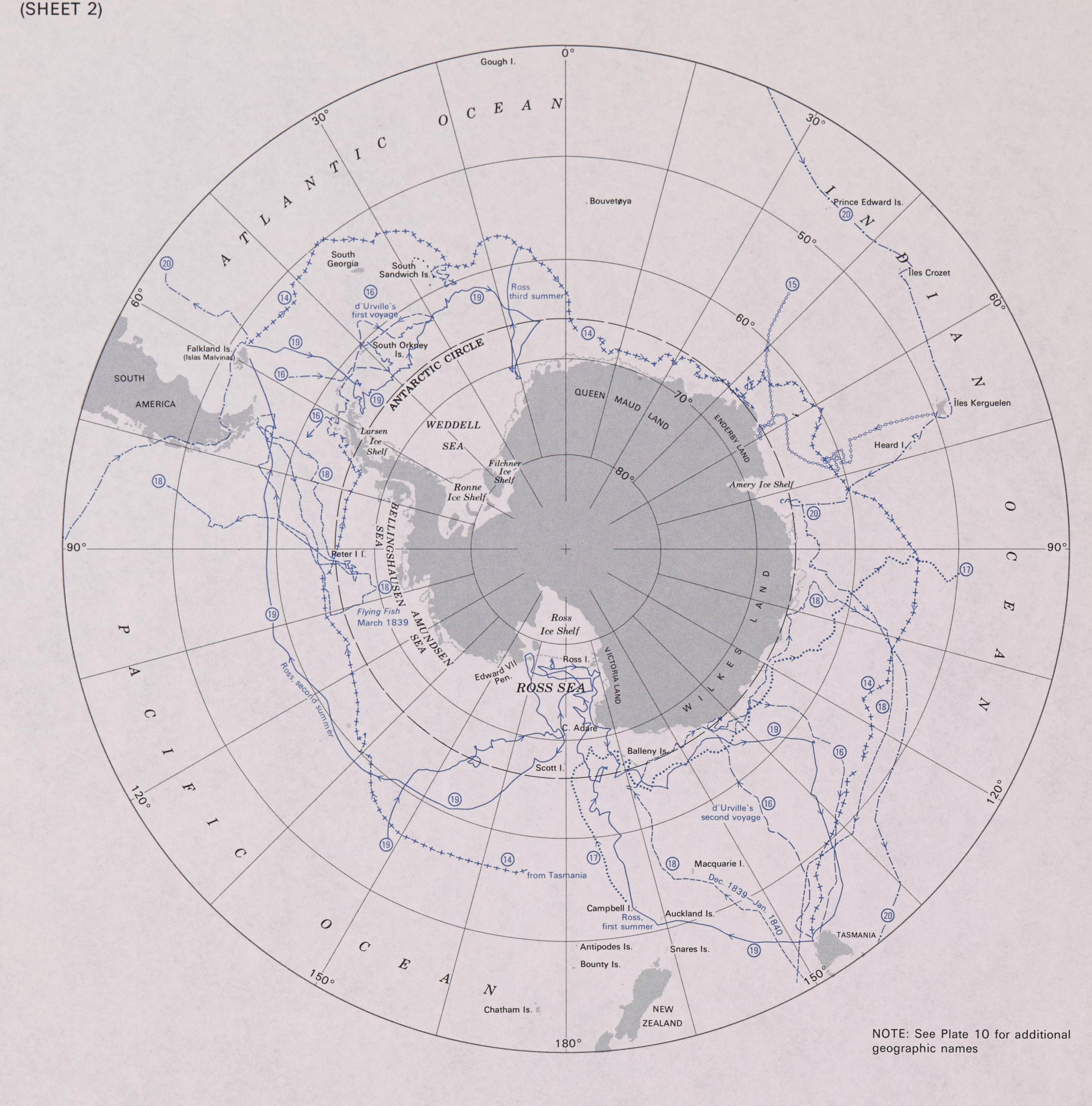
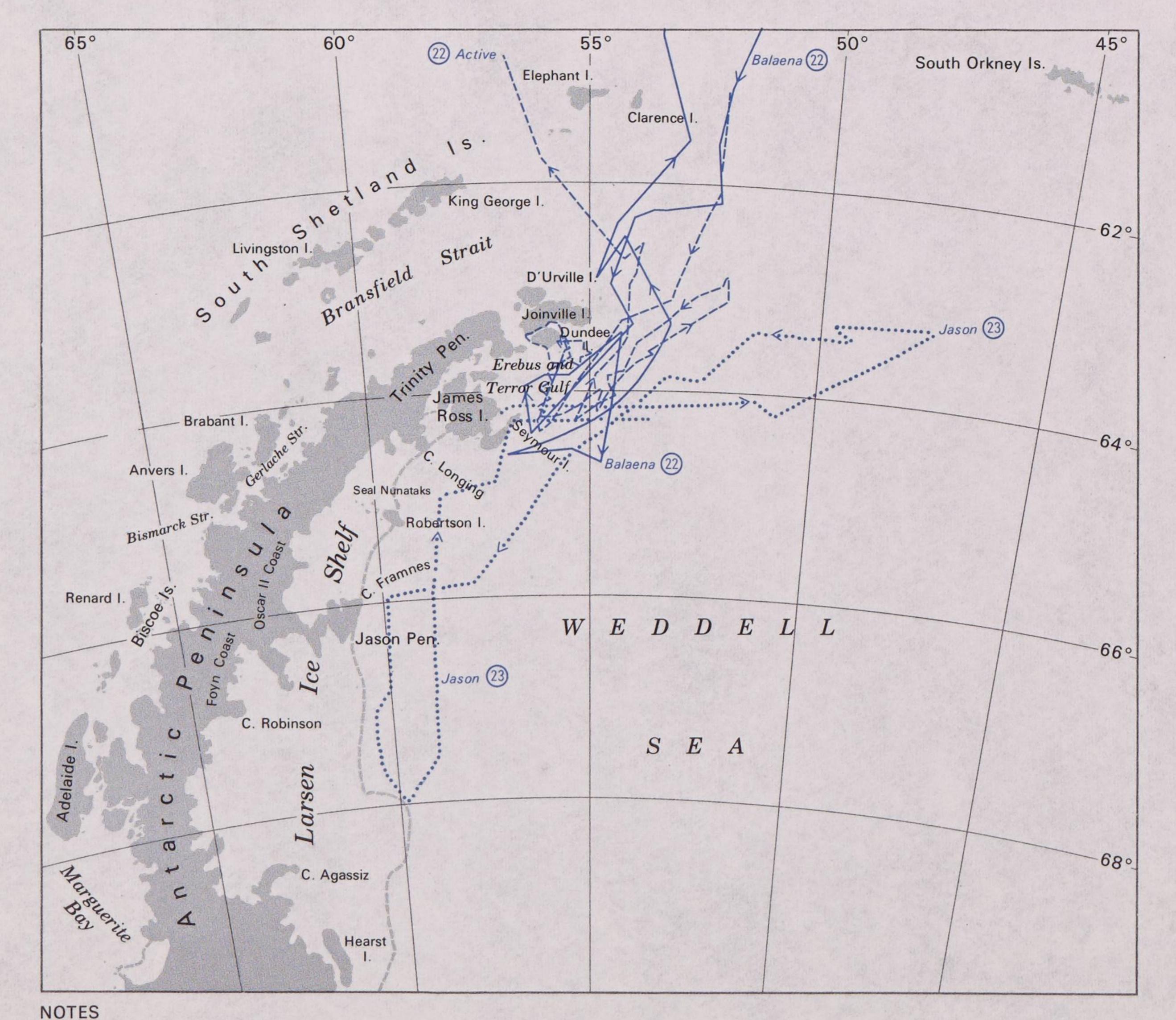
FOLIO 19-HISTORY
ANTARCTIC MAP FOLIO SERIES





Ice shelf limits on the maps are not necessarily in accord with

conditions at the time of the expeditions shown.

Bibliographic numerals given with historical summaries refer to the text section headed. "Bibliographic Sources."

Bold-face numerals indicate sources of expedition data given on the maps.

14 1830—1832 Great Britain
Leader: Capt. John Biscoe
Sponsor: Enderby Brothers
Ships: Tula and Lively
Purpose: Sealing and exploration
Bibliography: 19, 56, 143, 155, 262

John Biscoe sailed eastward from the Falkland Islands and passed the South Sandwich Islands on December 21, 1830. Continuing to travel eastward, he sighted the mountain peaks of Cape Ann in Enderby Land, but was unable to penetrate the pack ice for a landing. After spending the winter in Tasmania, Biscoe continued his circumnavigation of Antarctica, but found no land until he sighted peaks on Adelaide Island. Near the group now known as the Biscoe Islands he made a landing on an island—probably Anvers Island—which he took to be part of the mainland; accordingly he took formal possession in the name of King William IV, and named the mainland Graham Land.

1833—1834 Great Britain
Leader: Capt. Peter Kemp
Sponsor: Enderby Brothers
Ship: Magnet
Purpose: Sealing and exploration
Bibliography: 143, 262

Capt. Peter Kemp was commissioned to sail southward from the Kerguelen Islands; during his voyage he sighted the region of Antarctica now called Kemp Coast. Unfortunately the only record of his voyage known today is the *Magnet*'s charted track.

16 1837-1840 France
Leader: Capt. Dumont d'Urville
Sponsor: Ministry of Marine
Ships: Astrolabe and Zélée
Purpose: Exploration, and search for the South Magnetic
Pole

Bibliography: 119, 256, 260, 262, 263

King Louis Philippe proposed to d'Urville, who had explored in the Pacific on two previous expeditions, that on the third he should lead an expedition into the Antarctic in an attempt to penetrate farther into the Weddell Sea than Weddell had previously done. D'Urville's first voyage, in 1837-1838, was unsuccessful. Extensive pack ice made the Weddell Sea impenetrable, and he made no new findings among the South Shetland Islands and the Antarctic Peninsula. D'Urville, however, remapped and renamed some of the islands. He then spent a year in the Pacific, after which he set out from Tasmania for his return to the Antarctic to attempt to reach the South Magnetic Pole. During this voyage d'Urville discovered the Adélie and Clarie Coasts, which he named after his wife and the wife of the Zélée's captain. His magnetic readings indicated that he was close to the pole but that it lay inland beyond his

17 1838–1839 Great Britain

Leader: Capt. John Balleny

Sponsor: Enderby Brothers

Ships: Eliza Scott and Sabrina

Purpose: Sealing and exploration

Bibliography: 10, 43, 143, 155, 260

Balleny sailed from New Zealand to the Antarctic Circle at 178°E. He then moved west where he discovered and charted the Balleny Islands, the first discovery of land within the Antarctic Circle in the sector south of New Zealand. The rocky, precipitous rims of the islands prevented an attempted landing, but Capt. Foreman of the Sabrina was able to collect a few rocks along the shore. The ships then continued west. During the voyage Balleny sighted what appeared to be coastal land but could not verify this because of the intervening pack ice; the supposed land was noted on Balleny's charts and named Sabrina Land after his cutter. Later speculations based on accounts of this voyage reinforced the belief that Balleny had indeed been close to a landmass. On March 13, 1839, Balleny and his crew had seen an iceberg with a huge, dark rock deeply embedded in it, which had undoubtedly broken away from a glacier or an ice sheet.

18 1838–1842 United States (United States Exploring Expedition)
Leader: Lt. Charles Wilkes, USN
Sponsor: U.S. Navy, with Congressional appropriation
Ships: Vincennes, Peacock, Porpoise, Sea Gull, Flying Fish, and Relief
Purpose: Exploration to aid commerce, navigation, and the advancement of science

Bibliography: 11, 16, 17, 33, 43, 105, 108, 119, 129, 143,

147, 235, 260, 262

This expedition, the first voyage to the southern oceans sponsored by the United States government, was authorized by an act of Congress in May 1836. Wilkes reached the South Shetland Islands in March 1839, but storm conditions gave opportunity for little more than the sighting of the eastern coast of the Antarctic Peninsula. The intended penetration of the Weddell Sea was made impossible by extensive pack ice. Two of the vessels made an attempt to exceed Cook's farthest penetration south (71°10'S, 106°54'W), reached in January 1774. The Flying Fish worked through the ice floes to 70°S, 102°W on March 22, 1839. In April, gales forced the ships to withdraw for the harbor at Valparaiso. After extensive work in the Pacific, Wilkes returned to the Antarctic in December 1839 with four vessels. The expedition sighted the Balleny Islands in January 1840 and continued westward along the continental coast; heavy pack ice and icebergs prevented any landings. Wilkes was able to make intermittent but extensive sightings of land as he cruised west, and thus was the first to prove by substantial field observations that the land was a continent. Near Géologie Archipelago (66°39'S, 139°55'E) on the Adélie Coast, Wilkes was able to estimate the position of the South Magnetic Pole. Wilkes's 'Chart of the Antarctic Continent,' although once much belittled, has been proven by more recent exploration to be remarkably good.

19 1839–1843 Great Britain

Leader: Capt. James Clark Ross, RN

Sponsor: British Admiralty with cooperation of the British

Association and the Royal Society

Ships: Erebus and Terror

Purpose: Exploration, magnetic studies, and other scientific investigations

Bibliography: 43, 62, 130, 143, 167, 193, 204, 260, 262, 263 (21) 1873–1874

se sailed from England in September 1830 to

Sponsors: Albert Rosenth

Ross sailed from England in September 1839 to coordinate magnetic observations in the southern hemisphere and to reach the South Magnetic Pole in Antarctica. Although it did not attain the Pole, this expedition was credited with the longest and most southerly penetration of the Antarctic region and several land and island discoveries. The expedition traveled south of the Antarctic Circle during three consecutive summers. The first voyage, which set out from Hobart, Tasmania and sailed southward to Cape Adare, resulted in the discovery of the Ross Sea, the Ross Ice Shelf, and Victoria Land, which Ross named and claimed for the British crown. After wintering in Australian waters, the expedition returned to the Ross Sea in December 1841 for further exploration. Ross then sailed northward and eastward toward the Falkland Islands which he reached in April 1842. The 1842–1843 season was spent exploring Erebus and Terror Gulf and unsuccessfully attempting to pene-

The party obtained depth soundings and made magnetic and tidal observations throughout the expedition; they also collected lichens, mosses, and marine life from Antarctic and Subantarctic islands. Reports by this expedition of great numbers of whales were an important factor in the eventual development of the whaling industry in the Antarctic.

trate the Weddell Sea. The expedition then returned

20 1872-1876 Great Britain
Leaders: Capt. George S. Nares, RN, and Prof. C. Wyville
Thomson
Sponsor: British Admiralty in cooperation with the Royal
Society
Ship: Challenger
Purpose: Oceanographic studies
Bibliography: 43, 81, 143, 150, 253, 260, 262, 263, 264

Professor C. Wyville Thomson, scientific leader of the expedition, and his staff carried out studies in the Antarctic as part of a worldwide oceanographic cruise. The group's studies were made chiefly among the Subantarctic islands, but they conclusively proved the existence of the Antarctic continent by the identification of forms of rock dredged from the ocean floor which are not known on oceanic islands. In February 1874, the party sailed south from Heard Island to 66°40'S, 78°22'E and skirted the pack ice south of 60°S without sighting the mainland of Antarctica. The studies made by the Challenger scientists dispelled two contrary illusions about Antarctic marine life. They found neither an ancient uniform covering of flora and fauna on the ocean floor, nor a dearth of marine life at depths greater than those previously explored. Their findings showed a rich variety of marine life distributed throughout the ocean. The party made observations of ocean depths, and of the chemical composition, temperature, and general movements of the water.

21 1873—1874 Germany
Leader: Capt. Eduard Dallman
Sponsors: Albert Rosenthal and the German Society for Polar Navigation
Ship: Grönland
Purpose: Sealing and exploration
Bibliography: 169, no map

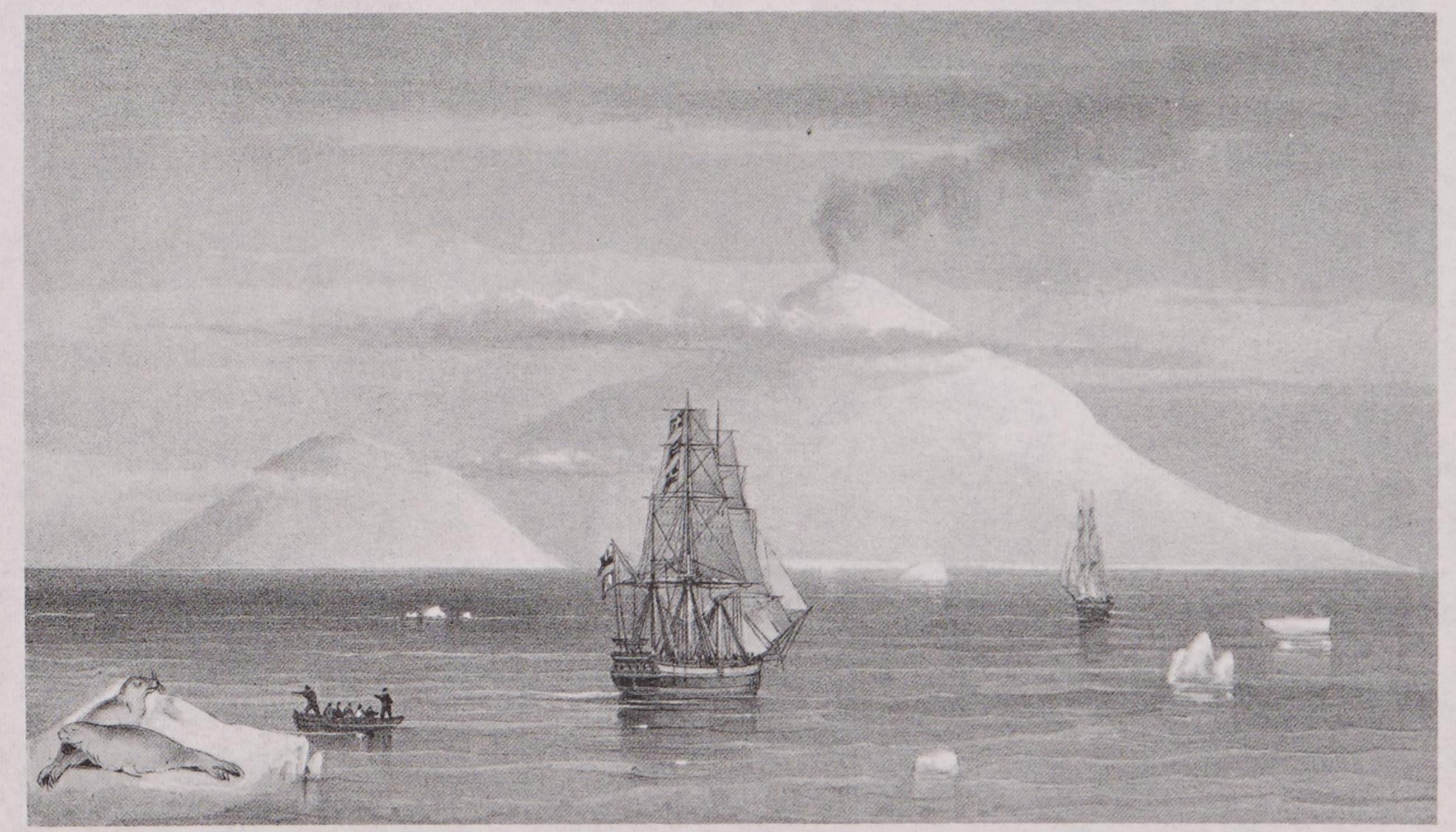
Dallman combined sealing and exploration in the South Shetland Islands and along the west coast of the Antarctic Peninsula and came finally to the Biscoe Islands discovered in 1832 by John Biscoe. He sailed farther than Biscoe, however, and discovered Bismarck Strait in an area where Biscoe had presumed there was land. Scattered throughout the strait is a group of islands which Dallman called the Kaiser Wilhelm Islands.

22 1892–1893 Scotland
Leader: Capt. Alexander Fairweather and three others
Sponsor: R. Kinnes
Ships: Balæna, Active, Diana, and Polar Star
Purpose: Whaling reconnaissance
Bibliography: 30, 32, 63, 64, 143, 153

This expedition set out to explore the whaling resources of the Antarctic Peninsula and the Weddell Sea area. Included in the crews were two surgeons, W. S. Bruce and C. W. Donald, who were interested in making any scientific investigations that the commercial activities of their ships allowed. Their accomplishments were restricted mainly to observations of animal life in coastal regions. The only geographical contributions were made by Thomas Robertson, captain of the *Active*, who discovered and named Dundee Island; he also discovered a channel between Dundee and Joinville Islands, and explored the Erebus and Terror Gulf.

1892–1893; 1893–1894 Norway
Leader: Capt. C. A. Larsen
Sponsors: Christen Christensen and Oceana Company of
Hamburg
Ships: Jason, Hertha, and Castor
Purpose: Whaling, sealing, and exploration
Bibliography: 22, 122, 156

During two consecutive seasons, Carl Anton Larsen made voyages along the eastern coast of the Antarctic Peninsula which resulted in several geographic and scientific discoveries. The first expedition spent its time whaling and sealing in the vicinity of the Erebus and Terror Gulf. On December 4 1892, Larsen landed on Seymour Island, claiming it for Norway. He collected plant and animal fossils and found evidences of sedimentary rock. On the 1893-1894 voyage there was no whaling, but sealing and exploration continued. The Jason penetrated the Weddell Sea to 68°10'S. Geographic discoveries along the margin of the Larsen Ice Shelf included the Foyn Coast, Oscar II Coast, Seal Nunataks, and Robertson Island. The Hertha sailed southward from the South Shetland Islands to within sight of Alexander Island.



Erebus and Terror in the Ross Sea with Mt. Erebus in the background (from Ross, 1847).