

Scoresby in 1811 recorded some soundings off the coast of Greenland, and Sir John Ross during his voyage to Baffin's Bay in 1817-18 took some deep soundings by means of an apparatus, designed by him and made on board, called "deep-sea clamms," in depths of 450, 650, 1000, and 1050 fathoms, bringing up from the last-mentioned depth several pounds of greenish mud. With the deposit-samples worms and other animals were brought up, and when sounding in 1000 fathoms a star-fish was found entangled in the line a little distance above the mud, thus proving that animal life was present in deep water.

Deep soundings.
Scoresby.
John Ross.

Deep-sea animals.

In 1817 Romme published in Paris a work on winds, tides, and currents, and Risso in 1826, Lowe from 1843 to 1860, Johnson from 1862 to 1866, and Günther from 1860 to 1870, published important papers dealing with deep-sea and pelagic fishes. In 1832 James Rennell published an investigation of the currents of the Atlantic Ocean, based upon the observations recorded by sailors up to that time.

Romme.
Risso.
Lowe.
Johnson.
Günther.
Rennell.

During the United States Exploring Expedition in 1839-1842 under Captain Wilkes, accompanied by Dana, several deep soundings were taken with the aid of a copper wire, and a few dredgings in shallow water were also made.

Wilkes and Dana.

Important sounding and dredging work was carried out by Sir James Clark Ross, accompanied by Hooker, during the British Antarctic Expedition in 1839 to 1843, the first truly oceanic soundings in depths exceeding 2000 fathoms being taken. After many unsuccessful attempts to sound in deep water, due to the want of a proper line, Ross had a line 3600 fathoms in length specially constructed on board. It was fitted with swivels here and there, strong enough to carry a weight of 76 lbs., and was allowed to run out from an enormous reel in one of the ship's boats. With this line the first abysmal sounding on record was taken in 2425 fathoms on the 3rd January 1840, in lat. 27° 26' S., long. 17° 29' W., and frequently during the cruise similar and greater depths were sounded. Such deep soundings could only be attempted in calm weather, and a note was kept of the time each 100-fathoms mark left the reel, a lengthening of the time-interval indicating when the weight had reached the bottom. The dredge also was successfully used during this expedition in depths down to 400 fathoms, abundant evidence of animal life being forthcoming, though unfortunately the deep-sea zoological collections were

British Antarctic Expedition.
James Clark Ross and Hooker.

Soundings in very deep water.

Introduction of time intervals in sounding.

Dredgings in deep water.