

samples procured were examined and described by Bailey and Pourtalès, the results being of great importance and interest.

Systematic soundings in the North Atlantic were commenced by Lee in the U.S.S. "Dolphin" in 1851-52, and continued in the same vessel by Berryman in 1852-53. In 1856 Berryman on the U.S.S. "Arctic" sounded across the North Atlantic from Newfoundland to Ireland, with the object of verifying the existence of a submarine ridge, along which it was proposed to lay a telegraph cable; his deposit-samples were described by Bailey.

In 1857 Pullen and Dayman in H.M.S. "Cyclops" ran a line of soundings along the great circle from Ireland to Newfoundland, a little to the north of Berryman's line. A modification of Brooke's sounding-machine was used, in which the spherical weight was replaced by a cylindrical one suspended by wire instead of cord, and with a different valve for collecting the deposit. The deposit-samples were examined and described by Huxley, who found in the bottles a viscous substance, described by him as *Bathybius*, which was subsequently shown by the "Challenger" observers to be a chemical precipitate thrown down from the sea-water associated with the deposits by the alcohol used in their preservation.

In 1858 Dayman in H.M.S. "Gorgon" sounded across the North Atlantic from Newfoundland to the Azores, and thence to the south-west of England.

In 1860 Sir Leopold M'Clintock on board H.M.S. "Bulldog" surveyed the route for the telegraph cable between England and America, in the region previously sounded by Berryman and Dayman. He was accompanied by G. C. Wallich, who published in 1862 an interesting account of the very important observations he made during the cruise on life in deep water and on the deposits covering the floor of the North Atlantic.

In 1860 a telegraph cable laid along the bed of the Mediterranean gave way at a depth of 1200 fathoms, and was raised for repair by Fleeming Jenkin, who brought up to the surface portions of the cable about forty miles in length, to which living organisms were found attached. Corals were growing on the cable at the place where it broke in 1200 fathoms, and other forms were adhering to the cable where it had lain in lesser depths, including molluscs, worms, bryozoa, alcyonarians, and hydroids, thus establishing beyond all doubt

Portalès.

Systematic soundings.

Lee.

Berryman.

Pullen and Dayman.

Huxley.

*Bathybius*.

Dayman.

M'Clintock and Wallich.

Animals attached to submarine cable.