a height of three hundred metres. Like the plain lying below, the summits of this range were nearly free of snow. Only on the hillsides or in deep furrows excavated by the streams of melted snow, and in dales in the plains, were large white snow-fields to be seen. A low ice-foot still remained at most places along the shore. But no glacier rolled its bluish-white ice-masses down the mountain sides, and no inland lakes, no perpendicular cliffs, no high mountain summits, gave any natural beauty to the landscape, which was the most monotonous and the most desolate I have seen in the High North."

Foul Bay, on the Coast of Spitzbergen

From "The Voyage of the Vega," Macmillan & Co., Ltd., London

On the 23d the *Vega* was again steaming forward among the fields of drift-ice. The difficulties of voyaging through unknown waters overhung with fogs and mists may better be understood by an anecdote described by Nordenskjöld, which illustrates how completely a person may be deceived by size and distance of objects:—

"One can scarcely, without having experienced it," he writes, "form any idea of the optical illusions, which are produced by mist, in regions where the size of the objects which are visible through fog is not known beforehand, and thus does not give the spectator an idea of the distance. Our estimate of the distance and size in such cases depends wholly on accident. The obscure contours of the fog-concealed objects themselves, besides, are often by the ignorance of the spectator converted into whimsical fantastic forms. During a boat journey in Hinlopen Strait I once intended to row among drift-ice to an island at a distance of some few kilometres. When the boat started, the air was clear, but while we were employed, as best we could, in shooting sea-fowl for dinner, all was wrapt in a thick mist, and that so unexpectedly, that we had not time to take the bearings of the island. This led to a not altogether pleasant row by guess among the pieces of ice that were drifting about in rapid motion in the sound. All exerted themselves as much as possible to get sight of the island, whose beach would afford us a safe resting-place. While thus occupied, a dark border was seen through the mist at the horizon. It was taken for the island which we were bound for, and it was not at first considered remarkable that the dark border rose rapidly, for we thought that the mist was dispersing and in consequence of that more of the land was visible. Soon two white snow-fields that we had not observed before, were seen on both sides of the land, and immediately after this was changed to a sea monster, resembling a walrus-head as large as a mountain. This got life and motion, and finally sank all at once to the head of a common walrus, which lay on a piece of ice in the neighbourhood of the boat; the white tusks formed the snow-fields and the dark brown round head the mountain. Scarce was this illusion gone when one of the men cried out, 'Land right ahead—high land!' We now all saw before us a high Alpine region, with mountain peaks and glaciers, but this too sank a moment afterwards all at once to a common ice-border, blackened with earth. In the spring of 1873 Phelander and I with nine men made a sledge journey round Northeast Land. In the course of this journey a great many bears were seen and killed. When a bear was seen while we were dragging our sledge forward, the train commonly stood still, and, not to frighten the bear, all the men concealed themselves behind the sledges, with the exception of the marksman, who, squatting down in some convenient place, waited till his prey should come sufficiently in range to be killed with certainty.

"It happened once during foggy weather on the ice at Wahlenberg Bay that the bear that was expected and had been clearly seen by all of us, instead of approaching with his usual supple zigzag movements, and with his ordinary attempts to nose himself to a sure insight into the fitness of the foreigners for food, just as the marksman took aim, spread out gigantic wings and flew away in the form of a small ivory gull. Another time during the same sledge journey we heard from the tent in which we rested the cook, who was employed outside, cry out, 'A bear! a great bear! No! a reindeer, a very little reindeer!' The same instant a well-directed shot was fired, and the bear-reindeer was found to be a very small fox, which thus paid with its life for the honour of having for some moments played the part of a big animal. From these accounts it may be seen how difficult navigation among drift-ice must be in unknown waters."

It had been understood that the *Lena* would accompany the *Vega* as far as one of the mouth-arms of the Lena River. But on the night of the 27th of August, while off Tumat Islands, all conditions being favourable, the ships parted company, after Captain Johannesen had received orders, passports and letters for home. "As a parting salute to our trusty little attendant during our voyage round the north point of Asia some rockets were fired, on which we steamed or sailed on, each to his destination."

Following an easterly course, through shallow open water the *Vega* all but made the Northeast Passage in one season. Toward the end of September, however, she was frozen in off the shore of a low plain or tundra in 67° 71′ N., and 173° 20′ W., near the settlements of the Chuckches, numbering about three hundred souls. The open water which to a late date in the season had favoured the progress of the expedition,

was accounted for by the volumes of warm water discharged into the Polar Sea during the summer by the great Siberian river systems. During the voyage, valuable natural history collections were made, and the sea bottom was found to abound in animal and vegetable life.

"When we were beset," writes Nordenskjöld, "the ice next the shore was too weak to carry a foot passenger, and the difficulty of reaching the vessel from the land with the means which the Chuckches had at their disposal was thus very great. When the natives observed us, there was in any case immediately a great commotion among them. Men, women, children, and dogs were seen running up and down the beach in eager confusion; some were seen driving in dog-sledges on the ice street next the sea. They evidently feared that the splendid opportunity which here lay before them of purchasing brandy and tobacco would be lost. From the vessel we could see with glasses how several attempts were made to put out boats, but they were again given up, until at last a boat was got to a lane, clear of ice or only covered with a thin sheet, that ran from the shore to the neighbourhood of the vessel. In this a large skin boat was put out, which was filled brimful of men and women, regardless of the evident danger of navigating such a boat, heavily laden, through sharp, newly formed ice. They rowed immediately to the vessel, and on reaching it most of them climbed without the least hesitation over the gunwale with jests and laughter, and the cry '*anoaj, anoaj*' (good day, good day).

"Our first meeting with the inhabitants of this region, where we afterwards passed ten long months, was on both sides very hearty, and formed the starting-point of a very friendly relation between the Chuckches and ourselves, which remained unaltered during the whole of our stay."

"On the 5th of October," continues Nordenskjöld, "the openings between the drift-ice fields next the vessel were covered with splendid skating ice, of which we availed ourselves by celebrating a gay and joyous festival. The Chuckche women and children were now seen fishing for winter roach along the shore. In this sort of fishing a man, who always accompanies the fishing women, with an iron-shod lance cuts a hole in the ice so near the shore that the distance between the under corner of the hole and the bottom is only half a metre. Each hole is used only by one woman, and that only for a short time. Stooping down at the hole, in which the surface of the water is kept quite clear of pieces of ice by means of an ice-sieve, she endeavours to attract the fish by means of a peculiar, wonderfully clattering cry. First, when a fish is seen in the water, an angling line, provided with a hook of bone, iron, or copper, is thrown down, strips of the entrails of fish being employed as bait. A small metre-long staff with a single or double crook in the end was also used as a fishing implement. With this little leister the men cast up fish on the ice with incredible dexterity."

The "Vega" in Konyam Bay

From "The Voyage of the Vega," Macmillan & Co., Ltd., London

Hunting and exploring excursions were sent out from the *Vega* with varying success; as the seasons advanced the natives were threatened with the usual scarcity of food, which was largely relieved by the generosity of the Europeans. A most careful and thorough study was made of these natives, their characteristics, mode of life, manners, speech, and customs.

RETURN OF THE "VEGA"

On July 18, the *Vega* was liberated from the ice, after having been imprisoned two hundred and ninety-four days.

After a lapse of three hundred and twenty-six years, when Sir Hugh Willoughby made the first attempt at a northeast passage, the *Vega* sailed through Behring Strait, July 20, 1879, being the first vessel to penetrate by the north from one of the great world oceans to another. The *Vega* anchored at Yokohama on the evening of the 2d of September.

"On our arrival off Yokohama," writes Nordenskjöld, "we were all in good health and the *Vega* in excellent condition, though, after the long voyage, in want of some minor repair, of docking, and possibly of coppering. Naturally among thirty men some mild attacks of illness could not be avoided in the course of a year, but no disease had been generally prevalent, and our state of health had constantly been excellent. Of scurvy we had not seen a trace."

From Yokohama the news of the *Vega's* success was telegraphed throughout the world, and the homeward journey of the expedition, *via* Hong Kong, Singapore, Suez, Naples, Lisbon, Copenhagen, to Stockholm was one of triumphant progress; each country trying to outdo the others in giving a royal welcome to the gallant explorers. The *Vega* reached Stockholm April 24, 1880, after a journey of twenty-two thousand one hundred eighty-nine miles.

CHAPTER XVII

British expedition of 1875.—The *Alert* and *Discovery*.—Captain George S. Nares, F. R. S., Albert H. Markham, F. R. G. S.—Two voyages of the *Pandora*, 1875-1876.—Schwatka's search for the Franklin records, 1878-1879.

Captain G. S. Nares, F. R. S.

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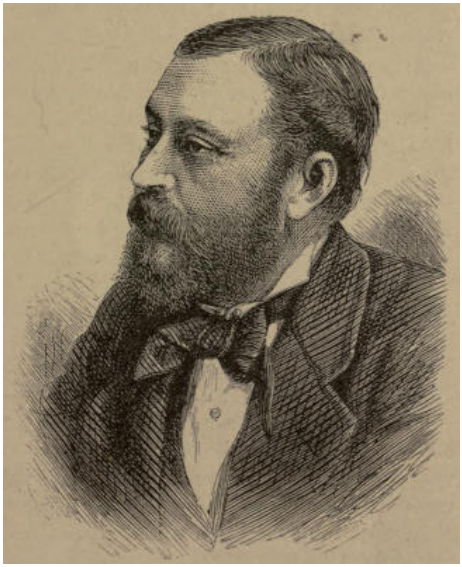
CAPTAIN GEORGE S. NARES, F. R. S.

The British north polar expedition of 1875 comprised the *Alert*, a seventeen-gun sloop, and the *Discovery*, originally a Dundee whaler. Under the supervision of the Admiral Superintendent of the Dockyard at Portsmouth (Sir Leopold M'Clintock) these ships were completely overhauled, reënforced, and admirably outfitted for the service expected of them. Each vessel was supplied with nine boats of various sizes, especially constructed for service in Arctic waters. Great care was exercised in selection of officers and men; and their social, moral, and physical qualifications were strictly inquired into. To Captain George S. Nares, F. R. S., was intrusted the command of the expedition, and Commander Albert H. Markham was placed second in command.



Commander A. H. Markham

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On the afternoon of May 29, 1875, the vessels steamed out of Portsmouth harbour. At Spithead the squadron was joined by the *Valorous*, which accompanied the ships as far as Disco. After a stormy but uneventful voyage the expedition stood off some distance from Cape Farewell June 25. On the 27th, a falling temperature and a peculiar light blink along the horizon gave due notice of the immediate proximity of the ice.

The weather being thick and foggy, extra precautions were taken to avoid collision with any icebergs. The following morning, the high, bold, snow-capped hills near Cape Desolation were sighted. Seals were now seen basking lazily on the ice, and birds common to these regions hovered round the ships, awakening the echoes with their gladsome cries. On July 1, the little Danish settlement of Fiskernaes was passed, and later that of Godthaab. On July 4, the Arctic circle was crossed, and two days afterwards the expedition was safely landed in the bay of Lievely, off Godhaven; the Inspector and inhabitants giving a warm and hearty welcome. Stores were now taken aboard from the *Valorous*, and every preparation made to plunge into the frozen north, and meet the experiences of a long period of enforced isolation.

A dense fog soon necessitated making the ships fast to icebergs to await a more favourable opportunity of advancing.

ALBERT H. MARKHAM, F. R. G. S.

"Whilst attempting to secure the ships," continues Markham, "an alarming catastrophe occurred. The boat had been despatched containing three men with the necessary implements, such as an ice drill and anchor for making the vessel fast. As soon as the first blow of the drill was delivered, the berg, to our horror, split in two with a loud report, one half with one of our men on it toppling over, whilst the other half swayed rapidly backwards and forwards. On this latter piece was another of our men, who was observed with his heels in the air, the violent agitation of the berg having precipitated him head foremost into a rent or crevasse. The water alongside was a mass of seething foam and spray, but curious to relate, the boat with the third man in it was in no way injured. They were all speedily rescued from their perilous position and brought on board, sustaining no further harm than that inflicted by a cold bath. Their escape appeared miraculous."

On the 19th of July, the ships came to anchor off the Danish settlement of Proven, and here Hans Hendrik, the Eskimo, dog-driver and hunter, who had accompanied so many expeditions to Smith Sound, was engaged. Putting to sea once more, they passed the headland of "Sanderson, his hope," the 21st of July, anchoring off Upernavik the following morning.

Pushing boldly through the middle ice, the passage through Melville Bay was safely accomplished and the North Water reached without incident. Arriving off the Gary Islands on the morning of the 27th, a cache of provisions was landed sufficient to sustain sixty men for two months. Other depots were cached at Cape Hawkes and Cape Lincoln. By the 28th of July both ships came to anchor at Port Foulke, the winter quarters of Dr. Hayes in 1860. An excursion from this point was taken by Captain Nares and Commander Markham to Life-boat Cove, the winter quarters of the remnant of the *Polaris* crew in 1872-1873. Traces of that expedition were immediately found upon landing; various relics such as a trunk, an old basket lined with tin, boxes, stores, pieces of wood, gun-barrels, and odds and ends lay strewn about. A collection was made of such articles as were of any value for the purpose of returning them to the United States. Nares and Markham now proceeded to Littleton Island in the hopes of finding an iron boat left there by Dr. Hayes in 1860. Though a careful search was made, no traces of it were discovered.

After erecting a cairn at the southwest end of the island on a hill some five or six hundred feet above sea level, from which point Cape Sabine and Cape Fraser could be seen, the intervening distance navigable open water, Captain Nares and Commander Markham congratulated themselves on the prospect of rapid progress.

A few hours after the return to the ship the favourable conditions suddenly changed, and from that time on the two ships battled with the ice-pack. Hugging the west shore, and keeping free from the main pack after leaving Cape Sabine, Captain Nares hardly left the crow's-nest in his heroic efforts to take advantage of every lead and opening.

“Little rest was enjoyed by any on these days during which we were subjected to the wayward will of the pack,” writes Commander Markham. On the 19th of August, he says, “During the last three weeks we had advanced exactly ninety miles, or at the rate of about four and a quarter a day. This cannot be considered a rapid rate of travelling, yet to accomplish even this necessitated a constant and vigilant lookout.”

Pushing their way steadily onward, they passed Cape Lieber and crossed Lady Franklin Bay. On the 25th of August, while threading among the ice-floes that bordered the coast, a herd of musk-oxen were seen browsing on an adjacent hill. A shooting party was sent ashore, which separated into three parties upon landing and advanced cautiously toward the spot where the animals were seen grazing. So successful was the hunt that twenty-one hundred and twenty-four pounds of fresh meat was the result of the “morning’s bag.”

The harbour in which the ships were anchored possessed all the necessary qualifications for comfortable winter quarters, so that Captain Nares decided to leave the *Discovery* and proceed with the *Alert*. Everything having been satisfactorily arranged, the *Alert* steamed away from Discovery Harbor on the morning of the 26th, pushing her cautious way along the west shore of Kennedy Channel. “September 1st (1875),” writes Commander Markham, “must always be regarded at least by all those connected with, or interested in, Arctic research, as a red letter day in the annals of naval enterprise, and indeed in English history, for on this day a British man-of-war reached a higher northern latitude than had ever yet been reached by any ship (82° 25′ N., 62° W.), and we had the extreme gratification of hoisting the colours at noon to celebrate the event.”

After rounding Cape Union, the coast trended away to the westward of north, further advance became impossible, and the *Alert* found herself on the bleak shores of the Polar Ocean. A more desolate position in which to pass the winter could hardly be imagined.

“Without a harbour,” writes Markham, “or projecting headland of any description to protect our good ship from the furious gusts that we must naturally expect, the *Alert* lay, apparently, in a vast frozen ocean, having land on one side, but bounded on the other by the chaotic and illimitable polar pack.”

After a preliminary sledge journey to ascertain if a more sheltered harbour might be sought, it was decided to winter in their present position. Preparations were immediately made to secure the ship to “Floe-berg Beach,” and plans were laid out for autumn sledge journeys to deposit caches of provisions for the following spring. On the 11th of September, Markham, Parr, and Egerton, accompanied by eighteen men, made a journey northward along the proposed route of exploration, for the purpose of advancing two boats to be used during future sledging operations. On September 25, Commander Markham, with Lieutenants Parr and May, assisted by members of the crew, set out upon another journey; they reached, October 4, 82° 50′ N., off Cape Joseph Henry, and a depot was established. The return journey became most irksome and laborious. The snow had accumulated to such a depth as to render some of the ravines and promontories almost impassable. A sudden fall in temperature produced severe frost-bites. On the 14th of October, in a temperature of 25° below zero, the exhausted party reached the ship.

Preparations for the winter having been finished and the sledging parties all having returned, there was little left to do but await the coming of the sun, which was absent one hundred and forty-five days, during which officers and crew united in keeping up cheerful spirits and good health by the usual exercise, amusements, and routine of daily duties.

Early in March, 1876, an attempt was made to communicate with the *Discovery*. Lieutenants Egerton and Rawson were selected for this journey and were accompanied by Petersen, the Danish interpreter and sledge-driver. On the 12th of March, in a temperature of 30° below zero, the party left the *Alert*, carrying messages, letters, and instructions to those aboard the sister ship. The temperature fell very low soon after their departure, and on the third day they unexpectedly returned with the poor Dane utterly prostrate and helpless on the sledge.

“I cannot do better than relate the sad story in Lieutenant Egerton’s own words,” writes Markham. “We read in his official report, that not five hours after they had left the ship ‘frost-bites became so numerous, that I thought it advisable to encamp.’ This was only the beginning of the story, for they appear to have passed a comparatively comfortable night. At any rate they were up early the next morning and again under weigh; at about one o’clock, when they halted for lunch, Petersen complained of cramp in his stomach, and was given some hot tea. He had no appetite, which perhaps was as well, for we read of the bacon, which is always used for lunch: ‘We were unable to eat it, being frozen so hard that we could not get our teeth through the lean.’ They still continued their journey, encountering some very rough travelling, which necessitated severe physical labour on the part of the two officers. ‘The dogs were of little or no use in getting across these slopes, as it was impossible to get them to go up the cliff, and Petersen being unable to work, Lieutenant Rawson and I had to get the sledge along as best we could.’ Towards the end of the day we read: ‘Petersen began to get rather worse, and was shivering all over, his nose being constantly frost-bitten, and at times taking five or ten minutes before the circulation could be thoroughly restored. Lieutenant Rawson had several small frost-bites, and I escaped with only one.’

The Crew of the "Vega"

From "The Voyage of the Vega," Macmillan & Co., Ltd., London

"On halting for the night," continues Markham, "directly the tent was pitched, they sent Petersen inside with strict injunctions to shift his foot gear and get into his sleeping bag, whilst they busied themselves in preparing supper and attending, to the dogs; but when they entered the tent they found 'that he had turned in without shifting his foot gear, was groaning a good deal, and complaining of cramp in the stomach and legs.'

"Having made him change, they gave him some tea, and then administered a few drops of sal volatile, which appeared to give the poor fellow a little ease. The next morning, the wind was so high and their patient in such a weak state that they did not think it prudent to attempt a start. He had passed a very restless night, and still complained very much of cramp. Later in the day he appeared to get worse, 'shaking and shivering all over and breathing in short gasps. His face, hands, and feet were all frost-bitten, the latter severely, and he had pains in his side as well.'

"After restoring the circulation they rubbed him with warm flannels and placed one of their comforters round his stomach. In such a wretched state was the poor fellow that they agreed it would endanger his life if they proceeded on their journey, and that when the weather moderated, the only course they could pursue was to return with all haste to their ship.

"As it was impossible to keep their patient warm in the tent, these two young officers burrowed a hole in a snow-drift, and into this cavity they transported the sick man, themselves, and all their tent robes, closing the aperture by placing over it the tent and sledge. They deprived themselves of their own clothing for the benefit of the invalid, whose frozen feet they actually placed inside their clothes in direct contact with their bodies, until their own heat was extracted and they were themselves severely frost-bitten in various parts. The poor fellow was now in a very low state; he could retain neither food nor liquid. About 6 P.M. he was very bad; this time worse than before. There appeared to be no heat in him of any kind whatever, and he had acute pains in the stomach and back. 'We chafed him on the stomach, hands, face, and feet, and when he got better wrapped him up in everything warm we could lay our hands upon,' namely their own clothing, which they could ill afford to lose; but they entirely forgot their own condition in their endeavours to ameliorate that of their comrade. Lighting their spirit lamp and carefully closing every crevice by which the cold air could enter, they succeeded in raising the temperature of the interior to 7°; but 'the atmosphere in the hut became somewhat thick.' This was, however, preferable to the intense cold. Let us follow the story out, and learn how nobly these two officers tended their sick and suffering companion. 'We were constantly asking if he was warm in his feet and hands to which he replied in the affirmative; but before making him comfortable' (fancy being *comfortable* under such circumstances) 'for the night, we examined his feet, and found them both perfectly gelid and hard from the toes to the ankle, his hands nearly as bad. So each taking a foot we set to work to warm them with our hands and flannels, as each hand and flannel got cold *warming them about our persons*, and also lit up the spirit lamp. In about two hours we got his feet to, and put them in warm foot gear, cut his bag down to allow him more room to move in, and then wrapped him up in the spare coverlet. His hands we also brought round and bound them up in flannel wrappers, with mitts over all. Gave him some warm tea and a little rum and water, which he threw up. Shortly after I found him eating snow, which we had strictly forbidden once or twice before. In endeavouring to do this again during the night, he dragged his feet out of the covering; but only a few minutes could have elapsed before this was detected by Lieutenant Rawson, who, upon examining his feet found them in much the same state as before. We rubbed and chafed them again for over an hour, and when circulation was restored wrapped him up again, and so passed the third night.'

RETURN TO THE SHIP

"On the following morning Petersen appeared to be slightly better, so thinking it was preferable to run the risk of taking him back as he was, rather than to pass another such night as the last, they put him on the sledge; and, having hurriedly eaten their breakfast, they started for the ship with all despatch. They had a rough journey before them of eighteen miles; but they knew it was a case of life and death, and they encouraged the dogs to their utmost speed. The dogs, being homeward bound, were willing enough and needed little persuasion, so that, for a time, they rattled along at a good pace. But actual progress could not have been very rapid, for we read in Egerton's report that the patient's 'circulation was so feeble that his face and hands were constantly frost-bitten, entailing

frequent stoppages whilst we endeavoured to restore the affected parts.' The difficulties of the homeward journey may be gathered from the following extracts: 'On arriving at the Black Cape we had to take the patient off the sledge, and while one assisted him round, the other kept the dogs back, for by this time they knew they were homeward bound, and required no small amount of trouble to hold in. After getting the sledge round and restoring Petersen's hands and nose (which were almost as bad again a few minutes after), and securing him on the sledge, we again set off. At the cape the same difficulties were experienced, in fact, rather more, for the sledge took a charge down a "ditch," about twenty-five feet deep, turning right over three times in its descent, and out of which we had to drag it, and while clearing harness (which employed us both, one to stand in front of the dogs with the whip, while the other cleared the lines), the dogs made a sudden bolt past Lieutenant Rawson, who was in front with the whip, and dragged me more than a hundred yards before we could stop them. At length, after the usual process with Petersen (that of thawing his hands and nose, which we did every time we cleared harness, or it was actually necessary to stop), we got away, thankful that our troubles were over. The dogs got their harness into a dreadful entanglement in their excitement to get home, but we were afraid to clear them lest they should break away from us, or cause us any delay, as we were both naturally anxious to return with the utmost speed to the ship, and so relieve ourselves of the serious responsibility occasioned by the very precarious state in which our patient was lying. Upon arriving alongside at 6:30 P.M., we were very thankful that Petersen was able to answer us when we informed him he was at home.'

"In conclusion Lieutenant Egerton says:—

"'I regret exceedingly that I have been compelled to return to the ship without having accomplished my journey to H. M. S. *Discovery*; but I trust that what I have done will meet with your approval, and that the course I adopted may be the means of having lessened the very serious and distressing condition of Petersen.'"

Poor Petersen never recovered from the effects of his terrible experience. He gradually sank and died peacefully, on the 14th of May.

The work of these two brave young officers on this occasion stands out conspicuously amongst the many deeds of daring and devotion with which the annals of Arctic adventure abound. Five days after their return to the ship (20th of March) the same two officers, accompanied by a couple of sailors and a sledge drawn by seven dogs, started once more for the *Discovery*. After five days of a toilsome journey rendered all the more severe by intense cold, they reached the ship and were warmly welcomed by her officers and crew.

Disco Island

The serious sledging work of the expedition was undertaken as early in the season as April 3, in a temperature of 33° below zero. Seven sledges under the command of Markham and Aldrich and manned by a force of fifty-three officers and men started on that day for the long-cherished object of reaching the Pole and of exploring the northern shores of Grinnell Land. "On the second day out," writes Markham, "the temperature fell to 45° below zero, or 77° below freezing point. The cold then was so intense as to deprive us of sleep, the temperature inside the tent being as low as -25°, the whole period of resting being occupied in attempting to keep the blood in circulation. Several frost-bites were sustained, but they were all attended to in time, and resulted in nothing worse than severe and very uncomfortable blisters."

By the 10th of April the depot of provisions established near Cape Joseph Henry during the autumn was found undisturbed. At this point the supporting sledges returned to the ship and the two divisions separated and advanced on their solitary missions. The northern division under Markham, with two heavily laden sledges and seventeen men, leaving land pushed straight out into the rugged polar pack. Handicapped by the two boats which they carried, and in dread of an open polar sea, they advanced, after abandoning one of the boats, seventy-three miles, but the advance being made with divided loads, more than two hundred seventy-six miles was actually covered. Reaching the farthest north up to that time, 83° 20′ N., 64° W., May 12, 1876, the depleted condition of the party and the rugged conditions of the ice-floes, forced the gallant Markham to retreat.

"It is unnecessary to describe," writes Markham, "the incidents that occurred on each successive day during the return journey. Snow fell heavily, during the greater part of the return journey, and fogs were very prevalent. Gales of wind had to be endured, for to halt was out of the question—rest there was none—onward was the order of the day. As the disease gradually assumed the mastery over the party, so did the

appetites decrease, and in a very alarming manner, until it was with the greatest difficulty that anybody could be induced to eat at all. Instead of each man disposing of one pound of pemmican a day, the same quantity sufficed for the entire party in one tent; and even this, occasionally, was not consumed. Nor was the subject of eating and drinking so often discussed. During the outward journey, beefsteaks and onions, mutton chops and new potatoes, and Bass's beer, formed the chief topics of conversation. On the return journey they were scarcely alluded to. Hunger was never felt; but we were all assailed by an intolerable thirst, which could only be appeased at meal times, or after the temperature was sufficiently high to admit of quenching our thirst by putting icicles into our mouths."

On the 27th of May the condition of the party was so critical that it became evident that to insure their reaching the ship alive the sledges must be considerably lightened. Five men were utterly unable to move, and were consequently carried on the sledges, five more were almost as helpless, but insisted on hobbling after the sledges. Three others were showing decided scorbutic symptoms, leaving only two officers and two men, who could be considered effective.

Terra firma was reached on May 5, but the party were in such a deplorable condition that though only forty miles remained between them and the ship their progress was so slow that it would take them fully three weeks to cover the distance, and by that time who would be left alive? Assistance had, therefore, to be obtained.

"To procure it," writes Commander Markham, "one amongst us was ready and willing to set out on this lonely and solitary mission with the firm reliance of being able to accomplish what he had undertaken, and with the knowledge that he possessed the full confidence of those for whose relief he was about to start on a long and hazardous walk. On the 7th of June, Lieutenant Parr started on his arduous march to the ship. Deep and heartfelt were the God-speeds uttered as he took his departure, and anxiously was his retreating form watched until it was gradually lost to sight amidst the interminable hummocks."

The following day one of their number died, and was buried near by. The saddened and suffering party now left this desolate spot and made an attempt to push on toward the ship.

"On the morning of the 9th," writes Markham, "a rainbow was seen, which, being an unusual sight, afforded much interest. On the same day, shortly after the march had been commenced, a moving object was suddenly seen amidst the hummocks to the southward. At first it was regarded as an optical illusion, for we could scarcely realize the fact that it could be anybody from the *Alert*. With what intense anxiety this object was regarded is beyond description. Gradually emerging from the hummocks, a hearty cheer put an end to the suspense that was almost agonizing, as a dog-sledge with three men was seen to be approaching. A cheer in return was attempted, but so full were our hearts that it resembled more a wail than a cheer. It is impossible to describe our feelings as May and Moss came up, and we received from them a warm and hearty welcome. We felt that we were saved, and a feeling of thankfulness and gratitude was uppermost in our minds, as we shook the hands of those who had hurried out to our relief the moment that Parr had conveyed to them intelligence of our distress. Those who a few short moments before were in the lowest depths of despondency appeared now in the most exuberant spirits. Pain was disregarded and hardships were forgotten as numerous and varied questions were asked and answered.

"We heard with delight that they were only the vanguard of a larger party, headed by Captain Nares himself, that was coming out to our relief, and which we should probably meet on the following day. A halt was immediately ordered, cooking utensils lighted up, ice made into water, and we were soon all enjoying a good pannikin full of lime-juice, with the prospect of mutton for supper!"

On the 14th of June, after seventy-two days of travel and hardship, Commander Markham's party reached the *Alert*. Out of fifteen men, one had gone to his long home, eleven others were carried alongside the ship on sledges, the remaining three barely able to hobble aboard.

"A more thorough break-up of a healthy and strong body of men it would be difficult to conceive," comments Markham. "Not only had the men engaged in the extended party under my command been attacked with scurvy, but also those who had been absent from the ship only for short periods, and some who may be said never to have left the ship at all, or if they did, only for two or three days! The seeds must have been sown during the time, nearly five months, that the sun was absent, and we were in darkness."

The serious condition of the crew of the *Alert* determined Captain Nares to publicly announce on the 16th of June that immediately upon the return of the other sledge parties he would rejoin the *Discovery*, transfer all the invalids, and send the ship home. The *Alert* would remain a second winter at Port Foulke, and in the spring sledge parties would endeavour to explore Hayes Sound and the adjacent lands, after which the *Alert* would return to England. This cheerful news did much to restore the invalids to convalescence, and immediately a change for the better was noticed among all hands.

Considerable anxiety was felt, however, for Lieutenant Aldrich's party. Although his route was along the coast-line, and it was hoped that a supply of hares, geese, and perhaps musk-oxen might occasionally be secured, every one knew that his supply of provisions was all but exhausted, and for the purpose of his relief a party of three men under Lieutenant May left the ship June 18.

The intervening time until Sunday, June 25, was one of great concern to all on board; on that day the wanderers were seen struggling through the hummocks some six or seven miles off. A relief party immediately left the ship and brought the men on board. All but two were suffering from scurvy. Only Lieutenant Aldrich and two men were able to walk alongside the ship, and one of these was in a critical condition for many weeks after. They had been absent from the ship eighty-four days, having explored two hundred twenty miles of new coast. Passing Cape Columbia, 83° 07′ N., Lieutenant Aldrich reached his farthest point on the 18th of May, 1876, in 82° 16′ N., 86° W., at Cape Alfred Ernst.

It now became the arduous work of the few members of the ship's company who were in good health to minister to the numerous invalids, prepare the ship for leaving winter quarters as soon as the ice would permit, and make hunting trips in search of fresh meat, so essential to the cure of scurvy patients.

On the 31st of July, a fresh southwesterly wind had blown the pack off the shore, a clear channel of open water to the southward was hailed with delight, the throbbing of the engines told the men that liberation was at hand, and the *Alert* bade farewell to her northern home. Progress was slow, and threatened "nips" in the short journey to the *Discovery* tried the patience of the crew, but on August 5, while yet twenty miles distant from the sister ship, Rawson and two of the men of the *Discovery* came on board.

"We were, of course, delighted to see them and to hear news of our consort," writes Commander Markham. "From them we learnt that poor Egerton had lost his way, and did not arrive on board their ship until after he had been wandering about for eighteen hours! The news from the *Discovery* was what we feared. Notwithstanding the large amount of musk-ox flesh procured by them during the autumn and following summer, scurvy had attacked her crew in almost the same virulent manner as it had ours. The return journeys of some of their sledge parties were simply

a repetition of our own. Beaumont's division—the one exploring the northwestern coast of Greenland—had suffered very severely, and we heard with extreme regret that two of his small party had succumbed to this terrible disease. The rest of his men, with himself and Dr. Coppinger, had not yet returned to the *Discovery*, having remained in Polaris Bay to recruit their healths. This was, indeed, a bitter ending to our spring campaign, on which we had all set out so full of enthusiasm and hope. It had the effect, however, of confirming Captain Nares in his resolution to proceed to England."

The excellent work done by the sledging parties from the *Discovery* may be summed up as follows: Lieutenant Archer had made a thorough survey of Archer Fiord; Dr. Coppinger had visited Petermann Fiord, and Lieutenant L. A. Beaumont made extensive explorations of the Greenland coast. He had travelled to Repulse Harbour, following the coast to Cape Bryant, pushing his way across Sherard Osborn Fiord, he had left all but one man to recuperate and travelled with his single companion as far on the eastern shore as 82° 20´ N., 51° W., which he reached May 20, 1876. The return journey was a fight for life against the encroachments of scurvy; a relief party under Lieutenant Rawson and Dr. Coppinger saved the party, but two men died at Hall's old quarters at Thank God Harbor.

The two ships now fought the good fight against the ice on their homeward journey, boring, charging, and towing as occasion required. "It was with no small amount of thankfulness," writes Markham, "that on the 9th of September we emerged from the cold grim clutches that seemed only too ready to detain us for another winter in the realms of the Ice King, and that we felt our ship rise and fall once more on the bosom of an undoubted ocean swell."

TWO VOYAGES OF THE "PANDORA"

On the 29th of October, 1876, the two ships reached Queenstown, having passed the *Pandora* in mid-ocean. The two voyages of this gallant little ship will now be taken up.

"The objects of the first voyage of the *Pandora* in 1875," writes Sir Allen Young, "were to visit the western coast of Greenland, thence to proceed through Baffin Sea, Lancaster Sound, and Barrow Strait, towards the Magnetic Pole, and if practicable to navigate through the Northwest Passage to the Pacific Ocean in one season. As, in following this route, the *Pandora* would pass King William Island, it was proposed, if successful in reaching that locality, in the summer season when the snow was off the land, to make a search for further records and for the journals of the ships *Erebus* and *Terror*."

The *Pandora* was rigged as a barkentine, and carried eight boats, including a steam cutter and three whale-boats. Her officers and crew numbered thirty-one men, with Captain Young in command. The expenses of the expedition, and the purchase and equipment of the *Pandora*, were undertaken by Sir Allen Young, assisted by contributions from Lady Franklin and Mr. James Gordon Bennett, who was second in command.

On the 27th of June, 1875, the *Pandora* sailed from Plymouth, and by July 19, stood in latitude 58° 58´ N., longitude 31° 33´ W.; by the 28th of July the first icebergs were encountered. The following day they saw the first Spitzbergen ice. At noon the same day the land about Cape Desolation could be plainly seen whenever the fog lifted.

Soon after they stood off the entrance of Arsuk Fiord; this coast is the *West Bygd* of the ancient Norse colonizers of Greenland, and near Arsuk was the old Norse church of Steinnals. "The whole coast," writes Captain Young, "from S. E. to N. N. E. stood before us like a panorama, and the sea so calm, and everything so still and peaceful, excepting now and then the rumbling of an overturning berg, or the distant echo of the floes as they pressed together to seaward of us, that it almost seemed like a transition to some other world."

At Irigtut, where the *Pandora* put in to coal, Captain Young had the pleasure of visiting his old ship, the *Fox*. At Irigtut also are located the famous cryolite mines, discovered by the Danish missionaries who first sent specimens to Copenhagen as ethnographical curiosities. The cryolite is found near the shore, resting immediately upon gneiss. The purest is of snow-white colour, the grayish white variety being second in quality. It much resembles ice which has been curved and grooved by the action of the sun's rays; its component parts are double hydrofluate of soda and alumina. It melts like ice in the flame of a candle, and it is used principally for making soda, also for preparing aluminum.

The *Pandora* was highly favoured by the singularly open condition of Melville Bay; bergs proved plentiful, but no dreaded ice-floe impeded her progress. A change in the ice conditions was first noticeable while off the Gary Islands. And upon leaving the islands and proceeding toward Lancaster Sound, the *Pandora* fell in with the ice the 20th of August while lying about thirty miles east of Cape Horsburgh.

"Three bears being seen on the ice," writes Captain Young, "I went away in the second cutter with Pirie and Beynen, and after shooting the old she-bear and one cub we succeeded in getting a rope around the larger cub and towing him to the ship. Now began a most lively scene. The bear was almost full grown, and it was with some difficulty we got him on board and tied down the ring-bolts with his hind legs secured; and notwithstanding this rough treatment he showed most wonderful energy in trying to attack any one who came within reach, and especially our dogs, who seemed to delight in trying his temper. He was at last secured on the quarter deck with a chain round his neck and under his fore arms, and soon began to feed ravenously on—I am sorry to have to write it—his own mother, who was speedily cut up and pieces of her flesh thrown to my new shipmate. I hope that he was only an adopted child, and the great difference between him and the other cub warranted this supposition, as, being three times the size of the other, he could not have been of the same litter." A few days later we read, "Our new shipmate, the bear, made desperate struggles to get over the rail into the sea, but the chain was tightened, and at last he went to sleep."

On the 23d of August, a barrier of ice across Lancaster Sound obliged Captain Young to retrace his steps. Snow, sleet, and wind prevailed as they scudded onward, an ice blink frequently ahead; then the inevitable floe in streams and loose pieces, with the sea dashing over them as they flew between.

"While we were in this situation," Captain Young observes, "our bear gradually worked himself into a state of frantic excitement—getting up to the rail,—watching the floe-ice rapidly dashing past our side—and in his attempts to get over the bulwarks, he released his chain until it was evident that in a few moments he would be free, whether to dive overboard or to run amuck among the watch appeared a question of doubt. The alarm being given by Pirie, who was writing up the deck log, the watch was called to secure the bear, and I fear that during the half hour which elapsed the ship was left, more or less, to take care of herself. The whole watch, besides Pirie with a revolver and myself with a crowbar, assaulted the unfortunate Bruin, whose frantic struggles and endeavours to attack every one within reach were quite as much as we could control. He was loose, but by a fortunate event a running noose was passed round his neck, and the poor brute was hauled down to a ring-bolt until we could secure the chain round his neck and body. I had hitherto no conception of the strength of these animals, and especially of the power of their jaws. Fearing that the iron crowbar might injure his teeth, I jammed a mop handle into his mouth while the others were securing his chain, and he bit it completely through. At last Bruin gave in, and beyond an occasional struggle to get loose, and a constant low growling, he gave us no further trouble. I ought to mention that in the midst of the scrimmage the Doctor was called up to give him a dose of opium, in the

hope of subduing him by this means; but having succeeded in getting him to swallow a piece of blubber saturated with chloroform and opium sufficient to kill a dozen men, our Bruin did not appear to have experienced the slightest effect, and the Doctor, who volunteered to remain up, and expressed some anxiety as to the bear's fate, retired below somewhat disappointed."

Making Barrow Strait for the purpose of reaching Beechey Island, the *Pandora* pursued her course, in fog and snow; Beechey Island was reached on the 25th. Going on shore, Captain Young and two officers inspected the state of provisions and boats at Northumberland House. It will be remembered that Northumberland House was built by Commander Pullen of the *North Star*, which wintered there in 1852-1853 and 1853-1854, as a depot for Sir Edward Belcher's expedition. The house was built in the fall of 1852, of the lower masts and spars from the American whaler *McLellan*, which had been crushed in the ice in Melville Bay in 1852.

Captain Young found that the house had been stove in at the door and sides, by the wind and by bears, and almost everything light and movable had been blown out or dragged out by the bears, which had also torn up all the tops of the bales, and scattered the contents in all directions. The house was nearly full of ice and snow frozen so hard as to necessitate the use of pick-axe and crowbar before anything could be moved. Tea-chests and beef casks had been broken open and the contents scattered or devoured. The place presented a scene of ruin and confusion, although there were no traces of the place having been visited by human beings since the departure of Sir Leopold M'Clintock in the *Fox*, the 14th of August, 1853.

A cask of rum had remained intact, "a conclusive proof to my mind," writes Captain Young, "that neither Eskimo nor British sailor had entered that way." The boats, however, were found in good condition, and had escaped the ravages of time and wild animals.

Weighing anchor the *Pandora* stood to the southward for Peel Strait. Captain Young visited a cairn in which a record had been placed by Captain James C. Ross, 7th of June, 1849.

An attempt was made to push through to Bellot Strait, but the fast closing in of the ice determined Captain Young to retreat and abandon his cherished hope of making the Northwest Passage this year. A race with the ice to Cape Rennell and a second visit to the Cary Islands resulted in finding a record left there by the *Alert* and *Discovery*, which brought glad tidings to friends at home. By the 11th of September, the *Pandora* sighted Cape Dudley Digges, about ten miles distant, "the wind freshening to a gale, with a high flowing sea, which froze as it lapped our sides."

Cape York was passed the next day. A stormy passage continued to harass them until the 19th, when the *Pandora* reached the harbour of Godhaven. After a four days' stay at Godhaven, she continued in her course; on the 1st of October she stood southward of the cape, steering direct for the English Channel, and anchored at Spithead, the 16th of October, 1875.

The *Pandora* put to sea on her second voyage from the Southampton Docks, May 17, 1876, for the double purpose of making another attempt to sail through Peel and Franklin straits, and navigate the coast of North America to Behring Strait, and to carry out the instructions of the British Admiralty in an attempt to communicate with the *Alert* and *Discovery*, at Littleton Island or Cape Isabella. Proceeding under sail, she reached Godhaven by the 7th of July.

Here desolation and gloom seemed to overwhelm the little settlement, owing to the storehouse having burned and consumed the entire winter's production of oil and blubber, some two hundred barrels, as well as all the store belonging to the United States *Polaris* expedition. Such a disaster to the poor Greenlanders was quite as great a catastrophe as the burning of half of London would be to a Britisher. However, a cordial welcome awaited Captain Young from the hospitable natives, and, "In fact," he writes, "we thoroughly enjoyed our stay in port, and all made great friends with the Greenlanders. The only drawback was caused by the quantities of the most venomous mosquitoes I ever saw, and they did their very best thoroughly to torment us. I never in any climate knew such a pest as we found these Greenland mosquitoes, for wherever we went, either on shore or in a boat, and even on board ship, they followed us persistently, and at whatever hour, night or day, it was always the same. I was this time more bitten than I ever was before. My head and hands were completely swollen, and one of my eyes shut up."

On the 11th of July, the *Pandora* steamed out of Godhaven, in the direction of Waigat, making a brief stop at Njaragsugssuk, and putting in for coal at Kudliest. By the 16th, she stood off Hare Island, and two days later was running under canvas towards Upernavik. Leaving on the 19th, the ship proceeded slowly through a dense fog toward Brown Island. The Duck Islands were passed on the 21st, the fog again made progress extremely difficult, and the complications of thousands of icebergs, of every conceivable form and shape, intermingled with the drifting floes of ice, almost blocked the way to the north.

The following days were passed in the greatest anxiety by Captain Young. The *Pandora* was beset in the ice-pack of Melville Bay, and in spite of blasting with gunpowder all around her, where the pressure was greatest, the enormous icebergs driving through towards her position threatened her destruction at any moment.

On the 29th of July, a frightful storm disrupted the pack, and, after twenty-four hours of uncertainty and danger, the *Pandora* steamed her way, inch by inch, yard by yard, into the open sea. "Cheers burst spontaneously from the crew as we launched out into the ocean and made all sail to a fair wind from the S. W."

The "North Water" at last, with the whole season ahead and a straight course for Cape York and the Cary Islands; a brief stop to examine the *Pandora's* depot of the previous year, and by August 2 the ship was passing west of Hakluyt Island. A stop was made at Sutherland Island for the purpose of finding any despatches from Captain Nares that may have been left there, but only Captain Hartstein's record was found, left there August 16, 1855, when he touched at this point in his search for Dr. Kane.

At Littleton Island, which was reached August 3, Captain Young was more successful, and a record written July 28, 1875, and left there by Captain Nares, gave full information of the British expedition up to that date. As it was evident that no sledging party had touched at that point in the spring, Captain Young's mission was over, and he turned his attention to the main object of his voyage, that of attempting the Northwest Passage *via* Peel Strait, previous to which, however, he made an examination of the bays and inlets between Littleton Island and Cape Alexander.

Touching at Cape Isabella, Lieutenants Arbuthnot and Becker landed and found a second communication from Captain Nares, left there July 29, 1875. Letters for the *Alert* and *Discovery* and a record of the *Pandora's* visit were deposited at this point. A second attempt to reach Cape Isabella for the purpose of a more thorough examination of a cask, described by the first landing party, and supposed by Captain Young to contain letters or despatches, resulted in the *Pandora's* spending three weeks in a struggle with the ice for an approach. When Cape Isabella was finally reached, after days of delay and disappointment, the cask which had caused so much anxiety and interest was found to be empty.

So much time had been lost in the disappointing effort to reach Cape Isabella, that the season was far advanced, and the *Pandora* found herself in a most critical position in the ice-pack. To proceed northward had become out of the question by the 27th of August, and furious storms literally drove the ship out of Smith Strait to the southward. Captain Young's personal disappointment at the turn of affairs was only surpassed by the disappointment of the crew, who, after the buffeting and danger of their recent experience, showed an eagerness to risk passing a winter in some snug harbour. The pack gradually receded as the *Pandora* made her way toward Hakluyt Island, and the way was clear for an immediate return to England. The only important incident of the return voyage was the meeting with the *Alert* and *Discovery* in latitude 54° 38′ N., longitude 44° 30′ W. The gallant little *Pandora*, continuing in her course, made Portsmouth harbour on the 3d of November, 1876.

SCHWATKA'S SEARCH FOR FRANKLIN RECORDS

Following in chronological order the interesting voyages of the *Pandora*, but of a totally different character was the remarkable land journey of over two thousand eight hundred nineteen geographical miles by Lieutenant Schwatka, U. S. A., with W. H. Gilder, in the years of 1878-1879, undertaken for the purpose of discovering the Franklin records, should they still exist on King William Land, or in the vicinity of the route taken by the survivors of the *Erebus* and *Terror*.

Lieutenant Frederick Schwatka was of Polish descent, American by birth, and had served with distinction in the Third Cavalry. His daring and courage led him to a desire for Arctic adventure, and, having secured leave of absence from the government and the support of the National Geographic Society, he left New York on the 19th of June, 1878, in the *Esther*, with four companions, under the following instructions:—

"Upon your arrival at Repulse Bay, you will prepare for your inland journey by building your sledges and taking such provisions as are necessary. As soon as sufficient snow is on the ground, you will start for King William Land and the Gulf of Boothia. Take daily observations, and whenever you discover any error in any of the charts, you will correct the same. Whenever you shall make any new discoveries, you will mark the same on the charts; and important discoveries I desire to be named after the Hon. Charles P. Daly and his estimable wife, Mrs. Maria Daly. Any records you may think necessary for you to leave on the trip, at such places as you think best, you will mark 'Esther Franklin Arctic Search Party, Frederick Schwatka in command; date, longitude, and latitude; to be directed to the President of the National Geographic Society, New York, United States of America. Should you be fortunate in finding the records, remains, or relics of Sir John Franklin or his unfortunate party, as I have hopes you will, you will keep them in your or Joe's control, and the contents thereof shall be kept secret, and no part thereof destroyed, tampered with, or lost. Should you find the remains of Sir John Franklin or any of his party, you will take the same, have them properly taken care of, and bring them with you. The carpenter of the *Esther* will, before you start on your sledge journey, prepare boxes necessary for the care of relics, remains, or records, should you discover the same. Whatever you may discover or obtain, you will deliver to Captain Thomas F. Barry, or whoever shall be in command of the schooner *Esther* or such vessel as may be despatched for you. You are now provisioned for eighteen months for twelve men. I shall next spring send more provisions to you, so that in the event of your trip being prolonged, you shall not want for any of the necessaries of life. You will be careful and economical with your provisions, and will not let anything be wasted or destroyed. Should the expedition for which it is intended prove a failure, make it a geographical success, as you will be compelled to travel over a great deal of unexplored country."

Winter quarters were established at Camp Daly on the shore ice of Hudson Bay, and intercourse kept up among the natives of Chesterfield Inlet, for the purpose of enlisting their support on the sledge journeys planned for the spring and to secure all available information regarding Sir John Franklin or his unfortunate crew.

Lieutenant Frederick Schwatka

From a portrait in the possession of A. Operti, Esq.

By the 1st of April, the sledge party started on the long march towards King William Land. Lieutenant Schwatka was accompanied by the original party of four white men and fourteen Eskimos. The sleds were drawn by forty-two dogs; the loads aggregated about five thousand pounds on the day of starting, consisting largely of walrus meat for the dogs, a liberal equipment of guns, ammunition, and articles of trade, besides the following list of provisions:—

	lbs.
Hard bread	500
Pork	200
Compressed corned beef	200
Corn starch	80
Oleomargarine	40
Cheese	40
Coffee	40
Tea	5
Molasses	20

This, it will be seen, was only about one month's rations for seventeen people, and was, in fact, nearly exhausted by the time the party reached King William Land. Dependence was placed on the hunting and abundance of game; five hundred and twenty-two reindeer, besides

musk-oxen, polar bears, and seals were secured in the course of the entire journey.

Travelling overland to the Back River, the party experienced all the fatigues incident to sledge progress, especially the Americans, who, unaccustomed to long marches, suffered greatly from blistered feet and muscular soreness. The country seemed alive with game, and on the 11th of May seven reindeer were killed and on the 13th as many as nine.

The northern shore of the Back River is bounded by high hills, almost a mountain range, and inland could be seen rocky hills piled together, barren and forbidding. About noon on the 14th, the party came upon some freshly cut blocks of snow turned up on end,—a sure sign of natives in the vicinity,—and farther on footprints in the snow as well as a cache of musk-ox meat. Following the tracks after breaking camp the next day, the party soon reached several igloos, and communication was immediately established with the inhabitants. The chief spokesman was an Okjoolik, who with his family comprised all that was left of the tribe which formerly occupied the western coast of Adelaide Peninsula and King William Land. From this interesting and important witness much information about the Franklin party was gained. When quite a little boy he had seen some white men alive, and from the description it might have been Lieutenant Back and his party. Years later, he saw a white man dead in the bunk of a big ship, which was frozen in near an island about five miles west of Grant Point on Adelaide Peninsula. He and his son had seen the tracks of white men on the mainland. The natives had boarded the ship at intervals, and, not knowing how to use the doors, had cut a hole in the side on a level with the ice and entered for the purpose of stealing wood and iron. In the following spring, the ship had filled with water and sunk. There were evidences that people had lived aboard the ship, as some cans of fresh meat mixed with tallow were found. There were knives, forks, spoons, pans, cups, and plates aboard, and afterwards a few articles were found on shore after the vessel had gone down.

Another native described seeing two boats on the Back River containing white men, and he also saw a stone monument on Montreal Island containing a pocket knife, a pair of scissors, and some fish hooks, but no papers of any description.

After an encampment of two days and a half, Lieutenant Schwatka continued his journey accompanied by some of these natives as guides.

In native encampments beyond Ogle Point and Richardson Point, an old woman was found who proved an interesting witness; she had been one of a party who had met some of the survivors of the *Erebus* and *Terror* on Washington Bay. She described seeing ten white men dragging a sledge with a boat on it. The Innuits encamped near the white men and stayed in their company about five days. The natives had killed some seals which they shared with the white men. In return, the old woman's husband had been given a knife and other articles now lost. The white men looked very thin, and their mouths were dry and hard and black. The natives moved on, but the white men could not keep up with them, and remained behind. The following spring, the old woman had seen a tent standing on the shore at the head of Terror Bay. In it were dead bodies, and outside were others covered with sand. There was no flesh on them,—nothing but bones and clothes. About the tent were knives, forks, spoons, watches, and many books, besides clothing and other personal articles.

Lieutenant Schwatka visited the cairn erected by Captain Hall over the bones of two of Franklin's men, near the Pfeffer River; a few relics were gathered up in the vicinity of Adelaide Peninsula, one a bunk fixture with the initials "L. F." in brass tacks upon it.

Cape Herschel, on King William Island, was reached in June. Lieutenant Schwatka made a thorough examination of the western shore of the island as far as Cape Felix. At Cape Jane Franklin, Captain Crozier's camp was found, where the entire company of the two abandoned ships had remained some time; strewn about were many relics of the party and the grave of Lieutenant Irving. Gilt buttons were found among the rotting cloth and mould at the bottom of the grave, and upon one of the stones at the foot of the grave was found a silver medal, two and a half inches in diameter, with a bas-relief portrait of George IV surrounded by the words—

Georgius IIII, D. G. Brittanniarum
Rex, 1820

and on the reverse a laurel wreath surrounded by

Second Mathematical Prize, Royal
Naval College

and inclosing

Awarded to John Irving,
Midsummer, 1830.

The remains of Lieutenant Irving were brought home for burial in Edinburgh.

The record deposited by M'Clintock on the 3d of June, 1859, was also found; much of it was illegible, and the cairn in which it had been deposited had been destroyed by natives.

The return from King William Land was started September 19. It will be remembered that for months the party had subsisted entirely on game found in the locality, that their original supply of provisions had lasted a little more than thirty days, and that the return was in the face of the fast approaching winter. Fortunately, reindeer were seen daily in immense herds.

"We cut quantities of reindeer tallow with our meat," remarks Gilder, "probably about half our daily food. Breakfast is eaten raw and frozen, but we generally have a warm meal in the evening. Fuel is hard to obtain, and consists entirely of a vine-like moss called ik-shoot-ik. Reindeer tallow is also used for a light. A small flat stone serves for candle-stick, on which a lump of tallow is placed, close to a piece of fibrous moss called mun-ne, which is used for a wick. The tallow melting runs down upon the stone and is immediately absorbed by the moss. This makes a very cheerful and pleasant light, but is most exasperating to a hungry man, as it smells exactly like frying meat. Eating such quantities of tallow is a great benefit in this climate, and we can easily see the effect of it in the comfort with which we meet the cold."

Directing his course toward the Great Fish-Back River, Lieutenant Schwatka began its ascent in November. The cold was intense, from 20° to 70° below zero.

"We found the travelling on Back's River much more tedious than we had anticipated," writes Gilder, "owing to the bare ice in the vicinity of the open-water rapids and the intense cold which kept the air filled with minute particles of ice from the freezing of the steam of the open water."

On December 28, 1878, Lieutenant Schwatka decided to abandon travel on the Great Fish-Back River, owing to the scarcity of game in the vicinity. The Innuit hunters having reported the land sledging in good condition toward the southeast,—indeed, much better than upon the river,

—and indications pointing to an abundance of game in that direction, the party immediately struck out for Depot Island.

The extreme cold experienced at this period of the journey was trying beyond expression, and had a serious effect upon man and beast. Even iron and wood were affected, strong oak and hickory breaking to the touch like icicles. It was a matter of great difficulty to keep the guns in working order, and the wary game would hear the sound of the crunching of the hunters' tread on the snow at long distances.

"I have frequently heard," remarks Gilder, "the crunching of the sled runners on the brittle snow—a ringing sound like striking bars of steel —a distance of over two miles."

The mean temperature for December was -50.4° Fahrenheit, the lowest -69°; on January 3 the thermometer fell to the lowest point experienced by Lieutenant Schwatka's party, and stood at -70° in the morning and -91° at five o'clock in the afternoon. The party had long been without the fatty food so essential to retain bodily warmth in these fearful temperatures, and the dogs, although fed upon frozen reindeer meat, which, however, has but little nourishment in it in that state for cold weather, began to sicken and die. The small amount of blubber now remaining only served for lighting the igloos at night, and a cooked meal could only be indulged in on days when the party remained in camp and could gather moss for fuel. To add to the general misery under which the return journey was continued, wolves were frequently met with, so ravenous and bold that they attacked the dogs for the purpose of eating the meat thrown out to them. On another occasion:—

"Toolooah was out hunting on the 23d of February," writes Gilder, "when a pack of about twenty wolves attacked him. He jumped upon a big rock, which was soon surrounded, and there he fought the savage beasts off with the butt of his gun until he got a sure shot, when he killed one, and while the others fought over and devoured the carcass, he made the best of the opportunity to get back into camp. It was a most fortunate escape, as he fully realized."

Two days later, the same hunter, while following a reindeer not far from camp, was surprised to meet another Innuit, whom he found to be an acquaintance; from this man he learned that Depot Island was about three days' journey off. Returning to camp with this happy intelligence, it was decided to push on and lighten the sledges at the igloo of this native the following day, and then by forced marches reach Depot Island as soon as possible.

The prospect of finding ships in the harbour, with news from home and friends, did much to revive the hope and spirits of the jaded party, and when, as they approached their destination, friendly natives were encountered, their joy and emotion knew no bounds. But though their reception among the Innuits had been warm and hearty, their joy was tempered with disappointment to find that the only ship in the bay was at Marble Island, and that Captain Barry of the *Esther* had failed to deposit at Depot Island a thousand pounds of bread and other provisions belonging to Lieutenant Schwatka upon which he had depended. This failure to keep a promise resulted in the party of twenty-two hungry travellers and nineteen starving dogs being forced upon the hospitality of the natives, and in less than a week famine existed in camp, and the situation became desperate. Storms had prevented the hunting of walrus and seal, until the eighth day after their arrival. In the meantime, Lieutenant Schwatka with two companions had pushed on to Marble Island for assistance. All they had to eat was a little walrus blubber, and in a forced march of twenty-four hours they covered seventy-five miles. The desperate situation in the settlement at Depot Island is described by Gilder as follows:—

"People spoke to each other in whispers, and everything was quiet, save the never-ceasing and piteous cries of the hungry children begging for food which their parents could not give them. Most of the time I stayed in bed, trying to keep warm and to avoid exercise that would only make me all the more hungry."

Four days later, the hunters were successful in killing a walrus, and this timely relief enabled the members of Schwatka's party to continue their journey to Marble Island. On the first day out, they met a native with relief for the camp. On Saturday, March 21, 1880, the ship *George and Mary* was reached, where a warm welcome awaited them from Captain Baker. When freed from the ice in the spring, this ship carried the explorers back to civilization.

It will be remembered that, during the entire journey, the reliance for food for man and beast was solely upon the resources of the country, that the white men lived exclusively upon the same fare as the Eskimos, and that the return sledge journey was accomplished during an Arctic winter acknowledged to be of exceptional severity by the natives. To Lieutenant Schwatka's excellent management, and thorough fitness for his position as commander, was due the success of the expedition.

"All our movements were conducted in the dull, methodical, business-like manner of an army on the march," writes Gilder. "Every contingency was calculated upon and provided for beforehand, so that personal adventures were almost unknown or too trivial to mention."

The results of this remarkable journey are summed up in a leading English newspaper published September 25, 1880.

"Lieutenant Schwatka has now dissolved the last doubts that could have been felt about the fate of the Franklin expedition. He has traced the one untraced ship to its grave beyond the ocean, and cleared the reputation of a harmless people from an undeserved reproach. He has given to the unburied bones of the crews probably the only safeguard against desecration by wandering wild beasts and heedless Eskimos, which that frozen land allowed. He has brought home for reverent sepulture, in a kindlier soil, the one body which bore transport. Over the rest he has set up monuments to emphasize the undying memory of their sufferings and their exploits. He has gathered tokens by which friends and relatives may identify their dead, and revisit in imagination the spots in which the ashes lie. Lastly, he has carried home with him material evidence to complete the annals of Arctic exploration."

W. H. Gilder

From a portrait in the possession of A. Operti, Esq.

CHAPTER XVIII

The *Jeannette* expedition, 1879-1881.—In command of Captain George W. De Long.—Leaves San Francisco, touches at Ounalaska, August 2, reaches Lawrence Bay, East Siberia, August 15.—Last seen by whale bark *Sea Breeze* near Herald Island, September 2.—The *Jeannette* beset in ice-pack, September 5, never again released.—Daily routine of officers and crew.—Ship springs a leak.—A frozen summer.—Sight of new land.—A second winter in the pack.—The *Jeannette* crushed.—Abandonment.—The retreat.—The fate of the three boats.—Death of De Long's party.—Melville's search.

The American Arctic expedition of 1879, commanded by Lieutenant George W. De Long of the United States Navy, was equipped and financed by Mr. James Gordon Bennett, proprietor of the *New York Herald*. The object of the expedition was to reach the North Pole by way of Behring Strait.

THE "JEANNETTE" EXPEDITION, 1879-1881

The bark-rigged steam yacht of four hundred twenty tons, *Pandora*, which had already seen considerable service in Arctic water, was purchased from Sir Allen Young. By special act of Congress she was allowed to sail under American colours, be navigated by officers of the United States Navy, and to change her name from *Pandora* to *Jeannette*. The *Jeannette* was reënforced and refitted for the arduous service expected of her, and her officers and crew, thirty-three in number, carefully selected for their especial fitness for the undertaking.

Among the number, Lieutenant De Long and Lieutenant Chipp, the executive officer, had seen Arctic service while attached to the U. S. steamer *Juanita*, which had been sent by the government in search of the *Polaris* in 1873; Engineer Melville had been attached to the *Tigress*, while that ship had been on the same errand, and Seaman Wm. F. C. Nindemann had sailed on the *Polaris* and been a member of the ice-drift party.

Lieutenant John W. Danenhower, U. S. N., was appointed navigator; Dr. J. M. Ambler, surgeon; Jerome J. Collins, meteorologist; Raymond L. Newcomb, naturalist; and William M. Dunbar, ice pilot.

The *Jeannette* left San Francisco July 8, and moved slowly toward the Golden Gate amid the cheers and waving of handkerchiefs from thousands of spectators on the wharves and on Telegraph Hill. A salute of ten guns was fired from Fort Point, while a convoy of white-sailed craft of the San Francisco Yacht Club escorted her out to the broad Pacific. Pursuing her course, the *Jeannette* made for Ounalaska, one of the Aleutian Islands, which she reached August 2. There additional stores were taken aboard, and four days later she pursued her course, to St. Michaels, Alaska, where she anchored the 12th of August. Dogs and fur clothing were purchased, and two Alaskans, Anequin and Alexai, were hired to accompany the expedition as dog drivers. By the 25th of August, she had reached St. Lawrence Bay, East Siberia, where Lieutenant De Long learned that a ship supposed to be the *Vega* had gone south in June. She then rounded East Cape and touched at Cape Serdze, from which point Lieutenant De Long sent his last letter home.

Captain Barnes of the American whale bark *Sea Breeze* saw the *Jeannette* under full sail and steam, on the 2d of September, 1879, about fifty miles south of Herald Island; on the 3d of September she was sighted by Captain Kelley of the bark *Dawn*; and at about the same time Captain Bauldry of the *Helen Mar* and several other whalers saw smoke from the *Jeannette's* smoke-stack in range of Herald Island. She was standing north. These were the last tidings heard of the expedition by the outside world for over two years.

On the 5th of September, the *Jeannette*, having boldly entered the ice in an attempt to push through and winter at Herald Island or Wrangell Land, was beset and never again left the ice-pack, but drifted at the mercy of this formidable foe, until she was crushed, and finally sank many months afterward.

Hoping against hope that a release would come, first in the fall with the promise of Indian summer, then in the spring with the breaking up of the ice-pack, Captain De Long saw the weeks and months glide by, and followed the complicated drift of the *Jeannette*, as she coquetted with her jailer, turning and twisting in her course, suffering the constant pressure of her enemy, that hourly threatened her destruction and pursuing an uneven drift north and eastward.

The daily routine during the long imprisonment was practically as follows:—

6 A.M.	Call executive officer.
7 A.M.	Call ship's cook.
8:30 A.M.	Call all hands.
9 A.M.	Breakfast by watches.
10 A.M.	Turn to, clear fire-hole of ice, fill barrels with snow, clean up decks.
11 A.M.	Clear forecastle. All hands take exercise on the ice.
11:30 A.M.	Inspection by executive officer.
12 M.	Get soundings.
1 P.M.	One watch may go below.
2 P.M.	Fill barrels with snow. Clear fire-hole of ice.
3 P.M.	Dinner by watches.
4 P.M.	Galley fires out. Carpenter and boatswain report departments to executive officer.
7:30 P.M.	Supper by watches.
10 P.M.	Pipe down. Noise and smoking to cease in forecastle, and all lights to be put out, except one burner of bulkhead lantern. Man on watch report to the executive.
	During the night the anchor watch will examine the fires and lights every half hour, and see that there is no danger from fire. All buckets will be kept on the starboard side of the quarter-deck, ready for use in case of fire.

This programme was varied only as contingencies arose; by threatening disaster from ice pressure; by the chase of bears; the capture of walrus and seals; or by hunting parties who travelled over the ice in search of game, or took a daily run with the dogs.

CAPTAIN GEORGE W. DE LONG

"Wintering in the pack," comments De Long, "may be a thrilling thing to read about alongside a warm fire in a comfortable home, but the actual thing is sufficient to make any man prematurely old."

On January 19, 1880, owing to serious convulsions of the ice, the *Jeannette* sprung a leak. The deck pumps were at once rigged and manned, and steam raised on the port boiler to run the steam pumps. This last caused great difficulty and delay, owing to the temperature in the fire-room being -29°, the sea-cocks being frozen, which necessitated pouring buckets of water through the man-hole plates, before the pumps could be operated. Through Melville's indomitable energy, the pumps were effective by afternoon. Though all hands worked until midnight, the serious situation was only partially controlled, the men working knee-deep in ice water, Nindemann standing down in the fore-peak, stuffing oakum and tallow in every place from which water came. Under the direction of Lieutenant Chipp, a bulkhead was built forward of the foremast, which partially confined the water. In the meantime, Melville, working night and day, rigged an economical pump with the Baxter boiler, with which the ship was pumped for nearly eighteen months.

Lieutenant Danenhower, who had been suffering for some time with his eyes, had become totally incapacitated for service, and on the 22d of January submitted to an operation performed by Dr. Ambler. Two days later, De Long comments on the gravity of his own responsibilities:—

"My anxieties are beginning to crowd on me. A disabled and leaking ship, a seriously sick officer, and an uneasy and terrible pack, with constantly diminishing coal pile, and at a distance of 200 miles to the nearest Siberian settlement—these are enough to think of for a lifetime."

The drift of the *Jeannette* for the first five months had covered an immense area; she had approached and receded from the one hundred eightieth meridian, drifting back to within fifty miles from where she had entered the pack. By the 3d of May, however, fresh southeast winds began, and the ship took up a rapid and uniform drift to the northwest. Hope for release, which had been buoyant in May, was deferred until June,

and when that month glided by with no signs of liberation, it passed to July and gradually faded with the brief passage of a frozen summer. The *Jeannette*, again uncertain in her drift, added to the general disappointment of the commander. The ring of despair and realization of failure are voiced in an entry August 12:—

"Observations to-day show a drift since the 9th of five and a half miles to S. 38° E. The irony of fate! How long, O Lord, how long?"

On September 1, the *Jeannette* for the first time since her imprisonment stood on an even keel; but four days later, one year from the time she flung her fortunes to the enemy, she was again held fast in its frozen grip. During the month she was put in winter quarters for the second time. The approach of the long night with its added anxieties brought little change to the members of the expedition. The question of fuel was the most serious problem, and the amount used was figured to the most economical basis. Weary days dragged along without novelty or change. "So far as I know," writes De Long in January, 1881, "never has an Arctic expedition been so unprofitable as this. People beset in the pack before have always drifted somewhere to some land, but we are drifting about like modern Flying Dutchmen, never getting anywhere, but always restless and on the move. Coals are burning up, food being consumed, the pumps are still going, and thirty-three people are wearing out their hearts and souls like men doomed to imprisonment for life. If this next summer comes and goes like the last without any result, what reasonable mind can be patient in contemplation of the future?"

Four long weary months were to elapse before a relief came to break the monotonous situation. On May 16, 1881, the *Jeannette* stood in latitude 76° 43′ 20′′ N., longitude 161° 53′ 45′′ E., land was sighted to the westward, which proved to be an island (later named Jeannette Island), the first that had greeted the weary eyes of officers and men since March 24, 1880, when the ship had been in sight of Wrangell Land. On May 24, a second island was seen. On the 31st, Melville, Dunbar, Nindemann, and three others started with a dog sledge and provisions, for an investigation of the newly discovered island. The party landed on June 3, hoisted the American flag, and formally took possession of the land in the name of the United States and giving it the name of Henrietta Island. They built a cairn and deposited a record. The journey had been fraught with great danger and hardship. "The ice between the ship and the island had been something frightful," writes De Long. "After digging, ferrying and its attendant loading and unloading, arm-breaking hauls, and panic-stricken dogs made their journey a terribly severe one. Near the island the ice was all alive, and Melville left his boat and supplies, and, carrying only a day's provisions and his instruments, at the risk of his life went through the terrible mass, actually dragging the dogs, which from fear refused to follow their human leaders. If this persistence in landing upon this island, in spite of the superhuman difficulties he encountered, is not reckoned a brave and meritorious action, it will not be from any failure on my part to make it known."

The approach of spring had revealed to Dr. Ambler a pale and stricken crew. Danenhower had long been a sufferer; Lieutenant Chipp was ill; Mr. Collins was recuperating slowly from a severe illness; Alexai, the Alaskan, was suffering from ulcers, and others of the crew showed incipient signs of scurvy.

THE "JEANNETTE" SINKS

On the 12th of June, 1881, while in 77° 15′ north latitude, and 155° east longitude, the *Jeannette* experienced a final pressure from the ice, from which she sank within a few hours. As soon as it was realized that her fate was sealed, orders were issued that all provisions, boats, etc., should be transported to a safe distance upon the ice; this was done without confusion or excitement. "When the order was given to abandon the ship," writes one of the officers, "her hold was full of water, and as she was keeling twenty-three degrees to starboard at the time the watch was on the lower side of the spar deck."

The men encamped upon the ice, and by four o'clock on the morning of the 13th, "amid the rattling and banging of her timbers and iron work, the ship righted and stood almost upright, the floes that had come in and crushed her slowly backed off, and she sank with slightly accelerated velocity; the yard arms were stripped and broken upward parallel to the masts; and so, like a great, gaunt skeleton clapping its hands above its head, she plunged out of sight. Those of us who saw her go down," adds Chief Engineer Melville,

“did so with mingled feelings of sadness and relief. We were now utterly isolated, beyond any rational hope of aid; with our proper means of escape, to which so many pleasant associations attached, destroyed before our eyes; and hence it was no wonder we felt lonely, and in a sense that few can appreciate. But we were satisfied, since we knew full well that the ship’s usefulness had long ago passed away, and we could now start at once, the sooner the better, on our long march to the south.”

The following week was spent in preparations for the retreat; the route was laid due south, it being the intention of Captain De Long to make for the Lena River, after a brief stop at the New Siberian Island. The day’s march was accomplished under the most trying circumstances, the lateness of the season and the ruggedness of the ice necessitating road-making, bridging, and rafting, or dragging the loads through slush and water that lay knee-deep in the path. The foot-gear of the men became practically useless as a result of constant wettings, and every device was resorted to to keep the bare feet from contact with the ice. “A large number,” writes Melville, “marched with their toes protruding through their moccasins; some with the ‘uppers’ full of holes, out of which the water and slush spurted at every step. Yet no one murmured so long as his feet were clear of ice, and I have here to say that no ship’s company ever endured such severe toil with such little complaint. Another crew, perhaps, may be found to do as well; but *better*, never!”

Captain G. W. De Long

From a portrait in the possession of A. Operti, Esq.

DAILY ROUTINE OF OFFICERS AND CREW

Nine loaded sledges and five boats carrying sixty days' provisions, had to be hauled across the moving floes in the course of the day. The road had to be

travelled no less than thirteen times, seven times with loads and six times empty handed, thus walking twenty-six miles in making an advance of two. The sick, with the hospital stores and tents, were under the care of Dr. Ambler. Thus the march over the frozen ocean was continued for several weeks when, to the consternation and dismay of Captain De Long, he found upon taking observations, that by the northerly drift of the pack they were losing ground daily and had drifted some twenty-four miles to the northwest. This disheartening intelligence was kept from the men, with the exception of Melville and Dr. Ambler. Changing their course to south-southwest, the party continued their slow and wearisome progress until the 11th or 12th of July, when the mountainous peaks of an island gladdened the eyes of the shipwrecked crew. Inspired to renewed effort, the men pushed on, finally landed, and Captain De Long took possession in the name of God and the United States, naming this new territory Bennett Island. Nine days were spent on this island, during which the boats were repaired. A cairn was built and a record left. The final departure from Bennett Island took place August 6. In the meantime, the brief summer had gone; already young ice was forming, and the streams and rivulets that had gladdened the men's eyes upon their arrival had disappeared as the cold grasp of winter prepared to hold them fast.

It had been decided by Captain De Long to divide the party into three sections, and to proceed by boats; to this end Lieutenant Chipp was assigned to the second cutter in command of nine men; Chief Engineer Melville to the whale-boat in command of nine men, De Long reserving the command of the first cutter and twelve men. Instructions to Chipp and Melville directed that they should keep close to the captain's boat, but if through accident they should become separated, to make their way south to the coast of Siberia and follow it to the Lena River, then ascend the Lena to a Russian settlement.

For the next eighteen days, the retreat was made by working through leads, hauling the boats out, and making portages across floe pieces that barred their progress; and occasionally as much as ten miles was made a day to the southwest. Vexatious delays were caused by the fast approaching winter, and, upon reaching Thadeouiski, one of the New Siberian Islands, the pinch of diminishing rations began sorely to be felt. Game, which had been occasionally secured during the early part of the retreat, had been scarce of late, and the outlook began to take on the gray aspect of a desperate future.

CHIEF ENGINEER MELVILLE

From now on, the retreat was one long, desperate struggle against famine and gales and piercing cold. Describing the experiences of September 7, Melville writes:—

"Standing to the southward, we shortly came up with a large floe alive with small running hummocks and stream ice. It was blowing stiffly, the sea was lumpy, and our boats careering at a lively rate. Pumping and bailing to keep afloat, we suddenly came unawares upon the weather side of a great floe piece, over which the sea was breaking so terribly that for us to come in contact with it meant certain destruction. It was floating from four to six feet above water, its sides either perpendicular or undershot by the action of the waves, which dashed madly over it, the surf flying in the air to a height of twenty feet; and, where the sea had honeycombed it and eaten holes upward through its thickness, a thousand waterspouts cast forth spray like a school of whales. Round about, down sail, and away we pulled for our lives. De Long, being fifty or a hundred yards in advance of me, and so much nearer danger, hailed me to take him in tow, which I did, and together we barely managed to hold our precarious position. The second cutter was away behind again, but upon coming up seized the whale-boat's painter; and so we struggled in line, and at last succeeded in clearing the weather edge of the floe. It was a long pull and a hard pull. The sea roared and thundered against the cold, bleak mass of ice, flying away from it like snowflakes and freezing as it flew; the sailors, blinded by the wind and spray, pulled manfully at the oars, their bare hands frozen and bleeding; and the boats tossed capriciously about with the wild waves and the unequal strain of the tow-line. Drenched to the skin by the cruel icy seas which poured in and nigh filled the boats, the overtaxed men, as they faced the dreadful, death-dealing sea and murderous ice-edge, found new life and strength and performed wonders....

"Our boats were well bunched together, and although it was now pitch dark, we could yet for a while discern each other looming up out of the black water like spectres, and plunging over the crests of the waves. Presently the second cutter faded away, but as mine was the fastest boat of the three, I experienced

no difficulty in following De Long. Indeed, in my anxiety to obey the order 'Keep within hail,' I at times barely escaped running the first cutter down...."

"Toward midnight," continues Melville, "we approached the weather edge of the pack, the roar of the surf reaching our ears long before we could see the ice. I involuntarily hauled the whale-boat closer on the wind, and by so doing lost sight of the first cutter, but the terrible noise and confusion of the sea warned me beyond doubt of the death that lay under our lee. Presently out of the darkness there appeared the horrid white wall of ice and foam. Not a second too soon. 'Ready about, and out with the two lee oars if she misses stays.' This, of course, from the heavy sea, she did; and quick as thought my orders were obeyed. As we turned slowly round, a wave swept across our starboard quarter filling the boats to the seats. Ye Gods! what a cold bath! And now we were in the midst of small streaming ice, broken and triturated into posh by the sea and grinding floes, and this was hurled back upon us by the reflex water and eddying current in the rear of the pack, which was rapidly moving before the wind. With bailers, buckets, and pumps doing their utmost, the two lee oars brought us around in good time, and we filed away on the other tack, the waves still leaping playfully in as though to keep us busy and spice our misery with the zest of danger.

"When day broke, neither of our companion boats was in sight. The wind had moderated greatly, and we were now in quiet water among the loose pack,—perhaps the most miserable looking collection of mortals that ever crowded shivering together in a heap. We looked, indeed, so utterly forlorn and wretched that just to revive and thaw, as it were, my drowned and frozen wits, I burst forth into frenzied song. Of a truth, as we sat shaking there, our situation was nigh desperate; we were down to an allowance of a pint of water to each man per day, now that De Long was separated from us; but upon the suggestion of some one in the boat, I set up the fire-pot and made hot tea. We were thus breakfasting when the first cutter hove in view. I at once joined company, and shortly after the second cutter made her appearance and we were again together. The sea soon calmed, *les misérables* thawed out, the morning became as pleasant as the memorable May mornings at home, and we again were bright and alive with hope."

A SECOND WINTER IN THE PACK

The following day, September 12, after a night's encampment upon a floe, the party landed in Semenovski, and the hunters had the good fortune to secure a deer, which provided them for the first time in many months a full and delicious meal. Cape Barkin, the point of destination, was found to be only ninety miles distant, and, after a day's rest and depositing a record at Semenovski Island, the party embarked once more full of hope and courage that Cape Barkin might be reached after one more night at sea.

The three boats sped forward to the southwest in a rising sea, the gale increased, and the heavy seas grew hourly more formidable and threatening. De Long and Chipp were experiencing great difficulty in the management of their overloaded boats. Melville, in his endeavour to obey the order to keep within hail, was all but swamped by the fury of the waves as they broke over the whale-boat.

In an endeavour to answer signals from De Long, Melville shouted down the wind that he must run or swamp—De Long waved back, motioning him onward. Melville hoisted sail, shook out one reef, and the whale-boat shot forward like an arrow. De Long then signalled Chipp; for an instant the second cutter was seen in the dim twilight to rise on the crest of a wave, then sink out of sight; once more she appeared; a tremendous sea broke over her; a man was seen striving to free the sail; she sank again from view, and, though seas rose and fell, one after another, the second cutter with all on board was never seen again.

The whale-boat plunged on at a spanking rate and was soon out of sight of De Long. The question now was whether she would outlive the gale—and to insure greater safety Melville ordered a drag anchor to be made of tent poles weighted with such available material as came to hand.

What a night, lying anchored at the mercy of the gale, bailing out with pumps, buckets, and pans the heavy seas as they broke over the boat; hungry and thirsty men, soaked to the skin with repeated ice-cold baths, half frozen from exposure to the icy blasts. A little whiskey was all they had during that fearful night, and in the morning a quarter of a pound of pemmican served as breakfast to the wretched crew. The gale still raged about them with unabated fury. But by afternoon it had abated sufficiently for them to get under way, and the morning of the 14th found them sailing through young ice, and in shoal waters, which they

avoided by steering to the eastward all day. Short rations of a quarter of a pound of pemmican three times a day, without water, was all they had, and another miserable night settled upon the toilers, as they bailed the water-logged whale-boat, the water turning to slush the minute it was in the boat.

The men were now undergoing severe sufferings from thirst. The following day they were fortunate in reaching one mouth of the Lena River, and, proceeding up this stream, they disembarked for the first time, after five days of misery. Taking shelter in a deserted hut, lately vacated by natives, they thawed their aching bodies around a cheering camp fire, brewed a pot of tea, and ate of a stew made of a few birds shot at Semenovski Island. But their swollen limbs, blistered and cracked hands, gave them excruciating pain, and another sleepless night added to their misery. Two more toilsome days were spent pulling up the river and encamping at night under a cold and cheerless sky.

On the 19th of September, 1881, Melville's party had the good fortune to fall in with natives, who treated the forlorn men with great kindness and generosity, and on the 26th of September they reached the Russian village of Geemovialocke, where they subsisted until they were able to communicate with the commandant at Belun.

Upon the separation of the boats already described, De Long experienced the same threatened destruction of the first cutter that had caused Melville so much anxiety in the whale-boat. After three miserable days and nights of exposure to the merciless seas, he decided to make a landing by wading ashore September 17, at a point 73° 25′ north latitude, 26° 30′ east longitude. Owing to the shallow water, it was found necessary to abandon the boat, and the wretched, enfeebled party, destitute, save for four days' scant provisions, began their fatal march on the inhospitable tundra of northern Siberia, in search of a settlement ninety-five miles distant. De Long's record of this weary tramp is one long agony of a slowly perishing party. Everything was abandoned that was not absolutely necessary, but in spite of lightened loads, the half-frozen men limped and hobbled slowly along, falling in their tracks, the weaker assisted by the stronger, but even then the ground covered was inconsiderable, so that on September 21, upon reaching some deserted huts, De Long records:—

"According to my accounts we are now thirty-seven miles away from the next station! and eighty-seven from a probable settlement. We have two days' rations after to-morrow morning's breakfast, and we have three lame men who cannot make more than five or six miles a day; of course, I cannot leave them, and they certainly cannot keep up with the pace necessary to take."

The hunters were fortunate in securing occasional deer, but the unfortunate condition of Erickson, whose frozen feet necessitated the amputation of his toes, retarded their progress, and October came in cold and blustery to find the miserable party still far away from human aid. For nine days more they struggled along the barren shores of the Lena; game failed, and their food was exhausted. Erickson died and was buried in the river. Nindemann and Noros started on a forced march for assistance from the nearest settlement at Ku Mark Surka; they carried their blankets, one rifle, forty rounds of ammunition, and two ounces of alcohol—but no food!

On October 10, De Long makes the following entry:—

"One hundred and twentieth day. Last half ounce alcohol at 5.30; at 6.30 send Alexey off to look for ptarmigan. Eat deerskin scraps. Yesterday morning ate my deerskin foot-nips. Light S.S.E. airs. Not very cold. Under way at eight. In crossing creek three of us got wet. Built fire and dried out. Ahead again until eleven. Used up. Built fire. Made a drink out of the tea-leaves from alcohol bottle. On again at noon. Fresh S.S.W. wind, drifting snow. Very hard going. Lee begging to be left. Some little beach, and then long stretches of high bank. Ptarmigan tracks plentiful. Following Nindemann's tracks. At three halted, used up; crawled into a hole in the bank, collected wood, and built fire. Alexey away in quest of game. Nothing for supper except a spoonful of glycerine. All hands weak and feeble but cheerful—God help us."

Three days later there is an entry, "We are in the hands of God, and unless He intervenes we are lost."

On October 16, the faithful hunter, Alexey, broke down, and the next day he died. On the 21st Kaack was found dead between the captain and Dr. Ambler, and about noon Lee died, and on October 22 De Long

writes:—

"One hundred and thirty-second day. Too weak to carry the bodies of Lee and Kaack out on the ice. The doctor, Collins, and I carried them around the corner out of sight; then my eye closed up."

On Monday, October 24, there is the simple entry: "One hundred and thirty-fourth day. A hard night." And three days later, "Iversen broken down," and the next day, "Iversen died during early morning." On October 29, "One hundred and thirty-ninth day, Dressler died during night." On October 30, Sunday, the last record of the brave De Long was written: "One hundred and fortieth day. Boyd and Görtz died during night. Mr. Collins dying."

The forced march of Nindemann and Noros is one of the most remarkable tests of human suffering and endurance in the annals of Arctic history. It is a record of travelling across the wilderness without food except as they brought down an occasional ptarmigan and lemming; sighting with the eyes of starving men a herd of deer which fled before they could approach sufficiently near to fire at them; struggling through wretched days to crawl into a snow hole at night, where they lay the night through wet to the waist, alternately sleeping for five-minute intervals, one man rousing the other that he might knock his feet together to keep them from freezing and taking up the march upon the strength of an infusion of Arctic willow tea and boot-sole. Crossing a couple of streams they sought shelter from a raging gale in a wretched hut where a refuse pile of deer bones were burned and eaten. Near another hut was found a little rotten fish —this eked out with strips cut from seal-skin clothing was all that stayed the pangs of hunger as they marched on. The 16th of October found their strength fast waning. Noros was complaining of illness and spitting blood. Two days later they reached a place set down on later maps as Bulcour; it consisted of three deserted huts.

"Near by was a half kayak with something in it. Noros tasted it. It was blue moulded and tasteless to them, but it was fish, and they took it with them to the other huts. They found nothing more, and after gathering some drift-wood they made a fire and tried to find some food in the mouldy fish."

On Friday, October 21, they were too weak to push on, but spent the day in careful husbanding of their resources. Measuring their fish, they found that by taking each two tin cupfuls a day they had enough for ten days. Sewing up the fish in their foot-nips and skull caps, they arranged straps to these bundles for carrying.

The next day, while still too weak to proceed, they heard a noise outside the hut, like a flock of geese sweeping by, and Nindemann, seizing his gun looked through the crack of the door. Seeing something moving which he thought were reindeer, Nindemann advanced, when the door suddenly opened and a man stood on the threshold. Seeing the rifle, the man fell upon his knees, but when Nindemann reassured him by throwing the weapon to one side, friendly communication was established between the stranger and the forlorn men. Sympathizing with their desperate plight, he let them know by signs that he would return in three or four hours, or days, they could not tell which.

About six o'clock the same evening, the stranger, accompanied by two other natives, returned, bringing with them a frozen fish, which they skinned and sliced, and while Nindemann and Noros were devouring the first real food that they had had for many a day, the men brought in deer-skin coats and boots for them. Assisting them into the sleighs, they drove off with them along the river to the westward for a distance of about fifteen miles to where some other natives were located in two tents. These treated the sailors with great kindness. By signs and pantomime Noros and Nindemann tried in every possible way to explain to these natives about De Long and the remainder of the first cutter's party, but they failed to understand, and two days later, after reaching Ku Mark Surka, the same efforts were renewed without success. In despair of securing assistance, the men implored to be conveyed to Belun, which they reached October 26.

ABANDONMENT

An interview with the commandant at Belun left the men still uncertain if they were understood, or the plight of De Long's forlorn party made clear to the official, who, however, repeated that he would take a paper to the "Captain," who Nindemann supposed to be his superior officer. Sick and weak from dysentery, scantily clothed, and insufficiently fed, the men were located in a miserable hut which had been assigned to them, when on the evening of November 2, 1881, the

door opened and a man dressed in fur entered. As he came forward, Noros exclaimed, “My God! Mr. Melville! Are you alive? We thought that the whale-boats were all dead!”

The official, having already knowledge of the safety of the whale-boat’s party, had immediately communicated with Melville, who in all haste came to Belun. The whale-boat party were now on their road from Geemovialocke to Belun. The intrepid Melville was now determined upon an immediate search for De Long’s party, and to this end hastened back, meeting Danenhower at Burulak, where he gave him instructions to proceed with the entire party to Yakutsk, a distance of twelve hundred miles, and to communicate with the Russian government and the United States minister.

Melville was by no means recovered from his long exposure, and his frozen limbs caused him great suffering, but nevertheless he went back over the track of Nindemann and Noros step by step. On November 10, the natives who had accompanied him announced they must return as the provisions were exhausted, but Melville commanded them to go on, declaring they would eat dog as long as the twenty-two lasted, and when these gave out he should eat them. Such determination won the day, and they proceeded to the settlement of North Belun. Here a native brought him one of De Long’s records, left on the march. From these natives he learned in which direction the records had been found, and pressing on, in spite of his frozen feet, which were in such a condition he could no longer wear his moccasins, he reached, November 13, the hut where De Long’s first record had been left, a distance from North Belun of thirty-three miles. Could De Long’s chart but have shown the native settlement of North Belun, the whole party would doubtless have been saved.

On November 14 following the northeast bank of the river he came to the shores of the Arctic Ocean and found the flag-staff where articles from the first cutter had been cached. Loading his sled with all the articles found there, including logbook, chronometer and navigation box, he returned to North Belun. With fresh dog teams he set out again November 17, in an endeavour to find the hut where Erickson died. Fierce storms and lack of food forced Melville to take refuge in a snow-hole dug about six feet square and three or four feet deep.

“The storm continued to blow,” writes Melville, “the whole of that night, the next day and the next night. It was impossible to move until the next day morning, when it cleared up a little, but in the mean time, we had nothing to eat. It was too stormy to make a fire to make tea, and the venison bones which the natives had dug out were full of maggots. We chopped this up in little cubes and swallowed it whole, which made me so sick after it warmed up in my stomach that I vomited it all out again.”

Melville reached Ku Mark Surka November 24, and at Belun three days later, after an absence of twenty-three days, in which he travelled no less than six hundred and sixty-three miles over the tundra of Northern Siberia in the face of an Arctic winter. Upon reaching Yakutsk December 30, 1881, where Danenhower and his party had preceded him, Melville retained Nindemann and Bartlett to assist him in the spring search, and instructed Danenhower to proceed with the other nine men to Irkutsk, distant over nineteen hundred miles, from thence to America.

The spring search was made under the following instructions from the Navy Department at Washington: —

“Omit no effort, spare no expense in securing safety of men in second cutter. Let the sick and the frozen of those already rescued have every attention, and as soon as practicable have them transferred to a milder climate. Department will supply necessary funds.”

In the meantime J. P. Jackson, special correspondent of the *New York Herald*, had arrived at Irkutsk, on his way to the Lena Delta. The Navy Department detailed L. P. Noros to accompany him. Lieutenant Giles B. Harber, U. S. N., accompanied by Master W. H. Schuetze, had been sent to search for Lieutenant Chipp and his party.

MELVILLE’S SEARCH

Melville, with Nindemann and Bartlett as assistants, engaged three interpreters and reached Belun the second week in February. A month was spent in collecting dogs and provisions and establishing depots of supplies at Mat Vai and Kas Karta. On March 16, 1882,

accompanied by Nindemann, Melville proceeded to a place called Usterda, where Captain De Long had crossed the river to the westward. A search was now made for the hut where Erickson had died.

Snow covered the country and effectively obliterated all traces of previous travellers. Storms forced their return to Kas Karta, and a fresh start was made. The party divided to insure a more thorough search.

"We followed the bay," says Mr. Melville in his narrative, "until late in the evening, having visited all the headlands; finally we came up to the large river with the broken ice. I jumped upon the headland or point of land making down in the bay and found where an immense fire had been made. The fire bed was probably six feet in diameter, large drift-logs hove into it, and a large fire made, such as a signal fire. I then hailed Nindemann and the natives, saying 'Here they are!' They thought that I had found the place where the De Long party had been. Nindemann came upon the point of land, and said that neither he nor Noros had made a fire of that kind, only a small fire in the cleft of a bank; but he was sure that this was the point of land they had turned going to the westward, and that this was the river along which he and Noros had come...."

"It is the custom of the people here," continues Melville, "in making a search to go facing the river and when they see anything to attract them, drop off the sled and examine it, or pick it up and go on. In this manner, about five hundred yards from the point where the fire had been, I saw the points of four sticks standing up out of the snow about eighteen inches, and lashed together with a piece of rope. Seeing this, I dropped off the sled, and going up to the place on the snow bank, I found a Remington rifle slung across the points of the sticks, and the muzzle about eight inches out of the snow. The dog-driver, seeing I had found something, came back with the sled, and I sent him to Nindemann to tell him to come back, he having gone as far up the river as the flat-boat. When they returned I started the natives to digging out the snow-bank underneath the tent-poles. I supposed that the party had got tired of carrying their books and papers, and had made a deposit of them at this place, and erected these poles over the papers and books as a landmark, that they might return and secure them in case they arrived at a place of safety. Nindemann and I stood around a little while, got upon the bank, and took a look at the river. Nindemann said he would go to the northward, and see if he could discover anything of the track and find the way to Erickson's hut. I took the compass and proceeded to the southward to get the bearings of Stolbovoi and Mat Vai, so I might return there that night in case it came on to blow.

"In proceeding to a point to set up the compass, I saw a tea-kettle partially buried in the snow. One of the natives had followed me, and I pointed out to him the kettle, and advancing to pick it up, I came upon the bodies of three men, partially buried in the snow, one hand reaching out with the left arm of the man raised way above the surface of the snow—his whole left arm. I immediately recognized them as Captain De Long, Dr. Ambler, and Ah Sam, the cook. The captain and the doctor were lying with their heads to the northward, face to the west, and Ah Sam was lying at right angles to the other two, with his head about the Doctor's middle, and feet in the fire, or where the fire had been. This fireplace was surrounded by drift-wood, immense trunks of trees, and they had their fire in the crotch of a large tree. They had carried the tea-kettle up there, and got a lot of Arctic willow which they used for tea, and some ice to make water for their tea, and had a fire. They apparently had attempted to carry their books and papers up there on this high point, because they carried the chart case up there, and I suppose the fatigue of going up on the high land prevented their returning to get the rest of their books and papers. No doubt they saw that if they died on the river bed, where the water runs, the spring freshets would carry them off to sea.

"I gathered up all the small articles lying around in the vicinity of the dead. I found the ice journal about three or four feet in the rear of De Long; that is, it looked as though he had been lying down, and with his left hand tossed the book over his shoulder to the rear, or to the eastward of him."

"Referring to the journal," continues Melville, "I found that the whole of the people were now in the lee of the bank, in a distance of about five hundred yards. In the meantime, the native that had gone for Nindemann had brought him back."

"The three bodies were all frozen fast to the snow, so fast that it was necessary to pry them loose with a stick of timber. In turning over Dr. Ambler, I was surprised to find De Long's pistol in his right hand, and then, observing the blood-stained mouth, beard, and snow, I at first thought that he had put a violent end to

his misery. A careful examination, however, of the mouth and head revealed no wound, and, releasing the pistol from its tenacious death-grasp, I saw that only three of its chambers contained cartridges, which were *all loaded*, and then knew, of course, that he could not have harmed himself, else one or more of the capsules would be empty.... I believe him to have been the last of the unfortunate party to perish. When Ah Sam had been stretched out and his hands crossed upon his breast, De Long apparently crawled away and died. Then, solitary and famishing, in that desolate scene of death, Dr. Ambler seems to have taken the pistol from the corpse of De Long, doubtless in the hope that some bird or beast might come to prey upon the bodies and afford him food,—perhaps alone to protect his dead comrades from molestation,—in either case, or both, there he kept his lone watch to the last, on duty, on guard, under arms."

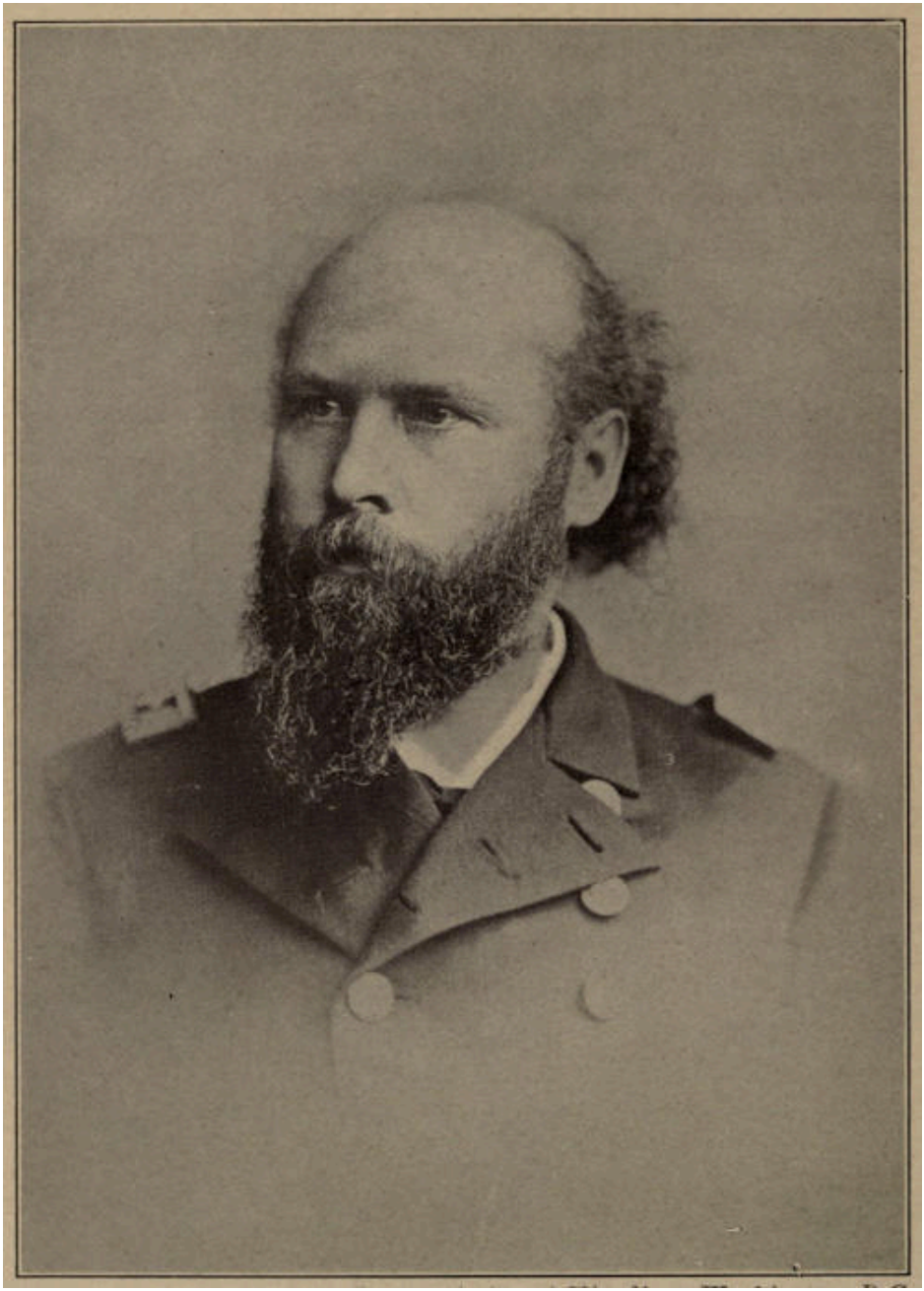
It now remained but to find the other bodies and bury the dead. In due time this was accomplished. Melville writes of the spot chosen as follows:—

"The burial ground is on a bold promontory with a perpendicular face overlooking the frozen polar sea. The rocky head of the mountain, cold, austere as the Sphinx, frowns upon the spot where the party perished; and considering its weather-beaten and time-worn aspect, it is altogether fitting that here they should rest. I attained the crest of the promontory by making a detour of several miles to the southward of its majestic front, and then toiling slowly to the top. Here I laid out by compass a due north and south line, and one due east and west, and where they intersected, I planted the cross which marks the tomb of my comrades."

"There in sight of the spot where they fell, the scene of their suffering and heroic endeavor, where the everlasting snows would be their winding sheet and the fierce polar blasts which pierced their poor unclad bodies in life, would wail their wild dirge through all time,—there we buried them, and surely heroes never found a fitter resting place."

Lieutenant Harber was also in the field, as was Mr. Jackson, correspondent of the *New York Herald*. A thorough search was made of the Delta for Chipp's party, without avail.

Congress having appropriated $25,000 for the expense of bringing home to America the bodies of De Long and his unfortunate party, Lieutenant Harber and Master Schuetze of the relief ship *Rogers*, which had been burned off the coast of Siberia in December, 1881, left the Lena in 1883 after a year's search, bringing with them the remains.



Rear Admiral George W. Melville, U.S.N.

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CHAPTER XIX

International circumpolar stations.—Failure of Dutch expedition.—Greely expedition reaches Lady Franklin Bay.—Life at Fort Conger.—Sledge journey of Brainard and Lockwood.—Farthest north.—Greely's journey to interior of Grinnell Land.—Lake Hazen.—Failure of relief ship *Neptune* to reach Conger in 1882.—Official plans for Greely's relief in 1883.—*Proteus* crushed in ice.—Garlington's retreat.—Greely's abandonment of Fort Conger.—Greely reaches Cape Sabine.—The beginning of a hard winter.—Death of members of the party from starvation and cold.—Schley's brilliant rescue of the remnant of the Lady Franklin Bay expedition in 1884.

The plan for establishing International Circumpolar Stations within or near the Arctic Circle, for the purpose of recording a complete series of synchronous meteorological and magnetic observations, was outlined in a well-thought-out paper delivered by Lieutenant Karl Weyprecht, A. H. Navy, before the German Scientific and Medical Association of Gratz in September, 1875, soon after the return from his remarkable journey in the *Tegetthof*.

Though Lieutenant Weyprecht did not live to see his splendid scheme carried into effect, the coöperation of Prince Bismarck and the hearty indorsement of the plan by a commission of eminent scientists, as well as the decision of the International Meteorological Congress, which reported "that these observations will be of the highest importance in developing meteorology and in extending our knowledge of terrestrial magnetism," resulted in the International Polar Conference, at Hamburg, October 1, 1879, in which eleven nations were represented, and a second conference at Berne, August 7, 1880, at which it was decided that each nation should establish one or more stations where synchronous observations should be taken from August, 1882.

With the exception of the Dutch expedition, the scheme was successfully carried out and the stations established without accident.

Norwegians—	Bosekof, Allen Fjord, Norway, under direction of M. Aksel S. Steen.
Swedes—	Ice Fjord, Spitzbergen, under direction of Mr. Ekholm.
Russians—	Sagastyr Island, mouth of Lena, Siberia, under Lieutenant Jürgens.
	Möller Bay, Nova Zembla, under Lieutenant Andreief.
Americans—	Point Barrow, North America, under Lieutenant Ray, U. S. A.
	Lady Franklin Bay, 81° 44′ N., under Lieutenant A. W. Greely, U. S. A.
English—	Great Slave Lake, Dominion of Canada, under Lieutenant Dawson.
German—	Cumberland Bay—west side of Davis Strait, under Dr. Giese.
Danes—	Godthaab, Greenland, under A. Paulsen.
Austrian—	Jan Mayen, North Atlantic, 71° N., under Lieutenant Wohlgemuth, A. H. Navy.

FAILURE OF DUTCH EXPEDITION

As to the unsuccessful Dutch expedition, the Varna sailed from Amsterdam July 5, 1882, bound for Dickson Harbor, but was beset in the Kara Sea in September; she was crushed in December, 1882, when the crew took refuge on board Lieutenant Hovgaard's vessel, the *Dymphna*, which had also been forced to winter in the pack. Nevertheless, Dr. Snellen did his utmost to procure regular observations from their besetment until the following August, when they started by boat and sledge for the coast of Nova Zembla. By August 25, they reached the south point of Waigat Island, where they met the *Nordenskjöld* and were safely landed in Hammerfest, September 1, 1883.

The inestimable value of the combined and systematic record of the scientific observations secured by the International Circumpolar Stations is a matter of public record. The success was complete, and all but the American nation might well be proud of the management and protection offered to the fearless men detailed to the splendid work.

The unparalleled disaster which overtook the Lady Franklin Bay expedition under Lieutenant Greely and his brave companions, through no fault of their own, but by a series of mismanaged accidents for which there was neither excuse nor condonation, leaves a blot upon the American records which the centuries cannot obliterate.

"If the simple and necessary precaution had been taken," writes Markham, brother of the famous explorer, "of stationing a depot-ship in a good harbour at the entrance of Smith Sound, in annual communication with Greely on one side and with America on the other, there would have been no disaster"; and he continues, "If precautions proved to be necessary by experience are taken, there is no undue risk or danger in polar enterprises. There is no question as to the value and importance of polar discovery, and as to the principles on which expeditions should be sent out. Their objects are explorations for scientific purposes and the encouragement of maritime enterprise."

Lieutenant Greely's party consisted of three officers besides the commander, nineteen men of the army, including an astronomer, a photographer, and meteorologist, and two Eskimos. Sailing from St. John's, Newfoundland, July 7, 1881, they were conveyed in the sealer, *Proteus*, to Littleton Island, where they hunted up the mail of the *Alert* and *Discovery*, then proceeded in open water to Cape Lieber, 81° 37′ N. There the ship was delayed by encountering ice in Hall Basin. By August 11, she had pushed through and safely landed the party at the old winter quarters of the *Discovery* in 1875-1876. Immediate preparations were made for building a house, and after all supplies were landed, the *Proteus* sailed home, leaving Lieutenant Greely and his party at "Fort Conger." Indications of approaching winter appeared as early as August 27, and the season proved one of unusual severity. Sledge journeys, hunting parties, and exploring trips, combined with regular duties, scientific observations, exercise and moderate amusements, insured the party a season of successful labour and good health.

Travelling in one instance a week, in another ten days, in frightful temperatures averaging 73° below freezing, Lieutenant Lockwood and Dr. O. Pavy, surgeon of the expedition, with their companions, endured the severity with surprising energy. The ice conditions of Robeson Channel were ascertained and depots established at Cape Sumner for use in the following spring.

Colonel David Legge Brainard, U.S.A.

From a painting in the possession of A. Operti, Esq.

The sun left on October 15, and was absent one hundred and thirty-five days. The curious effect upon the mind produced by the long Arctic night is recorded in December. "About the 10th," writes Lieutenant Greely in his Report, "a few of the men gave indications of being affected by the continual darkness, but such signs soon disappeared and cheerful spirits returned. The Eskimos appeared to be the most affected. On the 13th, Jens Edward disappeared, leaving the station in early morning, without mittens and without breakfast. Sending two parties with lanterns to describe a half-mile circle around the station, his tracks were soon found, leading towards the straits. He was at once pursued, and was overtaken about ten miles from the station, near Cape Murchison. He returned to the station without objection, and in time recovered his spirits. No cause for his action in this respect could be ascertained."

Dr. Pavy, who had spent the previous year among the Eskimos, said that this state of mind was not infrequent among the natives of lower Greenland, and often resulted in the wandering off of the subjects of it, and, if not followed, by their perishing in the cold.

SLEDGE JOURNEY OF BRAINARD AND LOCKWOOD

As early as February 19, 1882, Lockwood and Brainard made a dog-sledge trip to one of the depots, deposited the previous autumn, a journey over the foot-ice of twenty miles. On the 29th of February, Lieutenant Lockwood, accompanied by Brainard, four other men, and two dog teams, made an experimental trip to Thank God Harbor preparatory to his proposed grand expedition along the coast to northern Greenland. Visiting the grave of Charles Francis Hall, Lockwood wrote in his journal the following touching tribute:—

"The head-board erected by his comrades, as also the metallic one left by the English, still stands. How mournful to me the scene, made more so by the howling of the winds and the thick atmosphere! It was doubtless best that he died where he did. I have come to regard him as a visionary and an enthusiast, who was indebted more to fortune than to those practical abilities which Kane possessed. Yet he gave his life to the cause, and that must always go far toward redeeming the shortcomings of any man. The concluding lines of the inscription on the English tablet, I think good. 'To Captain Hall, who sacrificed his life in the advancement of science, November 8, 1871. This tablet has been erected by the British polar expedition of 1875, which followed in his footsteps and profited by his experience.'"

Dr. Pavy, accompanied by Sergeant Rice and Eskimo Jens with a dog-sledge, started March 19, 1882, for the north of Grinnell Land. A supporting sledge under Sergeant Jewell accompanied him as far as Lincoln Bay. On April 1, an unfortunate accident to a sledge runner caused a five days' delay at Cape Union. Sergeant Rice and Eskimo Jens made a forced march back to Fort Conger and secured a new runner. Storms retarded their advance, but in spite of the rough condition of the ice, all supplies were brought up to Cape Joseph Henry and left there April 20. Two days later a violent storm set in, and after it subsided, the party pushed on toward Cape Hecla. A lane of open water was seen extending from Crozier Island round Cape Hecla. As this channel rapidly increased in width, a retreat was decided on, but to his consternation, before land could be reached, Dr. Pavy found himself adrift on a floe in the Polar Ocean. Fortunately the floe was driven against the land near Cape Henry, and after abandoning all articles not absolutely indispensable, he escaped to the mainland, but was obliged to give up further explorations.

In the meantime, Lieutenant Lockwood had completed his preparations, and the advance party, consisting of Sergeant Brainard and nine men dragging four Hudson Bay sledges, left Fort Conger April 3, 1882, to be followed the next day by Lieutenant Lockwood with two men and one dog-sledge, under instructions to explore the coast of Greenland near Cape Britannia "in such direction as (he) thought best to carry out the objects of the (main) expedition,—the extension of knowledge regarding lands within the Arctic Circle."

The 5th of April, Lockwood joined the advance party at Depot A. On the afternoon of the 8th, they reached Cape Sumner. Bags of pemmican were added to the sledge loads for dog food. The parties encountered violent gales and extreme cold (81° below freezing) as they pushed on to Newman Bay. The hard experience of sledge travel was already telling upon the men, and at this point four were sent back, being unfit for continued field work. Pushing on for Repulse Harbor, with three hundred rations and eight men, Lockwood advanced in the face of storms, rough ice, and broken sledges, at the average rate of nine miles per day. The men suffered much from snow-blindness, and the unwonted fatigue of dragging the heavy sledges through areas of soft, deep snow. At Cape Bryant, which was reached April 27, a rest of two days was taken, during which Brainard, with two companions, visited the highest point of Cape Tulford.

On the 29th of May, Lieutenant Lockwood sent back the supporting sledge-men and, with Brainard and the Eskimo Christensen, the dog-sledge and twenty-five days' rations, pursued his journey north across the Polar Ocean to Cape Britannia, which was reached May 5, after six journeys, the last a very short one.

"From the top of the mountain, 2050 feet," writes Lockwood, "which forms Cape Britannia, I got a good view all around. Towards the northeast lay a succession of headlands and inlets as far as I could see—some 15 or 20 miles—and this was the character of the coast beyond as far as I got."

FARTHEST NORTH

They had followed out the letter of their instructions and had reached the destination mentioned therein, but finding it possible to continue their explorations, they pushed on over land never before explored by man, crossing the frozen ocean and reaching Mary Murray Island the 10th of May. The party were now suffering from cold and insufficient food. To husband their rations, they had eaten very little of late.

"The dogs were ravenous for food, and when feeding time came, it was amid blows from the men and fights among the dogs that the distribution was made."

In spite of serious delays by violent wind and storms, by floes so high that the sledge was lowered by dog-traces; by ice so rough as to necessitate the use of the axe before they could advance, and by widening water cracks which delayed their progress, these men pushed boldly on, and on May 15, 1882, made a world's record, reaching on that day Lockwood Island, 83° 24′ north latitude, 42° 46′ west longitude. Gaining a considerable elevation, Lockwood unfurled Mrs. Greely's

pretty little silken flag and "for the first time in two hundred and seventy-five years another nation than England claimed the honors of the farthest north, and the Union Jack gave way to the Stars and Stripes."

From this point the most northerly land seen was Cape Washington; beyond to the north "lay an unbroken expanse of ice, interrupted only by the horizon." Haven Coast trended to the northeast, in a succession of high, rocky, and precipitous promontories.

Evidences of vegetation and game were found in this high latitude. Lemmings, ptarmigan, foxes, and hares found their way to these desolate shores, and small plants struggled for a foothold in the uncongenial soil.

"As we think of Lockwood," writes Charles Lanman, his biographer, "at the end of his journey, with only two companions, in that land of utter desolation, we are struck with admiration at the courage and manly spirit by which he was inspired. Biting cold, fearful storms, gloomy darkness, the dangers of starvation and sickness, all combined to block his ice pathway, and yet he persevered and accomplished his heroic purpose, thereby winning a place in history of which his countrymen may well, and will, be proud to the end of time."[1]

The return was even more arduous than the advance, and as they pursued their weary trail, thoughts wandered to home and creature comforts. "What thoughts one has when thus plodding along!" writes Lockwood in his journal. "Home and everything there, and the scenes and incidents of early youth! Home again, when this Arctic experience shall be a thing of the past! But it must be confessed, and lamentable it is, as well as true, that the reminiscences to which my thoughts oftenest recur on these occasions are connected with eating,—the favourite dishes I have enjoyed,—while in dreams of the future, my thoughts turn from other contemplations to the discussion of beefsteak, and, equally absurd, to whether the stew and tea at our next supper will be hot or cold."

LAKE HAZEN

Joining the supporting party at Cape Sumner, the entire party, suffering from exhaustion and snow-blindness, reached Fort Conger, June 1, 1882. During the absence of Lockwood, Lieutenant Greely had left Fort Conger, April 26, 1882, and penetrated Grinnell Land, reaching Lake Hazen, a glacial lake, some five hundred square miles in area. Lake Hazen was again visited by Greely in June. "Following up Very River to its source, the farthest reached was 175 miles from the home station, between Mount C. A. Arthur and Mount C. S. Smith, which evidently form the divide of Grinnell Land,—between Kennedy Channel to the east and the Polar Ocean to the west." Ascending Mount C. A. Arthur, the highest peak of Grinnell Land, Greely stood 4500 feet above the sea, and saw to the north of Lake Hazen snow-clad mountains, and distant country to the southwest was also covered with eternal snows. Lieutenant Lockwood subsequently supplemented Greely's discoveries of the interior of Grinnell Land with the result that jointly 6000 square miles of territory was examined, an accomplishment which "determines the remarkable physical conditions of North Grinnell Land. It brought to light fertile valleys, supporting herds of musk-oxen, an extensive ice-cap, rivers of considerable size, and a glacial lake (Hazen) of extensive area...."

Traces of Eskimos having wintered at Lake Hazen, as shown by permanent huts, were a source of surprise to the explorers.

"Successful to such a degree as were these geographical explorations," writes Greely, "they were strictly subordinated to the obligatory observations in the interests of the physical sciences. Systematic and unremitting magnetic observations served to round out knowledge by enabling scientists to calculate the secular variation of the magnetic declination of the Smith Sound region. Apart from the general value of the meteorological series, it has most fully determined the climatic conditions of Grinnell Land.

"The tidal observations were so complete at the station and so amply supplemented by outlying stations, that scientists have determined not only the co-tidal lines of the Polar Ocean with satisfactory results, but also learned from them that the diurnal inequality of the tidal wave conforms at Fort Conger to the sidereal day. The pendulum observations have been classed as 'far the best that have ever been made within the Arctic Circle' and the 'determination of gravity (therefrom) has been singularly successful.' Botanical, zoölogical, and anthropological researches were pursued with similar unremitting attention, so that the scientific work of the expedition may be considered as satisfactory and complete,—especially in view of the high latitude of the station."

Summer had passed, and though the men had scanned the horizon long and earnestly for promised relief, no ship reached them. A second winter passed in the slow monotony characteristic of the Arctic night.

In order to facilitate his retreat in case the relief vessel of 1883 failed to reach him, Greely laid down stores at Cape Baird before the sun returned in February, 1883. Under his orders, Lieutenant Greely was to abandon Fort Conger not later than September 1 and retreat southward by boat, until he met the relief vessel, or Littleton Island was reached, where he would find a fresh party with fresh stores awaiting him.

FAILURE OF RELIEF SHIP "NEPTUNE"

As early as December 2, 1881, active steps were taken at the War Department in Washington for the relief vessel of 1882, estimates for an appropriation of $33,000 asked for, and negotiations for supplies opened with firms at St. John's and with the Danish government for stores to be delivered in Greenland. In May, 1882, a board of officers attached to the Signal Service met at Washington

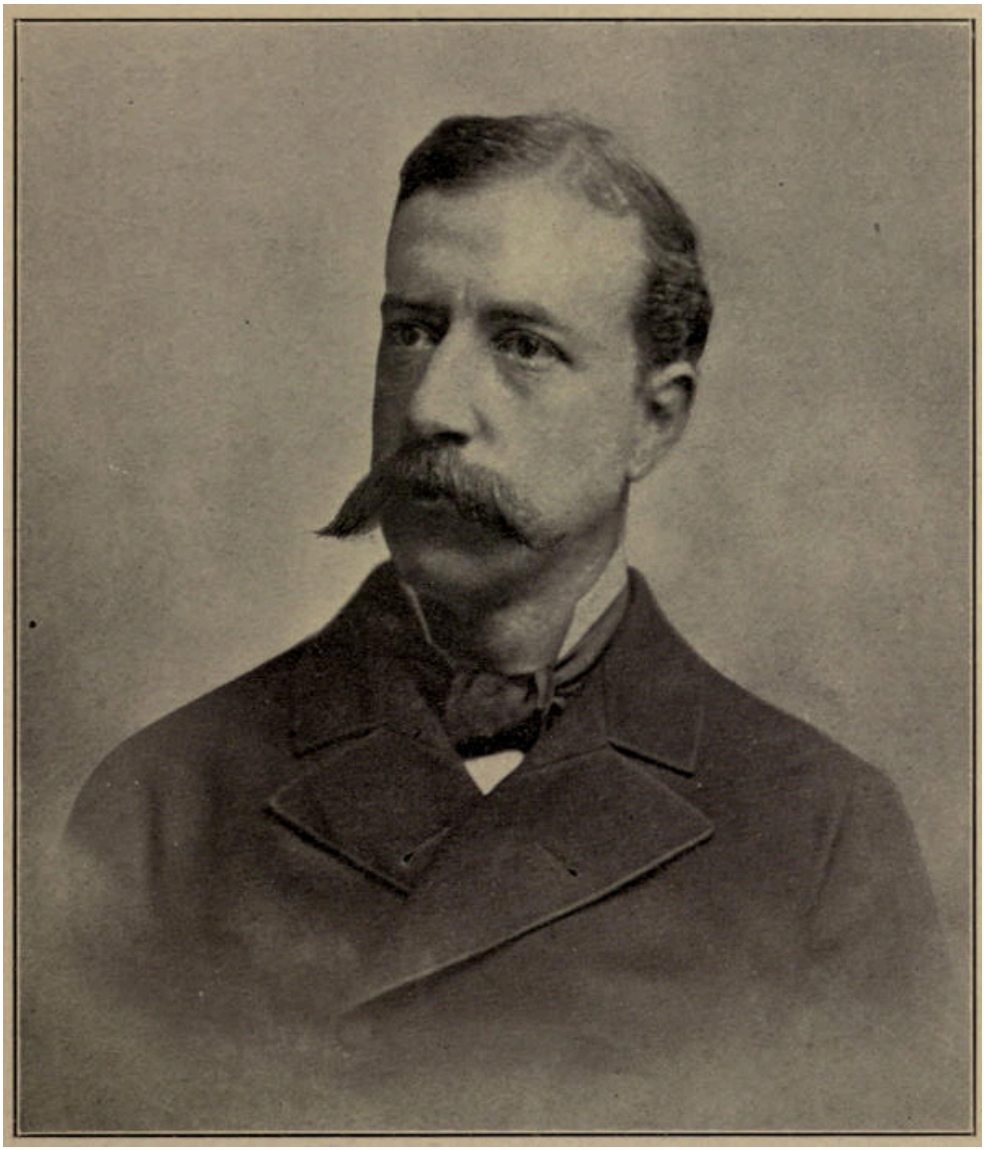
to consider plans for the relief expedition. And the ultimate result was the sailing from St. John's, Newfoundland, on July 8, 1882, of the sealing vessel *Neptune*, with Mr. William M. Beebe, Jr., a private in general service, and formerly Secretary to the Chief Signal Officer, in charge of the relief work.

The *Neptune* touched at Godhaven on the 17th and took on supplies; then directing her course slowly and with difficulty across Melville Bay, she came in sight of Cape York on the 25th; Littleton Island was reached on the 29th, where she was blocked by ice and obliged to return and anchor in Pandora Harbor. The next forty days the *Neptune* made fruitless efforts to enter Kane Sea. In the course of her many failures to penetrate to the north, she found anchorage between Cape Sabine, Brevoort Island, where Beebe examined the English cache made by the *Discovery* in 1875. This cache, of so much importance to Greely's men later, was found to contain one barrel of canned beef, two tins (forty pounds each) of bacon, one barrel (one hundred and ten pounds) dog-biscuit, two barrels (one hundred and twenty rations each) biscuit, all in good condition; two hundred and forty rations, consisting of chocolate and sugar, tea and sugar, potatoes, wicks, tobacco, salt, stearin, onion powder, and matches, in fairly good condition. Beebe failed to leave any provisions of his own.

On August 25, after a fourth trial to penetrate the pack, the *Neptune* returned to Littleton Island with the intention of making depots. Natives being in the vicinity, who in all probability would steal any deposits left, Beebe concluded to postpone making the cache and proceeded to Cape Sabine. Here he deposited, according to his orders, two hundred and fifty rations, one-eighth of a cord of birch wood, and a whale-boat. The *Neptune* then made a fifth attempt to penetrate the pack, and again on September 2, her sixth and final effort. Finding it impossible to advance, she returned to Littleton Island, and a second depot of two hundred and fifty rations was cached. She now started on her homeward voyage, September 5, 1882. Beebe, having carried out to the letter his instructions from the signal office, for the relief of the Lady Franklin Bay expedition, and left two depots of two hundred and fifty rations, or ten days' supply, returned to St. John's, carrying safely from the barren shores of the Arctic two thousand rations, or a full supply for three months.

OFFICIAL PLANS FOR GREELY'S RELIEF IN 1883

The return of the relief party of 1882 made the expedition that was to follow the next summer one of grave importance. In the course of official communication on the subject between the Chief Signal Officer and the Secretary of War, General Hazen stated that "it is most desirable that the officer and the enlisted men who are to go next year, be detailed as early as practicable, in order that they may be trained and have experience in rowing and managing boats, and in the use of boat compasses.... It is desirable that men be selected whose service has been in the northwest, and it is also important that the entire party, before going, should be familiar with boats and their management under all conditions."



Lieutenant James B. Lockwood, U.S.A.

From a portrait in the possession of A. Operti, Esq.

In the Secretary's reply, the suggestion is volunteered, "It seems that it would be much more desirable to endeavour to procure from the Navy the persons who are needed for this relief party." To this General Hazen made answer:—

"To change the full control of this duty now would be swapping horses while crossing the stream, and when in the middle of the stream. To manage it with mixed control, or even with mixed arms of the service under a single control, would be hazardous, and such action is strongly advised against by the many persons of both Army and Navy I have discussed the subject with. The ready knowledge of boats and instruments is but a very small part of the indispensable requisites in this case. This whole work has required a great deal of attention and study from the first, and I have not a doubt but any transfer of control now would result in failure to convey all the threads of this half-finished work, and that it

would work disastrously in many ways. In view of these facts, I would consider the transfer now of any part of this work to any other control as very hazardous and without any apparent promise of advantage."

First Lieutenant Ernest A. Garlington of the 7th Cavalry, having volunteered his services, was ordered, February 6, 1883, to report at Washington. Since his graduation from the Military Academy in 1876, he had served with his regiment at Fort Buford, Dakota Territory. Four enlisted men who had volunteered were also ordered from Dakota.

The *Proteus* was chartered and made ready for her voyage. A request was made by the Chief Signal Officer on the 14th of May that a Navy vessel should be detailed for service in connection with the expedition, "as escort to bring back information, render assistance, and take such other steps as might be necessary in case of unforeseen emergencies." The *Yantic*, under Commander Frank Wildes, was selected, and underwent such preparation as the limited time permitted.

Garlington was instructed to examine, if possible, all depots of provisions and replace any damaged articles of food, and if the *Proteus* could not get through, the party and stores should be landed at Life-Boat Cove, the vessel sent back, and the party should remain. The *Yantic* was to accompany the *Proteus* as far as Littleton Island and render such assistance as might become necessary. Lieutenant J. C. Colwell of the Navy, having volunteered his services, was detailed to accompany Garlington. The *Proteus* and the *Yantic* left St. John's the 29th of June, 1883, and were soon out of sight of each other.

"PROTEUS" CRUSHED IN ICE

The *Proteus* encountered ice in Melville Bay. Garlington examined the Nares cache of eighteen hundred rations on Southeast Gary Island, 60 per cent of the rations proving to be in good condition. There is no record that the 40 per cent were replaced from the *Proteus's* stores.

Littleton Island was passed without a cache being left there. The ice prevented an advance, and Garlington thereupon decided to go to Cape Sabine "to examine cache there, leave records, and await further developments." "At half-past three the *Proteus* came to anchor at Payer Harbor," writes Schley. "She remained at her anchorage from 3:30 to 8 P.M. This stay of four hours and a half at Cape Sabine was a turning-point in the history of the relief expedition. It was made up of golden moments. It is true that no one could predict that by that time next day the *Proteus* would be at the bottom of the Kane Sea. It is also true that Garlington's instructions had been officially construed as not including the formation of depots on the way north, and that the importance of reaching Lady Franklin Bay had been impressed upon his mind as the main purpose of his enterprise. At the same time it was known with tolerable certainty that two months later Greely would be at that point, if he carried out his intentions; and the commander of the relief expedition, although not expressly directed to land anywhere, had been instructed that if landings should be made at points where caches of provisions were located, he was, if possible, to examine them, and replace any damaged articles of food.

"Now there were two caches at or near Cape Sabine. One of them, left by Beebe the year before, was around the point of the cape. The other, left by Nares in 1875, was on Stalknecht Island, a long, low rock in the harbour itself, due west from Brevoort Island, and close to it. The position of the cache was well known. Beebe had visited it in 1882. The *Proteus* was now at Payer Harbor, probably within half a mile of Stalknecht Island; and on board the vessel were the four depots of provisions, of two hundred and fifty rations each, that had been arranged at Disco to be in readiness for landing at some tune and at any time."

Garlington ordered two privates to land and take a set of observations, while he went with a party of men to examine the caches. The repair of a cache and the set of observations are all the work reported as having been done at Cape Sabine on the way north.

Garlington then put to sea, and followed the open leads of water to the northward. After an advance of twenty miles, the ship was stopped by the pack near Cape Albert. The following day she was crushed, and the crew and relief party took to the floe, throwing overboard such stores and provisions as came to hand. Lieutenant Colwell was the last man to leave the ship. Garlington and his party of fifteen men, two whale-boats, and provisions for forty days reached Cape Sabine in safety. He now followed the "Wildes-Garlington agreement," which said "Should *Proteus* be lost, push a boat with party south to *Yantic*."

GARLINGTON'S RETREAT

Garlington's record left by him on Brevoort Island read in part:—

"Depot landed ... 500 rations of bread, tea, and a lot of canned goods. Cache of 250 rations; left by expedition of 1882, visited by me, and found in good condition. English depot in damaged condition, not visited by me. Cache on Littleton Island; boat at Isabella. U.S.S. *Yantic* on her way to Littleton Island, with orders not to enter ice ... I will endeavour to communicate with these vessels at once. Everything in power of man will be done to rescue the (Greely's) brave men."

"It transpired," writes Greely, "that there was no boat at Isabella; that Garlington's orders to replace damaged caches were imperative and disobeyed; that he had no knowledge that the Littleton Island cache was safe; that at Sabine he took every pound of food he could reach, though told that Greely was provisioned only to August, 1883; and that after Colwell's skill had brought Garlington safe to the *Yantic*, he did not even ask Wilde to go north and lay down food for Greely, otherwise doomed to starvation."

On September 13, 1883, Garlington wrote from St. John's, Newfoundland, to the Chief Signal Officer, U.S.A., Washington:—

"It is my painful duty to report total failure of the expedition. The *Proteus* was crushed in pack in latitude 70° 52′, longitude 74° 25′, and sunk on the afternoon of the 23d July. My party and crew all saved. Made my way across Smith Sound and along eastern shore of Cape York; thence across Melville Bay to Upernavik, arriving there on 24th Aug. The *Yantic* reached Upernavik 2d Sept. and left same day, bringing entire party here to-day. All well."

To telegraphic inquiries from the Signal Office asking what stores had been left for Greely, came answer:—

"No stores landed before sinking of ship. About five hundred rations from those saved, cached at Cape Sabine; also large cache of clothing. By the time suitable vessels could be procured, filled, provisioned, etc., it would be too late in the season to accomplish anything this year."

We leave to the imagination the alarm aroused by the sudden realization of what this failure meant to our fellow-countrymen at Fort Conger. From July, 1882, to August, 1883, not less than 50,000 rations were taken in the steamers *Neptune*, *Yantic*, and *Proteus*, up to or beyond Littleton Island, and of that number about 1000 were left in that vicinity, the remainder being returned to the United States or sunk with the *Proteus*.

General A. W. Greely, U.S.A.

Courtesy of Clinedinst

The date of Garlington's letter read "September 13." With what horror did it dawn upon the public mind that the abandonment of the well-supplied station at Fort Conger was ordered "not later than" September 1. Even now Greely and his men, leaving behind them a scant year's army rations, and carrying with them every pound of food possible, were making their hazardous retreat in "heavily laden boats through water-ways crowded with ice, acted on by strong currents and high winds, the recurring heavy gales, keeping the pack in constant motion, to and fro against the precipitous and rockbound coast."

"Time and again," writes Greely, "only the most desperate efforts and measures secured the safety of the specially strengthened launch, while the whale-boat escaped destruction only by speedy unloading and drawing-up on floes. Every cache, however small, was taken up, ending with damaged, mouldy bread, etc., at Cape Hawks."

GREELY'S ABANDONMENT OF FORT CONGER

Fort Conger had been abandoned August 9, 1883; on September 13, the whale-boat had been left behind (afterward recovered), and the men were fighting their desperate way across the pack to the shore. The following day Greely made this entry in his journal:—

"The absence of sufficient light to cast a shadow has had very unfortunate results, as several of the men in the past few days have been sadly bruised or strained. When no shadows form and the light is feeble and blended, there is the same uncertainty about one's walk as if the deepest darkness prevailed. The most careful observation fails to advise you as to whether the next step is to be on a level, up an incline, or over a precipice. These conditions are perhaps the most trying to Sergeant Brainard, who, being in advance selecting our road, finds it necessary to travel as rapidly as possible. A few bad falls quite demoralize a man, and make him more than ever doubtful of his senses. Travelling slowly, with our heavily laden sledges, we rarely suffer much from this trouble, as our steps are slow and uncertain at the best, but when a jar does come on a man pulling his best, it gives his system a great shock and strain."

On September 17, all articles that were not of vital importance were abandoned, and yet the men were hauling about six thousand pounds. At the end of a weary day Sergeant Brainard wrote in his journal:—

"Turned in at 11 P.M., after ten hours of the severest physical strain. As the sleeping-bags (of those of us in the tepee) are protected from the ice by only one thickness of canvas, our comfort can be imagined."

Three days later he adds:—

"We are now carrying burdens which would crush ordinary men, but the texture of the party is of the right sort, and adversity will have very little effect on our spirits."

On September 29, 1883, Greely made a landing at a point midway between Cape Sabine and Isabella, after fifty-one days of the most arduous travel.

"The retreat from Conger to Cape Sabine," writes Greely, "involved over four hundred miles' travel by boats, and fully a hundred with sledge and boat; the greater part of which was made under circumstances of such great peril or imminence of danger as to test to the utmost the courage, coolness, and endurance of any party, and the capacity of any commander. As to my officers and men, it is but scant justice to say that they faced resolutely every danger, endured cheerfully every hardship, and were fully equal to every emergency (and they were many) of our eventful retreat."

On October 5, Lieutenant Lockwood says:—

"We have now three chances for our lives: First, finding American cache sufficient at Sabine or at Isabella; second, of crossing the straits when our present rations are gone; third, of shooting sufficient seal and walrus near by here to last during the winter. Our situation is certainly alarming in the extreme."

These men were shelterless, with but a small food supply, with impassable barriers of ice north and south. "Some hunted on land, others on ice; some put up stone huts, others searched for cairns and records." The Arctic night had settled upon them before their huts were barely finished, these huts of heavy granite stones, dug from the snow and ice, lifted with swollen and bleeding hands, put in place with back-breaking efforts, by enfeebled, weary men, and into them they crawled with torn clothing, hand and footgear in holes, covering shivering, aching bodies.

GREELY REACHES CAPE SABINE

In this desperate plight, scouts returned with news of the sinking of the *Proteus* and with the notice from Lieutenant Garlington, describing the disaster, his plans and his retreat, and the caches of provisions at Cape Sabine. Relying on the expressed promise that "everything within the power of man will be done to rescue the brave men at Fort Conger from their perilous position," Greely at once endeavoured to move his party near that point. "Camp Clay" was established on Bedford Pim Island, which was reached October 15, with forty days' rations to tide over two hundred and fifty days of darkness and misery until help could come. Another hut was erected by the same arduous methods employed in building former huts. The rock walls were about two feet thick and three feet high; outside this wall was an embankment of snow at first four feet thick, but as the season advanced the winter gales buried the hut entirely in snow.

"The whale-boat just caught on the end walls, and under that boat was the only place in which a man could even get on his knees and hold himself erect. Sitting in our bags, the heads of the tall men touched the roof." "Compared to our previous quarters," writes Greely, "the house is warm, but we are so huddled and crowded together that the confinement is almost intolerable. The men, though wretched from cold, hard work, and hunger, yet retain their spirits wonderfully."

It now behooved the party to gather in the stores from all the caches, and this was done under the most trying conditions. The news of the loss of the *Jeannette* was learned by a newspaper found among the stores and brought in with other articles. Records and instruments of the Lady Franklin Bay expedition were safely cached early in October on Stalknecht Island.

During the few remaining days of light, the hunter, Long, with the Eskimo, remained out of the floe in the intense cold, ill fed, without shelter, for the purpose of securing seals or other game that might be seen. A seal was all that was secured under the most trying circumstances.

When certain of the stores were examined to ascertain their condition, the dog biscuits were evidently bad, but "When this bread, thoroughly rotten and covered with green mould, was thrown on the ground, the half-famished men sprang to it as wild animals would." October 26, 1883, marked the last day of sunlight for one hundred and ten days. The hunters still pursued their labours, but without success. However, on the last day of the month, "Bender was fortunate enough to kill a blue fox with his fist; it was caught with its head in a meat-can."

All rations had been collected except one hundred and forty-four pounds of beef cached by Nares in 1875, forty miles distant at Cape Isabella. A further reduction of the quantity of food served to each man was inaugurated November 1. The following day Rice, Frederick, Elison, and Lynn started in the Arctic night for Cape Isabella; on the fifth day out they reached their destination after the most hazardous travel in temperatures ranging from -20° to -25° with only sixteen ounces of food per day to each man. Taking up their cache of meat, they started on the return journey. On reaching their first camp after fourteen hours of hard travel, Elison, who had done this day's work on a cup of tea and no food, was found to have frozen both his hands and feet. "Our sleeping-bag was no more nor less than a sheet of ice," writes Frederick in his journal. "I placed one of Elison's hands between my thighs, and Rice took the other, and in this way we drew the frost from his poor frozen limbs. This poor fellow cried all night from pain. This was one of the worst nights I ever spent in the Arctic."

Continuing the next two days with their half-frozen comrade, they reached Eskimo Point. Here they cut up an abandoned ice-boat for fuel, and endeavoured to thaw out Elison's limbs and dry his clothing. "When the poor fellow's face, feet, and hands commenced to thaw from the artificial heat," says Frederick, "his sufferings were such that it was enough to bring the strongest to tears."

After labouring nineteen hours for the welfare of their suffering comrade, Rice and Frederick attempted to advance. —"We tried to keep Elison in front of us, but to no avail. He would stagger off to one side, and it seemed every moment that the frost was striking deeper into the poor man's flesh. We fastened a rope to his arm and the sledge, as it now took three men to haul our load, but every few rods the poor fellow would fall, and then sometimes he was dragged several feet. No person can imagine how that poor man suffered."

Unable to haul Elison any farther, in the face of a gale and the piercing temperature of -20°, it was decided that Rice should start for Camp Clay for assistance. With only a bit of frozen meat for food, he started alone in the Arctic darkness and travelled twenty-five miles in sixteen hours, reaching the camp at midnight. Immediate relief was started, Sergeant Brainard and Christiansen leading the advance, to be followed two hours later by Lieutenant Lockwood, the doctor, and four of the men.

The fearful night spent by Frederick, Lynn, and their frozen companion can hardly be pictured. "We tried to warm him," says Frederick, "but as we lay helpless and shivering with the cold, and poor Elison groaning with hunger (his frozen lips did not permit him to gnaw the frozen meat) and pain, you can imagine how we felt. Lynn was a strong, able-bodied man, but the mental strain caused by Elison's sufferings made him weak and helpless. In fact, I was afraid that his mind would be impaired at one time. We were but a few hours in the bag when it became frozen so hard that we could not turn over, and we had to lay in one position eighteen hours; until, to our great relief, we heard Brainard's cheering voice at our side. There was nothing more welcome than the presence of that noble man, who had come in advance with brandy for Elison and food for all."

The rescue party, although weak and half-starved themselves, reached Elison with all despatch to find him in a very critical condition; his hands and feet were frozen solid; his face frozen to such an extent that there was little semblance of humanity.

THE BEGINNING OF A HARD WINTER

If November was ushered in with such misfortune, the succeeding months record a history of unparalleled misery and suffering. The hunters were ever on the alert, and the occasional game brought in was the only cheer that surrounded these famishing outcasts. A seal, a bear, a few foxes, dovekies, and ptarmigan were all that the desolate land gave forth to the unremitting vigilance of the hunters, and, reduced to the last extremities of famine, shrimps, seaweed, reindeer-moss, saxifrage, and lichens were diligently sought for and devoured.

On Thanksgiving Day,—what irony in the mere name,—these men celebrated by a little extra allowance of food—and Greely wrote in his journal:—

"To-day we have been *almost* happy, and had *almost* enough to eat."

On December 9, there is rejoicing because Brainard and Long shot two blue foxes.

"We are all very weak," writes Lieutenant Lockwood, ten days later, "and I feel an apathy and cloudiness impossible to shake off. It is a great difficulty to know each night just how much bread to save for breakfast on the morrow,—hunger to-night fights hunger to-morrow morning. I always eat my bread regretfully. If I eat it before tea, I regret that I did not keep it; and if I wait until tea comes, and then eat it, I drink my tea hastily and do not get the satisfaction I otherwise would.

What a miserable life, when a few crumbs of bread weigh so on one's mind! It seems to be so with all the rest. All sorts of expedients are tried to cheat one's stomach, but with about the same result."

On December 21, Lieutenant Greely says:—

"Sergeant Brainard is twenty-seven to-day. I gave him half a gill of rum extra on that account, regretting my inability to do more for him. He has worked exceedingly hard for us this winter; and, while all have done their best, his endurance, unusual equanimity of temper, and impartial justice in connection with the food have been of invaluable service to me."

"Mouldy hard bread and two cans of soup make a dinner for twelve," says Brainard. "At Fort Conger ten cans of soup were needed to begin dinner. But even the dire calamity which now confronts us is insufficient to repress the great flow of good nature in our party generally."

"A terrible scene occurred in our wretched hut during the morning," writes Brainard, March 24, 1884. "While preparing breakfast (tea) the cooks had forgotten to remove the bundle of rags from the ventilators in the roof, and the fumes thrown off by the alcohol lamps, being confined to the small breathing space, soon produced asphyxia. Biederbick, one of the cooks, was the first to succumb to its effects, and Israel immediately afterwards became insensible. At the suggestion of Gardiner, all the rest of us rushed for the door, and the plugs were at once removed from the roof and the lamps extinguished. By prompt attention, Dr. Pavy succeeded in reviving Israel and Biederbick. Those who went outside were less fortunate than those who fainted in their bags. As soon as they came in contact with the pure outside air, all strength departed, and they fell down on the snow in an unconscious state. In consequence of the absence of all animation, many of us were frost-bitten—Lieutenant Greely and myself quite severely. The lives of several of the men were probably saved through the noble efforts of Gardiner, who, though weak and sick, did all in his power to get us in the hut.... During the excitement of the hour about half a pound of bacon was stolen from Lieutenant Greely's mess, and as soon as the fact became known, great indignation was expressed that in our midst lived a man with nature so vile and corrupt—so utterly devoid of all feelings of humanity—as to steal from his starving companions when they were thought to be dying. A deed so contemptible and heartless could not long remain concealed from those who had been injured. We were not disappointed in the discovery that Henry was the thief. He had literally bolted the bacon, and his stomach was overloaded to such a degree that, in its enfeebled state, it could not retain this unusual quantity of food, and his crime was thus detected. Jens afterwards reported having seen him commit the theft, and illustrated by signs his manner of doing it."

"Poor suffering Elison!" he writes a few days later. "This morning he turned to the doctor and said, 'My toes are burning dreadfully, and the soles of my feet are itching in a very uncomfortable manner; can you not do something to relieve this irritation?' He little dreams that he has neither toes nor feet: they having sloughed off in January."

On March 21, Greely makes this entry:—

"A storm prevents hunting.... It is surprising with what calmness we view death, which, strongly as we may hope, seems now inevitable."

DEATH FROM STARVATION

As the gaunt and ghostly form of Death laid its fatal touch upon the weakest one by one, a strong man stole food from comrades, and stole again, and justly forfeited his right to live. Then one by one they died, the Eskimo, Christiansen, from exhaustion, and Lynn. "He asked for water just before dying; and we had none to give."

Then Rice sacrificed his life for others, dying in the arms of his comrade, Frederick, near Baird Inlet, where he had gone in search of a hundred pounds of English beef abandoned in November, that Elison might be brought to camp alive. Then Lockwood died and Jewell failed—and soon joined his sleeping comrades, and yet in face of horror crowding upon horror, there is an entry:—

"On Easter Sunday we heard on our roof a snow-bird chirping loudly—the first harbinger of spring."

In the meantime, the chief dependence of this rapidly diminishing party was derived from the gathering of shrimps—or sea-lice; the small crustacea were from one-eighth to one-half of an inch in length, consisting of about four-fifths shell and one-fifth meat, and about seven hundred of them were required to weigh an ounce.

"Dr. Pavy says," writes Brainard in his journal, May 20, 1884, "that our food must be something more substantial than these shrimps, or none of us can live long. I caught twelve pounds of these animals to-day, and one pound of marine vegetation. Returned very much exhausted from this trip. Cannot last much longer."

"Caterpillars are now quite numerous on the bare spots of Cemetery Bridge," he writes a day or two later. "Yesterday Bender saw one of these animals crawling over a rock near the tent, and after watching it intently for a moment he hastily transferred it to his mouth, remarking as he did so, 'This is too much meat to lose.'"

On May 29 there was a southeast gale and drifting snow. Brainard and Long returned from their day's hunting with a few pounds of shrimps and a dovekie. "On returning to the tent," writes Brainard, "Dr. Pavy and Lalor refused to admit me to their sleeping-bag, in which I occupied a place. Physically I could not enforce my rights in this matter, my condition bordering on extreme exhaustion, and wishing to avoid any unpleasantness, I crawled into one of the abandoned bags lying

outside, as the only alternative. This bag was frozen and filled with snow. Can my sufferings be imagined? They certainly cannot be described.

"Suffering with rheumatism, and smarting under the sense of wrong done me by my sleeping-bag companions, mental agony was added to physical torture.

"To-day I caught six pounds of shrimps. This evening (June 6) dinner consisted of a stew composed of two boot-soles, a handful of reindeer moss, and a few rock lichens. The small quantity of shrimps which I furnish daily are sufficient only for the morning meal.

"Wednesday, June 11, 1884. Long returned at 1:30 A.M. from the open water, bringing with him two fine guillemots which he had killed. One of these was given to the general mess, and the other will be divided among those who are doing the heavy work for their weaker companions. This evening a great misfortune befell me. The spring tides have broken out the ice at the shrimping place, and my nets have been carried away and lost; my baits, poor and miserable as they were, are gone also. It is anything but pleasant to reflect that to-morrow morning we will have no breakfast except a cup of tea. It was quite late when I returned this evening from shrimping, and everybody had retired. I did not have the heart to awaken the poor fellows, but I let them sleep on quietly under the delusion that breakfast would await them at the usual hour in the morning. How I pity them!

"I made a flag, or distress signal, as it might be more properly termed, which I intend placing on the high, rocky point just north of our tent, where it may be seen by any vessel passing Cape Sabine."

SCHLEY'S BRILLIANT RESCUE

Ten days later the whistle of the *Thetis* blown by Captain Schley's orders to recall his searching parties fell lightly on the ears of the dying Commander of the Lady Franklin Bay expedition.

"I feebly asked Brainard and Long if they had strength to go out," writes Greely, "and they answered, as always, that they would do their best."

From the cutter, as it entered the cove, Lieutenant Colwell, straining his eyes, recognized the familiar landmarks of the year before.

"There, on the top of a little ridge, fifty or sixty yards above the ice-foot, was plainly outlined the figure of a man. Instantly the coxswain caught up the boat-hook and waved the flag. The man on the ridge had seen them, for he stooped, picked up a signal flag from the rock, and waved it in reply. Then he was seen coming slowly and cautiously down the steep, rocky slope. Twice he fell down before he reached the foot. As he approached, still walking feebly and with difficulty, Colwell hailed him from the bow of the boat:—

"'Who all are there left?'

"'Seven left.'"

"As the cutter struck the ice," continues Schley, "Colwell jumped off and went up to him. He was a ghastly sight. His cheeks were hollow, his eyes wild, his hair and beard long and matted. His army blouse, covering several thicknesses of shirts and jackets, was ragged and dirty. He wore a little fur cap and rough moccasins of untanned leather tied around the leg. As he spoke, his utterance was thick and mumbling, and in his agitation his jaws worked in convulsive twitches. As the two met, the man, with a sudden impulse, took off his glove and shook Colwell's hand.

"'Where are they?' asked Colwell, briefly.

"'In the tent,' said the man, pointing over his shoulder, 'over the hill—the tent is down.'

"'Is Mr. Greely alive?'

"'Yes, Greely's alive.'

"'Any other officers?'

"'No.' Then he repeated absently, 'The tent is down.'

"'Who are you?'

"'Long.'

"Before this colloquy was over, Lowe and Norman had started up the hill. Hastily filling his pockets with bread, and taking the two cans of pemmican, Colwell told the coxswain to take Long into the cutter, and started after the others with Ash. Reaching the crest of the ridge and looking southward, they saw spread out before them a desolate expanse of rocky ground, sloping gradually from a ridge on the east to the ice-covered shore, which at the west made in and formed a cove. Back of the level space was a range of hills rising up eight hundred feet, with a precipitous face, broken in two by a gorge, through which the wind was blowing furiously. On a little elevation directly in front was the tent. Hurrying on across the

intervening hollow, Colwell came up with Lowe and Norman, just as they were greeting a soldierly-looking man, who had come out from the tent.

"As Colwell approached, Norman was saying to the man,—

"'There is the Lieutenant.'

"And he added to Colwell,—

"'This is Sergeant Brainard.'

"Brainard immediately drew himself up to the 'Position of the soldier,' and was about to salute, when Colwell took his hand.

"At this moment there was a confused murmur within the tent, and a voice said,—

"'Who's there?'

"Norman answered, 'It's Norman—Norman who was in the *Proteus*.'

"This was followed by cries of 'Oh, it's Norman!' and a sound like a feeble cheer.

"Meanwhile one of the relief party, who in his agitation and excitement was crying like a child, was down on his hands and knees trying to roll away the stones that held down the flapping tent cloth.... There was no entrance, except under the flap opening, which was held down by stones. Colwell called for a knife, cut a slit in the tent cover, and looked in."

"It was a sight of horror," continues Schley. "On one side, close to the opening, with his head toward the outside, lay what was apparently a dead man. His jaw had dropped, his eyes were open, but fixed and glassy, his limbs were motionless. On the opposite side was a poor fellow, alive, to be sure, but without hands or feet, and with a spoon tied to the stump of his right arm. Two others, seated on the ground, in the middle, had just got down a rubber bottle that hung on the tent pole, and were pouring from it in a tin can. Directly opposite, on his hands and knees, was a dark man with a long matted beard, in a dirty and tattered dressing-gown, with a little red skull cap on his head, and brilliant, staring eyes. As Colwell appeared, he raised himself a little, and put on a pair of eye-glasses.

"'Who are you?' asked Colwell.

"The man made no answer, staring at him vacantly.

"'Who are you?' again.

"One of the men spoke up,—

"'That's the Major—Major Greely.'

"Colwell crawled in and took him by the hand, saying to him,—

"'Greely, is this you?'

"'Yes,' said Greely, in a faint, broken voice, hesitating and shuffling with his words; 'yes—seven of us left—here we are—dying—like men. Did what I came to do—beat the best record.'

"The scene, as Colwell looked around, was one of misery and squalor. The rocky floor was covered with cast-off clothes, and among them were huddled together the sleeping-bags in which the party had spent most of their time during the last few months. There was no food left in the tent, but two or three cans of a thin, repulsive-looking jelly, made by boiling strips cut from the sealskin clothing. The bottle on the tent-pole still held a few teaspoonfuls of brandy, but it was their last, and they were sharing it as Colwell entered. It was evident that most of them had not long to live.

"Colwell immediately sent Chief Engineer Lowe back to the cutter to put off to the *Bear* with Long to report and to bring the surgeon with stimulants, while he fed the dying men with bits of the food he had with him. As their hunger returned, they cried piteously for more; fearing too much at one time would injure them, Colwell wisely dissuaded them, but 'when Greely found that he was refused, he took a can of the boiled sealskin, which he had carefully husbanded, and which he said he had a right to eat, as it was his own.'

"The weaker ones were like children, petulant, rambling, and fitful in their talk, absent, and sometimes a little incoherent."

The *Bear* having by this time arrived, Sergeant Long was lifted from the cutter aboard, and there told his pitiful tale; all were dead except Greely and five others, and they were on shore in "Sore distress—sore distress"; it had been "a hard winter," and "the wonder was how in God's name they had pulled through."

"No words," says Schley, "can describe the pathos of this man's broken and enfeebled utterance, as he said over and over, 'a hard winter—a hard winter'; and the officers who were gathered about him in the ward room felt an emotion which most of them were at little pains to conceal."

Soon after the *Thetis* came in sight, and her officers, including brave Melville, whose last sad offices for De Long had been but lately finished, went ashore and aided those from the *Bear* in the care and succour of the forlorn party.

As soon as possible the men were carefully moved on stretchers and carried in boats to the ships, but not before a hurricane had broken upon them, which made the labour hazardous and difficult.

Meanwhile, Lieutenant Emory of the *Bear* was making a careful collection of all articles belonging to the camp. Near the sleeping-bags were found little packages of cherished valuables, carefully rolled up, and addressed to friends and relatives at home; the survivors, too, had already done up and addressed their own, and, strange as it may seem, a pocket-book was found containing a large roll of bills carried by the owner for some unaccountable reason to the barren shores of Lady Franklin Bay. It was not difficult to move the bodies of the dead; there was only a thin covering of sand above the mounds that formed the graves.

Looking out from the side of the hut to the ice-foot, Colwell's attention was fixed by a dark object on the snow. Following a path which led to it from where he stood, he found the mutilated remains of a man's body.

"It was afterward identified from a bullet hole," writes Schley, "as that of Private Henry, who had been executed on the sixth of June."

Wrapping it in a blanket, Colwell carried it to the landing-place, where a seaman took the bundle on his shoulder. Presently the boat came off, and all who had remained on shore were taken on board the *Bear*. The ships returned to Payer Harbor.

The next day, June 23, Lieutenant Emory, accompanied by Sebree and Melville, and a number of men made a second search at Camp Clay, which lasted several hours; everything was gathered up and brought away.

The officers of the *Thetis* meanwhile had secured from Stalknecht Island Greely's tin boxes containing his scientific records and standard pendulum.

The relief squadron in 1884 under Captain W. S. Schley and Commander W. H. Emory, and fitted out under the personal orders of the Hon. W. E. Chandler, Secretary of the Navy, had brilliantly executed its commission and had out-rivalled the early Scotch whalers, to whom a bounty had been offered by Congress for the speedy rescue of Greely, in pushing boldly through the "middle ice." "No relief or expeditionary vessels ever ventured at so early a date into the dangers of Melville Bay," writes Greely.

"That the United States Navy won in the race for Sabine is an illustration of the wonderful adaptability and abundant resources of the representative American seaman, which so well fits him for coping successfully with new and untried dangers and makes him a worthy rival of our kin across the sea."

In triumph they bore the remnant of the Lady Franklin Bay expedition home to relatives and friends. Only six reached America alive (brave, pitiful Elison had died at Godhaven, July 8), six soldiers out of a company of twenty-five, broken in health, yet courageous in spirit, and loyal to a nation that through "a hard winter—a hard winter—in sore distress—" had left them to their fate!

Rear Admiral Schley, U.S.N.

Courtesy of Clinedinst

CHAPTER XX

Nansen.—The man.—First Arctic experience.—Plans the crossing of Greenland.—Carries out his great undertaking.—Voyage on the *Fram*.—Drifting with the current.—Life aboard.—Nansen and Johannesen start for the Pole.—Difficulties of travel. The "Farthest North."—The retreat.—A winter on the Franz Josef Land.—Attempt to reach Spitzbergen by kayak.—The meeting at Cape Flora with Frederick Jackson.—Home in the *Windward*.

The character of the explorer Nansen is best summarized in the brief paragraph explaining his plan for the first crossing of Greenland.

"My notion," he says, "was that if a party of good 'ski-lobers' were equipped in a practical and sensible way, they must get across Greenland if they began from the right side, this latter point being of extreme importance. For if they were to start, as all other expeditions have done, from the west side, they were practically certain never to get across. They would have the same journey back again in order to reach home. So it struck me that the only sure road to success was to force a passage through the floe-belt, land on the desolate and ice-bound east coast, and thence cross over to the inhabited west coast. In this way one would burn all one's ships behind one, there would be no need to urge one's men on, as the east coast would attract no one back, while in front would lie the west coast with all the allurements and amenities of civilization. There was no choice of route, 'forward' being the only word. The order would be: 'Death or the west coast of Greenland.'"

Between these lines one sees the fibre of this man, who deliberately stakes out his course and invites a race with Death to the goal of victory; who carefully curtails to the minimum the possibility of failure; who thoughtfully removes from weaker companions all temptations that might jeopardize his chances of success, and who carries through a plan scoffed at by the world as the impracticable scheme of a madman.

There is an indescribable charm about this bold Norwegian, "who was a terrible one for falling into brown studies," as a child; of whom his masters wrote, "He is unstable, and in several subjects his progress is not nearly so satisfactory as might have been expected"; who combines a gentle, childlike disposition with an indomitable will, never doubting for an instant that he is right and the world wrong, and who steadfastly goes to work to prove his point. Born in 1861 near Christiania; educated in the university of his native city; fond of all the sciences; trained as a zoölogist; a natural athlete, an expert "skilober," a good hunter, with the spirit for adventure, which is totally careless of all creature comforts, Fridtjof Nansen, at twenty-one, stood on the prow of the *Viking*, a Norwegian sealer, bound for Arctic seas, ready to meet a foe worthy of his mettle.

FIRST ARCTIC EXPERIENCE

This trip to East Greenland waters for the purpose of gathering zoölogical specimens was followed by his appointment the same year as curator in the Natural History Museum at Bergen.

The return of Nordenskjöld in 1883, from his second remarkable journey to Greenland, determined Nansen upon a similar journey, the success of which he carefully planned. Nordenskjöld had made fifteen marches on the inland ice from Sophia Harbor south to Disco Bay, and reached an altitude of forty-nine hundred feet, sending skilled Lapps on skis a farther distance of one hundred and forty miles, where they reached an elevation of sixty-six hundred feet, on the marvellous ice-cap which still rose before them.

Accompanied by three Norwegians, Otto Sverdrup, Lieutenant Oluf Christian Dietrichson, of the Norwegian army, and Kristian Trana, and two Lapps, Balto and Ravna, Nansen sailed on the Danish steamer *Thyra* from Scotland, May 9, 1888. The *Thyra* was to carry the little band of explorers the

first stage of their journey to Iceland. At the Faroe Islands, Nansen learned of the extremely bad condition of the ice round Iceland. The east coast of the island was reported inaccessible. By May 17 the *Thyra* stood off the Vestmanna Islands, and later she passed Reydjanaes, which carries the only lighthouse Iceland possesses.

Anchoring off Thingeyre, the party took leave of the *Thyra*, and, warmly welcomed by Herr Gram, the merchant of Thingeyre, they awaited the *Jason*, which was to convey them to the coast of Greenland. On the morning of June 3, the expectant party sighted a little steamer slowly working inwards. As she came nearer, she was found to be the *Isafold* of the Norwegian Whaling Company. She anchored and sent a boat on shore amid increasing excitement. "I had begun to suspect the truth," says Nansen, "when, to my astonishment as well as joy, I recognized in the first man who stepped ashore Captain Jacobsen of the *Jason*. Our meeting was almost frantic, but the story was soon told. He had reached Isafjord, and, not finding us there, had thought of coming on to Dyrafjord with the *Jason*. But with the strong wind blowing it would have taken his heavily rigged ship a whole day to make the voyage, and, as the Norwegian Company's manager most kindly offered to send the *Isafold* to fetch us, he had taken the opportunity of coming too.

"Farewells were hastily said; willing hands transferred the baggage, which consisted, in addition to the usual Alpine outfit, of Canadian and Norwegian snow-shoes, instruments, food, fuel, and sleeping gear, a load of twelve hundred pounds for their five sledges; and a restive and unwilling pony bought of Herr Gram, and the *Isafold* steamed out of the fiord and to the northwards."

For six weeks the *Jason* made fruitless attempts to land the impatient explorers on this barren coast of Greenland, when, July 17, 1888, Nansen and his party attempted by boat to make Cape Dan, from which they were separated by an ice stream ten miles wide.

"When Ravna saw the ship for the last time," writes Balto, the Lapp, "he said to me: 'What fools we were to leave her to die in this place. There is no hope of life; the great sea will be our graves!'"

Sleeping upon the floes at night, dragging or rowing their boats by day, the journey to the coast was perilous and dangerous in the extreme. After several days they found themselves being carried south upon the floe and "straight away from shore, at a pace that rendered all resistance completely futile."

"July 20," says Nansen, "I was roused by some violent shocks to the floe on which we were encamped, and thought the motion of the sea must have increased very considerably. When we get outside we discover that the floe has split in two not far from the tent. The Lapps, who had at once made for the highest points of our piece of ice, now shout that they can see the open sea....

"The swell is growing heavier and heavier, and the water breaking over our floe with ever-increasing force. The blocks of ice and slush, which come from the grinding of the floes together and are thrown up round the edges of our piece, do a good deal to break the violence of the waves. The worst of it is that we are being carried seawards with ominous rapidity."

Taking refuge upon a stronger and larger floe, the party awaited the issue with courage and resignation, though it must be confessed the poor Lapps were not in the best of spirits. "They had given up hope of life, and were making ready for death." A night of fearful promise succeeded a day of imminent peril. Sverdrup took the watch and paced alone the sea-washed floe. Several times he had stood by the tent door prepared to turn his comrades out.

"Once he actually undid one hood," says Nansen, "took another turn to the boats, and then another look at the surf, leaving the hood unfastened in case of accidents. A huge crag of ice was swaying in the sea close beside us, and threatening every moment to fall upon our floe. The surf

was washing us on all sides.... The other boat, in which Balto was asleep, was washed so heavily that again and again Sverdrup had to hold it in its place."

A second time he came to undo the tent hood, but just as things looked their worst, the floe changed her course and as if directed by an unseen hand, sailed toward land, and took refuge in a good harbour. On July 29, the fates were kind, and they made a landing at Anoritok, 62° 05′ N., nearly two hundred miles south of Cape Dan. Following the shore to the north, they fell in with natives near Cape Bille.

The ice journey commenced from Ninivik 64° 45′ N., which was reached August 10, after pursuing their journey up steep, irregular slopes, covered with soft snow and beset with dangerous crevasses; they made only forty miles inland after seventeen days of most arduous travel, and reached an elevation of six thousand feet.

PLANS THE CROSSING OF GREENLAND

"It was now late in the year," writes Nansen, "and the autumn of the 'inland ice' was not likely to prove a gentle season, so the fact that it was considerably shorter crossing to the head of one of the fiords in the neighbourhood of Godthaab to Christianshaab was an argument that had its weight.... I consulted the map again and again, made the calculations to myself, and finally determined upon the Godthaab route.... The point where I thought of getting down was that which we actually hit, and which lies at about latitude 64° 10′ N.... The rest of the party hailed my change of plan with acclamation. They seemed to have already had more than enough of 'inland ice,' were longing for kindlier scenes, and gave their unqualified approval to the new route."

CARRIES OUT HIS UNDERTAKINGS

Sails had been rigged to the sleds, and with the terrific winds which swept the ice-cap, advance was assisted by this means, the men marching on skis. So frightful were the storms that raged over these desolate snow fields that at night it seemed as if the tent would be torn to shreds, and before a start could be made in the morning, the sledges had to be dug out of the drifts and unloaded so that their runners might be scraped clean of snow and ice, "a task which we found anything but grateful in the biting wind, ... but the cruellest work of the whole day was getting the tent up in the evening, for we had to begin by lacing the floor and walls together; as this had to be done with the unprotected fingers, we had to take good care not to get them seriously frozen." "One evening when I was at work," says Nansen, "I suddenly discovered that the fingers of both my hands were white up to the palms. I felt them and found they were as hard and senseless as wood. By rubbing and beating them, however, I soon set the blood in circulation and brought their colour back."

The Lapps suffered from snow-blindness, and all were burned by the sun's rays. This was largely due to the want of density in the air, and the reflection of the rays from the level expanse of snow.

"About ten in the morning of August 31," writes Dietrichson, "we saw land for the last time. We were upon the crest of one of the great waves, or gentle undulations in the surface, and had our final glimpse of a little point of rock which protruded from the snow. It lay, of course, far in the interior, and for many days had been the only dark point, save ourselves and the sledges, on which our eyes could rest."

At an altitude of nearly eight thousand feet, they toiled on for days over the interminable desert of snow; there was no break in the horizon, no object to rest the eye upon, and a course was laid out by the diligent use of the compass alone. From the second week in September the party had been anxiously looking for the beginning of the western slope. On September 19, Balto's joyful cry of "Land ahead!" greeted the advancing sledge fleet. The ice conditions had become more formidable in character, the gradual descent treacherous in the extreme.

"It was a curious sight for me to see the two vessels coming rushing along behind me," says Nansen, "with their square Viking-like sails showing dark against the white snow fields and the big round disk of the moon behind. Faster and faster I go flying on, while the ice gets more and more difficult. There is worse still ahead, I can see, and in another moment I am into it. The ground is here seamed with crevasses, but they are full of snow and not dangerous. Every now and then I feel my staff go through into space, but the cracks are narrow and the sledges glide easily over. Presently I cross a broader one, and see just in front of me a huge black abyss. I creep cautiously to its edge on the slippery ice, which here is covered by scarcely any snow, and look down into the deep, dark chasm. Beyond it I can see crevasse after crevasse, running parallel with one another, and showing dark blue in the moonlight. I now tell the others to stop, as this is no ground to traverse in the dark, and we must halt for the night."

The joy of having crossed the ice-cap and the prospect of successfully passing the inland ice to the more congenial soil of the western coast caused the little band to meet cheerfully the most arduous labour in a perilous descent over crevasses and glacier, mountain, and valley into the promised land, of which old Ravna spoke with enthusiasm:—

"I like the west coast well; it is a good place for an old Lapp to live in; there are plenty of reindeer; it is just like the mountains of Finmarken."

Having reached the coast, it became essential to reach civilization as well, and to expedite the journey it was found desirable to go by sea. The lack of a boat was a small consideration to men who had boldly sailed sledges across the Greenland ice-cap—for though wood, tools, and materials were lacking, there was the tent and plenty of willow bushes around, some six or seven feet in height. "Ribs made of these would not be as straight as we could wish," says Nansen, "and would not stretch the canvas very evenly, but the main thing was to get her to carry us.... By the evening the boat was finished. She was no boat for a prize competition, indeed in shape she was more like a tortoise-shell than anything else."

In this crazy little craft Nansen and Sverdrup rowed away to get relief from the inhabitants of Godthaab. Their companions remained in Ameralikfjord, in charge of the sledges and equipment. Great was the rejoicing in Godthaab when the explorers reached there and immediate preparations were made to succour the remainder of the party. These had slowly moved in the direction of Godthaab and gratefully welcomed the Eskimos who met them with supplies.

Unfortunately the party missed the last European vessel that left port that season and were obliged to spend the winter in Greenland. Letters and despatches, however, had been carried by the Eskimos down the coast to the *Fox*, M'Clintock's old vessel, in his famous search for Sir John Franklin, and this veteran little craft carried the thrilling news of the "First crossing of Greenland" to Europe. The winter passed, and on April 15 "the settlement rang with the single shriek—'The ship, the ship.'—Joyfully the brave band of explorers received news from home, and almost sorrowfully prepared to leave their hospitable friends of Godthaab."

On May 21, 1889, Nansen and his companions made their triumphant entry into Copenhagen—and, concludes Nansen, "May 30 we entered Christiania Fjord, and were received by hundreds of sailing boats and a whole fleet of steamers.... When we got near the harbour, and saw the ramparts of the old fortress and the quays on all sides black with people, Dietrichson said to Ravna: 'Are not all these people a fine sight, Ravna?' 'Yes, it is fine, very fine;—but if they had only been reindeer!' was Ravna's answer."

Previous to his famous journey across Greenland, in one of his many conferences with Dr. H. Rink, that veteran explorer of Greenland, Nansen was addressed by Mrs. Rink, who said to him:

“You must go to the North Pole, too, some day,” and without hesitation he answered her emphatically, as though his mind had long ago been made up on that point, “I mean to.”

From his twenty-third year, Nansen had bent his mind and energies upon that great journey into the Polar regions, upon which he did not embark, however, until nine years later.

In the meantime, he was appointed curator in the Museum of Comparative Anatomy at the Christiania University.

In the Danish Geographical Journal for 1885, Mr. Lytzen, Colonial Manager at Julianshaab, gave an interesting account of certain relics of the ill-fated *Jeannette* expedition picked up by Eskimos on the west Greenland coast. Among these articles was a list of provisions, signed by Captain De Long, a manuscript list of the *Jeannette's* boats, a pair of oil-skin breeches marked “Louis Noros,” the name of a member of the *Jeannette's* crew, the peak of a cap with F. C. Lindemann, or Nindemann, written on it.

It was plain to Dr. Nansen that these articles had drifted no less than twenty-nine hundred miles and in a period of eleven hundred days, nor could he escape the conviction that a current passes across or very near the Pole into the sea between Greenland and Spitzbergen. Upon this hypothesis Dr. Nansen urged his plan to take a well-provisioned ship, “built on such principles as to enable it to withstand the pressure of ice—for on this same drift-ice, and by the same route, it must be no less possible to transport an expedition.”

In spite of the madness of his scheme, its condemnation by many of the most eminent Arctic authorities of Europe and America, the Norwegian government extended its patronage, and the “Storthing” granted eleven thousand two hundred and fifty pounds toward the expenses of the expedition, the remainder being collected by private subscription.

The *Fram*, eight hundred tons displacement, was built with especial attention to the construction of the shape of the hull, so as to offer the greatest possible resistance to the attacks of the ice. She carried requisite provisions for dogs and men for five years, and coal for four months' steaming at full speed.

The navigation of the *Fram* was given to Captain Otto Sverdrup; Lieutenant Sigurd Scott-Hansen, of the Norwegian navy, was tendered the management of the meteorological, astronomical, and magnetic observations. Dr. Henrik Blessing, physician and botanist, Chief Engineer Anton Amundsen, Lieutenant in the Reserve, Frederick Johannesen, whose eagerness to accompany the expedition led him to accept the position of stoker, and seven others, made up the personnel of the expedition.

VOYAGE ON THE “FRAM”

The *Fram* left Norway in June, 1893, skirted the north coasts of Europe and Asia, and put into the Polar pack ice near the New Siberia Island, September 22, 1893.

Frozen fast in the ice three days later, the *Fram* stood off northwest of Saunikof Land in 78° 50′ N., 134° E. It now behooved the company to ship rudder, clean the boilers, and prepare for winter. No idle moments could be spared, rigging must be cared for, sails inspected, provisions of all kinds got out from the cases down in the hold, and handed over to the cook, and the smithy called upon for his offices in repairing bear traps, hooks, knives, etc.

A busy life is a happy one, and the *Fram's* company lived in harmonious good-fellowship and drifted leisurely with the great ice-pack, just as Nansen had predicted they would, with only occasional visits from bears to break the monotony of complete isolation.

In December, Nansen, who had read Dr. Kane's fearful experiences in the Arctic night, with insufficient food for dogs and men, suffering from the ravages of scurvy, compares his own condition in the comfortable warm quarters on board the *Fram*. No ageing or depressing effects had been felt by any member of his party. The quiet, regular life seemed to agree with them, and with good food, in profusion and variety, a warm shelter, plenty of exercise in the open air, and cheerful diversions in the shape of instructive books and amusing games, the men kept up a cheerful balance of good health and spirits. Nevertheless, the patience of all on board was sorely tried before the cruise was over.

The drift of the ship during the thirty-five months of her besetment, was uneven and irregular; her zigzag course as she receded or approached her goal, encouraged or disheartened her enthusiastic crew. She met bravely and withstood in a remarkable manner threatened disaster from the ice pressures. Wild enthusiasm greeted the slightest advance, such as was found February 16, 1894, when the observations showed 80° 1′ north latitude, a few minutes north of the observations taken the week before. And a corresponding depression is noticed when contrary winds retard or actually force the *Fram* to retrace her hard-earned progress.

It is not surprising that Nansen's adventurous spirit grew restive under the enforced inactivity of the *Fram's* uncertain drift. Early in the year 1894 one finds his mind working upon deep-laid plans to force the issue with the enemy, and eventually he announced his intentions of attempting one of the most daring and hazardous sledge journeys in the annals of Arctic adventure. His plan was to leave the ship with one companion, advance over the frozen polar ocean, as far as possible, and without making an effort to rejoin the ship, retreat by way of Franz Josef Land and Spitzbergen, back to Norway. February 26, 1895, he officially informed the crew that after his departure, Captain Sverdrup was to be chief officer of the expedition, with Lieutenant Scott-Hansen second in command.

On the 14th of March, 1895, the *Fram* stood in 84° 04′ N., 102° E., and amid a parting salute with flag, pennant, and guns, Nansen's third and final sledge dash to the north was taken. Johannesen, who had been chosen as his companion for this arduous undertaking, was in all respects qualified for the work—an accomplished snow-shoer equalled by few "in his powers of endurance,—a fine fellow physically and mentally."

NANSEN AND JOHANNESEN START FOR THE POLE

Off they went, accompanied for a short distance by several of the crew. Three sledges drawn by twenty-eight dogs were loaded with two kayaks, and provisions for one hundred days for the men and fifty days' dog-food. Nansen and Johannesen, fully confident that fifty days would see them at the Pole, plunged into the unknown and met bravely the pitiless foe. Hummocks and ridges, lanes and slush, cold and exhaustion, these were the impediments to progress.

It was Nansen's rule to march nine or ten hours, broken by a midday halt for a little rest and a bit to eat. These stops were a bitter trial to the men exposed to the merciless winds without fire or shelter, to be followed by the uncomfortable task of disentangling the dogs' traces, before they were able to take up the march again. On March 29, they were "grinding on, but very slowly"; the dogs were showing signs of weakening—there was endless disentangling of the hauling ropes.

On April 3 they were making their desperate way over ridges and lanes which had frozen together with rubble on either side. It was impossible to use snow-shoes, there being too little snow between the hummocks. Thick weather, with deceptive mists making all things white, added to their miseries; irregularities and holes and the spaces between, so that the men and dogs stumbled blindly on, crashing into pitfalls and cracks and running the grave risk of broken bones.

On April 6 the ice grew worse and worse; after an advance of only four miles Nansen and Johannesen were in despair.

The following day, the limit of patience was reached—a world's record made—Nansen found himself in 86° 13.6′ N., about 95° east longitude; a distance of one hundred and twenty-one geographical miles from the *Fram*, with two hundred and thirty-five miles between himself and the Pole. Twenty-three days had passed; Nansen and Johannesen turned their backs upon a veritable chaos of ice-blocks, stretching as far as the horizon, and prepared for their retreat to Cape Fligely.

On this remarkable journey southward, confidently expected by Nansen to extend over not more than three months, but which in reality lengthened to one hundred and fifty-three days, the courage and ability of these men was tested to the utmost. Frightful gales, which disrupted the pack, and thick fogs, which made advance almost impossible, added to their discomforts and privations. The dogs reduced in strength from exhaustion and lack of food, died one by one or were killed and fed to the survivors. The work of hauling became heavier and heavier, as their numbers diminished. The men had the misfortune to allow their watches to run down, thereby making their longitude observations uncertain, the result of which was that they travelled far out of their course in search of the land, which persistently remained hidden.

Early in June it became necessary to curtail the rations, and although they steadfastly kept to weights, in order that their remaining provisions would last, they were reduced, June 18, to a frugal supper of two ounces aleuronic bread and one ounce butter per man—and crept into their sleeping-bags hungry and exhausted.

The capture of a seal relieved a situation that threatened to become very serious. At last, on July 24, the tired eyes of the travellers rested upon something rising above the never-ending white line of the horizon, and the joyful cry was raised of "Land! Land!" Progress to the happy hunting-ground was exasperatingly slow and not without its startling adventures. Johannesen was attacked by a bear, and without the prompt action on the part of Nansen would doubtless have proved its victim.

Open water was reached August 6, 1895, and, by dint of paddling and hauling up on the floes to advance by sledge, on August 16 they stood on the dry land of Houen Island. Continuing on their journey they soon realized that the rapid approach of winter would make the effort to reach Spitzbergen impossible, so they encamped on one of the outlying islands off Franz Josef Land and, building themselves a stone hut covered with walrus hides, prepared to spend the winter. Bears and walrus were plentiful and supplied them with abundant food; other game was occasionally shot. The cold Arctic night found them, on the whole, quite comfortable in their hut. The train-oil lamps kept the temperature in the middle of the room about freezing. For nine months Nansen and Johannesen hibernated thus, with no variation to their existence but the taking of the most necessary meteorological observations.

DIFFICULTIES OF TRAVEL

With the return of spring the two "wild men" made every preparation for their journey to Spitzbergen. This was no easy matter, considering they lacked everything, and the few reserve stores of flour and chocolate had mildewed and spoiled during the winter. On May 19, 1896, the sledges stood loaded and lashed and after leaving inside the hut a short report of their journey and adventures, Nansen and Johannesen started for Spitzbergen. Though the winter had been long and monotonous, adventure greeted them frequently in their advance. Nansen nearly lost his life by falling into a water-hole. They were delayed by a gale, during which they nearly lost their kayaks. Seeing these frail crafts, with all they possessed on board, drifting rapidly away from their moorings, Nansen sprang into the icy water and made a desperate attempt at rescue. Meanwhile, Johannesen paced restlessly up and down the ice in an agony of suspense. With strokes growing more and more feeble, the swimmer realized the

desperate situation and, putting forth his last benumbed energies in a final stroke, grasped a snow-shoe which lay across the end. All but frozen, Nansen had great difficulty in getting into the kayak and still more trouble in paddling to land. Numb and shivering, the wind biting his very marrow, he yet had courage to fire at two auks which he secured for a warm and welcome supper.

In the meantime, their meat was nearly gone. The outlook was anything but promising. In these frail, weather-worn, canvas-covered kayaks, twelve feet long, about two and one half feet wide and hardly more than one and one fourth feet deep, there was yet a journey of two hundred miles of ocean, more or less encumbered by ice, which intervened between them and Spitzbergen, where their only hope lay in being taken aboard one of the small vessels, which visit these shores every summer. The future for Nansen and Johannesen was indeed desperate, but a happy chance brought them timely deliverance, and the dramatic meeting with Frederick G. Jackson, June 17, 1896, in the isolated regions of Franz Josef Land terminated one of the most brilliant retreats in Arctic history.

Mr. Jackson and his companions, who for two years had been making most valuable scientific observations and collecting specimens in all departments of natural science which the islands and surroundings seas afforded, welcomed the wanderers with open arms, brought them to the house, fed, and warmed them, and, best of all, gave them news from home and letters. It was not surprising that the first night was spent in reading home letters, which Jackson had faithfully carried for them into these desolate regions, and in talking over the strange adventures now so happily ended. For at last their work was done, and, as Nansen said, “he didn’t want to sleep, he felt so happy.”

So the days passed rapidly until the *Windward* came, which brought yearly supplies to Jackson and carried home the adventurous explorers. They reached Vardo Haven, August 13. All that was needed to complete the happiness of the home-coming was news of the *Fram*, and this was not long withheld. On August 20, 1896, the joyful tidings of the arrival of the *Fram* reached Nansen in a brief telegram sent from Skyaervo, Kraenangem Fiord.

She had pursued her monotonous drift to her highest point to the west-northwest, 85° 57′ N., 60° E., changing to a south-southeast direction, to 84° 09′ N., 15° E., where she remained nearly stationary from February until June, 1896. The open summer permitted Captain Sverdrup to push through her ice barrier, and, by the judicious use of explosives, blast her way to the open water, August 13, 1896, north of Spitzbergen.

CHAPTER XXI

Journeys of Dr. A. Bunge and Baron E. von Toll.—Exploration in Spitzbergen.—Sir Martin Conway.—Dr. A. G. Nathorst.—Professor J. H. Gore.—Andrée's balloon expedition to the North Pole.—Search for Andrée by Theodor Lerner.—J. Stadling, Dr. A. G. Nathorst.—Captain Bade.—Walter Wellman's plan to reach the Pole from Spitzbergen.—Italian expedition under Duke of Abruzzi.—Loss of the *Stella Polare*.—Captain Umberto Cagni's journey.—Breaks the record.—Retreat.—Home.—Baldwin-Ziegler expedition of 1900.—Complete equipment.—Return of expedition in autumn.—Ziegler expedition under Anthony Fiala.—The *America* reaches high northing.—Winters in Triplitz Bay.—Is destroyed.—Failure of sledge journeys.—Relief ship does not come.—Second winter.—Return of party by *Terra Nova* in 1903.

The voyage of the *Jeannette*, among other valuable scientific results, had proved Wrangell Land to be an island of moderate size. The drift of the *Fram* had demonstrated the theory of a polar ocean of vast dimensions and great depth. The interest, therefore, in Arctic exploration for the next few years was centred in numerous scientific parties which thoroughly examined, surveyed, and explored the unknown sections of lands bordering on the Polar Basin.

DR. BUNGE AND BARON VON TOLL JOURNEYS

As early as 1885, an expedition was fitted out under the auspices of the Imperial Russian Geographical Society, and placed in charge of Dr. A. Bunge and Baron E. von Toll for scientific and geographical work in the Siberian Island. Toll visited Nova Sibir and traversed the entire coast of Kotelnoi; in the meantime, Dr. Bunge explored Great Liachof, where he secured a valuable collection of fossils.

Toll returned again to the Arctic in 1893, visiting the northeast of Jana, for the purpose of securing a well-preserved mammoth. Afterward, in company with Lieutenant Schileiko, he again visited the New Siberian Island, and with dog-sledges travelled on the west coast of Kotelnoi, as far as 75° 37′ north latitude, establishing two depots of provisions for Nansen's possible use. Among other important results of this expedition was the discovery of evidence that in the mammoth periods trees grew no less than 3° north of their present limit. Toll returned to the mainland and followed the Lena, reporting impassable tundras from Sviatoi Nos to Dudinka,—and reached Yeniseisk the 4th of December. Later geological researches were made on Great Liachof Island.

Baron Toll determined upon another voyage to the Arctic for the purpose of supplementing the geological knowledge of Bennett and other islands and to complete a journey of exploration to Sannikof Land, first seen by him in 1886.

The *Sarya* was fitted out for this expedition, and the winter of 1900-1901 was passed in 76° 08′ north latitude, 95° east longitude.

"On April 18, 1901," writes Baron Toll, "immediately after the Feast of Easter, Lieutenant Kolomiezoff and the zoölogist, A. Birulja, set out with two sleighs each with a team of eight dogs, the object of the first being to reach the Yenisei and establish coaling stations, while the second was directed to accompany it as far as Cape Sterlegof, some 200 wersts distant. Two days later began my excursion with Lieutenant Koltschak to the Chelyuskin Peninsula, accompanied by a sleigh with a team of twelve dogs and laden as lightly as possible.

"On May 1, we reached that point on the bay where we had established a depot the previous year (1900). The provisions and fish here buried were to complete our supplies, which barely sufficed for just one month. But we were unable to dig out the deposit from the deep snow. On May 7, we started from this place in an east-northeasterly direction, with the intention of pushing on to St. Thaddeus Bay on the east coast of the Chelyuskin Peninsula, and returning thence along the coast. After traversing the tundra for forty wersts in this direction, we again came unexpectedly on an inlet, which grew narrower towards the west-southwest, where it assumed the form of a narrow sound or river mouth.

"The position as determined by Lieutenant Koltschak on the off side of the bay was 76° 17′ N. and 99° 29′ E."

On May 12, the tired dogs were given a day's rest; then Toll made a day's march, half a degree eastward, on Canadian snow-shoes. There were no prospects for adding to their limited food supply by hunting, so it became necessary to retrace their steps.

"Hitherto," writes Toll, "we had to contend with almost constant difficulties caused by fog, and deep snow already softened by the sun. But henceforth we had to struggle with contrary snow-storms, which lasted almost without a break for fourteen days. The consequence was the loss of five dogs, which broke down one after another through exhaustion. On May 30, we reached the *Sarya*, the excursion having lasted forty-one days. Of these we had to pass nine in the sleeping-sack during the fiercest snow-storms; four were uselessly wasted at the depot; and during the remaining twenty-eight days we covered 500 wersts."

Other excursions were made by members of the party, with most gratifying results.

The release of the *Sarya* was confidently hoped for early in August. "But in the interim," writes Baron Toll, "there was still to be solved a geographical question, namely, to discover the mouth of the Taimyr River. According to the maps hitherto published, the Taimyr was supposed to discharge in the first or second of the larger bights lying to the east of the Taimyr Sound. Both of these were twice explored by Lieutenant Kolomeizoff, and in the first was, in fact, found the mouth of a considerable stream; but its configuration was not at all in accordance with the contour lines given by the topographer Wagenoff on Middendorff's chart. In the second no indication could be detected of any river mouth. As these researches had been undertaken in winter amid fogs and snowdrifts, there still remained a doubt, which could only be removed by fresh investigations carried out in clear summer weather. Should these also lead to negative results, the only remaining assumption would be that the Taimyr discharged into that bight which during our journey to the interior of the Chelyuskin Peninsula, Lieutenant Koltschak and I had crossed, since no considerable stream assuredly entered that other inlet where the depot lay."

The survey of the first two bays was undertaken by Birulja and Dr. Walter, their excursion lasting from July 20 to August 15, 1901. "Respecting the question of the Taimyr, the two savants came to negative results. Still they confirmed Kolomeizoff's discovery of a large estuary in the first of the two bays."

On the 25th of August, the fissures in the ice had expanded; the whole of the ice-pack round the *Sarya* was set in motion, and she drifted in the direction of the cliffs of Station Island. Slowly she was carried through the Fram Strait to the open sea. Withdrawing behind a cape at Nansen Island, the *Sarya* awaited the drifting away of the ice-pack. On August 30, the water-way was free, and she began her voyage to Koletnoi Island; doubling Cape Chelyuskin on September 1, she sighted, three days later, the east coast of the Taimyr Peninsula, without meeting any ice.

"As we drew near," writes Toll, "to the New Siberian archipelago in favorable weather till September 7th, a strong southeaster began to blow in our teeth, and against this we made very slow headway. I, therefore, changed the course to the northeast. On September 9th we reached the

edge of the pack-ice in 77° 9′ N., and 14° E. Here we encountered a southern gale, which, acting in concert with the marine current, drove the *Sarya* 30 miles to the northwest. The storm veered round to the west-southwest, and I thought it better again to make the most of the wind and now direct our course southeastwards for Bennett Island, instead of trying under these circumstances to penetrate into the ice in search of land. On September 11th the imposing headland of Cape Emma at Bennett Island suddenly loomed up before us out of the fog, and presently became again wrapped in fog.

"We had approached to within 12 knots of the island, when our further advance towards it was barred by a belt fourteen feet thick of impenetrable ice. Here we remained two days in the hope that the ice might shift, but in vain!"

Disappointed in his hopes of reaching Sannikof Land in 1902, Baron Toll succeeded in sheltering the *Sarya* for a second winter at Nerpichi Bay, Kotelnoi Island, 75° 22′ N., 137° 16′ E. The sad disaster which overtook the brave scientists ends a chapter valuable to Arctic achievement.

On June 7, 1902, Baron Toll, accompanied by Seeberg, the astronomer, and two hunters, left for a geological excursion, and after arduous efforts landed on Bennett Island, August 3, which was found to be a plateau some fifteen hundred feet in height. Their researches disclosed Cambrian deposits.—They left the island to return to the ship on November 8, 1902, and were never seen again. Brunsneff and Koltshak, in a relief expedition in 1904, discovered a record containing the information just stated, but no other traces were found of these courageous men who sacrificed their lives in the cause of science.

SIR MARTIN CONWAY

Another scene of activity was centred in Spitzbergen, for crossing which in 1896 Sir Martin Conway and party received the applause of the world. The following year he again returned to continue his explorations. Dr. A. G. Nahorst circumnavigated Spitzbergen in 1898, surveying and mapping the irregular coast-line with admirable precision. The same year, Professor J. H. Gore of the United States Coast and Geodetic Survey made pendulum observations in Spitzbergen for the determination of the force of gravity in that latitude. Prince Albert of Monaco and party cruised along the coast for the purpose of making scientific observations. So active had been the interest in this hitherto unclaimed archipelago that Russia began to assert her rights to ownership.

ANDRÉE'S BALLOON EXPEDITION TO THE POLE

The most unique venture for polar honours was undertaken in 1897 by Salamon August Andrée, a Swede, and two companions, Mr. Strindberg and Mr. Traenkel, from Dane Island north of Spitzbergen. Andrée was an ardent apostle of aërial conquest of the North Pole. His balloon, the *Ornen*, had a cubical contents of forty-five hundred metres, and the shape of a sphere terminating in a slightly conical appendage. The envelope was made of six hundred pieces of pongee silk, each being from seventeen to eighteen metres long by about forty-eight centimetres wide; these were sewn together by machine, then subjected to a process of "cementing" with a special varnish. A carefully made net composed of hemp cords encompassed the envelope. Special valves were devised by Andrée. The car was of cane basket-work, mounted on a frame of chestnut wood, the bottom being strengthened by wooden cross-beams, the whole covered with tarpaulin, with necessary openings.

Provisioned with tins of preserved food,—chocolate, compressed bread, condensed milk, champagne, claret, butter, fresh water, and alcohol, besides a cooking apparatus, and other necessary equipment,—this frail craft made its ascension with its human freight, July 11, 1897.

"The last farewells are brief and touching," writes Alexis Machuron. "Few words are exchanged, but hearty handclasps between those whose hearts are in sympathy say more than words. Suddenly Andrée snatches himself away from the embraces of his friends and takes his place on the wicker bridge of the car, from whence he calls in a firm voice:—

"'Strindberg ... Franaenkel ... Let us go!'

"His two companions at once take their places beside him. Each is armed with a knife for cutting the ropes supporting the groups of ballast bags.... Andrée is always calm, cold, and impassable; not a trace of emotion is visible, nothing but an expression of firm resolution and an indomitable will. He is just the man for such an enterprise, and he is well seconded by his two companions. At length the decisive moment arrives: 'One! Two! Cut!' cries Andrée in Swedish. The three sailors obey the order simultaneously, and in one second the aërial ship, free and unfettered, rises majestically into space, saluted by our heartiest cheers.... Scattered along the shore, we stand motionless, with full hearts and anxious eyes, gazing at the silent horizon. For some moments, then, between two hills we perceive a gray speck over the sea, very, very, far away, and then it finally disappears.

"The way to the Pole is clear, no more obstacles to encounter—the sea, the ice-fields, and the Unknown!"

Out of the Great White North came a lone survivor, a carrier-pigeon, bringing the tidings written "July 13th, 12:30 P.M., 82° 2′ north latitude, 15° 5′ east longitude. Good journey eastward, 10° south. All goes well on board. This is the fourth message sent by pigeon.

"ANDRÉE."

Ah! but all did not go well. In June, 1899, a buoy containing a note from Andrée was found in Norway; it had been thrown out eight hours after departure.

The "North Pole buoy" to be dropped when the Pole was passed, was found *empty* in September, 1899, on the north side of King Charles Island. A third buoy, also empty, was picked up on the west coast of Iceland, July 17, 1900, and another reported from Norway, August 31, 1900, contained a note stating that the buoy was thrown out at 10 P.M., July 11, 1897, at an altitude of eight hundred and twenty feet, moving north 45 E. Thus the carrier-pigeon was the last messenger—the harbinger of Andrée's last word to friends on earth; the fate of the three brave spirits lies buried in the Arctic silence.

Theodor Lerner was one of the first to hurry to Spitzbergen in 1898 leading the German scientific expedition, to obtain news from Andrée, if possible, and the same year the Swedish Anthropological and Geographical Society sent J. Stadling, with companions, to the Lena delta, the mouth of the Yenisei and the islands of New Siberia, where they searched in vain for traces of their missing compatriots. Again, in 1899, Dr. A. G. Nathorst turned his attention to eastern Greenland in an unsuccessful search for tidings of Andrée, making valuable maps and observations of the fiord system of King Oscar Fiord. Nor did Captain Bade in his explorations in East Spitzbergen, King Charles Land, and Franz Josef Land in 1900 find any traces of the missing aëronaut.

In the year 1894 Walter Wellman, an American, made Spitzbergen the base of his activities in an attempt to penetrate the Polar pack and reach the North Pole. Sailing in the *Ragnvald Jarl*, he had the misfortune to lose his ship off Walden Island; undaunted by this grave disaster, he pushed north with sledges as far as 81°, but had to retrace his steps, owing to the impenetrable condition of the ice. He had, however, reached a point east of Platen Island. Wellman again endeavoured to conquer the ice in 1898, this time choosing for his base Franz Josef Land. He was

liberally fitted out, and accompanied, among others, by Evelyn B. Baldwin of the United States Weather Bureau. Mr. Wellman made his headquarters at "Harmsworth House," at Cape Tegetthoff, for three years the Arctic home of Frederick A. Jackson and his companions.

WELLMAN'S PLAN TO REACH NORTH POLE

In February, 1899, Mr. Wellman, with three companions, started for the Pole with every promise of success. An unforeseen accident to Mr. Wellman, and an upheaval in the ice, which destroyed many dogs and much of their equipment, necessitated a hurried return to headquarters. Disappointed, but not discouraged, Wellman organized a series of important scientific observations and explorations, during which Evelyn Baldwin, in a long sledge journey to Wilczek Land, determined its eastern boundary, and discovered, among other islands to the northeast, Graham Bell Land.

ITALIAN EXPEDITION UNDER DUKE OF ABRUZZI

To that daring and adventurous prince, H. R. H. Luigi Amedeo of Savoy, the duke of the Abruzzi, is due one of the most interesting chapters in Arctic history. There is charm in the graceful dedication of his book, "To Her Majesty the Queen-Mother," as well as in his gallant tribute to his brave companions who won laurels under his direction and fought gallantly the dangers of the Arctic under his banner. "Italians and Norwegians behaved throughout this voyage as though the crew were composed of one nationality," he says. "I had comrades with me, rather than subordinates. I express, therefore, my gratitude towards all, since to their harmonious coöperation is due the success of my expedition, and I express the same gratitude to the memory of the three brave men who perished whilst on the sledge expedition."

The *Jason*, having a carrying capacity of five hundred and seventy tons cargo, was purchased by the Duke, renamed the *Stella Polare*; refitted, equipped, provisioned, and manned for four years, at a total cost of thirty-eight thousand four hundred and thirteen pounds sterling.

Second in command to the Duke of Abruzzi, who, by the way, was but twenty-six years old at the time of his adventure was Captain Umberto Cagni of the Italian Navy, in charge of the scientific observations. Other officers of the Navy were Lieutenant Francesco Querini, in charge of the mineralogical collections, and Dr. Achille C. Molinelli, medical officer, also in charge of the zoölogical and botanical collections. Four other officers, a crew of twelve, and four especially experienced guides completed the personnel of the expedition.

Under the personal advice and superintendence of Dr. Nansen, who aided in every possible way the success of the expedition, a carefully thought out plan was made, by which the *Stella Polare* was to leave Archangel, early in July, make for Cape Flora and Northbook Island, establish a depot provisioned for eight months, then proceed, take up winter quarters as far north as possible, close to the lands lying west of Franz Josef Land. Sledge journeys in the autumn would establish a chain of provision caches on the lands to the north, and in the spring a sledge journey to the north for a world record would be undertaken. A retreat to the depot at Cape Flora with or without the ship would insure subsistence until the arrival of a relief ship to be sent in two years, or, if the relief ship failed, a retreat to Nova Zembla or Spitzbergen would be undertaken by boats.

On June 30, 1899, the *Stella Polare* reached Archangel, where one hundred and twenty-one dogs were taken aboard to be used in the sledge journeys. On the 12th of July, she weighed anchor and proceeded on her voyage. Ice was encountered, July 17, and three days later Northbrook Island was sighted, and a visit made to Jackson's huts and Leigh Smith's winter quarters.

LOSS OF THE "STELLA POLARE"

The *Stella Polare* bravely fought her way through unfavourable ice conditions and succeeded in reaching 82° 04′ N., 59° E. by the British Channel. Securing an anchorage in Teplitz Bay, Prince Rudolf Land, she received a disastrous nip, September 7, when she sprang a leak, and it became necessary to disembark her provisions and establish winter quarters on Rudolf Island.

"As our ship, which we had abandoned after it had been seized by the ice," writes the Duke of Abruzzi, "was the only means of our returning home in the following year, we had to consider how to save her. Part of the engines, the condenser, and the furnaces were under water, which had frozen to a thickness of about nineteen inches. The ship had not changed her position, but had heeled over still more as the ice which had supported her had given way.

"The water had first to be pumped out of the ship to enable us to find the leak on the left side, and this had to be mended as well as that which was visible on the right side; we had then to see if it would be possible to keep the ship dry, and if not, to protect the engines so that they might remain under water during the winter without being injured. Such was the work before us. At that time I did not believe it possible, but Captain Cagni never despaired for a moment of being able to carry it out, and if it was accomplished, it was owing to his strong will and to his perseverance, which was never discouraged by any difficulties."

Early in the winter, the Duke of Abruzzi, in one of his sledge excursions, had the misfortune to freeze a part of his left hand, which resulted in the loss of the joints of two of his fingers. This unfortunate accident prevented his accompanying the spring sledge journey to the north, for which active preparations were already in progress. The sledges and kayaks were patterned after those used by Dr. Nansen; the former eleven feet five inches long, six inches wide, and six and one-half inches high, with convex runners shod with plates of white metal, and were saturated with a mixture of pitch, stearine, and tallow to render them more slippery and durable.

After careful calculations by Dr. Molinelli, the rations to be carried were estimated at two pounds twelve ounces nine drams per day for each man, consisting of biscuit, tinned meat, pemmican, butter, milk, Liebig's Extract, desiccated vegetables, Italian paste, sugar, coffee, tea, chocolate, etc.

The first start was made in February, but after travelling in the extreme cold for several days, the party returned and made a fresh start, March 11. The expedition was composed of ten men and thirteen sledges, which, with their loads, weighed five hundred and fifty-one pounds each, and was drawn by one hundred and two dogs.

It had been previously settled to send back detachments, after twelve, twenty-four, and thirty-six days; the last detachment to remain in the field seventy-two days. Cagni, however, modified these plans, and in the meantime the Duke of Abruzzi anxiously waited the return of the first detachment. On April 18, the second detachment returned to camp; they had left Commander Cagni, March 31. The first detachment, consisting of Lieutenant Querini, Stökken, and Ollier, had started to return March 23. An immediate search was instituted for the missing men, but without results. After every effort had been expended, the three men were given up for lost. Meantime, the other supporting parties having returned, anxiety was beginning to manifest itself for Cagni. The day set for his return had come and gone. On May 19, Dr. Molinelli and two companions had set out for Cape Fligely, with provisions for ten days, to look for him. The Duke of Abruzzi anxiously scanned the horizon with his telescope for signs of his missing companions. After an absence of one hundred and four days, Captain Cagni, with three companions, having made a world record and reached 86° 34′, was sighted in the distance and welcomed home by his impatient and enthusiastic companions.

“Although their strength had been much reduced,” writes Abruzzi, “by want of sufficient food, they were not exhausted. The seven dogs which survived seemed much worse; some of them were merely skin and bone. The only part of their outfit they had brought back that was still capable of being of any use, was their tent, and this had been mended. The framework of the kayaks had been broken and their canvas torn, so that they could not be used unless a week was spent in mending them. The sledges which remained had been mended with pieces of other sledges. All that was left of their cooking utensils was the outer covering of the stove, a saucepan which had been mended, and the plates. The *Primus* lamp had been replaced by a pot, in which dog’s grease had been burned for the last few weeks. The sleeping-bag had been thrown away, and only the thick canvas lining kept. Their clothes were in rags.”

Cagni had advanced under the same trying conditions of hummocky ice, slush, and deep snow that had been encountered by Nansen; he had had the misfortune to freeze one of his fingers, and suffered excruciating pain, necessitating his operating with his own hand and removing the dead mass with a pair of scissors. He had steadily advanced until April 25, 1900.

His return journey covered sixty days under the most alarming conditions; for on May 18, he writes: “I feel more and more every day a terrible anxiety with regard to our fate. After marching nine days toward the southeast, we are nearly on the same meridian,” owing to the southwest drift of the ice-pack. Four weeks more of almost superhuman effort brought them to Harly Island, from which point they made their way to Rudolf Island.

With the achievement of this brilliant record it now remained but to free the *Stella Polare* by blasting and cutting channels about her snug quarters. The brief Arctic summer having set in, her deliverance at last was secured, and “At half-past one in the morning of August 16, everything was ready, and we steamed slowly away from the shore, giving three cheers as we turned round the ice of the bay which had held us so long imprisoned.”

BALDWIN-ZIEGLER EXPEDITION OF 1900

In contrast to the Italian expedition, the Baldwin-Ziegler Polar expedition, which sailed from Tromsoe, Norway, July 17, 1900, stands out conspicuously. Mr. Baldwin was born in Springfield, Missouri, in 1862. He had seen Arctic service with the Peary expedition of 1893-1894, and had come near being one of the ill-fated Andrée balloon party. He had done good service with Wellman in Franz Josef Land, and now with the unlimited means put at his disposal by the munificence of Mr. William Ziegler of New York, he proposed to conquer the Pole.

“Our fleet,” wrote Mr. Baldwin in *McClure’s Magazine*, September, 1901, “comprises three vessels. The *America*, our flagship, as some one has expressed it, is a three-masted ship-rigged steamer of 466 tons net burden, driving a single screw. Her length over all is 157 feet; beam, 27 feet; depth, 19 feet.... The *Frithiof* is a Norwegian sailing-vessel, ... the third vessel is the *Belgia*, which carried the Belgian Antarctic expedition of 1897-1899, under Captain Gerlache.”

Never before in the history of Polar expeditions was food and equipment carried in such luxurious profusion. The three vessels were as many floating hotels with larders lacking “nothing that foresight, experience, and the generosity of Mr. Ziegler could suggest or procure.”

The scientific equipment was also complete, including small balloons with releasing devices for depositing records when the ground was reached, buoys with records to be sent floating back to civilization by the currents, search-lights and wireless telegraph, besides the standard scientific instruments for meteorological, astronomical, and geodetic work. There were three hundred and twenty dogs, and fifteen ponies in charge of six expert Russian drivers.

“The present expedition,” wrote Mr. Baldwin, “typifies the spirit of the twentieth century;” and he adds, “No previous expedition to the north has ever made such complete arrangements for the transmission of news back to civilization as that which I have the honor to command.”

“The *America* and the *Frithiof* left Tromsoe, Norway, in July, 1901, for Franz Josef Land, which Baldwin regarded as the best starting-point for a polar venture,” writes Mr. P. F. M’Grath in the *Review of Reviews*, July, 1905, “proceeding to Alger Island, in latitude 80° 24′ north, longitude 55° 52′ east, where he established his winter quarters. The *Frithiof* unloaded her stores and proceeded south, leaving the *America* harbored, with the dogs and equipment ashore, portable houses erected, and detail of duties being carried out. The personnel comprised 42 souls,—17 Americans, 6 Russians, and 19 shipmen, mostly Norwegians. Game was plentiful, and several tons of bear and walrus meat were accumulated, the former for the men and the latter for the dogs. With this base beyond the eightieth parallel, Baldwin intended to push forward with his ship, or over the ice, exploring the adjacent region for uncharted land masses which would supply stationary points, insuring him against the disadvantages of an advance across the shifting ice, and from the farthest north of these he would, the next spring, make his dash across the crystal fields for the Pole. In this he would employ about twenty-five men as a vanguard and reserve, the flying column pushing rapidly ahead, and the transport train following with the heavier supplies. Numerically, the party would be strong enough to overcome otherwise serious obstacles, while the quantity of supplies to be carried by 320 dogs and 15 ponies would put the possibility of disaster almost out of the question.... With this elaborate programme, and the knowledge that the Duke of Abruzzi, with a much smaller party, attained a northing of 86° 33′, Baldwin confidently anticipated making the Pole. And, as in that segment of the Arctic Circle he might find himself, in returning, obliged by ice and currents to head for the Greenland coast, which reaches to 83° 27′, or 180 miles nearer the Pole than his base, he planned that if he should be swerved westward by the tides, it would be easier to reach that shore. There he would find musk-oxen to eke out his supplies, and journey down the east coast to where the depot was made by the *Belgica* for him. But, as often happens in Polar work, Baldwin’s hopes were blasted, dissensions rent his party asunder, his dogs perished by the score, and after a futile attempt to get north, he and his whole party returned to Tromsoe in August, 1902, while the *Frithiof*, which had sailed for Alger Island a month previous with additional outfits and for news of him, had to retreat, owing to the unbroken ice-pack.”

The return of the Baldwin-Ziegler expedition in the autumn of 1902 was followed by that reorganized by Mr. Ziegler and given to the leadership of Mr. Anthony Fiala of Brooklyn, New York, to be carried out on practically the same lines laid out by Mr. Baldwin.

Captain Edwin Coffin, of Edgartown, Massachusetts, was chosen as navigating officer, and he assembled an American crew, most of them experienced whalers. Of the Field Staff, Mr. William J. Peters, of the Geological Survey and representing the National Geographic Society, was chosen as chief scientist and second in command of the expedition. The results of his systematic records and magnetical observations, when in the north, were of the highest value, and he rendered most efficient service.

The Retreat of 1904

Sledge column leaving Cape Mellinbock

Courtesy of Doubleday, Page and Co.

Breaking Camp at Cape Richthope

Courtesy of Doubleday, Page and Co.

After collecting stores and equipment, the *America* sailed from Trondhjem, Norway, June 23, 1903. Brief stops were made at the island of Tromö and Archangel, where dogs, ponies, and additional stores were taken aboard. The ice was first met, July 13, in 74° 51′ north latitude, 38° 37′ east longitude, through which the *America* steamed and blasted her way to Cape Flora, which was reached August 12. A few days later Triplitz Bay was passed, with the "skeleton-like remains of the framework of the tent where lived the brave Abruzzi and his companions, standing out in plain view." The *America* made the highest northing of a ship under steam in the Western Hemisphere, and reached a point, 82° north latitude; she then returned to Triplitz Bay. Upon landing, Fiala found the Abruzzi cache in excellent condition. "Camp Abruzzi" was established, scientific work at once begun, and preparations commenced for the spring sledge journey to the north.

RETURN OF EXPEDITION IN AUTUMN

Severe gales struck in early in October, and continued almost unremittingly until the last of the month, when they raged with such fury as to threaten the safety of the ship.

She bravely withstood the terrible ice pressures to which she was subjected until January 23, when, during a frightful hurricane, she disappeared from view.

The first week in March a sledging journey was undertaken, comprising twenty-six men, sixteen pony-sledges, and thirteen dog-sledges, but the severity of storms, and the suffering and hardship endured from cold, decided the party to return, and camp was reached on March 11. Other journeys of short duration were undertaken with similar success. Leaving part of the company at Camp Abruzzi, Fiala made a retreat to Cape Flora, there to await the promised relief ship which was expected early in August. His idea was to renew his North Pole dash the following season.

The expected ship was eagerly watched for, but as the months sped by one by one, and the ship did not come, preparations were made for wintering, and the liberal depots of supplies left by Jackson, Abruzzi, and Andrée, were examined and found in excellent condition.

"Elmwood," Jackson's little house, was dug out and made habitable. Communication was frequent between "Camp Abruzzi" and "Elmwood."

Fiala, in a cold and dangerous journey, returned to Camp Abruzzi, where he made preparations for another spring journey toward the Pole, to be undertaken with one companion, three dog teams, and a supporting column of three small detachments. Seaman Duffy, who had accompanied Fiala to Cape Barentz in August, 1904, and Camp Flora in June of the same year, was chosen as his companion. The start was made in March, but very slow progress was made. After days of disheartening travel, covering but a few miles a day, the conditions grew worse instead of better. "Our trail was from ice-cake to ice-cake," writes Fiala, "while we crossed the separating water by means of ice-bridges laboriously constructed at the narrowest points with our ice-picks. In other places, we traversed monster pressure ridges that splintered and

thundered under our feet, scaring the dogs until they whined and whimpered in their terror. It was difficult to find a cake of ice large enough for our small party to camp on. Deep snow and numerous water-lanes, with a high temperature and attendant fog, also impeded our advance."

On March 22, the advance was abandoned, and ten days were occupied in the retreat. Camp Abruzzi was reached, April 1.

The relief ship *Terra Nova* reached Cape Flora the end of July, picked up the party encamped there, and, touching at Cape Dillon, took aboard the remainder. It was then learned that in 1904 the *Frithiof* had made two bold attempts to reach Cape Flora, but had been unsuccessful.

CHAPTER XXII

Otto Sverdrup.—Four years' voyage of the *Fram*.—Journeys in Ellesmere Land.—Important exploration of Jones Sound.—Discovery of new lands.—Release of the *Fram*. Captain Roald Amundsen.—The voyage of the *Gjoa*.—Reaches head of Petersen Bay (King William Land).—Two years' stay.—Valuable scientific observations.—Visits from Eskimos.—Sledge journeys.—Release from the ice.—August 14, 1906.—Completion of the Northwest Passage.—Another Arctic winter.—Sledge journey of Amundsen to Eagle City.—Release of the *Gjoa*.—Reaches San Francisco, 1907.

In the *Geographical Journal* of November, 1902, Sir Clements R. Markham, President of the Royal Geographical Society of London, commenting on the remarkable achievement of Otto Sverdrup and his gallant companions during four travelling seasons entailing four Arctic winters, expresses himself as follows:—

"They have discovered the western side of Ellesmere Island and the intricate system of fiords, as well as three large islands west of Ellesmere Island; they have explored the northern coast of North Devon; they have connected Belcher's work with the coasts of Jones Sound; they have reached a point within 60 miles of Aldrich's farthest; and they have discovered that land north of the Parry Islands, the existence of which was conjectured, as far west as the longitude of the eastern coast of Melville Island. This includes the discovery of the northern sides of North Cornwall and Findlay Islands. In addition to the main Arctic problem which is thus solved, it is likely that the regions discovered will be of exceptional interest, from the winds and currents, the varying character of the ice, the existence of coal-beds, and the abundance of animal life. A systematic survey has been made of these important discoveries, checked by astronomical observations."

"We must look forward," concludes Markham, "to an account of these things, and to the details of the expedition, with the deepest interest; and meanwhile we may well express admiration for the way in which the work was conceived and executed, and at the perfect harmony with which all loyally worked under their chief. Without such harmonious work, success was not possible."

The Norwegian, Otto Neumann Sverdrup, was born in Bindalen, in Helgeland, in 1855. At seventeen years of age he went to sea, passed his mate's examination in 1878, and for some years was captain of a ship. He accompanied Nansen on the Greenland expedition in 1888-1889 and was captain of the *Fram* on Nansen's famous Polar voyage. A few days after the return of this expedition in September, 1896, while the *Fram* was lying in Lysaker Bay, Dr. Nansen came aboard one morning.

"Do you still wish to go on another expedition to the north?" he asked Sverdrup.

"Yes, certainly, if only I had the chance," came the prompt reply.

FOUR YEARS' VOYAGE OF THE "FRAM"

Then Nansen told him that Consul Axel Heiberg and the firm of brewers, Messrs. Ringnes Brothers, were willing to finance and equip another scientific Polar expedition, with Captain Sverdrup as leader.

Anthony Fiala

Courtesy of Doubleday, Page and Co.

The *Fram* was loaned by the Norwegian government, and about eleven hundred pounds was granted by the "Storthing" for necessary alterations and repairs. The personnel of the expedition was most carefully selected, including Lieutenant Victor Banman of the Norwegian Navy, Lieutenant Ingvald Isachsen of the Army, the botanist Herman Georg Simmons, a graduate of the University of Lund; and Edvard Bay, zoölogist, a graduate of the University of Copenhagen, the latter a member of Lieutenant Ryder's expedition to the east coast of Greenland in 1891.

The *Fram* was ready for sea, June 24, 1898, and left her moorings with the quay packed with people and the fiord covered with small craft "which had come to see the last of us and wish us a safe return home."

Captain Sverdrup's original plan was to push through Kennedy and Robeson channels and as far along the north coast of Greenland as possible before seeking winter quarters. The unfavourable seasons of 1898-1899 prevented him from carrying out his intentions, and he fortunately turned his attention to Jones Sound, which led to the completion of the most important Arctic work yet remaining; "namely, the discovery of what was hitherto unknown in the wide gap between Prince Patrick Island and Aldrich's farthest."

Frustrated in his attempt to enter Kane Basin, Sverdrup wintered in Rice Strait, west of Cape Sabine. Immediate preparations were made for passing the cold season, and scientific observations and exploring trips occupied the autumn.

In describing the sun sinking out of sight, Sunday, October 16, 1898, Sverdrup says:—

"We were looking at the sun for the last time that year. Its pale light lay dying over the 'inland ice'; its disk, light red, was veiled on the horizon; it was like a day in the land of the dead. All light was so hopelessly cold, all life so far away. We stood and watched it until it sank; then everything became so still it made one shudder—as if the Almighty had deserted us, and shut the Gates of Heaven. The light died away

across the mountains, and slowly vanished, while over us crept the great shades of the polar night, the night that kills all life. I think that each of us, as we stood there, felt his heart swell within him. Never before had we experienced homesickness like this—and little was said when we continued on our way.... Here came Franklin, with a hundred and thirty-eight men. The polar night stopped him; and not one returned. Here came Greely, with five and twenty men; six returned.... Well! there lay the *Fram*, stout and defiant, like a little fairy-house, in the midst of the polar night. It was warm and bright in her cabins, and we worked with a will from morning to night."

Sledge journeys, including a visit to the *Windward*, Lieutenant Peary's ship, and a personal interview with the explorer himself; visits to the *Fram* by neighbouring Eskimos and a brilliant journey across Ellesmere Land, occupied members of the Sverdrup expedition until May 17, 1899, when those on board the *Fram* celebrated with true patriotism the Independence Day of Norway.

On one of the early summer sledge journeys, Dr. Johan Svendsen sacrificed his life. Overrating his endurance, he had rapidly failed, and though he persisted in remaining in the field, his strength did not return. After a day's work, Sverdrup came into camp, where Sclei and Simmons were cooking dinner. "The doctor said he felt much better," writes Sverdrup; "the pain in his side was gone, and his eyes had so far recovered that he could sit inside the tent without spectacles.... I then asked him for a second time if he would not let me take him on board, now that we had all rested, but he would not hear of it, and said that he should prefer to remain where he was. I then offered to stay behind with him—we could collect insects and shoot seals together. But he would not let me defer the journey to Beitstadfjord, and said that the time would pass quickly, even when he was there alone. He could go out shooting, collect insects, and look after his dogs;—he would have plenty to do.... We got ready for our four days' trip to Beitstadfjord, and the doctor helped us to carry down our things, lash the loads to the sledges, and harness the dogs. And then we said good-by to one another, little thinking what was about to happen."

Four days later the absent party returned. "To our great sorrow we found the doctor dead."

On June 16, 1899, Captain Sverdrup made the entry in his journal:—

"The flag is flying at half mast from the pole to-day. It is the first time it has been in this position on board the *Fram*, let us hope it will indeed be the last."

The interesting journey across the "inland ice" of Ellesmere Land, by Isachsen and Braskerud was undertaken May 23, 1899, with food for thirty days, and instruments and equipment; a total weight of eight hundred and seventy-two pounds, divided equally upon the sledges, each drawn by six dogs. Choosing a route to the westward, Isachsen writes in his report:—

"About midnight on June 2, we saw from the high ground to the northwest the first sight of what, later, proved the west coast. It was a fiord-arm, which cut into the land in an easterly direction from the larger fiord lying almost due north and south. From the outer part of this fiord-arm a chain of mountains of equal heights ran in a southeasterly direction. Nearer, and in front of this chain, was a wide level waste —'Brakerndflya.' There was no snow, either on the waste or on the mountains. In one part only of the chain was a fragment of glacier to be seen hanging over the upper part of the mountain side. In the southeast the waste abutted immediately on the 'inland ice.'"

Travelling over a glacier, they endeavoured to reach the bare land of the fiord; this they succeeded in doing, June 4. "Three converging glaciers fell into a glacier-lake, and the following day we drove on this down the valley, but only for a couple of miles, which was the extent of its length. The ice on it was about to break up."

Having encamped, the two men rambled over a considerable area in the vicinity; finding luxuriant vegetation wherever there was bare land. At a distance some ten or eleven miles in a northwesterly direction, there was no "inland ice" west of the northernmost glaciers previously mentioned. After continuing their explorations for several days, they were forced to return through continued bad weather, fogs, and gales. On June 22, the thirtieth day since leaving the ship,—the food supply remaining was reduced to about fifty biscuits, ten and a half tablets of compressed lentils, about four pounds of pemmican, enough coffee for twice, six whole rounds, or seventy-two rations, of dog-food, and a half gallon of petroleum. After a delay of six days by the inclement weather and a slow and difficult progress to the top of Leffert Glacier, it was with joy that a relief party from the ship were met with, and "the following day we drove down Leffert Glacier, on splendid snow, and reached the *Fram* on Sunday, July 2, at five in the morning."

On August 4, the conditions being more favourable than heretofore, Captain Sverdrup endeavoured to navigate the *Fram* through Kane Basin. In Payer Harbor an American steamer was sighted, going northeast. To the joy of all, the steamer signalled she had letters on board for the Norwegians.

The attempt to penetrate Kane Basin was unsuccessful; the *Fram* was forced back to Foulke Fjord, a short distance from one of Peary's ships. Captain Bartlett, Dr. Diedrick, and one or two other members of the expedition exchanged courtesies with the Norwegians. Mr. Bridgman and Professor Libbey came aboard the *Fram*.

SCIENTIFIC OBSERVATIONS

It was learned that the mail brought north had been left at Payer Harbor. The *Fram* endeavoured to get it, but the impenetrable pack prevented, and after the most desperate efforts they gave up in despair. It was at this juncture, after the abandonment of the plan to trace the northern extremity of Greenland, that Sverdrup transferred his base to the fiords of the north coast of Jones Sound. Securing no less than thirty-three walrus for dog-food, the *Fram* established the second winter quarters at Havnefjord in 96° 29′ N., 84° 25′ W. Game and seals were found in plenty during the autumn, also musk-oxen, hares, and reindeer. Most successful scientific researches were promoted, sledging parties continued explorations, and the only event to mar a happy autumn was the death of Braskerud. He had had a very bad cold, was ill a fortnight with a cough and had great difficulty in breathing, but had suffered no pain; there was no doctor, and nothing could be done to relieve him; he had kept his bed the last three days of his illness, and no one dreamed the end was so near.

Preparations for the "grand sledge journey" of the spring kept the men busy during the winter and early in the season Isachsen, Bay, Schei, and Stolz, each man with a full load, went to examine the outlying depots placed the previous fall. At Björneborg, the ravages of bears had caused loss of food and damaged equipment, and this serious menace to the success of the future journeys decided Captain Sverdrup to place a watchman at this lonely and isolated spot. Bay, the zoölogist, volunteered for the duty and was appointed "Commandant of Björneborg."

"On March 7," writes Sverdrup, "Fosheim and I started west in company with the newly appointed commandant. A little after twelve the following day we arrived at the boat-house.... After finishing our work we had dinner, which was as sustaining as it was splendid, and consisted of boiled beef, sausage, soup, and green peas. After dinner we had drams and coffee, and after supper grog. Early next morning, and on good

ice, we drove on, running by the side of the loads nearly the whole day to increase the pace. We reached Björneborg in the evening, where we found our new depot in good order.

"Next day we set to work on the erection of the Commandant's residence. We built a very respectable house.... Like other residences of the kind, 'Björneborg' must have its flag, we thought, and as we were in possession of a flagstaff, which, considering our circumstances, was irreproachable, we secured it to the roof, and ran up a 17th of May flag. But our Commandant was economical, and would only use it on occasions of especial ceremony.

"Here Bay lived, absolutely alone, for three months, and during the first part of the time without so much as a living being for company; afterwards he had a garrison consisting of a whole watch-dog. During all this long period I never saw him out of spirits."

The following day, Sverdrup and Fosheim made an examination of the ice, which in the fiords was rugged and hummocky. Upon the return to the ship it was decided that Banmann, leading the supporting party, should leave the ship Saturday, March 17, with full loads, "with Björneborg as their destination; returning thence to the boat-house to fetch provisions and dog-food, which were to be used on the approaching journeys westward."

For these journeys, Isachsen and Hassel were to make one party, Fosheim and Sverdrup the second, Schei and Peder the third. All were to meet at Björneborg on March 21, later to separate and journey in different directions.

The following rations were allotted to the different parties:—

Banmann and his men,	240 days' rations, about 530 pounds.
Isachsen and Hassel,	100 days' rations, about 220 pounds.
Sverdrup and Fosheim,	100 days' rations, about 200 pounds.
Schei and Peder,	80 days' rations, about 175 pounds.
Bay,	90 days' rations, about 200 pounds.

SLEDGE JOURNEYS

The "Great Expedition," upon which so much thought and care had been expended, was ready to start, March 20, 1900. "The weather was beautiful," writes Sverdrup, "and we drove out through the sound, east of Skreia, at a smart pace, taking, when south of it, a line direct for South Cape."

On this journey in which Sverdrup and Fosheim traced the west shore of Ellesmere Land to 80° 50′ N., a serious, yet amusing, incident occurred. "At certain places on our way," writes Sverdrup, "we came across huge rocks, some of which were as big as a cottage, and round them the snow had drifted to such a height that we could only just see the top. When we came nearer, we found that, as a rule, the wind had hollowed out a large empty space between the drift, and we were often met by a yawning pitfall twelve to eighteen feet in depth.... I should mention that we were obliged to drive above the rocks, as below was the open sea.... It once happened that, just as we were passing a rock of this kind, a gap occurred between my sledge and the one following it. As soon as I became aware of this, I pulled up; but almost before I knew what was taking place, the dogs had made their usual frantic rush to catch up, and the sledge, men, and team were precipitated into the hole twelve feet below. A moment afterwards, before anything could be done to prevent it, the next sledge came tearing up and fell into the hole, and on the heels of number two came a third, which followed their example.... In the grave lay pell-mell three men, eighteen dogs, and three sledges with their loads, and the snow was flying up from it in clouds. Here and there a sledge runner, or a sealskin strap, was sticking out. Then I saw one of the men crawling out of the medley and pulling himself together, then another, and another. Thank God, they were all alive! And the dogs? They were lying in a black heap, one team on top of the other, kicking, howling, and fighting, till we could hardly hear the men's voices for their noise, so, apparently, they, too, were alive. As soon as we had hauled them all up, we set to work to shovel part of the drift away so that we could drag up the loads. The first sledge, which, after much toil, we succeeded in bringing up, strange to say, was whole, nor was there anything wrong with number two, while number three was as intact as the two former. The very astonishing result of this flight through the air was, therefore, that not a limb, nor a lashing, nor bit of wood was broken."

While the travellers were in the field pursuing their perilous and exciting adventures, the Commandant at Björneborg was leading a lonely and monotonous life awaiting his chance to annihilate marauding Bruins. His first call to arms came soon after Captain Sverdrup's departure. Late one night, while half asleep, the Commandant, at that time without a garrison, thought he heard a faint sound in the depot. "I only turned round in the bag," he says, "and inwardly cursed Hassel's dogs, which were loose again and ransacking the depot. I was on the point of falling asleep once more, when it began to dawn on me that my reasoning had been wrong, for there were no dogs within many miles, and therewith I heard a crash, which seemed to make the earth tremble. A moment later I was out of the bag, had dragged my gun from its cover, and cocked it, for it suddenly occurred to me that my guest was a serious one. The first thing I did was to light the lamp, after which I began to move away some tins I had put in front of the door, that night for the first time, to keep it in place. The sounds still continued at the depot, but, in moving the last tin, I happened to make a slight noise, and then everything became as still as death. I raised the door and crept out. It was one o'clock (I had looked at my watch when I lit the lamp), and much darker than was pleasant for the work before me.

Roald Amundsen

Courtesy of Constable and Co., London, and E. P. Dutton and Co.

"The bear, meanwhile, had made itself quite at home. In order to get at one of the blubber-cases, it had thrust the empty boxes out of its way, and had thrown down one of the dog-food boxes which had been placed on the cases of blubber. The marks of all its claws were clearly visible in the tin. The other box was open, and the bear had tasted a couple of rations, but had evidently not found them to his liking, for he had spat them out again into the box. It had then very carefully lifted the tin down on to the snow, and then—also very carefully—raised the lid of the blubber box. But just as it was going to begin its meal, it had evidently heard my clatter inside the hut, and had sat down to listen, with its right paw clasping the edge of the box. It was in this position at any rate that I found it, when I raised myself up, after creeping out. The bear was about fifteen yards away from me, and as soon as it saw me rose, large, and fat and hissing; it made the open tin rattle as it put its left paw down on it. It looked just as if it were thumping the table, to show what a fine fellow it was, and reminded me of one of my friends on board—so much so that I half unwittingly addressed it in the way usual between us; a manner, however, hardly fit for publication. Whether the bear felt offended at this I know not, but certain it is that it got up and walked, growling, with long measured steps round the depot. I aimed, and shot it in the shoulder; I could just discern the sights through the darkness." "The bear uttered such a loud growl," continues the Commandant, "that it seemed to make the stillness ring. The fire from my gun had dazzled me, and I could no longer see the sights, and the bear itself I only saw as a shapeless mass, which seemed to have grown most incredibly larger. The other barrel, the small-shot barrel, which was loaded with a large ball, I fired straight into the mass without going through any such formality as aiming. Then I made a well-ordered retreat behind the hut, and put in some fresh cartridges. I do not much believe in hurrying, but I did this in less time than it takes to tell. To my great astonishment I did not see anything—not that I wanted to—of my enemy during this operation, but as soon as I was ready, I began to peer about after it, though at first without success. At last, on bending down, I caught sight of a large dark object a short distance away, at a spot where I knew there was no rock, —this, of course, must be the bear, but whether dead or alive it was impossible to tell. I therefore advanced with much caution, and fired a shot at what I supposed to be its head. On closer examination it proved to be the other end of the bear I had bombarded; but as a zoölogist I, of

course, knew that the head in *Ursus maritimus* is, as a rule, exactly at the opposite extremity to the after-end of the animal, and at last really succeeded in giving it some lead in the right place. The bear had, no doubt, been dead for some time, but discretion is the better part of valour. I then realized that I had killed my first bear; to say that I was proud is nowhere near the mark."

The Commandant had other visits from bears while leading the hermit's life at Björneborg, and the killing of a seal was also added to his achievements. On June 2, however, he left the castle where he had lived alone for almost a quarter of a year.—"It was not without a feeling of sadness," he writes, "that I saw the last glimpse of the spot as we rounded the steep bluffs of Stormkap, for, although my life there had been solitary and monotonous enough,—except on occasions when it had been extremely lively,—I felt I was leaving a home where I knew every stone and every irregularity of the ground—a place I had known in calm and the glory of sunshine, as well as during the raging of the storms. And then, too, I had a feeling as if peace and quietness were at an end, for east of the Stormkap began for me the great busy world, which for so long now I had almost forgotten."

A serious fire occurred on board the *Fram*, May 27, 1900. A spark from the galley falling upon the winter awning, was supposed to be the cause of the conflagration. The loss of paraffin-prepared kayaks, a quantity of skis, and wood and other valuables were consumed, but the chief danger, which threatened the safety of the ship and all on board, was the proximity of the fire to an iron tank containing fifty gallons of spirit; so great was the heat of the fire that, though the tank held, the tinning on the outside was found melted.

RELEASE FROM THE ICE

On August 9, after a summer of successful research, the conditions being favourable, Captain Sverdrup decided to push westward with the *Fram*. "Through the ice-free sound all went well," he writes; "but farther out, east of the rocks, we entered the ice, and lay there ramming the whole day long. Whenever we got a chance we forged on full speed ahead; and when perforce we came to a standstill, we backed to get an impetus, and gave another ram." Skirting the coast, the *Fram* pushed her difficult course to within about a mile and a half from North Devon, where on September 3, 1900, the ship was made ready for her third winter in the Arctic. On the 15th, a storm disrupted the pack, and quick action on the part of officers and men was required to prepare the *Fram* for the opening of the ice which suddenly released her. As quickly as possible she was bearing toward Cardigan Strait, and steered through in easy waters, finally anchoring in the good winter harbour of Gaasefjord. The land in the vicinity of this harbour was rich in game, fauna, and interesting fossils.

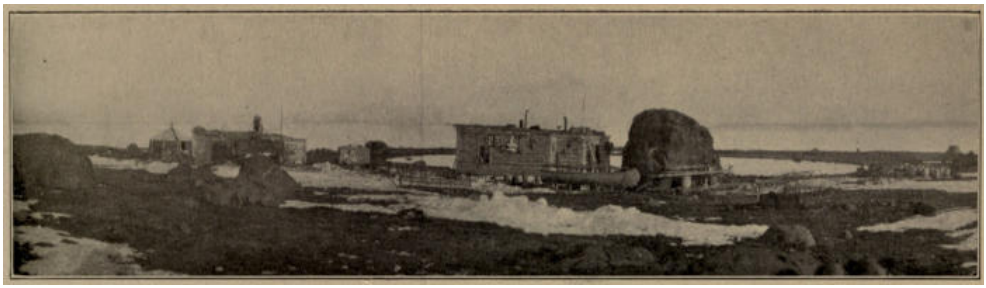
Captain Sverdrup describes a curious experience while out hunting. In a small valley he discovered countless hare-tracks, which crossed and recrossed one another in every direction, the snow in places having been trodden in hard runs. Calling his telescope to his aid, he made out what he had mistaken for a group of white stones a short distance off, to be a group of Arctic hares, thirty-one in number, evidently at rest, with one plainly acting as sentinel.

Although Sverdrup approached with great caution, the hare on guard suddenly took alarm and, starting up, ran wildly round her flock, striking her hind legs on the ground till it fairly resounded, then setting off at a brisk pace over the ridge of a hill, the others following in a long line and presently disappearing.

At a short distance two others, evidently not belonging to the other lot, remained by themselves. "I thought," writes Sverdrup, "it would be interesting to go across to them if possible, and see what they were about, but realized I must make use of other tactics if I would approach near them. This, I thought, was a fitting moment to impersonate a reindeer, or some other kind of big game, and I made a valiant attempt to simulate their grazing movements backwards and forwards on the sward.... My tactics were so successful that, in the end, I was not much more than two or three yards away from them. It was quite touching to see these great innocent Arctic hares sitting only a few paces off, quietly gnawing roots. The only notice they vouchsafed me was an occasional sniff in my direction....

"I stayed long fraternizing with the hares down on the grass, and at last we did not mind each other in the very least. They went on with their occupations quite unconcernedly; I with mine. I felt something like Adam in Paradise before Eve came, and all that about the serpent happened."

Hunting expeditions and autumnal sledge journeys at an end, the winter set in with plenty of work to do for every one on board the *Fram*. The smithy was called upon for endless labour; the taking of observations and the many other daily occupations caused the long Arctic night to pass with less monotony and depression. A visitation from wolves added excitement to the winter, and various methods were tried for their capture.



Cape Flora in early July, 1904

Courtesy of Doubleday, Page and Co.

The Coal Mine at Cape Flora, 600 Feet above the Level of the Sea

Courtesy of Doubleday, Page and Co.

"FRAM'S" SECOND POLAR EXPEDITION

The explorations of 1901 proved Heiberg Land to be an island, separated by Heureka Strait; this was explored as far as its junction with Greely Fjord, but another year remained before the Norwegian standard was carried to 81° 37′ N., 92° W., where it was raised, May 13, 1902, and the outline of coast completed to Aldrich's farthest.

Having made one of the most brilliant records in Arctic history, the members of the *Fram's* second polar expedition turned toward their native land, and on August 6, 1902, the *Fram* began her triumphant retreat from the Great White North.

"Homeward! What a strange ring in the simple word!" cries Captain Sverdrup. "On our long and laborious sledge journeys we had many a time used it when we thought of the *Fram*, and a good home the *Fram* had been these four years, warm and strong and well provided, but that was in another way. Now the longing for home coursed through our blood, and all the yearning, which we had thrust aside during these long years, broke loose, rang in our ears, and made our hearts beat faster. Half-forgotten memories and dawning hopes came back again. A sea of thoughts streamed in on us and tied our tongues in the midst of the joy at going home. It was a moment full of promise when we knew that we were looking for the last time on these mountains and fiords, which for so long had been the object and scene of our endeavor."

September 26, the *Fram* reached Christiansand, and two days later she dropped anchor for a few hours at Langgrunden, off Horten. Quite a fleet of steamers and sailing-boats escorted her from Stavanger to Christiania, which was reached "on a beautiful Sunday which recalled to us the day, four years since, when we had gone the other way." ... "So the *Fram's* second polar expedition was at an end," concludes Captain Sverdrup. "An approximate area of one hundred thousand square miles had been explored, and, in the name of the Norwegian King, taken possession of. If the members of the expedition have been able to do *anything*, this is owing in the first instance to the sacrifices of generous Norwegians; that we have not done more is, at any rate, not owing to want of will."

The successful navigation of the long-sought Northwest Passage by Captain Roald Amundsen has been one of the stirring events of the early twentieth century. Of this hardy Norseman, and what he accomplished, Mr. Alger gives an interesting account in *Putnam's Magazine*:—

"Born July 16, 1872, at Borge, in the district of Smaalenene, southern Norway, he comes from an old sea-faring family, and has had much experience as a sailor. As an officer he took part in the Belgian South Pole expedition of 1897, on board the *Belgica*, and it was down in the Antarctic regions that he first planned his famous Arctic voyage. On the whaler, *Gjoa*, a ship of only 46 tons, he left Christiania in May, 1903, with a crew of seven men; and three years later, in the summer of 1906, the news was spread over the world that he had accomplished what no man before him had succeeded in doing. He had not only sailed through the Northwest Passage, but had located the Magnetic Pole and otherwise gathered much scientific information of the greatest value in regard to these little-known regions."

The *Gjoa* was especially strengthened and refitted throughout. She was amply provisioned for five years, and her crew most carefully selected. Second in command was Lieutenant Godfred Hansen of the Danish Navy. First mate Auto Lund of Tromsoe had had long years of service in the sealing trade. Peder Ristredt, a sergeant in the Norwegian Army, was first engineer. Helmer Hansen, also an experienced sealer, a good snow-shoer and hunter, was second mate. Gustav Juel, second engineer, was to take part in the magnetic observations, but he died on the trip from pneumonia, in March, 1906. Adolf Linstrom served as cook, having served in the same capacity aboard the *Fram*.

Sailing at midnight, June 16, 1903, from Christiania, Cape Farewell, Greenland was sighted five weeks later. Securing ten fine dogs at Godhaven from Herr Dongaad Jensen, Inspector for North Greenland, they entered Melville Bay, August 8. On August 15, they came in sight of Dalrymple Rock; at this point two Scotch whaling captains—Milne and Adams—had deposited certain stores for Amundsen. The *Gjoa* was unexpectedly met in kayaks by members of the Danish Literary Greenland expedition, Herr Mylius Eriksen and Herr Knut Rasmussen. An exchange of courtesies was followed by the loading of the *Gjoa* with the packages from Dalrymple Rock. Pushing through the lanes, at full steam, they emerged into open water in Baffin Bay, and later entered Lancaster Sound, anchoring at Beechey, August 22. On August 24, they pushed into Peel Sound. The efficiency of the compass now ceased, and they were compelled to navigate by the stars whenever they appeared through the fog, which prevailed most of the time. Passing along the west coast of Boothia Felix, they came to grief by grounding on September 1 and were obliged to "lighten the ship by throwing overboard the greater part of the deck cargo. On Saturday, September 12, entered Gjoa Harbor"—a small landlocked cove at the head of Petersen Bay (King William Land), and here they remained for nearly two years.

SCIENTIFIC OBSERVATIONS

Immediate preparations were made for wintering, provisions landed, observatories erected, and Amundsen at once began his valuable scientific observations.

“In order to ensure accuracy,” writes General Greely in the *Century*, 1907, “the magnetic instruments were installed in temporary wooden buildings, built with copper nails, and entirely free of any iron, heat, or even light, except the lamp behind the reflector. Here day and night, for twenty months, were made photograph records, and these were supplemented by personal eye-readings to serve as needful checks on those photographically obtained. The observers in this work were clothed entirely in deerskin garments, and before entering the building where the magnetometres were installed, carefully divested themselves of watches, keys, knives, and other metallic objects. The observations were made in winter under such conditions of cold, monotony, and darkness as to merit the highest commendation for endurance and constancy.” And he continues, “The value of the continuous observations at Gjoa Harbor was largely increased by similar observations in the field, which necessarily entailed severe exposure and consequent hardships on the sledging parties. In March, 1904, a preliminary journey, made for the purpose of establishing food depots, involved much suffering owing to excessive cold, the temperature falling to 79° below zero, Fahr. The sledge journey to the Magnetic Pole itself was made by Amundsen and Ristvedt, starting April 2, 1904, with ten dogs and two sledges, much difficulty resulting from rough ice.

“Five observation stations were occupied between Gjoa Harbor and Tasmania Islands, which are about eighty miles directly north of Ross’s magnetic pole. This field work occupied about two months, being summarily finished at the end of May, owing to loss of food through the thieving Itchnachtorviks of eastern Boothia. While no definite result of the field observations can yet be given, it is not thought that there has been any decided change from the magnetic conditions observed by Ross in 1831, when the pole of declination was in the neighborhood of Cape Adelaide, 70° 05′ N., 96° 44′ W.”

On April 1, 1905, Lieutenant Hansen and Ristvedt, with two sledges, twelve dogs, and provisions for three months, visited Victoria, and after charting half of the missing coastline returned June 24.

Neighbours were not lacking these isolated white men. Frequent visits from Eskimos, and the news of American fishermen to the south, permitted of letters being forwarded by Eskimos.

AUGUST 14, 1906

On August 14, 1906, all conditions being favourable, the *Gjoa* weighed anchor and proceeded westward in open water, and within a few hours had successfully passed through Etta Sound, the narrowest place in the Northwest Passage, a tortuous channel between Etta Island and the mainland. The following day they threaded their way through a group of newly discovered islands in shallows that constantly necessitated the use of the lead.

A heavy pack was encountered in Victoria Strait, but they continued on their way “through the strait between Victoria Land and the mainland,” thence through “Dease Strait and Coronation Gulf out into Dolphin and Union straits, and on the morning of August 25 sighted Nelson Head—a tall and imposing headland.”

Having successfully passed from the Atlantic side into the Pacific side, the *Gjoa* had the good fortune to speak on the same day the American whaling schooner, *Charles Hansson*, from San Francisco. A delay of twenty-four hours was caused by the ice off Cape Bathurst. Near Bailey Island, several beset whalers were encountered, and the barks *Alexander* and *Bowhead* were sighted off Pullen Island.

Cape Sabine was reached September 2—but progress was only made to King Point, about thirty-five miles east of Herschel Island, where the *Gjoa* was forced to put in another Arctic winter.

On October 13, Amundsen, with a sledge and five dogs, made a journey of five months’ duration, covering a distance of fifteen hundred miles to Eagle City, Alaska. This included a two months’ sojourn in Eagle City, when all despatches were forwarded, and mails received, for himself and other members of the expedition.

The following August, the *Gjoa* was freed, but on the 19th of that month she received a bad injury to her propeller by grounding on a piece of ice, so continued her journey entirely under sail. She arrived at San Francisco, October 19, with a rich cargo of ethnographical, zoölogical, and botanical specimens, and many furs and curios. These were freighted to Christiania, the *Gjoa* taken charge of by Admiral Lyons, commandant of the Mare Island Navy-yard, and Amundsen and his companions started by rail for home.

CHAPTER XXIII

Robert E. Peary.—The man.—First visit to the Arctic, 1886.—Other journeys, 1891.—Independence Bay, Greenland.—Discovers Melville Land and Heilprin Land.—Subsequent journeys, 1893-1895.—Discovery of famous "Iron Mountain."—Summer voyages, 1896-1897.—North Pole journey of 1898.—Peary seriously disabled by frost-bites.—Polar expedition in S. S. *Roosevelt*, 1905-1906.—Final dash for the Pole, 1908.

For nearly a quarter of a century the name of Robert Edwin Peary has been closely identified with Arctic work. No man in the history of exploration has renewed his attacks upon the impassable barriers of the Great White North with such perseverance, endurance, and determination. Again and again in the face of disappointments, bodily disablements, failures, and discouragements that would have blasted the most sanguine hopes of the average man, he has persisted in his endeavours, returned to the field of action, fought gallantly the disheartening fight, come back to receive the polite indifference or enthusiastic praise of his countrymen, turned his energies to raising the necessary funds to renew his enterprise, and when this was done, faced to the north and passed again beyond the Arctic Circle.

He is typically American, tall, lean, wiry, muscular, keen-eyed, alert, positive, and possessed of that indomitable will which conquers or dies. Born in Cresson, Pennsylvania, May 6, 1856, he had early the misfortune to lose his father, and his widowed mother, with her boy of three, returned to her relatives and friends in New England and made her home in Portland, Maine. Here Peary, the lad, grew up, fond of the sea and the woods, loving the wild roar of the ocean as it beat upon the rocky coast, or the gentle summer winds whispering amid the northern pines.

He loved to roam, to explore, to find adventure, and to lead others to it, and in his schoolboy days he was noted for his athletic tastes and powers of endurance. At twenty-one years of age he completed his college life at Bowdoin, graduating second in a class of fifty-one, and four years later had passed the examinations which made him Civil Engineer in the United States Navy. From duty in Florida he was transferred to the Nicaragua Canal zone, where he remained engaged in the Interocean Ship-canal Survey from 1884 to 1885.

He returned under government orders to Washington in the fall of that year, and during a leisure hour, in an old book-store, he accidentally came upon a paper on the Inland Ice of Greenland. Remembering the adventures of Dr. Kane which had thrilled him as a boy, and reading the experiences of Nordenskjöld, Jensen, and the rest, Peary felt he must know for himself what was the truth of this great mysterious interior.

Thus early had the seed of ambition to explore the land of the mysterious north germinated in his active mind.

The "Roosevelt" drying her Sails

Courtesy of F. A. Stokes Company

FIRST VISIT TO THE ARCTIC

The following year he received permission from the Department for leave of absence to make a reconnoissance of the Greenland ice-cap, east of Disco Bay, 70° north latitude.

Accompanied by Christian Maigaard, a Dane, and eight natives, Peary examined the coast and fiords, penetrated the inland ice, and visited among other interesting spots the Tossukatek Glacier, the base of Noursoak Peninsula, and the fossil beds of Atanekerdluk. "Here," he says, "I found fragments of trees, black petrifactions with the grain of the wood and the texture of the bark showing clearly. Pieces of sandstone split

readily into sheets, between which were to be seen sharp, clear impressions of large net-veined leaves, every tiniest veinlet and minute serratum of the edges distinct as the lines of a steel engraving; long, slender, parallel-veined leaves and exquisite feathery forms."

Full of enthusiasm for further adventure in the land of desolation, where the wild vivid poppy flourishes in sheltered nooks, near eternal glaciers; where a lifeless desert of perpetual snow, from five thousand to ten thousand feet above the level of the sea, extends over an area of some twelve hundred miles in length and five hundred in width,—a glistening shroud,—covering the mighty rocks of ages, the buried summits of high mountains thousands of feet below,—Peary returned to the United States and in a newspaper article attracted the attention of the Philadelphia Academy of Natural Sciences, which offered to defray part of the expense of his second expedition.

Peary left, June 6, 1891, in the *Kite*, and with his party, including Mrs. Peary; Langdon Gibson, ornithologist and hunter; Dr. Frederick A. Cook, surgeon; Eivind Astrup, a Norwegian; John M. Verhoeff, mineralogist and meteorologist; and Matthew Henson, a coloured man, landed at M'Cormick Bay in August. An unfortunate accident aboard the *Kite*, which resulted in a broken leg, caused Peary disappointment and delay in carrying out his autumn plans. However, "Red Cliff House" was erected, communications with the natives established, and such work carried on as Peary's unfortunate condition would permit. In April, 1892, Peary, being fully restored to health, left Red Cliff House and explored Inglefield Gulf; his next move was to establish caches of provisions to be used on his sledge journey across the ice-cap.

This journey was undertaken in May; four sledges, to which were harnessed sixteen dogs, carried the provisions and equipment. A supporting party advanced with Peary to a point about one hundred miles from M'Cormick Bay. The explorer, with one companion, Astrup, proceeded over the great ice at an elevation of about five thousand feet, and by May 31 looked down into Peterman Fjord. "Here," says Peary, "we were on the ice-bluffs forming the limit of the great glacier basin, just as we had been at Humboldt, but a trifle less fortunate here than at Humboldt. I found it necessary to deflect some ten miles to the eastward, to avoid the inequalities of the glacier basin, and the great crevasses which cut the ice-bluffs encircling it."

Peary's object now was to make the east coast of Greenland, following the edge of the ice-cap, beset with crevasses, slippery ice, hummocks, drifting snow and fogs, and the journey was continued until July 4, 1892, when they reached Independence Bay, 81° 37′ north latitude. An ascent of Navy Cliff revealed a magnificent panorama of rugged, majestic, ice-free country to the north, and the broad expanse of the East Greenland Ocean.

Strange it seemed that in this remote country in sheltered nooks the flowers bloomed; the hum of bees, the drone of flies, fell upon the ear; the snow-bunting, the sandpiper, a Greenland falcon, and a pair of ravens greeted the adventurers. Musk-ox fed upon the patches of greensward, and no less than five fell to Peary's rifle and supplied men and dogs with abundant meat.

The return journey back to M'Cormick Bay, a distance of some four hundred and fifty miles, was made over the ice-cap in the face of violent storms and wind, through drifts and fog, with diminished provisions and failing dogs.

A joyful meeting with Professor Heilprin and party, who had come north a month before with the *Kite*, took place on the Inland Ice, at the head of M'Cormick Bay, and a happy return was made to Red Cliff House.

DISCOVERS MELVILLE LAND

The results of Peary's second voyage to the Arctic, embracing the great twelve-hundred-mile journey, determined the northern extension and insularity of Greenland; made the discovery of detached ice-free land-masses of less extent to the northward, and established the rapid convergence of the Greenland shores above the 78th parallel. It also included the discovery of Melville Land and Heilprin Land, and the accumulation of most valuable scientific data, besides laying the foundation for Peary's comprehensive study of the Greenland Highlanders, or native Eskimo.

Immediately upon his return to the United States, Peary devoted his energies to a lecture tour from which he hoped to derive the necessary funds to promote a more extended exploration of Northeast Greenland.

Granted three years' leave of absence by the Hon. B. F. Tracy, Secretary of the Navy, the North Greenland expedition of 1893-1894 sailed in the *Falcon*, June, 1893, and entered the mouth of Bowdoin Bay, in Inglefield Gulf, August 3.

Here a house was rapidly constructed, stores landed, the *Falcon* making a brief trip after the winter supply of meat, with a stop at Life-Boat Cove, where a visit was made to the site of Polaris House. A few relics were picked up bearing the stamp of the United States Navy-yard at Washington, dated 1865 to 1870. The 20th of August, after her return to the station at Bowdoin Bay, the *Falcon* steamed south, leaving the little group of fourteen persons, including, among others, Mr. and Mrs. Peary, Mr. Samuel J. Entrikin, Eivind Astrup, Dr. Edward E. Vincent, Mr. E. B. Baldwin, Mrs. Susan J. Cross, and the coloured man, Matthew Henson.

On September 12, in this far-away land, the famous "snow baby" was born, little blue-eyed Marie Ahnighito Peary, and "bundled deep in soft, warm Arctic furs, and wrapped in the Stars and Stripes."

In early March, 1894, the last preparations were completed for a second twelve-hundred-mile journey across the Greenland Ice-cap. On the 6th of the month, accompanied by eight men, twelve sledges, and ninety-two dogs, Peary ascended the Inland Ice. The advance of such a caravan was slow and heavy. The dogs of the various teams, being unaccustomed to one another, were constantly fighting; the penetrating cold nipped with frost-bites the hands and feet of his men, so that after an advance of one hundred and thirty-four miles, at an elevation of five thousand five hundred feet, Peary determined at the end of thirteen days to cache surplus stores, send back the majority of his men, and proceed with three men alone. But the conditions of cold and storms were too adverse for human endurance, the thermometer reaching as low as -60°. The dogs were reduced to a most pitiable condition, many dying from exposure. On April 10, having advanced only about eighty-five miles, Peary decided it was inadvisable to attempt to proceed and prepared for his return to Bowdoin Bay.

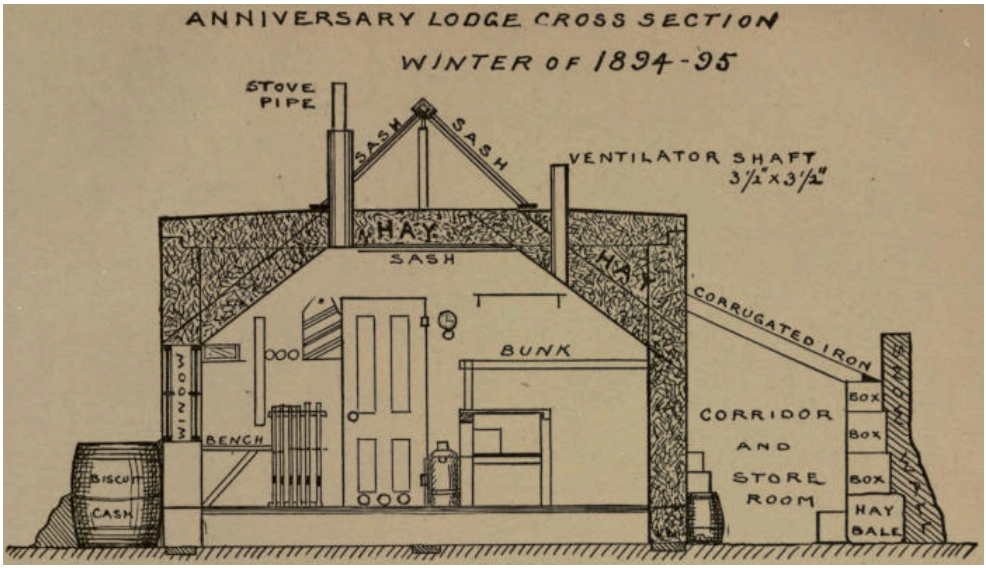
Cairn erected over the Body of Marvin

Courtesy of F. A. Stokes Company

Abandoning and caching all unnecessary impedimenta, with only twenty-six dogs remaining out of the original number, the party reached the station in a much enfeebled and reduced state.

Though temporarily defeated in the main object of his enterprise, Peary had gleaned much information concerning the famous "Iron Mountain" of Melville Bay, first mentioned by Captain Ross in 1818, and as part of the programme he had laid down for himself, a visit to that interesting spot was undertaken. On May 27, 1894, Peary located this remarkable meteorite, leaving a cairn with records at a short distance from the spot.

In the meantime, Astrup had made a successful sledge journey and reconnoissance of Melville Bay, and carefully charting much of its hitherto little-known northeastern shore.



ANNIVERSARY *LODGE CROSS SECTION*

WINTER OF 1894-95

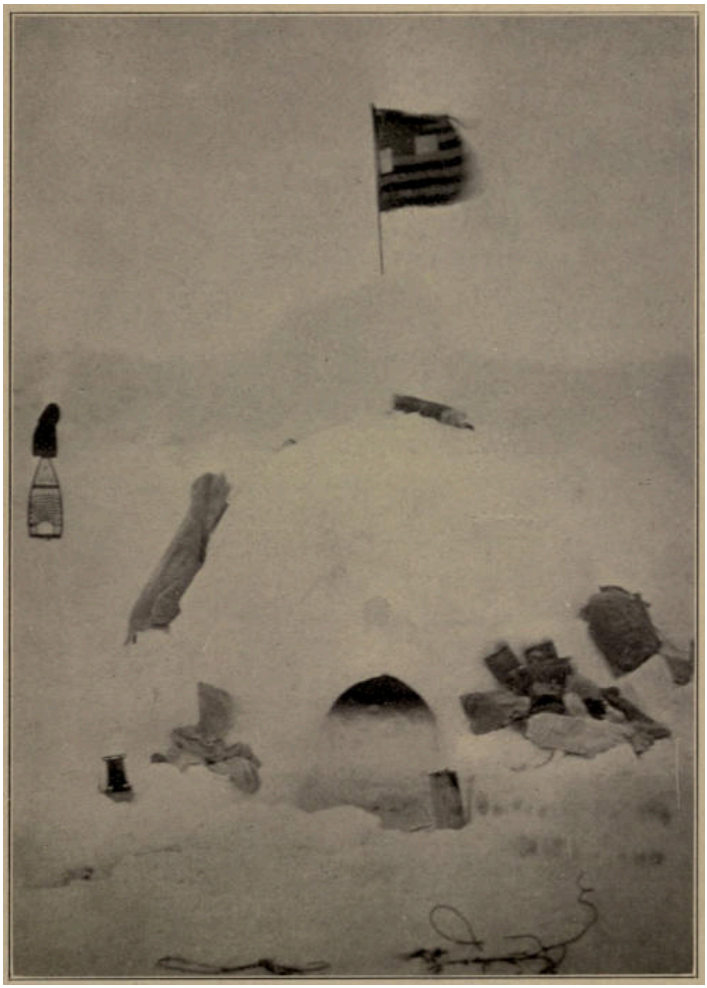
Courtesy of F. A. Stokes Co.

The last of July, the *Falcon*, with a party of scientists aboard, including, among others, Professor T. C. Chamberlin, Professor Wm. Libbey, Jr., H. L. Bridgman, and Mrs. Peary's brother, Emil Diebitsch, anchored in M'Cormick Bay. After a sojourn in northern waters, it returned to the United States, carrying on board the entire Peary party, with the exception of the indomitable leader and two companions, Lee and Henson. Peary's resources were limited; food and fuel were reduced so as to menace future activities, and the visit of a relief ship in the summer of 1895 depended practically upon Mrs. Peary's sole exertions. Nevertheless, Peary determined to remain, and, immediately enlisting the natives to assist him, he drew on the country for his supplies.

The fall was occupied in the chase after reindeer and Arctic hare for human food, and walrus meat for the dogs; and later an examination and rehabilitation of the nearer caches of provisions left on the Inland Ice.

The monotonous winter passed, and as the spring advanced the day of departure approached for the next great journey across the Greenland ice. On April 2, 1895, the little band, consisting of its intrepid leader, with Lee and Henson, four natives, and the six sledges with their dog teams, started northward.

The fierce storms of winter had obliterated the marked caches; in vain was the immediate neighbourhood scoured in every direction, sometimes to a distance of five miles; no signs of the looked-for depots could be discovered.



Camp Morris Jesup

Courtesy of F. A. Stokes Company

Though Eskimos deserted and turned back, Peary still pushed on, at last left with only the two companions, some forty dogs and three sledges. The prospect was indeed dismal. Lee became disabled by frost-bites; the dogs died; the gaunt form of starvation loomed on the horizon. May 8, Lee could proceed no farther, and was left in camp, distant some sixteen miles from the coast, while Peary and Henson advanced in the desperate search for game. Four days and nights death by starvation faced them, in the fruitless search for food. Then, disappointed, back to camp, and a desperate march to Independence Bay. Then down the tortuous valley, across rocks, cobble, and boulder, the men plunged on. "A few miles beyond the valley, I saw a fresh hare track," says Peary, "and a few hundred yards beyond came upon the hare itself, squatting among the rocks a few paces distant. With the sight of the beautiful spotless little animal, the feeling of emptiness in the region of my stomach increased. I called to Matt, who was some little distance back, to stop the dogs and come up with his rifle. He was so affected by the prospect of a good supper, his first and second bullets missed the mark, but at the third the white object collapsed into a shapeless mass, and on the instant gaunt hunger leapt upon us like a wolf upon its prey.... It was the first full meal we had had since the Eskimos left us thirty-five days ago."

Later musk-ox fell to the hunter's aim, which restored courage and strength to the desperate men. They reached the cairn which Peary had erected in 1892, and found the papers there still intact. To linger in the vicinity meant a constant consumption of food for which they were not prepared. There was yet the long journey back over the dread ice-cap, eight thousand feet above the level of the sea. With nine dogs, and food for seventeen days only, they retraced their steps, fleeing in forced marches, from that ever present gaunt form, Starvation, closing upon their wake.

One by one the faithful dogs died by the wayside. This retreat over the Great Ice is one of the most desperate struggles in Arctic history. At last, June 25, the three starving, exhausted men reached Bowdoin Bay. "At the beginning of the last day there were left four biscuits, saved from the half and quarter rations of the preceding weeks; and one dog was still alive, the sole survivor of a pack of forty-two."

"Poor brute!" says Peary, "the memory of those famine days upon the 'Great Ice' remained so vividly with him, that for weeks after our return, though weak and afflicted like ourselves, he might be seen at any time, when not asleep, hiding away every bit of meat or blubber, and every bone that he could find about the place."

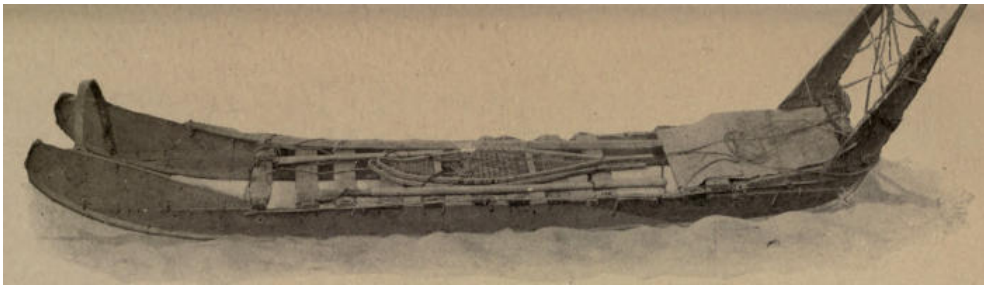
A few weeks of recuperation fitted the men for the journey home, and relief ship *Kite*, in charge of Captain Bartlett, reached them in early August.

SUMMER VOYAGES, 1896-1897

In 1896 and 1897, Peary made two summer voyages to the Arctic for the purpose of transferring to the United States the largest of the three Cape York meteorites. On the first trip he was successful in dislodging this ninety-ton mass from the ice grip of centuries, but was compelled to leave it until the next season, when he successfully had it transferred to the hold of the *Hope*, the Peary ship of that year, and the world wonder now reposes in the Museum of Natural History, New York City.

During these active years Peary had made warm friends, men who had said to him with the same confidence expressed by Theodore Roosevelt, "I believe in you, Peary," and the Peary Arctic Club was formed, headed by that generous benefactor, Morris K. Jesup, as President, Frederick E. Hyde, Vice-President, Henry W. Cannon, Treasurer, and Herbert L. Bridgman, Secretary, and others to lend encouragement and financial aid.

Peary's ambitions had not been satisfied by his brilliant achievements in twice crossing the Greenland ice-cap, and the lure of the Arctic had long beckoned him to try to reach the northernmost extremity of the earth.



THE SLEDGE THAT WENT TO THE POLE

It is the perfected "Peary" type and is now in the American Museum of Natural History, New York City.

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A GREAT EVENT IN THE LONG NIGHT

Christmas dinner on board the "Roosevelt," 450 miles from the Pole. From left to right: Borup, Marvin, Captain Bartlett, Peary, Dr. Goodsell, McMillan.

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His journey of 1898 to 1902 under the auspices of the Peary Arctic Club had for its main purpose the attainment of the Pole itself. His carefully laid plan was to advance toward the Pole by the west coast of Greenland, and establish food stations, depending upon picked Eskimos for coöperation with his small party. In the final dash, supporting sledges would be sent back as soon as emptied, and the returning explorer, with two companions, would be met by a relief party of Eskimos.

PEARY SERIOUSLY DISABLED BY FROST-BITES

Mr. Harmsworth of London generously gave his yacht, the *Windward*, for this expedition. Peary started with every prospect of success. The *Windward* endeavoured to force a passage into Kennedy Channel, but was obliged to seek shelter and winter quarters at Cape D'Orville. In early autumnal journeys Peary determined the continuity of Ellesmere and Grinnell lands, and prepared to make his headquarters at Fort Conger. In January, 1899, came a sudden and most disheartening set-back to his ambitious plans. While on this dangerous sledge journey, in a frightful temperature that ranged between 51° to 63°

below zero, he had both feet badly frozen, and this grave injury, which nearly cost him his life, resulted in the amputation of eight toes; but not before weeks of suffering had been passed in the melancholy winter darkness at Greely's old quarters.

"During the following weeks," writes Peary, "our life at Conger was pronouncedly *à la* Robinson Crusoe. Searching for things in the unbroken darkness of the 'Great Night,' with a tiny flicker of flame in a saucer, was very like seeking a needle in a haystack." At last, on the 18th of February, in the moonlight, they started back to the ship. Lashed firmly down, with feet and legs wrapped in musk-ox skin, Peary was dragged, in the cold Arctic night, a distance of two hundred and fifty miles in eleven days.

Disheartening weeks of inaction and suffering aboard the *Windward*, but partially restored his health; nevertheless, in April, while still on crutches, he was dragged on sledges to Fort Conger. This season was passed in scientific work and map making. While crossing Ellesmere Land ice-cap in July, at an elevation of seven thousand feet, Peary discovered Cannon Bay.

Other results of his indefatigable endeavours were the collecting of relics of the Lady Franklin Bay expedition, which were sent home by the *Windward*, the sextant and record of the Nares expedition were also found and sent back to be presented to the Lords of the Admiralty of Great Britain, and placed in the Museum of the Royal Naval College at Greenwich.

Each season a vessel was sent to Greenland to carry him supplies, and bring back letters. Small parties of scientists, university students, and hunters took advantage of the opportunity to sail north and be left at various points, to be called for on the vessel's return.

In 1899, Dr. Robert Stein of the United States Geological Survey, Dr. Leopold Kann of Cornell, and Mr. Samuel Warmbath had taken passage in the Peary supply ship *Diana* for explorations in Ellesmere Land.

In the fall of 1899, the *Windward* returned to the United States, leaving Peary in Etah, where he remained until the following March, when he journeyed to Fort Conger, and from there made his northern dash in an attempt to reach the Pole. The explorer followed closely the route laid down by Brainard and Lockwood, and, on May 8, beat their record; later he reached the most northern point of land to which he gave the name of Cape Morris K. Jesup, 83° 39′ N. From this point his travel was over the disintegrating polar pack, an advance of "ridges of heavy ice thrown up to heights of twenty-five to fifty feet, crevasses and holes masked by snow, the whole intersected by narrow leads of open water." Having reached 83° 54′ N., he then returned to Cape Morris Jesup and followed the coast of Melville Land for some distance, then returned south. In 1901, he attempted another northern journey, but found advance impossible after reaching Lincoln Bay.

Undaunted by failure, his next attempt was made in February, 1902, and reached, April 21, 84° 17′ N., but again he was forced back, after risking his own life and that of his companions over the worst ice he had ever encountered. Momentarily discouraged, he wrote at this time: "The game is off. My dream of sixteen years is ended. I have made the best fight I knew. I believe it has been a good one. But I cannot accomplish the impossible."

After four years of strenuous endeavour in the face of the most disheartening failure, Peary came back to the United States, took courage once more, renewed the losing fight, and planned his seventh voyage into the Arctic.

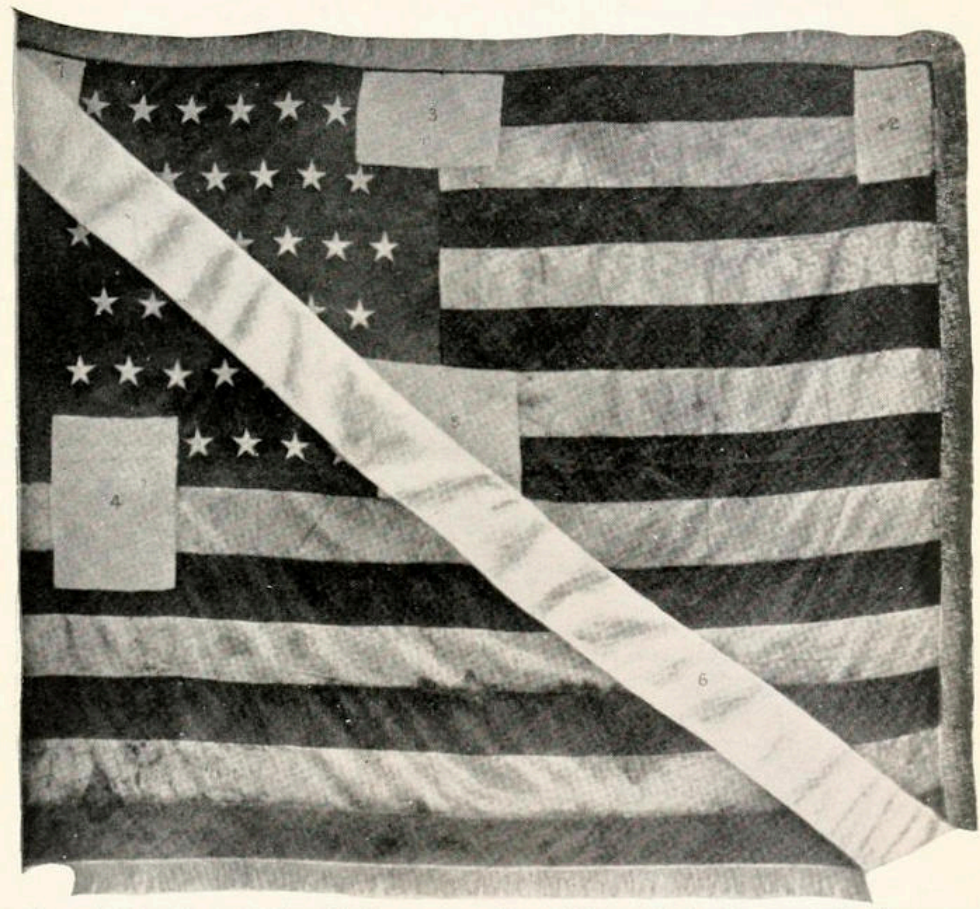
POLAR EXPEDITION IN S.S. "ROOSEVELT"

Under the auspices of the Peary Arctic Club, a model ship was built for the sole purpose of assisting Peary in accomplishing the work upon which he had set his heart, lavished his fortune, and staked the confidence of his friends. The result was the building of the *Roosevelt*, the most modern of ice-fighters. The plans for the *Roosevelt* allowed a length of one hundred and eighty-four by thirty-five feet beam and sixteen feet draft, loaded. She was provided with engines capable of developing one thousand horse-power; she carried a light three-masted schooner rig. Her hull was especially designed to resist the terrific pressure of the ice-floes, and of such shape to lift easily from the treacherous ice cradles in which she was expected to test her resisting qualities. In this splendid craft, Peary started north in 1905; and boldly ploughed the *Roosevelt* farther than any vessel had yet penetrated, reaching nearly 82° 30′ north latitude on the north coast of Grant Land. The *Roosevelt* wintered at Cape Sheridan, and from this high latitude Peary started in February, 1906, for the Pole. Everything seemed favourable, improved equipment, Eskimo assistance, well-laid caches, and Peary himself full of the eternal vigour, which, in spite of years of hardship, gave to his mind and body the elasticity of youth.

On—across the interminable obstacles—on—past one degree and then another, with the ever present problem of cold, storm, rough ice, and diminishing food, until finally the forces of nature baffled once again the forces of human strength. At 87° 6′, the uncompromising voices of the North cried out, "This far shalt thou come, and no farther." Back once more—step by step—over hummock, crevasse, and floe, over thin and treacherous ice, across the big lead whose thin, undulating surface, some two miles in width, barely supported the weight of a man, in his frantic race with death.

Back once more to the south, baffled once more in his schemes, but sterner than ever in the purpose to die or win "because the thing he has set himself to do is a part of his being." Peary returned to the United States, the plans of his eighth and final journey already maturing in his mind.

The *Roosevelt* was docked for the purpose of repairs. Funds for this last journey were slow in forthcoming. Every expedient was tried, but, though a substantial sum was raised, there still lacked money to complete the work, provision and equip the expedition, and to pay the current expenses of the trip. In the midst of these perplexing problems, Peary received another blow in the news of the death of Mr. Morris K. Jesup, his most liberal supporter. With his death all seemed lost; the darkest hour of discouragement had come; delays of months meant perhaps the delay of years, or, possibly, the entire abandonment of this last voyage—the voyage of the forlorn hope. Proverbially the darkest hour is just before dawn, and the Peary Arctic Club, under its new president, General Thomas H. Hubbard, received a liberal check, tendered by Mr. Zenas Crane, the paper manufacturer of Massachusetts, which suddenly rent asunder the sombre clouds and showed once more their silver lining.



The Flag that Peary carried to the Pole

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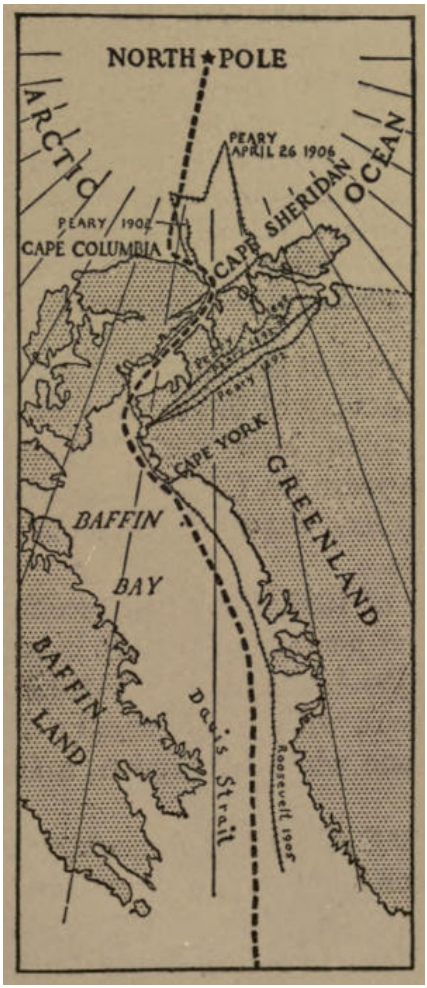
Pieces cut from its Folds mark all the "Farthest" Northern Points of the Western Hemisphere: 1 and 2 were left at Cape Morris Jesup; 3 at Cape Thomas Hubbard; 4 at Cape Columbia; 5 at Peary's Farthest North, 1906 (87° 6′), and 6 at the North Pole.

FINAL DASH FOR THE POLE, 1908

Relieved of the mental anxiety which had been his constant companion for months, Peary now hurried his final preparations, and, rejoicing in his good fortune, steamed out of New York harbour, July 6, 1908, in the gallant *Roosevelt*, with her penants flying bravely to the breeze. Peary, now grown old in Arctic service, sailed to the Great White North, this time to reach his goal.



The Route Taken by Commander Peary in 1908

Courtesy of Benjamin B. Hampton and F. A. Stokes Co.

CHAPTER XXIV

Dr. Frederick A. Cook.—Claims discovery of the Pole.—His return from the Arctic.—Reception by the Danes.—Announcement of conquest of the Pole by Peary.—Denounces Dr. Cook.—Delay of Dr. Cook to produce his data.—Acceptance of Peary's claims by the American Geographical Society.—Dr. Cook finally sends manuscript to Copenhagen.—Verdict.—Prior claim to the discovery of the North Pole.—Not proven.

The announcement in the *New York Herald* on September 1, 1909, of the discovery of the North Pole by Dr. Frederick A. Cook, of Brooklyn, New York, astounded the civilized world. For some years Dr. Cook's name had been associated with Arctic enterprise, but to the majority of the public his name was strange.

In the summer of 1907, Cook had accompanied Mr. John R. Bradley in that gentleman's yacht in an excursion after big game beyond the Arctic Circle. Later Mr. Bradley sailed home, leaving Cook with a fair supply of provisions and equipment, and one white companion, a German-American named Francke.

On March 8, 1908, Cook left Annooktok, accompanied by eleven men and one hundred and three dogs, with the avowed purpose of reaching the Pole. Francke remained at Annooktok, with instructions to return to the United States in case Cook did not return by June, 1908.

News of Cook's departure for the North Pole had meanwhile aroused interest in the United States. One of the objects of Commander Peary's expedition of 1908 was "The Relief and Rescue of Dr. Frederick A. Cook." The big supply station at Etah was, in fact, established by him mainly for the benefit of Dr. Cook. When the *Roosevelt* and *Erik* arrived at Annooktok on August 7, 1908, Francke was found in a pitiable condition, and he begged to be sent "home." He was returned in the *Erik* (commanded by Captain Bartlett), and from St. John's, Newfoundland, sent out the news that Cook had probably perished on his way to the Pole.

This announcement aroused so much interest that early in August, 1909, a relief ship left St. John's for the purpose of searching for Dr. Cook and for carrying provisions to Peary. News travels slowly "north of 53," and meanwhile Cook had returned.

In April, 1909, a white man and two Eskimos appeared at the relief station at Annooktok, the station immediately north of Etah. The three were utterly fatigued and were made as comfortable as possible by the men whom Commander Peary had left behind. A few days later Cook left Annooktok for South Greenland, whence he took steamer for Copenhagen.

Despatches from the Shetland Islands, the last of August, 1909, proclaimed that Dr. Cook had reached the Pole in April, 1908. Cook declared his route to have been by Smith Sound, across Ellesmere Land, to Nansen Sound; to Land's End, thence by Cape Thomas Hubbard, which he left in March, 1908, to the Pole, four hundred and sixty miles distant, which he claims to have reached on April 21, 1908.

HIS RETURN FROM THE ARCTIC

The familiar story of his welcome at Copenhagen needs not to be retold here. Meanwhile came a despatch to the *New York Times*:—

> "I have the Pole, April 6. Expect arrive Chateau Bay, September 7. Secure control wire for me there and arrange expedite transmission big story.
>
> "PEARY."

At Battle Harbor, Commander Peary learned of Cook's claim to have reached the Pole. But Peary had carried northward a number of Eskimos, with their wives and children, and these he had led safely back again to Etah. However, the Greenland winter was approaching, and he lingered at Etah, organizing a walrus hunt which supplied his faithful company with food for the coming year. Not till this provision was made did he set his face toward the United States.

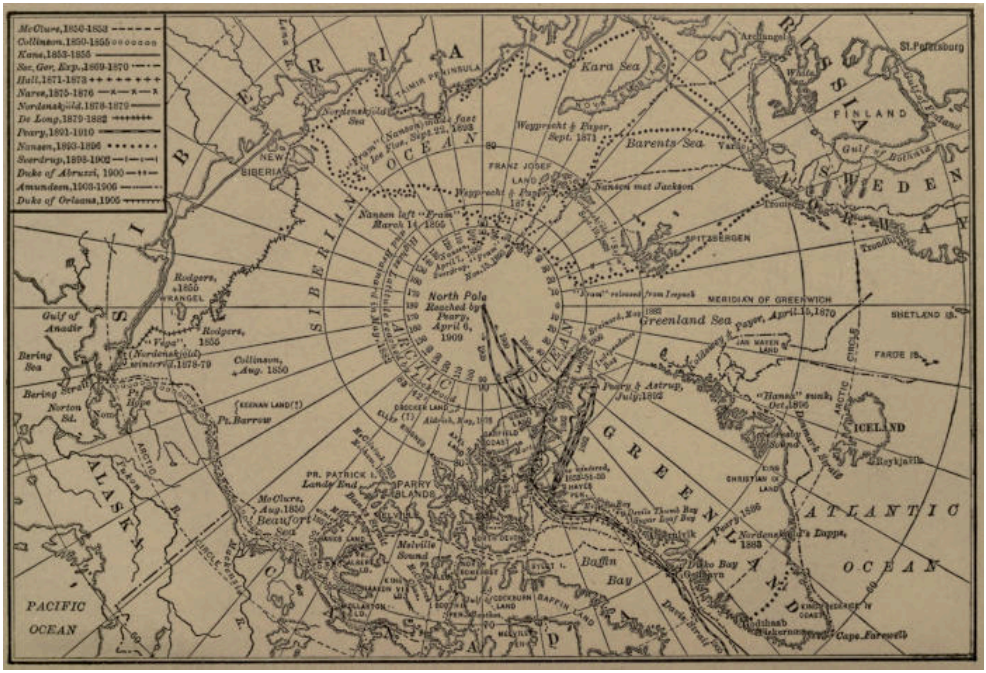
A shadow of doubt, hardly bigger than a man's hand, which was cast by a part of the scientific world at the Doctor's first announcement, soon grew into what eventually proved to be a cloudburst. No controversy in the history of modern times has caused more general excitement. Soon the two principals were pursuing their separate activities under very dissimilar conditions. Dr. Cook was lecturing in the United States, facing packed houses, interviewing reporters, asserting his claims, promising proofs of his assertions. Peary preferred to present his own claims to the discovery of the Pole in terse language, the first announcement published in the *New York Times* reading:—

> "*Summary of North Polar Expedition of the Peary Arctic Club*: The steamer *Roosevelt* left New York on July 6, 1908; left Sidney on July 17; arrived at Cape York, Greenland, August 1; left Etah, Greenland, August 8; arrived Cape Sheridan, at Grant Land, September 1; wintered at Cape Sheridan. The sledge expedition left the *Roosevelt* February 15, 1909, and started for the North. Arrived at Cape Columbia, March 1; passed British record, March 2; delayed by open water, March 2 and 3; held up by open water, March 4 to 11; crossed the 84th parallel, March 11; encountered open lead, March 15; crossed 85th parallel, March 18; crossed 86th parallel March 23; encountered open lead March 23; passed Norwegian record March 23; passed Italian record March 24; encountered open lead March 26; crossed 87th parallel March 27; passed American record March 28; encountered open lead March 28; held up by open water March 29; crossed 88th parallel April 2; crossed 89th parallel April 4; North Pole April 6. All returning left North Pole April 7; reached Cape Columbia April 23; arriving on board *Roosevelt* April 27. The *Roosevelt* left Cape Sheridan July 18; passed Cape Sabine August 8; left Cape York August 26; arrived at Indian Harbor with all members of the expedition returning in good health, except Professor Ross G. Marvin, unfortunately drowned April 10, when forty-five miles north of Cape Columbia, returning from 86° north latitude in command of the supporting party.
>
> "ROBERT E. PEARY."

Immediately upon his return to the United States, Peary joined his family at their summer home in Maine, offering to submit his proofs at once to any competent body. The National Geographic Society accepting the offer, pronounced favourably upon his claims. In the meantime, he took no active part in the trend of affairs, but waited quietly for the dust to settle.

COOK SENDS MANUSCRIPT TO COPENHAGEN

In November, Dr. Cook cancelled his lecture engagements, and settled down to preparing the long-delayed proofs to be submitted as promised to the University of Copenhagen. This accomplished, he despatched a typewritten copy to the University of Copenhagen, Denmark. After careful deliberation, the University of Copenhagen rendered its verdict to the world, which, summarized in two short words, left the claim of Dr. Frederick A. Cook to the discovery of the North Pole, April 21, 1908, *Not Proven*.



ARCTIC EXPLORATIONS, 1850-1908

CONCLUSION

For three and twenty years Robert Edwin Peary has knocked valiantly at the portals of Immortal Fame—that Castle Nowhere—whose glistening walls of eternal ice lie shimmering in the brilliant sun; whose jewelled towers and minarets catch the glint of sparkling rainbows.

The Gates at last have opened and the banquet hall is set. Wild Arctic melodies fall grandly upon the ear. The cannonade of glaciers thunders a salute. About the festive board stand the heroes of the past, according to their precedence and rank.

Hail! ye Iva Bardsen! Hail! ye early Norsemen and ye Danes! There stand the Cabots, John the father, Sebastian the bold son. There Sir Willoughby and Chancellor; and old Sir Humphrey Gilbert and a host of others. There Barentz, there Behring,—there Henry Hudson and old Baffin. Three hearty cheers for Von Wrangell, Ross and Parry and brave old Sir John Franklin! Crozier and his men line at attention and salute!

Ah! Elisha Kane, the beauty of a noble soul lies written in a gentle face. Francis Hall, thou dreamer, stand forth and welcome the arriving guest. German, Austrian, Norwegian and Italian, stand thou behind the board, lift high the diamond chalice and quaff the limpid draft in honour of the hero, for he comes.

In one voice, down the ages goes the cry, "*All praise to him who conquers!*" and Peary, entering, bows, and takes his seat.

FOOTNOTES

[1] Reprinted from *Farthest North* by Charles Lanman. Copyright, 1885, by D. Appleton and Company.

[2] Navy ropes have certain threads of red or yellow, etc., laid in along with the yarns.

EXPLANATION OF TERMS

Bay-ice, or **young ice**, is that which is newly formed on the sea, and consists of two kinds, common bay-ice and *pancake* ice; the former occurring in smooth, extensive sheets, and the latter in small, circular pieces, with raised edges.

Beset the situation of a ship when closely surrounded by ice.

A **bight** is a bay in the outline of the ice.

Blink. A peculiar brightness of the atmosphere, often assuming an archlike form, which is generally perceptible over ice or land covered with snow. The blink of land, as well as that over *large* quantities of ice, is usually of a yellowish cast.

Bore. The operation of "boring" through loose ice consists in entering it under a press of sail, and forcing the ship through by separating the masses.

Brash-ice is still smaller than drift-ice, and may be considered as the wreck of other kinds of ice.

Cache. Literally a hiding-place. The places of deposit of provisions in Arctic travel are so called.

A **calf** is a portion of ice which has been depressed by the same means as a hummock is elevated. It is kept down by some larger mass, from beneath which it shows itself on one side.

Drift-ice consists of pieces less than floes, of various shapes and magnitudes.

Field-ice, or a field of ice, "is a sheet of ice so extensive that its limits cannot be discerned from the masthead of the ship."

Fiord. An abrupt opening in the coastline, admitting the sea.

A **floe** is similar to a field, but smaller, inasmuch as its extent *can* be seen.

Glacier. A mass of ice derived from the atmosphere, sometimes abutting on the sea.

Heavy and **light** are terms attached to ice, distinguishable of its thickness.

A **hummock** is a protuberance raised upon any plane of ice above the common level. It is frequently produced by pressure, where one piece is squeezed upon another, often set upon its edge, and in that position cemented by the frost. Hummocks are likewise formed by pieces of ice mutually crushing each other, the wreck being heaped upon one or both of them. To hummocks, principally, the ice is indebted for its variety of fanciful shapes and its picturesque appearance. They occur in great numbers in heavy packs, on the edges, and occasionally in the middle of fields and floes, where they often attain the height of thirty feet and upwards.

Ice-belt. A continued margin of ice, which, in high northern latitudes, adheres to the coast above the ordinary level of the sea.

Iceberg. A large mass of solid ice, generally of great height, breadth, and thickness.

Ice-foot. Ice attached to the land, either in floes or in heavy grounded masses lying near the shore.

Ice-hook. A small ice-anchor.

A **lane** or **vein** is a narrow channel of water in packs or other collections of ice.

A **lead** is an opening, large or small, through the ice, in which a vessel can be able to make some progress either by sailing, tracking, or towing.

Nipped. The situation of a ship when forcibly pressed by ice on both sides.

Open-ice, or **sailing-ice**, is where the pieces are so separated as to admit of a ship sailing conveniently among them.

A **pack** is a body of drift-ice, of such magnitude that its extent is not discernible. A pack is *open* when the pieces of ice, though very near each other, do not generally touch, or *closed* when the pieces are in complete contact.

A **patch** is a collection of drift or bay-ice of a circular or polygonal form. In point of magnitude, a pack corresponds with a field, and a patch with a floe.

Pemmican. Meat cured, pulverized, and mixed with fat, containing much nutriment in a small compass.

Rue-raddy. A shoulder-belt to drag by.

Sconce pieces are broken floes of a diameter less than half a mile; and, occasionally, not above a hundred or a few hundred feet.

Sludge consists of a stratum of detached ice crystals, or of snow, or of the smaller fragments of brash-ice, floating on the surface of the sea.

A **stream** is an oblong collection of drift or bay-ice, the pieces of which are continuous. It is called a *sea-stream* when it is exposed on one side to the ocean, and affords shelter from the sea to whatever is within it.

Land-ice consists of drift-ice attached to the shore; or drift-ice which, by being covered with mud or gravel, appears to have recently been in contact with the shore; or the flat ice resting on the land, not having the appearance or elevation of icebergs.

Tide-hole. A well sunk in the ice for the purpose of observing tides.

A **tongue** is a point of ice projecting nearly horizontally from a part that is under water. Ships have sometimes run aground upon tongues of ice.

Tracking. Towing along a margin of ice.

Water-sky. A dark appearance in the sky, indicating “clear water” in that direction, and forming a striking contrast with the “blink” over land or ice.

INDEX

Abruzzi, Duke of, the, 425-430.

Adams, Captain, 451.

Advance, voyage of, 105, 108, 113;
second voyage, 198-200;
winters in Rensseläer Harbour, 202;
abandonment, 228.

Advice, voyage of, 103.

Albert, Prince of Monaco, 422.

Aldrich, Lieutenant, farthest, 325.

Alert, voyage of, 310;
high northing, 314;
winters at Floe-berg Beach, 315-324;
rejoins the *Discovery*, 326.

Alexai, 346, 351, 360.

Alexander, voyage of, 30.

Ambler, Dr. J. M., 346, 349, 352, 367.

America, voyage of, 430, 432, 433.

Amundsen, Anton, 410.

Amundsen, Captain Roald, successful navigation of Northwest Passage, 450-454.

Anderson, James, 185.

Andrée, Salamon August, 422-424.

Andreief, Lieutenant, 370.

Andriz, Claes, 17.

Anequin, 346.

Anjou, Lieutenant P. F., 25.

Archer, Lieutenant, surveys Archer Fiord, 326.

Arctic, in command of Lieutenant Hartstein, 232.

Assistance, in command of Captain Ommaney, 104, 109, 120;
in command, of Sir Edward Belcher, 141, 143, 179, 191.

Astrup, Eivind, 457, 459, 460.

Austin, Captain H. T., 104, 120, 122.

Austro-Hungarian expedition, 286.

Back, Captain G., search for Ross, 67;
explores Great Fish River, 71;
Back's farthest, 72;
second voyage, 73;
land voyage with Franklin, 82, 85, 87, 88;
second land journey with Franklin, 90.

Bade, Captain, 424.

Baffin, 21.

Baldwin, Evelyn, 425, 430, 432, 459.

Baldwin-Ziegler expedition, 430-434.

Balto, the Lapp, 403.

Banman, Lieutenant Victor, 433.

Bardsen, Iva, 2.

Barnes, Captain, of *Sea Breeze*, 346.

Barentz, William, three voyages, 13-17.

Barnard, Lieutenant, murdered, 174.

Barreto Junior, 93.

Barry, Captain, 342.

Bartlett, Captain, 440.

Bauldry, Captain, of the *Helen Mar*, 346.

Bear, 398-400.

Beaumont, Lieutenant L. A., explores Greenland coast, 326.

Bedford, 80.

Beebe, William M. Jr., 379-380, 383.

Beechey, Captain, in command of *Blossom*, 60.

Behring, 21-24.

Belcher, Sir Edward, in command of search expedition, 141, 143, 148;
directs sledging parties, 174-177;
desertion of the ships, 179.

Belgia, 430, 432.

Bellerophon, 80.

Bellot, Lieutenant, French navy, 123, 127, 129, 131, 133, 136;
death of, 169-172.

Bender, 393.

Bennett, James Gordon, 345.

Berggren, Dr., 300.

Bessels, Dr. Emil, accompanies *Polaris* expedition, 254;

sledge journey, 256.

Beverly, Surgeon, 32.

Biederbick, 392.

Billings, Captain, 25.

Birulja, A., 418.

Bona Speranza, in command of Sir Hugh Willoughby, 5.

Bona Ventura, in command of Richard Chancellor, 6.

Boothia Felix, 67.

Boothia Peninsula, examined by M'Clintock, 100.

Bore, Lieutenant G., Royal Italian navy, 304.

Bradley, John R., 470.

Brainard, D. L., 373;
highest north, 376, 385, 391, 394, 396.

Braskerud, 439, 441.

Brattelid, 2.

Bridgman, H. L., 440, 460, 464.

British expedition of 1875, 310.

Brown, Captain, in command of the *Delight*, 11.

Brunsneff, 421.

Buchan, 29-40.

Buddington, Captain S. O., in command *George Henry*, 243;
sailing master of *Polaris*, 254;
wreck of *Polaris*, 259;
winters Life Boat Cove, 261.

Bunge, Dr. A., 417.

Burrough, Stephen, 6;
discovers strait leading into Kara Sea and winters at Colomogro, 7.

Butler, Captain, 10.

Cabot, John, 3-4.

Cabot, Sebastian, 3-5.

Cagni, Captain Umberto, 426;
highest north, 428.

Cannon, Henry W., 464.

Cape Bounty, discovered by Parry, 42.

Carcase, in command of Phipps, 27.

Carlsen, Captain E., navigates the Sea of Kara, 268.

Cato, voyage of, 80.

Cator, Lieutenant Commander, of the *Intrepid*, 104.

Chamberlin, Professor T. C., 460.

Chancellor, Richard, 5;
reaches Bay of St. Nicholas, undertakes visit to Moscow, 6.

Chandler, Hon. W. E., 400.

Chipp, Lieutenant C. W., executive officer of the *Jeannette*, 345, 348;
abandonment of *Jeannette*, 351;
assigned to second cutter, 353;
lost, 357.

Christiansen, Hans, Eskimo interpreter for second Grinnell expedition, 200, 208, 210, 219, 228;
accompanies *Polaris* expedition, 254;
adrift on the ice floe, 260, 266.

Christensen, Eskimo, 375, 393.

Clavering, Captain, 57.

Coffin, Captain Edwin, 432.

Collins, Jerome J., 346, 351;
death, 360.

Collinson, Captain Richard, in command of *Enterprise*, 103.

Colwell, Lieutenant J. C., 381, 384, 395, 400.

Conway, Sir Martin, 421.

Cook, Captain, 28.

Cook, Dr. Frederick A., 457;
claims discovery of the Pole, 471-473.

Coppinger, Dr., 326.

Cortereals, Caspar, Miguel, Vasco, 7.

Crane, Zenas, 468.

Cresswell, Lieutenant, 148;
carries despatches from McClure to England, 149.

"Crimson Cliffs," first mentioned by Captain John Ross, 31.

"Crocker Mountains," 32.

Cross, Mrs. Susan J., 459.

Crozier, Captain F. R. M., 187.

Daly, Charles P., 335.

Daly, Maria, 335.

Danenhower, Lieutenant John W., 346, 349, 351, 364.

Davis, John, three voyages, 13.

Dawn, bark, 346.

Dawson, Lieutenant, 370.

Dease and Simpson, 73-75.

Diedrick, Dr., 440.

Delight, under Sir Humphrey Gilbert, 10.

De Long, Lieutenant George W., in command of the *Jeannette* expedition, 345;
new lands, 350;
abandonment of the *Jeannette*, 351;
the retreat, 352;
Bennett Island, 353;
divides party, 353;
making for the Lena delta, 357;
lands, 358;
last days, 360.

Deshneff, 22.

Dicuil, 2.

Diebitsch, Emil, 462.

Dietrichson, O. C., 403, 406.

Digges, Sir Dudley, 19.

Discovery, in command of Henry Hudson, 19;
Discovery, voyage of, 310;
winters at Discovery Harbour, 314;
communicates with the *Alert*, 324;
return to England, 326.

Dorothea, voyage of, 33-40.

Dressler, 360.

Duffy, Seaman, 434.

Dunbar, William M., 346, 350.

Dymphna, 370.

Eddystone, 45.

Egerton, Lieutenant, 315, 320, 326.

Einarsfjord, 2.

Ekholm, 370.

Elison, 388-390-393;
death, 400.

Emory, Lieutenant, 399-400.

Enterprise, in command of Sir James Clark Ross, 95, 98;
under Captain Richard Collinson, 103, 166.

Entrikin, Samuel J., 459.

Erebus, in command of Sir John Franklin, 93;
last seen, 94.

Eriksen, Mylius, 451.

Esther, 335, 336, 342.

Fairholme, Lieutenant, 93.

Falcon, voyage of, 459, 460.

Felix, in command of Captain John Ross, 104, 123.

Fiala, Anthony, 432-434.

Fitzjames, 193.

Forsyth, Commander Charles C., 104.

Forth, convoy for Duchess of Angouleme, 81.

Fosheim, 441-443.

Fox, voyage of, 186.

Fram, Nansen's voyage in the, 410-416;
four years' voyage in command of Otto Sverdrup, 436-449.

Franaenkel, 422.

Franklin, John, 29;
early life, 79;
first land journey, 82;
land journey of 1825, 91-92;
government service, 92;
last journey of Sir John Franklin, 93;
traces of lost ships, 110-184;
record of Franklin expedition, 190-193.

Franklin, Lady Jane, 92;
offers reward for assistance to her husband, 102;
appeal to the United States, 104.

Frederick, 388-390, 393.

Frithiof, 430-434.

Frobisher, Martin, three voyages, 8.

Frozen Strait of Middleton, 47.

Fury, voyage of, 44-56;
abandoned, 51.

Gabriel, in command of Martin Frobisher, 8.

Gardiner, 392.

Garlington, Lieutenant E. A., 381, 384, 387.

George Henry, conveys Charles Francis Hall to Greenland, 180;
under Captain Buddington, 243.

Georgian Islands, later called Parry Islands, discovered, 43.

Gerlache, Captain, 430.

German expedition, first, 268;
second, 269;
beset, 279;
winters, 278;
remarkable journey of Lieutenant Payer, 281.

Germania, in command of Captain Koldeway, beset, 279;
winters, 281;
return, 285.

Gibson, Langdon, 457.

Giese, Dr., 370.

Gilbert, Sir Humphrey, 10-13.

Gilder, W. H., 334, 340-344.

Gjoa, in command of Captain Roald Amundsen, 450-454.

Gladen, convoy, 300.

Golden Hinde, 10.

Goodsir, Dr., 103, 122.

Gore, Graham, 191-194.

Gore, Professor J. H., 422.

Görtz, 360.

Greely, A. W. (Major General U. S. A.), Lieutenant in command of the Lady Franklin Bay
expedition, 371;
explorations in Grinnell Land, 377;
first failure of relief ship, 379;
second failure of relief ship, 382;
abandonment of Fort Conger, 385;
the retreat, 386;
Cape Sabine, establishes Camp Clay, 387;
horrors of the winter, 380-392;
saved, 395-400.

Green, sailor, 20.

Greenland, yacht, in command of Captain Koldewey, 268.

Grinnell expeditions, first, in command of De Haven, 105, 119;

second, in command of Dr. Kane, 199;
winters in Rensseläer Harbour, 202;
sledging trips, 207;
effects of exhaustion and cold, 211;
Dr. Kane's journey, 215;
illness of Dr. Kane, 219;
second winter in the ice, 223;
privation and sufferings, 225;
abandonment of *Advance*, 228;
death of Ohlsen, 229;
rescue, 230.

Grinnell, Henry, 105.

Grinnell Land, discovered, 115.

Griper, in command of Parry, 41;
in command of Clavering, 58.

Haddington, Lord, 92.

Hall, Charles Francis, early life, 243;
first trip to Arctic, discovers Frobisher relics, 244-255;
life with Eskimo, 246;
journey to King William Land, 248;
finds relics of Franklin, 251;
return to the United States, 253;
North Polar voyage, 254;
death of Hall, 255.

Hansa, second German expedition, 269;
wreck of, 274.

Hansen, Helmer, 450.

Hansen, Lieutenant Godfred, 450, 452.

Harber, Lieutenant Giles B., 364, 368.

Hartstein, Lieutenant, sent to the relief of Dr. Kane, 232-234.

De Haven, Lieutenant in command of first Grinnell expedition, 105.

Hayes, Dr. I. I., accompanies second Grinnell expedition, 213, 219;
in command of the *United States*, 235;
death of Sonntag, 236;
sledge journey to "Open Polar Sea," 239;
journey in *Panther*, 242.

Hazen, General, 380, 384.

Hearne, discovers the Coppermine River, 28.

Hecla, in command of Parry, 41-56.

Hegemann, Fr., Captain, in command of the *Hansa*, 269.

Heiberg, Consul Axel, 436.

Heilprin, Professor, 458.

Helen Mar, whaler, 346.

Henry, 392, 399.

Henry VII, grants patent to Cabots, 3.

Henson, Matthew, 457, 459, 463.

Hepburn, John, 83, 123.

Herald, voyage of, 95, 149.

Hobson, Lieutenant, makes search for Franklin relics, 186, 197.

Hood, Robert, 82, 84;
    death, 89.

Hope, 464.

Hoppner, Lieutenant, 51.

Horgaard, Lieutenant, 304, 370.

Hubbard, General Thomas H., 468.

Hudson, Henry, early voyages, 19;
    last voyage, 20.

Hyde, Frederick E., 464.

Icy Cape, headland of Alaska, seen by Barentz, 16.

Iron Mountains, 460.

Isabel, in command of Captain Inglefield, R. N., 143-147;
    in command of Mr. Kennedy, 148.

Isabella, under Ross and Parry, 30.

Isachsen, Lieutenant Ingvald, 436, 439, 442.

Isbjorn, in command of Lieutenant Weyprecht, 286.

Island of Cape Breton, seen by Cabots, 3.

Israel, 392.

Iversen, 360.

Jackman, Charles, 9.

Jackson, Frederick G., 416.

Jackson, J. P., 364.

Jason, 425.

Jeannette, in command of Captain De Long, 345;
    beset, 347;

is sunk, 351;
relics found, 409.

Jeannette expedition, 345-368.

Jens, Eskimo, 372.

Jensen, Heir Dongaad, 451.

Jesup, Morris K., 464.

Jewell, 393.

Johannsen, Captain, circumnavigates Nova Zembla, 268.

Johannesen, Frederick, 410, 413, 415.

Juanita, 346.

Kamchatka, 22.

Kane, Dr. Elisha Kent, U. S. N., 105;
describes escape from Wellington Channel, 113;
new lands, 115;
death, 234.

Kann, Dr. Leopold, 466.

Keemsdirk, Jacob, 16.

Kellett, Captain Henry, 95.

Kelley, Captain of the bark *Dawn*, 346.

Kennedy, Captain in command of *Prince Albert*, 123-129;
journey to Fury Beach, 138;
discovers Bellot Strait, 140.

King Alfred, 2.

King, Dr. Richard, 67, 72.

Kite, voyages of, 457, 458, 464.

Kjellman, F. R., 304.

Koldewey, Captain Karl, in command of *Germania*, 269, 271, 281, 284.

Kolomiezoff, Lieutenant, 418.

Koltschak, Lieutenant, 418-420.

Lady Franklin, in command of Mr. Penny, 103;
in command of Inglefield, 148.

Lady Franklin Bay expedition, 371-400.

Lanford, Captain, in command of *Polephemus*, 80.

Lerner, Theodor, 424.

Libbey, Professor William, 460.

Linstrom, Adolf, 450.

Lockwood, Lieutenant J. B., 372;
highest north, 376, 386;
death, 393.

Lok, Michael, patron of Frobisher, 8.

Long, Captain Thomas, 268.

Long, Sergeant, 391, 394, 398, 400.

Lord Wellington, Hudson Bay Company trader, 45.

Lowe, Chief Engineer, U. S. N., 398.

Lund, Auto, 450.

Lynn, 388-390.

Lyon, Lieutenant, 44, 48;
in command of *Griper*, 59.

Lyons, Admiral, 454.

Lytzen, 409.

Machuron, Alexis, 423.

Mackenzie, 28.

M'Clintock, explores coast line of Boothia Peninsula, 100;
sledge journey of 1851, 121;
in command of *Fox*, 186;
finds relics of Franklin's expedition, 190-198.

McClure, Commander, 103;
accomplishes Northwest Passage, 148-168.

McLeod, employee of Hudson Bay Company, accompanies Captain Back, 68.

Maigaard, Christian, 456.

Marian, rescues the Kane party, 231.

Markham, Commander Albert H., second in command of the British expedition of 1875, 311;
visits Life-boat Cove, 313;
autumn sledge journey, 315;
Markham's farthest, 321.

Marvin, Professor Ross G., 473.

Mathew, voyage of, 3.

Melville, George W. (Rear Admiral United States Navy), Engineer of the *Jeannette*, 346, 348, 350;
abandonment of the *Jeannette*, 351;
in command of whale boat, 353;
reaches mouth of Lena River, 358;

meets natives, 359;
Nindemann and Noros, 362;
winter search for De Long, 363;
spring search, 364-368;
to the relief of Greely, 399-400.

Melville, Right Honourable Viscount, 52.

"Meta Incognita," discovered by Frobisher, 8;
mentioned by Hall, 244.

Meyer, Sergeant F., Signal Corps, U. S. A., with *Polaris* expedition, makes record, 256.

Michael, sails in company with the *Gabriel*, under command of Frobisher, 8.

Michaelmas Bay, so named by Hudson, 19.

Milne, Captain, 451.

Molinelli, Dr. Achille C., 426, 427, 428.

Moore, Captain, in command of *Plover*, 95.

Movements of Captain Austin's squadron in spring of 1851, 121.

Murdock, sailing master, first Grinnell expedition, 105.

Muscovy Company, established by merchants of London, 4.

Nahorst, Dr. A. G., 422, 424.

Nancy Dawson, 96.

Nansen, F., 401;
first crossing of Greenland, 403-408;
plans North Polar voyage, 409;
adrift in the pack, 411;
leaves the *Fram*, 412;
highest north, 413;
the retreat, 414;
winter on Franz Joseph Land, 415;
meeting with Jackson, 416, 426, 436.

Nares, Captain George S., in command of the British expedition of 1875, 311;
visits Lifeboat Cove, 313;
winters Floe-berg Beach, 315;
organizes sledging parties, 321;
to the relief of Markham, 324.

Nautilus, 44.

Nelson, hero of Trafalgar, 27, 28.

Neptune, 379, 380, 384.

Newcomb, Raymond L., 346.

New York Herald, 345, 364, 470.

Nindemann, Seaman Wm. F. C., 346, 348, 350;

forced march, 360;
meets Melville, 362;
assists in search for De Long, 364, 366, 368.

Nordenskjöld, Baron A. E. von, first voyage, Spitzbergen, 299;
subsequent journeys, 300;
journey of 1875, 302;
voyage in the *Vega*, 304-308;
return of *Vega*, 309.

Nordenskjöld, the, 371.

Norman, 397.

Noros, L. P., 359, 361, 362, 364.

North Cape, 2.

North Star, 99;
winters in Wolstenholme Sound, 103-104;
attached to Sir Edward Belcher's squadron, 140, 144, 169, 179.

Nova Scotia, supposed to be land first seen by Cabots, 3.

Ohlsen, accompanies second Grinnell expedition, 202, 204, 207, 213, 216;
death of, 229.

Ommaney, Captain, in command of *Assistance*, 104;
leaves record at Cape Riley, 109.

Onkle Adam, convoy, 300.

Ornen, balloon, 422.

Osborne, Sherard, in command of *Pioneer*, 104;
describes examination of Beechey Island, finds relics of *Erebus* and *Terror*, 111.

Other, early adventurer, 2.

Otter, Count T. W. von, in command of *Sofia*, 299.

Palander, Lieutenant, 300;
commander of the *Vega*, 304.

Palliser, navigates Sea of Kara, 268.

Pandora, voyage of, 327-330;
second voyage, 332-334.

Parker, landed provisions for Franklin at Cape Hay, 103.

Parr, Lieutenant, 315, 323.

Parry, Lieutenant W. E., 29;
second voyage, 41;
passes 110° W., wins reward, 42;
discovers Parry Islands, 43;
third voyage, 44-51;

North Polar voyage, 52.

Paulsen, A., 370.

Pavy, Dr. D., 372;
sledge journey, 273, 392, 393.

Payer, Lieutenant Julius, of the second German expedition, journey of, 283;
Austro-Hungarian expedition, 287;
sledge journey, 291;
farthest, 296;
return, 297.

Peary, Mrs., 457, 459.

Peary, Robert Edwin, early life, 455;
first journey, 456;
subsequent journeys, 457;
explores Greenland ice cap, 458;
summary of second voyage, 459;
journey of 1893, second journey across Greenland ice cap, 460;
summer voyages, 464;
secures the famous meteorite, 464;
first attempt to reach Pole, 464;
work at Fort Conger, 465;
record of 1899, 466;
record 1902, 467;
record 1906, 468;
announcement of discovery of the Pole, 471;
summary of the North Polar Expedition of Peary Arctic Club, 472.

Peary Arctic Club, 464, 467, 468, 472.

Peder, 442.

Pendulum Islands, discovered by Clavering, 280.

Penny, Captain, of whaling ship *Advice*, 103.

Pet, Arthur, voyage of, 9.

Peterman, Dr. A., promotes first German expedition, 268.

Peters, William J., 432.

Petersen, 316;
death, 320.

Phipps expedition, 27-28.

Phœnix, in command of Inglefield, 148.

Pim, Lieutenant, 167.

Pioneer, in command of Sherard Osborne, 141.

Plover, in command of Captain Moore, 95, 96, 149.

Polaris, under Captain Hall, 254;
under Captain Buddington, 256;

wreck of, 259;
separation of crew, 261.

Polephemus, 80.

Polhem, in command of Lieutenant Palander, 300.

Porden, Anne, first wife of Sir John Franklin, 81, 90.

Porpoise, 80.

"Prima Terra Vesta," mainland of North America, so named by Cabots, 3.

Prince Albert, in command of Captain Forsyth, 104-106;
in command of Kennedy, 123, 140.

Prince of Wales, trader, 45, 82, 94.

Privy Purse expenses for purchase of Newfoundland, 3.

Proteus, conveys the Lady Franklin Bay expedition to Fort Conger, 371;
to the relief, 381;
sunk, 384, 387, 397.

Pullen, Lieutenant, 96.

Pytheas, early adventurer, 2.

Queen Elizabeth's Foreland, discovered by Frobisher, 8.

Querini, T., 426, 428.

Racehorse, in command of Phipps, 27.

Rae, Dr. John, overland journey, 75-78;
search for Franklin, 141;
finds traces, 184.

Ragnvald Jarl, 424.

Rainbow, in command of Sir John Franklin, 92.

Raleigh, Sir Walter, 10.

Rasmussen, Knut, 451.

Rattlesnake, under Commander Trollope, 148.

Ravna, the Lapp, 403.

Rawson, Lieutenant, 315, 318, 325, 326.

Ray, Lieutenant, 370.

Red Cliff House, 457.

Reid, 122.

Release, in command of Lieutenant Hartstein, sent to relief of Dr. Kane, 232.

Resolute, in command of Captain H. T. Austin, 104;
under Captain Kellett, 141;

story of the, 180.

Retribution, 182.

Rice, Sergeant, 373, 388;
death, 393.

Rink, Dr. H., 409.

Ristvedt, 452.

Robinson, Lieutenant, reaches Cresswell Bay, 101, 130.

Rogers, burned, 368.

Roosevelt, 467, 469.

Roosevelt, Theodore, 464.

Ross, Captain John, first voyage, 29-32;
second voyage, 61-67;
search for Sir John Franklin, 123.

Ross, James Clark, discovers North Magnetic Pole, 63;
in command of *Enterprise* and *Investigator*, in search for Sir John Franklin, 95.

Ryder, Lieutenant, 437.

Sabine, takes observations on Pendulum Islands, 58.

Sacheuse, John, Eskimo, 30.

St. Peter, 24.

Sarya, 418-421.

Schalaroff, 25.

Schei, 442.

Schileiko, Lieutenant, 418.

Schley, Winfield Scott (Rear Admiral, United States Navy), 382, 395, 400.

Schuetze, W. H., 364-368.

Schwatka, Lieutenant Frederick, land journey, 334;
finds Franklin relics, 339;
finds M'Clintock record, 340;
the return, 340.

Scoresby, 57.

Scott-Hansen, Lieutenant Sigurd, 410.

Sea Breeze, American whale bark, 346.

Search-thrift in command of Stephen Burrough, 6.

Seeberg, 421.

Sheldon, Robert, 96.

Simmons, Herman Georg, 436.

Simpson and Dease, 73-75.

Slaradoubzov, Sawa, 24.

Snellen, Dr., 370.

Smith, Leigh, 302.

Snow, W. P., 104, 106, 108.

Sofia, in command of Count F. W. von Otter, 299;
high northing, 300.

"Somerset House," 65.

Sonntag, 206;
death, 236.

Sophia, in command of Penny, 103.

Speckman, Sergeant, 49.

Squirrel, 10-12.

Stadling, J., 424.

Steen, Aksel, S., 370.

Stein, Dr. Robert, 466.

Stella Polare, in command of the Duke of the Abruzzi, 426-430.

Stephenson, George, 229.

Stewart, Marshall J., 122.

Strindberg, 422.

Sutherland, Dr., 122.

Svendsen, Dr. Johan, 438.

Sverdrup, Otto, 403-408;
Captain of the *Fram*, 410-412;
second voyage in command of *Fram*, 435;
sledge journey, 441, 443, 447, 449.

Swallow, 10-12.

Talbot, 179.

Tchitschagof, Admiral, attempts to round Spitzbergen in 1764, 25.

Tegetthoff, Austro-Hungarian expedition, 286-297, 368.

Terra Nova, 434.

Terror, in command of Captain Back, 73;
in command of Sir John Franklin, 93.

Lord Wellington, the, trader, 45.

Thetis, voyage of, 395-400.

Thyra, 403.

Tigress, in command of Captain Bartlett, 266, 346.

Toll, Baron E. von, 417, 421.

Torell, Otto, geologist, 298.

Trana, Kristian, 403.

Trollope, Commander, 148.

Tschirikov, Captain, 22.

Tyson, Captain George, 255;
adrift on ice-floe, 262;
rescue, 266.

Valorous, 311, 312.

Varna, 370.

Veer, Gerard de, 16.

Vega, voyage of, 303-309, 346.

Verhoeff, John M., 457.

Victory, in command of Captain John Ross, 61;
abandoned, 64.

Victory, 183.

Viking, 402.

Vincent, Dr. Edward E., 459.

Walter, Dr., 420.

Wardhuys, 5.

Warmbath, Samuel, 466.

Waxall, 24.

Wellman, Walter, 424-425.

Weyprecht, Lieutenant Karl, sails in *Isbjorn*, 286;
in command of Austro-Hungarian expedition, 287-297, 368.

Wildes, Commander Frank, 381, 383.

Willoughby, Sir Hugh, 5.

Windward, 416, 465, 466.

Wohlgemuth, Lieutenant, 370.

Wolstenholme, Sir John, 19.

Wrangell, Admiral von, 25-27.

Wulfstan, early adventurer, 2.

Yantic, voyage of, 381-384.

Ymer, 303.

Young, Allen, voyage in the *Fox*, 186;
sledge journey, 198;
voyage in *Pandora*, 327-331;
second voyage in *Pandora*, 332-334.

Zeno, Niccolò, 8.

Zichnmi, 8.

Ziegler, William, 430-432.

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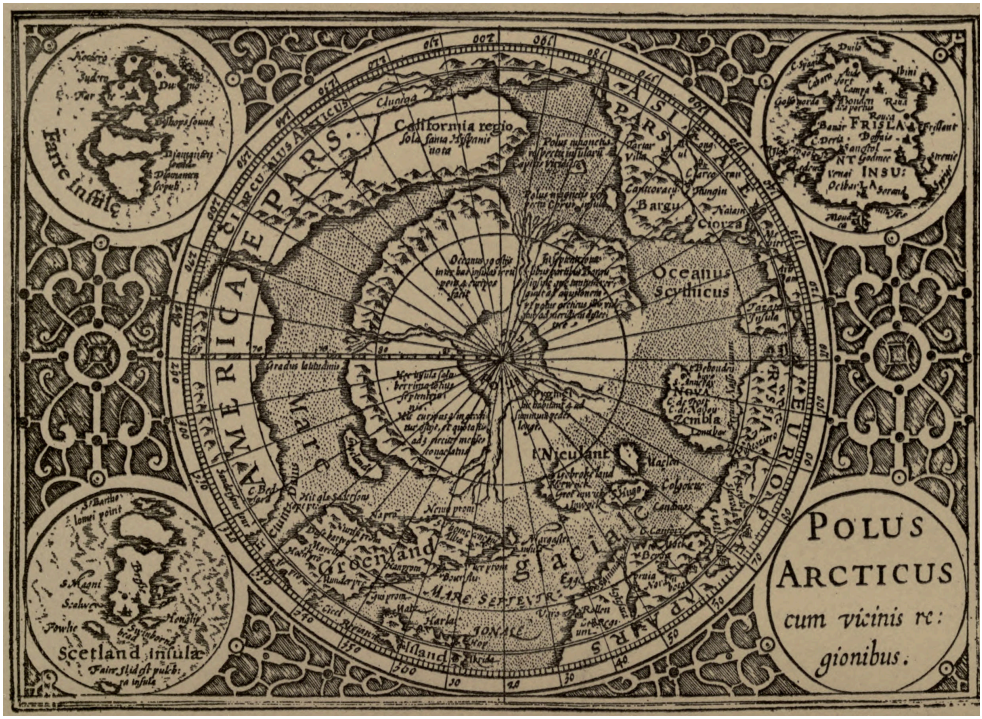
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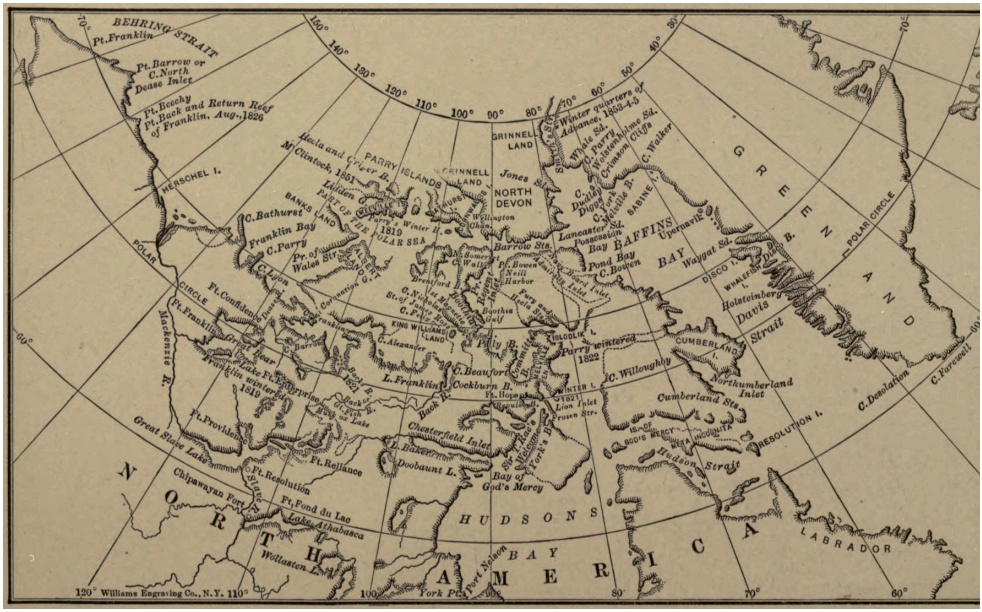
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H. M. Ships Erebus and Terror

Wintered in the Ice in

28 of May 1847 Lat. 70° 5' N Long. 98° 23' W

Having wintered in 1846–7 at Beechey Island in Lat. 74° 43' 28" N. Long 91° 39' 15" W after having ascended Wellington Channel to Lat 77° and returned by the West side of Cornwallis Island.

Commander.

Sir John Franklin commanding the Expedition

All well

Whoever finds this paper is requested to forward it to the Secretary of the Admiralty, London, *with a note of the time and place at which it was found:* or, if more convenient, to deliver it for that purpose to the British Consul at the nearest Port.

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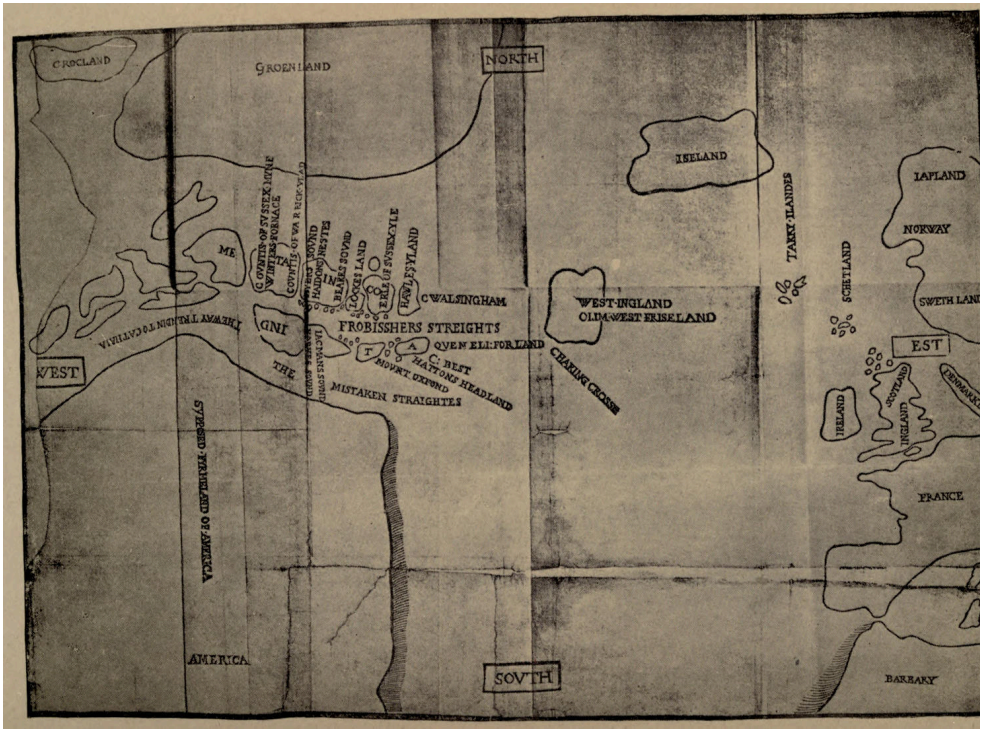
Party consisting of 2 Officers and 6 men left the Ships on Monday 24th May 1847

G. M. Gore Lieut.

Chas F. Des Voeux Mate.

Boston Ticknor & Fields

back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AMERICA
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back

McClure, 1850-1853
Collinson, 1850-1855
Kane, 1853-1855
Sec. Ger. Exp., 1869-1870
Hall, 1871-1873
Nares, 1875-1876
Nordenskjöld, 1878-1879
De Long, 1879-1882
Peary, 1891-1910
Nansen, 1893-1896
Sverdrup, 1898-1902
Duke of Abruzzi, 1900
Amundsen, 1903-1906
Duke of Orleans, 1905
North Pole Reached by Peary, April 6, 1909
ARCTIC OCEAN
GREENLAND
ICELAND
SPITZBERGEN
FRANZ JOSEF LAND
Barents Sea
Kara Sea
Greenland Sea
Baffin Bay
Beaufort Sea
PACIFIC OCEAN
ATLANTIC OCEAN
ALASKA
FINLAND
MERIDIAN OF GREENWICH

back