

*Nubecularia lucifuga*, DeFrance (Pl. I. figs. 9-16).

"*Vermiculi crustati*," Soldani, 1789, Testaceographia, vol. i. part 1, p. 34, pl. xxxi. fig. 99 to pl. xxxii. fig. 99.

*Nubecularia lucifuga*, DeFrance, 1825, Dict. Sci. Nat., vol. xxv. p. 210; Atlas Zooph., pl. xlv. fig 3.

" " Blainville, 1834, Mun. d'Actinol., pl. lxvi. fig. 3, a-d.

" " Parker and Jones, 1863, Ann. and Mag. Nat. Hist., ser. 3, vol. xii. p. 209, No. 64.

" *crstellarioides*, Terquem, 1878, Mém. Soc. géol. France, sér. 3, vol. i., Mém. III., p. 14, pl. i. fig. 5.

This is one of the simplest of all the testaceous Rhizopods, and, perhaps for that reason, one of the most variable in contour and habit of growth. The shell of recent specimens is thin, as compared with the stout calcareous walls of some of the fossil varieties, and imperforate; it is either free or adherent—that is to say, under favourable circumstances it prefers the support of some foreign body over which it can spread indefinitely, but if detached leads equally well an independent existence;—it is polythalamous, and the normal plan of growth is spiral, but very early in the life of the animal all regular arrangement is usually lost, and the chambers follow each other in more or less annular, rectilinear, or acervuline fashion. The septation is often partial or incomplete, and in adherent specimens the shelly investment is tent-like, and covers only the superior surface of the animal. The general aperture is either terminal and simple, or takes the form of a number of rounded or irregular orifices variously disposed. The shell is commonly white, and its texture porcellanous; but it shares the tendency of many other *Miliolidae* to agglutinate sand-grains and to become rough externally, as shown in fig. 12. The specimens represented by figs. 9, 10 are parasitic upon fibres, apparently of vegetable origin, and are not to be confounded with forms like *Nubecularia divaricata*, in which the segments are united by calcareous stoloniferous tubes.

The typical *Nubecularia lucifuga* is very rare in the Challenger collections, indeed, it has only been met with at one Station, namely, off Tongatabu, Friendly Islands, depth, 18 fathoms. Its scarcity is probably due to the fact that very few gatherings were made from shore-pools or littoral sands. It is nevertheless a common species in the still, shallow-water margins of warm or temperate latitudes. The figured specimens are from the coast of Tripoli and from the beach near Melbourne, Australia. The species is abundant on the shores of the Mediterranean, in the East and West Indies, and elsewhere. One or two starved specimens, dredged off the coast of Devonshire, are evidence of its occasional presence in the British seas, and probably indicate its northern geographical limit.

In the confusion that appears to exist between the adherent *Nubecularia* and their arenaceous isomorphs of the sub-genus *Webbina*, it is not easy to speak with accuracy concerning the geological distribution of *Nubecularia lucifuga*; but that it occurs