many radiolarian skeletons. The frustules of diatoms and skeletons of radiolarians may occur in all deposits, but generally they do not become characteristic or predominant when calcareous shells are present in large numbers.

Red clay.

Red Clay is characteristic of great depths, say beyond 2700 fathoms (as Globigerina ooze is characteristic of moderate depths, between 1000 and 2500 fathoms), and is the most widely distributed of all the deep-sea deposits, covering a larger area of the sea-floor than any other deposit type. The basis of the deposit is the hydrated silicate of alumina, or clay, derived principally from the decomposition and disintegration of pumice and other volcanic products long exposed to the action of sea-water, often associated with secondary products derived from the same source, such as manganese-iron nodules and phillipsite crystals. Calcareous remains may be totally absent in the greatest depths, while in lesser depths the percentage of calcium carbonate may approach 30, and the deposit then passes gradually into Globigerina ooze. If the calcium carbonate in a Globigerina ooze or a Pteropod ooze be removed by weak acid, the residue resembles closely a Red clay. In other places the siliceous remains of radiolaria may increase to such an extent that the Red clay merges gradually into Radiolarian ooze. The rate of accumulation is evidently at a minimum in the Red clay areas, for the calcareous shells falling from the surface waters have been gradually removed in solution either before, or immediately after, reaching the bottom; the ear-bones of whales and teeth of sharks (some of them belonging to extinct species) are there found in the greatest profusion, impregnated with and coated by the peroxides of manganese and iron; and there also occur in greatest abundance (though always rare) minute metallic and chondritic spherules supposed to have fallen from interstellar space, and found there more abundantly simply because of the sparse deposition of other materials. Radio-active substances are also found more abundantly in Red clay than in any other marine deposit, or in any continental rocks.

Horizontal distribution.

A few facts relating to the horizontal distribution of marine deposits may now be indicated. The terrigenous deposits include a number of varieties, but as a whole they surround all continents and islands in all latitudes, and extend to varying distances from the shore. The Coral muds and sands included in this class are limited to the coral-reef regions of tropical and subtropical latitudes, and the presence of the calcareous shells