

*Orbulina* than they are in *Globigerina*; and the spines, which are of great length and extreme tenuity, seem rather to arise abruptly from the top of scattered papillæ than to mark the intersections of the crests. This origin of the spines from the papillæ can be well seen with a moderate power on the periphery of the sphere. The spines are hollow and flexible: they naturally radiate regularly from the direction of the centre of the sphere; but even in specimens which have been placed under the microscope with the greatest care, they are usually entangled together in twisted bundles. They are so fragile that the weight of the shell itself, rolling about with the motion of the ship, is usually sufficient to break off the whole of the spines, and leave only the papillæ projecting from its surface, in the course of a few minutes. In some examples, either those in process of development, or a series showing a varietal divergence from the ordinary type, the shell is very thin and almost perfectly smooth, with neither papillæ nor spines, nor any visible structure except the two classes of pores, which are constant.

The chamber of *Orbulina* is often almost empty; even in the case of examples from the surface which appear, from the freshness and transparency of the shell, to be living, it is never full of sarcode; but it frequently contains a small quantity of yellow sarcode stuck against one side, as in the last chamber of *Globigerina*. Sometimes, but by no means constantly, within the chamber of *Orbulina* there is a little chain of three or four small chambers singularly resembling in form, in proportion, and in sculpture, a small *Globigerina*; and sometimes, but again by no means constantly, spines are developed on the surface of the calcareous walls of these inner chambers, like those on the test of *Globigerina*. The spines radiate from the position of the centre of the chambers and abut against the inside of the wall of the *Orbulina*. In a few cases, the inner chambers have been observed apparently arising within or amidst the sarcode adhering to the wall of the *Orbulina*.