

microscopic details apply equally to these, at least when they have taken on the characteristic green colour of glauconite.

*Geographical and Bathymetrical Distribution.*—Bailey in 1856 and subsequently Pourtalès, during an examination of samples procured off the Atlantic coast of North America, appear to have been the first to call attention to the occurrence of glauconite in modern marine deposits, Ehrenberg having previously pointed out its existence in the chambers of Foraminifera in many geological formations. During the last thirty years the examination of samples of marine deposits, from nearly all parts of the great ocean basins, has yielded a large amount of information with reference to the distribution of glauconite and glauconitic casts over the floor of the ocean. The Tables of Chapter II. show that in the Challenger samples, glauconite was almost exclusively limited to terrigenous deposits in more or less close proximity to the continental masses of land, while it was relatively rare or wholly absent from pelagic deposits situated towards the centres of the great ocean basins. It is characteristic of, and occasionally very abundant in, Green Muds and Sands, and is almost always present, though in smaller quantity, in Blue Muds. It is also present in samples of Globigerina Ooze situated at no great distance from the continents, in which the debris of continental land is relatively abundant. It may even be recognised in samples of Red Clay and other truly pelagic deposits, if these be in positions to which continental debris is transported by floating ice, or to which continental dusts are transported by winds. It is doubtful if any typical examples of glauconite have been discovered in the Volcanic Muds and Sands surrounding oceanic islands, although a few pale-coloured casts have been noticed in the muds off the Crozets and the New Hebrides. Glauconite is also absent from Coral Muds and Sands, except when these are formed off continental shores. Where the detrital matters from rivers are exceedingly abundant, and where there is apparently a rapid accumulation, glauconite, though present, is relatively rare; on the other hand, along high and bold coasts where no rivers enter the sea, and where accumulation is apparently less rapid, glauconite appears in its most typical form and greatest abundance.

The Challenger met with glauconite in greater or less abundance off the coast of Portugal, off the west coast of Africa, off the east coast of North America, the Cape of Good Hope, the Antarctic Continent, the coasts of Australia and New Zealand, the coasts of the Philippines, China, and Japan, and the west coast of South America. It has been found in the Mediterranean, off the north coast of Scotland, off the west coast of North America, off the east coast of Africa, and in many other regions, by other expeditions. During the cruise of the Challenger, glauconite was not recognised in any of the deposits after leaving the coast of Japan till the expedition neared the coast of Chili, thus presenting an excellent illustration, in the case of the Pacific, in support of the general statement that glauconite is not at the present time in process of formation in the