

1. The organisms which in many instances cover them continue to live even while the depositions are taking place. This shows evidently that in the ordinary progress of the phenomena only minute particles of the substance are deposited during the life-period of these animals.
2. All the pelagic deposits, in which these nodules are found in abundance, must increase much more slowly than the terrigenous deposits, and in all those pelagic deposits, like the Red Clays, where the calcareous organisms are wholly removed in solution, the rate of deposition must be exceedingly slow.
3. The highly-altered state of the basic and other fragments of volcanic glass shows that they must have lain a long time in the surface layers of the deposit exposed to the action of sea-water.
4. The greater abundance of sharks' teeth, bones of Cetaceans, crystals of phillipsite, cosmic spherules, in the areas where nodules are numerous, than in other deposits, points also to a slow rate of accumulation, for, *a priori*, there is no reason why these should be more abundant in these manganese regions except the fact that they are not covered over and masked by such an abundance of foreign materials as at other points of the deep sea. That some of the sharks' teeth, for instance, are covered by deep layers of manganese, while others lying alongside of them in the deposit have little or no manganese, indicates that some have lain on the bottom for a much longer time than others, and that there has been but little increase in the thickness of the deposit during the interval.
5. We have pointed out that nodules sometimes occur in Globigerina Oozes, as for instance at Station 297, but here they are not accompanied in the dredgings and trawlings by sharks' teeth, earbones of whales, zeolites, nor cosmic spherules, apparently from the more rapid accumulation due to the presence of the Foraminifera. In this and other deposits there are, however, many fragments of altered basic volcanic glass, which indicate proximity to submarine eruptions.

III. GLAUCONITE.

Among the minerals of modern marine deposits, glauconite is one of the most interesting as well as one of the most widely distributed. This interest arises from the facts that it is one of the restricted number of silicates formed at the present day on the sea-bed, and that it is not universally distributed over the floor of the ocean, but is limited to the deposits forming along continental shores. The glauconitic grains found in marine deposits present, moreover, both in form and size, a complete analogy with those found at different horizons in the geological series of rocks, from the Cambrian period up to the most recent Tertiary layers. We are thus dealing with a mineral species that plays a very con-