

identical with that of *Stylactis vermicola*, but not with that of the three species of true *Stylactis* which originally constituted this genus. I am therefore of the opinion that it would be better, and justified by general systematic principles, to retain the older definition given by Allman in 1871 (p. 302), viz. :—"Gonosome: Sporosarc borne on the hydranths at the proximal side of the tentacles," and to separate the symbiotic deep-sea species as a new genus, *Stylactella*, "with gonophores borne on the creeping stolon or the hydrorhiza." The full definition of this genus would then be as follows :—

*Stylactella*, nov. gen.—Tubulariæ without hydrocaulus, with a reticular hydrorhiza, from which arise single sessile or pedunculate hydranths, and scattered between them single gonophores. Hydranths claviform, naked, with a single circlet of filiform tentacles, which surround the base of a conical hypostome. Gonophores ovate, naked, with a simple central spadix. Chitinous perisarc investing only the tubular branches of the hydrorhiza.

#### *Species of Stylactella.*

1. *Stylactella vermicola*, Allman, Report, *loc. cit.*, p. 2, pl. i. fig. 2.—Symbiotic with an Annelid. Station 244; depth, 2900 fathoms.

2. *Stylactella spongicola*, n. sp.—Symbiotic with many Deep-sea Keratosa (Spongelidæ and Stannomidæ). Stations 241, 244, 270 to 274, &c.; depths between 2000 and 2900 fathoms.

3. *Stylactella abyssicola*, n. sp.—Symbiotic with several Deep-sea Keratosa (Spongelidæ and Stannomidæ). Stations 198, 270 to 272, &c.

The genus *Hydranthea*, Hincks, is also similar to our *Stylactella*. Allman, in his Tubularian Monograph (p. 301), places it between *Wrightia* (*Atractylis*) and *Stylactis*. Comparing the figures of his *Hydranthea margarica*, which Hincks gave in 1863,<sup>1</sup> I find it rather different, not only in the formation of the hydranth (with a short hydrocaulus and a double circlet of tentacles), but also in the formation of the gonophores. These are true medusiform sporosacs, with four radial canals in the rudimentary umbrella. The gonophores of *Stylactella*, however, like those of *Stylactis*, are simple club-shaped sacs, with a central blind-canal or spadix, between which and the ectodermal membrane the ova are developed. I am much inclined to regard this formation as a primitive one, not as having arisen from reduced Medusoids (as in the case of *Hydranthea*). I suppose that *Stylactella* (and probably also *Stylactis* and some allied genera) belong to the oldest and most primitive forms of Hydroids, and that their gonophores are not reduced Medusoids, but either simple genital buds, organs of the hydranth (as in *Hydra*), or sexual zooids, separated from the nutritive zooids by division of labour. Perhaps *Stylactella* and the allied genera may represent together a distinct family, Stylactidæ.

<sup>1</sup> *Ann. and Mag. Nat. Hist.*, ser. 3, vol. x. pl. ix. fig. 4.