

terrigenous deposits, is obviously connected with the more rapid accumulation of the latter, by which the teeth are covered up and the chance of the dredge bringing them up greatly lessened.

The cosmic spherules discovered by Mr. Murray in deep-sea deposits are likewise more numerous in the deposits of the Central Pacific than elsewhere, and their relative abundance in the deposits brought up in the various dredgings and trawlings is the same as in the case of the Cetacean bones and Sharks' teeth, and is to be explained in the same manner. These spherules have been recently more minutely examined by Messrs. Murray and Renard, who write :—

“ It is known that the atmosphere holds in suspension an immense number of microscopic particles which are of organic and inorganic origin, and are either dust taken up by aerial currents from the ground or are extra-terrestrial bodies. A large number of scientific men, headed by Ehrenberg, Daubrée, Reichenbach, Nordenskiöld, and Tissandier, have studied this interesting problem, and have brought forward many facts in support of the cosmic origin of some of the metallic particles found in atmospheric precipitations.

“ It is certain that serious objections may be raised against the origin of a large number of so-called cosmic dusts. In a great many cases it can be shown that these dusts are composed of the same minerals as the terrestrial rocks which are to be met with at short distances from the spot where the dust had been collected, and a cosmic origin can be attributed only to the metallic iron. It is somewhat astonishing, however, that no trace is ever found in these dusts of meteoric silicates, although in a great many meteorites it might be said that the iron is only accidentally present, while the silicates predominate. On the other hand, having regard to the mineralogical composition of meteorites, it appears strange that the so-called cosmic dusts should present characters so variable, from the point of view of their mineralogical composition, in the different regions where they have been collected. It might also be objected that even the iron, nickel, and cobalt could come from decomposing volcanic rocks in which these bodies are sometimes present, and this objection would seem quite natural, especially in this particular case, where there are numerous volcanic fragments in decomposition on the bottom of the sea. Again, according to numerous researches, native iron is found, although rarely, in various rocks and sedimentary layers of the globe. A reduction of the oxide of iron into metal might also be admitted under the influence of organic substances. It might still further be objected in opposition to the cosmic origin of the fine particles of native iron that they might be carried by aerial currents from furnaces, locomotives, the ashes of grates, and, in the case of the ocean, from steamers. All the materials of combustion furnish considerable quantities of iron dust, and it would not be astonishing to find that this, after having been transported by the winds, should again fall on the surface of the earth at great distances from its source.