

Reophax nodulosa, H. B. Brady (Pl. XXXI. figs. 1-9).

Reophax nodulosa, Brady, 1879, Quart. Journ. Micr. Sci., vol. xix., N. S., p. 52, pl. iv. figs. 7, 8.

Test long, slender, tapering, straight or arcuate; consisting of several (usually less than 12) segments, joined regularly end to end, and more or less embracing. Segments oblong, rounded, oval, or pyriform, somewhat inflated; primordial segment sometimes relatively large, the remainder increasing in size towards the distal end of the test. Exterior rough in large specimens, comparatively smooth in smaller ones; interior neatly finished. Size very variable; length, from $\frac{1}{10}$ th inch to 1 inch (0.5 to 25 mm.) or more.

The series of figures heading Pl. XXXI. sufficiently demonstrates the great variety of size and contour assumed by specimens of the present species; nevertheless in all important characters its members agree exceedingly well. Between straight and arcuate tests no distinguishing line can be drawn. Some individuals are stout and few-chambered, and each fresh segment is considerably larger than the previous one; whilst others with relatively small initial segments, have many chambers, are of slender contour, and taper very gradually; some specimens are rough and coarse-textured, whilst others are nearly smooth externally, the sand-grains being almost completely incorporated by the excess of cement. In size the variation is correspondingly wide; minute specimens measure but half a millimetre, whilst there are others that attain fifty times that length, and are amongst the very largest of recent arenaceous Foraminifera.

The chemical composition of the test has been investigated with some care; and it has been found that the larger specimens are not really disintegrated by treatment with nitric acid, but retain their general form unchanged. This is the case even when tolerably strong acid is used, and the digestion continued long enough to ensure the complete removal of both the calcareous and ferruginous constituents of the cement. A specimen which has been treated in this way is represented in fig. 2; and a comparison with the previous figure will show that the only conspicuous alteration in appearance is that the normal brown hue has given place to a dirty grey. The walls are porous and fragile, but the test still possesses sufficient firmness and cohesion to bear careful handling. Any cement which still remains must be siliceous, either in the form of uncombined silica or of some metallic silicate, but the entire quantity is probably comparatively small.

The geographical distribution of *Reophax nodulosa* is very wide. It occurs frequently amongst arctic soundings taken on the shores of Franz-Josef Land at depths of 89 to 145 fathoms, but the specimens are small; and there are one or two starved examples in Mr. Robertson's collection, from shallow-water on the west coast of Scotland. Elsewhere it has only been met with in deep water. In the North Atlantic, mid-ocean, it has been found at three Stations, ranging from 1070 to 3150 fathoms; and in the South Atlantic at three Stations, from 1900 to 2800 fathoms. In the Southern Ocean it is tolerably common;