

more easily detached, and specimens in the adherent condition are not very frequently met with. The accumulation of sand surrounding adherent specimens has already been described in connection with the allied form.

Valvulina fusca is a common North Atlantic Foraminifer. It most affects comparatively shallow water, though it has been taken at depths as great as 500 or 600 fathoms. It occurs on the shores of Norway, Great Britain, Belgium, and France, the Canary Islands, the Azores, and the West Indies. I have no record of its presence in the South Atlantic; but in the South Pacific it has been observed at five localities, the depths ranging from 7 to 410 fathoms; and in the North Pacific at a single point, off the Philippine Islands, 95 fathoms. The species is not known in the fossil condition.

Clavulina, d'Orbigny.

Spirolinites, pars, Lamarck [1804].

Nodosaria, pars, Lamarck [1816], d'Orbigny, Morris.

Clavulina, d'Orbigny [1826], Münster, Bronn, Reuss, Costa, Karrer, Seguenza, Stache, Schwager, Gümbel, Hantken, &c.

Orthocerina, d'Orbigny [1826].

Verneuilina, pars, Parker and Jones [1860], Vanden Broeck.

Valvulina, pars, Parker, Jones, and Brady [1865].

The genus *Clavulina* bears precisely the same relation to *Valvulina* that *Bigenenerina* bears to *Textularia*; that is to say, it is a dimorphous modification, the earlier segments of which are arranged in the typical manner as a triserial spire, whilst the later chambers are disposed in a single Nodosariform line. In recent specimens the relationship to *Valvulina* may almost invariably be recognised by the aperture, which, even in the dimorphous varieties, retains the normal character, and is partially closed by a projecting tongue or valve.

Two other genera of *Textulariidae*, namely, *Chrysalidina* and *Tritaxia*, have dimorphous modifications resembling *Clavulina*; and though there are minor differences by which such forms may be distinguished, the nature of the aperture affords as a rule the safest means of identification. Thus in *Chrysalidina* the aperture consists of a number of small pores, in *Tritaxia* it is a simple rounded opening, and in *Clavulina* it is a circular orifice with an overhanging valvular tongue.

The walls of the test are thick and finely arenaceous, as shown in the various sectional drawings in Plate XLVIII., the constituent sand-grains being often almost entirely calcareous. Less frequently the test is composed of coarse sand, and presents a rough exterior. Sometimes a more or less complete shelly lining may be traced, and the rim surrounding the orifice is nearly always of fine homogeneous texture and smoothly finished.

In the northern hemisphere the distribution of the genus *Clavulina* is somewhat limited, and does not extend much to the north of lat. 40° N., either in the Atlantic or