

the Arabian Sea and Bay of Bengal in the north and into the Southern Ocean in the south.

In the Pacific Ocean, the area covered by Globigerina Ooze is estimated at about 14,800,000 square miles. In the western basin of the Pacific it extends from the Southern Ocean, in about 55° S. latitude, along the shores of New Zealand and Australia, in a very irregular and broken manner, to the eastern shores of Japan in the north; there is a detached area in the Central Pacific around the Society Islands, a smaller area extending north-west from the Sandwich Islands, and numerous small detached patches around the coral island groups. In the south-eastern part of the Pacific, Globigerina Ooze extends westwards from off the Chilian coast of South America, encircling an extensive area of Red Clay, and joins the area of the western basin south-east of New Zealand, so that it may be said to extend almost uninterruptedly from the shores of Japan to the south-west coast of South America.

An examination of the bathymetrical contour lines on Chart 1 shows that the Globigerina Oozes occupy all the medium depths of the ocean removed from continents and islands, and is especially developed in those regions where the surface of the sea is occupied by warm currents, the only development of the deposit in the Arctic regions being in the track of the northern extension of Gulf Stream waters, where in the Norwegian Sea this deposit is estimated to cover about 193,000 square miles, the greater part of which is within the Arctic Circle. It will also be noticed that the deposit is found at greater depths in tropical regions than in more northern or southern latitudes.

PTEROPOD OOZE.

This name was employed by Mr. Murray during the cruise of the Challenger to designate those deep-sea deposits in which a very large part of the calcareous organisms consists of the dead shells of Pteropods and Heteropods, along with the shells of other pelagic and larval Molluscs. One of the most remarkable facts discovered by the Challenger is, that though the remains of these pelagic Molluscs are abundant everywhere in the surface waters of the tropical and subtropical regions of the ocean, yet their dead shells are wholly absent from the deposits in all the deeper waters. A few traces of them may be met with occasionally in depths as great as 2000 fathoms, but it is only in lesser depths that they make up any appreciable part of a Globigerina Ooze, or are so abundant as to justify the distinctive name of Pteropod Ooze. As in the warmer regions the appearance of Pteropod and Heteropod shells in a deposit is associated with a depth limit and other oceanic phenomena of great interest, it seemed desirable to emphasise their occurrence in this way. A Pteropod Ooze is then distinguished from a Globigerina Ooze, with which it has so many points of resemblance, by the presence of these shells.

The following is a list of the Pteropod and Heteropod shells that may be found in a Pteropod Ooze :—