of the continental shelf, the deposit in each case being a Green Sand, in depths of 98 and 150 fathoms, while the third station is situated in the deep water to the south of the Bank, in 1900 fathoms, the deposit being a Globigerina Ooze.

The mineralogical elements of the Green Sand (Stations 141 and 142) may be considered as derived from the neighbouring land, consisting of quartz, garnet, green hornblende, black mica, &c., and the coast character of the deposit is still further indicated by the large quantity of mineral particles left in the residue after treatment with acid, and also by the presence in abundance of typical grains of glauconite, a mineral never found, we may say, in truly pelagic deposits. The analogy between this sediment and the greensands of geological formations cannot be misconstrued, and the conditions under which they have both been formed must be nearly identical. As the distance from land and the depth of the sea increase, the deposit assumes a more pelagic character, and consequently at Station 143 the mineral particles are for the most part those found in the open ocean, being mostly of volcanic origin; this Globigerina Ooze, however, being formed at a point not very far removed from land, is not purely pelagic and still contains particles of quartz, indicating with considerable certainty the proximity of land. This deposit may be compared with the white chalk of geological formations, but in this case the Rhizopod shells, constituting the mass of the sediment, are preserved entire, and belong to pelagic species, while in the chalk the Foraminifera are chiefly bottom-living forms, and have generally been broken or reduced to powder by agencies posterior to sedimentation.

During the Challenger Expedition, phosphate of lime was procured at many of the shallower stations around continental shores, but never in such abundance or such typical development as at these stations to the south of the Cape of Good Hope.[1]

Mr Murray has described similar phosphatic concretions from the dredgings of the U.S.S. "Blake," along the Atlantic coasts of North America.[2] In one instance the nucleus of the concretion consisted of a fragment of a manatee bone, but in the majority of cases the nodules consisted of an aggregation of calcareous organisms cemented by a brownish yellow phosphatic matter, often showing concentric rings, after the manner of agates, thus indicating deposition from solution.

It may be pointed out that phosphatic nodules are apparently more abundant in the deposits along coasts where there are great and rapid changes of temperature, arising from the meeting of cold and warm currents, as, for instance, off the Cape of Good Hope and off the eastern coast of North America. It seems highly probable that in these places large numbers of pelagic organisms are frequently killed by these changes

[1] In the material dredged by the German ship "Gazelle" on the Agulhas Bank, which Mr Murray was permitted to examine at Berlin, there were numerous phosphatic and glauconitic nodules identical with those procured by the Challenger.

[2] *Bull. Mus. Comp. Zoöl.*, vol. xii. pp. 42, 43, 52, 53, 1885.