

is the very small mineral crystals produced inside of some marine algae. In the shallow water of the Bahamas, as well as off the coasts of Florida, the alga Penicillus grows abundantly, forming microscopic crystals of calcium carbonate within its tissues. Because of the abundance and rapid growth of this alga, great quantities of the crystals are produced, forming an important component of the "lime mud" part of the sediments.⁵ Thus one should never think of lime mud as a structureless or unimportant form of matter.

Let us then keep in mind that the carbonate components which make up the Bahama Banks are of several types--some formed by the slow processes of organic growth and others by gradual precipitation of aragonite crystals. This fact becomes even more meaningful when we realize that these are the processes by which the Bahama Banks were built up.

The building processes which are now going on are readily observable in numerous locations. The accumulation of reef sediments occurs mainly on the eastern sides of the Banks. There, the reef organisms can benefit from the freshly oxygenated ocean water which is brought in by the prevailing winds from the east. However, the building of sand bars, cays, and other observable sedimentary structures occurs in many parts where there are no reefs to produce sediments. An example of this is seen in the "pseudoatolls" which are being formed to the north of Andros Island. These are circular-to-elongate cays with a shallow lagoon in their centers. They are composed primarily of oölitic sand, and project just above the water level. They lie in the path of reversing tidal currents which deposit this non-skeletal sand in crescent-shaped ridges, first on one side and then on the other.⁶ This is one example of how effective a sedimentary building process can be, even without the aid of any reef-forming organisms. It also illustrates some of the processes which undoubtedly participated in the formation of what are now the deeper parts of the Bahama Banks, in the past.

Test drillings which have been made into the deeper layers of the Great Bahama Bank show that the entire mass is composed of carbonate materials, part in the form of limestone and part in the form of dolostone. Much of the limestone, and some of the dolostone, contains large amounts of oöids, fecal pellets, skeletal fragments, and Foraminifera shells which can still be identified. Therefore, the drilling samples show us that the deep parts of the Bank were formed from basically the same kinds of materials that are being produced today. And the fact that, at various places in the Bahamian stratigraphic column, there is a layer containing large quantities of oöids, is an indication that each such layer was produced at shallow depths (when the Bank was higher with respect to sea level). It is also important to realize that nearly all of the sediments of which the Bahama Banks are composed are very different from the very fine-grain sediments (oozes) which make up most of the ocean floors.