

Sub-family 1. *Lituolinæ*.*Reophax*, Montfort.

Reophax, Montfort [1808], Brady, Norman, Siddall, Bütschli, Carpenter.

Orthoceras, DeFrance [1824].

Nodosaria, pars, d'Orbigny [1826], Terquem.

Protonina, pars, Williamson [1858].

Lituola, pars, Parker and Jones [1860], Brady, M. Sars, G. M. Dawson, Robertson, Winther, &c.

Haplostiche, Schwager [1865].

Dentalina, pars, Terquem [1870].

Test free, coarsely arenaceous; composed either of a single inflated chamber, or of a number of chambers joined end to end in a straight, curved, or crooked (never spiral) linear series. Chamber-cavities undivided; aperture simple, terminal.

The term *Reophax* appears to be the earliest generic designation applied to any member of this group, and it has therefore been adopted to include all the free, non-spiral, and non-labyrinthic *Lituolæ*. It is a term of convenience only, and of about the same value in relation to *Haplophragmium*, as *Nodosaria* to *Cristellaria* amongst the hyaline types.

The genus *Reophax* is cosmopolitan, and its bathymetrical range extends from almost the deepest portions of the sea-bottom yet explored to the shallow water of the Laminarian zone. Its geological history is practically that of a single species, *Reophax scorpiurus*, which goes back as far, at least, as the Jurassic period.

Reophax difflugiformis, H. B. Brady (Pl. XXX. figs. 1-5).

Reophax difflugiformis, Brady, 1879, Quart. Journ. Micr. Sci., vol. xix. N. S., p. 51, pl. iv. fig. 3 a. b.

„ „ Id., 1882, Proc. Roy. Soc. Edin., vol. xi. p. 715.

Test free; consisting of a single, elongate, oval or pyriform chamber, with or without a produced tubular neck; walls arenaceous, very variable in texture; aperture simple. Length, $\frac{1}{10}$ th to $\frac{1}{4}$ th inch (0.36 to 0.63 mm.).

Had this little organism been found in fresh or brackish water, or even in shore-pools it would, without doubt, have been assigned to the *Difflugia*; and it is perhaps an assumption rather than an ascertained fact that Rhizopoda with lobose pseudopodia have no home in the deep sea. Nevertheless, as the test bears the same sort of relation to the moniliform *Lituolæ* as that of *Lagena* does to the *Nodosariæ*, there is a natural place for it in the Reticularian series.

There seemed a possibility at first that the species might turn out to be only the primordial chamber of *Reophax scorpiurus*, but as it has since been found in considerable abundance in at least one area at which the latter form does not occur, it is evident that it holds an independent position.