Family Serpulidæ.

In comparison with former expeditions that of the Challenger has produced a comparatively large number of species belonging to this family. No less than nineteen different forms, besides fragments of undetermined species, occur. The majority come from depths under 500 fathoms, but five are from the abysses of the ocean. Prof. Ehlers [1] was specially interested in finding Serpulidæ from considerable depths in the collection made by the U.S. steamer "Blake," viz., about 860 fathoms, especially as he had not found such in the materials from the "Porcupine." In the present series, however, we find that *Serpula philippensis* reaches 1050 fathoms, a *Vermilia* 1450 fathoms, *Placostegus challengeriæ* 2375 fathoms, *Placostegus ornatus* 2900 fathoms, and *Placostegus benthalianus* the still greater depth of 3125 fathoms. Examples of the same genus, moroever, occur equally in shallow water as in the abysses of the Pacific.

Schmarda gives eleven representatives of the family, mostly from shallow water or between tide-marks. Several come from coral reefs. Kinberg records five species. Grube mentions three in the Annulata Œrstediana, two in the collection of the "Gazelle," and seven in the Philippine series. An interesting résumé of the genera included under the family is given by Marenzeller as an introduction to the description of the seven species from Southern Japan. His remarks in regard to the structure of the hooks in the various groups are both appropriate and useful.

The food of the members of this family is the same as that of other Annelids.

The absence of *Spirographis* (*Cymospira*), *e.g.*, the well-known *Cymospira gigantea*, Pall., is remarkable.

While Philippi's view with regard to the diagnostic value of the operculum is noteworthy and merits his opinion that it has "the advantage that it may still be frequently observed in dried specimens preserved in Museums," much has to be added to it. For instance, the structure of the body-wall and the minute characters of the bristles and hooks are indispensable in modern work. Even Mörch's more recent Revisio critica Serpulidarum [2] fails in the anatomical characters just mentioned. The remarks by Langerhans in his recent paper on the Serpulidæ of Madeira [3] are noteworthy. He makes three types, the first including the genera *Serpula*, *Eupomatos*, *Pomatoceros*, and *Placostegus*, while near them are *Protula* and *Psygmobranchus*. The second type includes *Filograna*, *Apomatus*, *Filogranula*, *Salmacina*, *Spirorbis*, and *Pileolaria*; while the third group is represented by *Vermilia* and *Omphaloma*.

[1] *Bull. Mus. Comp. Zoöl.*, vol. v. p. 274, 1878–79.

[2] *Naturhistorisk Tidsskrift*, June 1863, p. 347.

[3] *Zeitschr. f. wiss. Zool.*, Bd. xl. pp. 273–275. Prof. Langerhans is a noble example of an invalid who has the courage to do valuable work under physical disadvantages.