

Biloculina tubulosa, Costa (Pl. III. fig. 6 a.b.c.).

Biloculina tubulosa, Costa, 1856, Atti dell' Accad. Pont., vol. vii. p. 309, pl. xxiv. fig. 7.

Under the above name Costa has described a variety of *Biloculina* allied to *Biloculina bulloides*, but differing from that species in having a wide fissure or depression on both faces of the test on the line of union between the two outermost segments. It is obvious that a shell so constructed can only remain Biloculine so long as the depression is regular, and equal at the two sides, and that any obliquity is liable to expose a portion of the ante-penultimate segment, or in other words, to render it Triloculine. In point of fact, the specimen figured by Prof. Costa is in the latter condition.

In one of the Challenger dredgings a form with similar peculiarities, which may confidently be assigned to the same species, is tolerably abundant. The specimens are of considerable size, often $\frac{1}{5}$ th inch (1.25 mm.) in length. In their young state they are generally Biloculine, and sometimes retain the same condition when fully grown; but more commonly in the adult shell a small portion of the surface of a third chamber is exposed, as shown in the drawing, fig. 6, c.

An analogous passage form is figured by Dr. Karrer, from the Miocene of Kostež (Sitz. d. k. Akad. Wiss. Wien, vol. lvii. pl. i. fig. 11), under the name *Triloculina intermedia*; that, however, appears to be more distinctly Triloculine than the recent specimens, and the margins of the two outer segments are subcarinate.

Biloculina tubulosa is common in one of the dredgings off Kandavu, Fiji Islands; depth, 210 fathoms.

As a fossil it is rare in the Pliocene deposits of Lequile and Ischia, Italy (Costa).

Spiroloculina, d'Orbigny.

Miliolites, pars, Lamarck [1804].

Miliola, pars, DeFrance [1824], Bronn.

Spiroloculina, d'Orbigny [1826], Roemer, Macgillivray, Reuss, Ehrenberg, Bornemann, Costa, Williamson, Parker and Jones, Karrer, Carpenter, Seguenza, Brady, Schwager, Robertson, Schulze, Terquem, Berthelin, Wright, &c.

In the typical *Spiroloculina* the segments are Milioline—that is to say, each extends the entire length of the shell, and the position of the aperture is alternately at either end—they are arranged on one plane, and the whole of them are visible on both sides of the test. These characters serve to distinguish it from *Miliolina*, in which the plane of growth changes with each fresh segment, and from *Biloculina*, in which, though the chambers are arranged symmetrically on one plane, they are broad and embracing, and each encloses all the previous segments on the same side.

But whilst these are typical characters, and in most cases sufficient for the discrimination of the subgeneric groups, they are open to considerable variation. For example, in