

Description of typical deposit sample collected by the "Michael Sars."

GLOBIGERINA OOZE—dirty white colour, coherent, granular.

CALCIUM CARBONATE—78.59 per cent; pelagic and bottom-living foraminifera, ostracods, coccoliths, and rhabdoliths.

RESIDUE, 21.41 per cent:—

*Siliceous Organisms*—2 per cent; radiolaria, sponge spicules.

*Minerals*—4 per cent, m. di. 0.09 mm., one angular fragment of volcanic glass exceeded 2 mm. in length; quartz, plagioclase, volcanic glass, augite (?), magnetite, mica.

*Fine Washings*—15.41 per cent; amorphous clayey matter with minute mineral particles.

*Note.*—The sounding-tube brought up a roll about 9 inches in length of a creamy white colour throughout.

All the rock fragments dredged during the "Michael Sars" Expedition, as well as those collected by H.M. ships "Knight Errant" and "Triton" in 1880 and 1882, have been carefully examined and studied by Dr. B. N. Peach.<sup>1</sup> Drs. Peach and Horne have prepared the following note on the general results:—

Rock fragments dredged by the "Michael Sars."

The materials collected by the "Michael Sars" Expedition fall under two categories: (1) those whose presence on the sea-floor is due to natural agencies, and (2) those distributed by human agencies. The materials belonging to the first group consist chiefly of rock fragments, the remains of floating or swimming organisms that lived at or near the surface of the sea (such as barnacles and the ear-bone of a whale), and fragments of wood. The members of the second group are mainly furnace clinkers and pieces of coal, small pieces of glazed pottery, and oyster-shells, together with a cannon-bone of a small ox.

By far the most interesting collection of the "Michael Sars" series was obtained from Station 95, which lies about 230 miles south-west of Mizen Head, Ireland, at a depth of 5886 feet, or a little over a mile. The rock fragments, comprising over 200 specimens, included upwards of 100 of sedimentary origin, 58 of igneous origin, and 40 belonging to the metamorphic series. Some of the specimens were referred to the Cretaceous and Carboniferous periods by means of their fossil contents; the remainder were grouped with the Devonian or Old Red Sandstone and Silurian systems solely on lithological grounds.

The fragments regarded as of Silurian age include greywacke-sandstones, dark shales, and black lydian stone identical in lithological characters with rocks that floor a large part of the southern uplands of Scotland and the north of Ireland. Those referred to Devonian time resemble the Glengariff grits of the Dingle peninsula in the south-west of Ireland. The carboniferous specimens comprise encrinital limestones with chert, like those of Galway and Clare. One sandstone fragment was crowded with *Schizodus* and *Edmondia* similar to rocks occurring in places along the Solway shore in Scotland and in Londonderry and Tyrone in Ireland. The specimens of chalk and chalk-flints are like the rocks in the Antrim plateau.

<sup>1</sup> See detailed report in *Proc. Roy. Soc. Edin.*, 1912.