

from depths less than 500 fathoms, the average depth would be 2049 fathoms. So that the result from these figures agrees with the impression derived from a large experience in the examination of deep-sea deposits, viz., that the depth at which Globigerina Ooze is found in its most typical development is about 2000 fathoms, and it will be noticed that of the 118 Challenger samples 84 come from depths between 1500 and 2500 fathoms.

In addition to the pelagic Foraminifera many other organisms contribute to the carbonate of lime present in a Globigerina Ooze, some of these living in the surface waters of the ocean and others having their habitat at the bottom of the sea; among the former are pelagic Molluscs and pelagic calcareous Algæ. The shells of pelagic Molluscs—Pteropods and Heteropods—are sometimes present in great abundance in tropical and subtropical regions, and then the Globigerina Ooze passes gradually into a Pteropod Ooze in the shallower depths. Coccospheres and Rhabdospheres are regarded as calcareous Algæ, and their remains or broken fragments, Coccoliths and Rhabdoliths, sometimes make up fully 15 per cent. of Globigerina Ooze. In the samples of Globigerina Ooze procured from high northern or southern latitudes the shells of pelagic Molluscs, Coccoliths, and Rhabdoliths, are wholly absent. The remains of calcareous organisms which habitually live on the bottom of the sea, such as Molluscs, Echinoderms, Annelids, Corals, Polyzoa, and bottom-living Foraminifera, are nearly always to be found in a Globigerina Ooze, from whatever region the specimen may have been procured.

The carbonate of lime in the Globigerina Oozes in the Tables ranges from 30·15 per cent. at Station 97 in 2575 fathoms to 96·80 per cent. at Station 343 in 425 fathoms, the average percentage being 64·47. Arranged in depths of 500 fathoms, the samples contained for each zone the following average percentages:—

3 samples under 500		fathoms, 87·07 mean per cent. CaCO ₃ .	
2	„ from 500 to 1000	„ 68·47	„ „
13	„ „ 1000 „ 1500	„ 63·69	„ „
35	„ „ 1500 „ 2000	„ 72·66	„ „
49	„ „ 2000 „ 2500	„ 61·74	„ „
16	„ over 2500	„ 49·58	„ „

This table shows generally a decrease in the quantity of carbonate of lime with increasing depth, but this fact would be still more strikingly exhibited had the samples been all from one region of the ocean, in which the surface conditions were the same, or had the samples from the shallower depths near continents and islands been eliminated, for in these there is always a large admixture of accidental matters derived from land.

The estimated percentage of carbonate of lime due to the presence of the dead shells of pelagic Foraminifera ranges from 25 to 80, the average being 53·10; it will thus be seen that the great bulk of the carbonate of lime present in Globigerina Oozes is referred