

The genus *Nectophysa* resembles *Aurophysa* in the structure of the tentacles, and has the same simple tentilla in the form of slender cylindrical filaments. It differs, however, in the composition of the cormidia, which are not ordinate, but loose; the gonostyles are not attached to the base of the siphons, but alternate with them and are scattered along the stem. A beautiful species of this genus was observed by me, in December 1866, in the Canary Island Lanzerote, and is described in the following lines (Pl. XXIII.) as *Nectophysa wyvillei*, dedicated to the memory of Sir Wyville Thomson. Another closely allied species seems to be *Rhizophysa eysenhardtii*, described by Gegenbaur (10, p. 78, Taf. xxxi. figs. 46-49).

*Nectophysa wyvillei*, n. sp. (Pl. XXIII.).

*Habitat.*—North Atlantic; Canary Islands, Lanzerote, December 26, 1866 (Haeckel).

*Corm.*—The long cylindrical stem has a rose-coloured exoderm, a yellowish entoderm, and in the fully expanded state (figs. 1, 2) a length of 300 mm. or more and a thickness of about half a millimetre; in the contracted state, and spirally coiled upon itself (with a dexiotropic spiral, fig. 3), it is much thicker (2 or 3 mm.); but its length is only 10 to 20 mm. The circular as well as the longitudinal muscles are strongly developed. The specimen figured in fig. 2 bore about a dozen fully developed siphons, besides some younger ones on the apex; and regularly alternating with them, midway between each two siphons, a large gonodendron. The general colour of both is rose.

*Pneumatophore* (figs. 1-4, *p*).—The float exhibits the same structure as is described above of *Cannophysa murrayana* (compare pp. 308 and 325, and Pl. XXIV. figs. 1-7). In the fully expanded state it was pyriform or ellipsoidal, in the contracted state subspherical. As the corm was irritated, and the stem much contracted (fig. 3), the pneumatocyst was constricted in its equator, and a large air-bubble (fig. 3, *x*) escaped from the opened apical stigma (*po*); the animal sank down to the bottom of the glass vessel, and some time afterwards was again expanded, the siphons being partly attached by a suctional mouth-disc to the bottom (fig. 2). The apical half of the pneumatosac is covered by a violet mitra ocellaris (fig. 3, *pp*), whilst the distal half of the large pericystic cavity was filled with numerous hypocystic villi (*pv*) arising from the air-funnel. In the highest state of contraction of the stem, after the total expulsion of air from the pneumatocyst, the clustered villi were all pressed downwards into the dilated apical portion of the stem (fig. 4, *pv*). (Compare p. 310.)

*Siphons* (figs. 1-4, *s*, 5).—The feeding polypites are in the contracted state short rose-coloured spindles, in the expanded state cylindrical tubes 15 to 20 mm. in length, 1 to 2 mm. in breadth. Their thick muscular wall is very expansible and contractile, the inside covered with numerous small hepatic villi. No different segments