Brachiopoda.—These organisms are found living even in the greatest depths of the ocean; occasionally they are dredged in large numbers in depths down to 300 fathoms, but in deep water it is only rarely that their remains can be detected in the deposits.[1]

Pteropoda and Heteropoda.—A large number of these pelagic Molluscs secrete carbonate of lime shells, and this is especially the case in tropical waters. In polar regions the place of the shelled species is taken, with the exception of one or two small species of *Limacina*, by shell-less species. The shells of the tropical species make up a large part of some tropical and subtropical deposits from moderate depths, in which there is a relatively small quantity of land debris. Like the pelagic Foraminifera, these pelagic Mollusca attain their greatest development in the warm oceanic currents, and diminish both in the number of species and the size and mass of the shells as the colder currents of the polar regions are approached. Like the pelagic Foraminifera, also, the distribution of the living animals at the surface corresponds with the distribution of their dead shells over the sea-bed, with certain limits as to depth. The dead shells are not universally distributed over the floor of the ocean, for in all the deposits from the greater depths of the ocean they are absent, or only rare fragments are met with, and as a general rule they disappear from deep-sea deposits with increasing depth in the same way as the shells of pelagic Foraminifera, the more delicate and fragile ones being found only in the lesser depths. In the deposits of polar regions these shells are very rarely, if ever, observed in the deposits, and certainly never make up any sensible part of the carbonate of lime in the muds or oozes. A list of the species, whose shells may constitute a large part of a Pteropod Ooze, is given on page 224.[2]

The Pteropoda and Heteropoda live in the surface and subsurface waters of the ocean, are Holoplanktonic, and belong exclusively to the pelagic Plankton. It has never been suggested that they lived exclusively, or for any portion of their lives, at the bottom of the sea, as was long maintained with reference to the pelagic Foraminifera. It is interesting then to point out that the shells of these pelagic Molluscs follow the same order with respect to distribution in depth as the shells of pelagic Foraminifera. They are abundant, and the shells of all species appear to be represented, in the shallower deposits, but with increasing depth the more delicate shells first disappear, and then the thicker and more massive ones. In depths of 2300 fathoms they are wholly removed from the deposits, or only an occasional fragment is encountered. In the surface waters, however, the living animals are quite as abundant over the region where the shells are absent, as over the region where they are present, on the bottom. In whatever way we may account for the removal of the Pteropod shells from the deeper deposits of the ocean, the same reasoning is evidently applicable to the removal of the shells of pelagic Foramini-

[1] See Davidson, Report on the Brachiopoda, Zool. Chall. Exp., pt. 1.

[2] See Pelseneer, Report on the Pteropoda, Zool. Chall. Exp., pt. 65; Smith, Report on the Heteropoda, Zool. Chall. Exp., pt. 72.