where sponges are plentiful, their spicules, broken or entire, are often used in place of sand, as in fig. 14; and amongst the coral-reefs of the tropics the rough calcareous débris is employed in the same way, figs. 15, 16. The minute structure of a test of the latter description, constructed of very large grains, chiefly calcareous, is exemplified in the sectional drawing, fig. 17.

It is obvious that an organism so dependent on external conditions must assume a great diversity of external characters. Two of the more regular varieties, which in addition to their symmetrical contour and neater build, present some peculiarities of distribution, have been described separately as *Reophax pilulifera* and *Reophax dentaliniformis* respectively.

A very interesting modification of the type, somewhat allied to these regular forms, has been described elsewhere under the name *Reophax arctica*.[1] The test in this case is straight, regularly built and somewhat tapering; but instead of being cylindrical in section, is compressed and bilateral, like *Lingulina*. It is an exceedingly minute species, and has only been found hitherto on the shores of Novaya Zemlya and Franz-Josef Land.

Reophax scorpiurus is one of the commonest of cosmopolitan species. It is abundant in the Arctic Ocean to almost the extreme limits of our geographical knowledge, and occurs plentifully in all the great ocean-basins, its area of distribution extending at least as far south as Heard Island, about lat. 53° S. The bathymetrical range of the species is on a corresponding scale. In the tropics it is found at depths commencing with 3 or 4 fathoms, and in colder areas on bottoms as shallow as 30 or 40 fathoms; and from depths such as these down to 3950 fathoms, it is met with at every stage.

There can be no doubt that the specimens figured by Terquem from the Oolite of Fontoy, Moselle (*Nodosaria agglutinans*), and those described by Haeusler from the Jurassic formations of Switzerland (*Reophax helvetica*) belong to the present species; it is also one of the forms enumerated by Messrs. Crosskey and Robertson in their list of Foraminifera from the Post-tertiary beds of Norway. I find no other satisfactory record of its occurrence in the fossil state.

Reophax pilulifera, n. sp. (Pl. XXX. figs. 18–20).

Test straight or curved; composed of few (3 to 5) segments. Segments spherical, each much larger than its predecessor. Walls composed of coarse sand-grains, but compactly built and presenting a nearly smooth exterior. Aperture simple, central, often situated in a mammillate protuberance. Length, $\frac{1}{10}$th inch (2·5 mm.).

This is little more than a local variety of *Reophax scorpiurus*, characterised by its spherical segments and comparatively regular contour.

[1] *Denkschr. d. k. Akad. Wiss. Wien*, 1881, vol. xliii. p. 99, pl. ii. fig. 2, *a.b.*