

being 6 (Station 147, 1600 fathoms); but this question will be more fully dealt with in discussing the bathymetrical distribution.

The geographical range of individual species<sup>1</sup> appears, with few exceptions, to be somewhat restricted. As exceptions we may mention *Halichondria panicea*, *Reniera cinerea*, *Chalina pergamentacea*, *Tedania digitata*, *Iophon pattersoni*, *Axinella profunda*, *Suberites carnosus*, *Tentorium semisuberites* and *Latrunculia apicalis*. Five of these (Nos. 1, 2, 4, 5, 7) are very generalised types, with few definite specific characters to go by, and might consequently be expected to have a very wide range. One, *Axinella profunda*, comes from very deep water (2300 and 2385 fathoms) at widely remote localities in the North and South Pacific respectively (*cf.* p. 181), but apparently under exactly similar conditions in the two cases; while the distribution of the remaining three is very hard to understand. The genera and families, on the other hand, have mostly a very wide range, although some appear to be characteristic of special localities and to be comparatively rare elsewhere. Thus the Chalininæ and Ectyoninæ are highly characteristic of the Indo-Australian area, and the Tedaniinæ more or less so of the Patagonian area.

## DISCUSSION OF THE BATHYMETRICAL DISTRIBUTION.

We have already had occasion to point out that the Monaxonida are not a predominant group in very deep water. If we analyse our table of bathymetrical distribution as we did that of geographical distribution we shall find this conclusion fully confirmed, especially if we bear in mind the large proportion of Challenger dredgings which were taken in deep water as compared with those taken in shallow water. Our four bathymetrical areas may then be arranged as follows, according to the number of species<sup>2</sup> obtained in each:—0–50 fathoms (85 species); 50–200 fathoms (55 species); 200–1000 fathoms (46 species); 1000–3000 fathoms (24 species). Here then we have the very definite result that the number of species varies in inverse proportion to the depth, or in other words that the number of species gradually diminishes as we go downwards.

According to Vosmaer<sup>3</sup> (and we have no reason to doubt the correctness of his statement) the greatest depth at which a Monaxonid sponge has hitherto been obtained is 860 fathoms (recorded for *Cladorhiza*). This depth is now extended to 3000 fathoms (for *Cladorhiza longipinna*, nobis) by the results of the Challenger investigations, which

<sup>1</sup> For details as to the geographical distribution of individual species the reader is referred to the Table and to the Description of Genera and Species.

<sup>2</sup> For the purpose of simplifying the discussion, varieties are here again treated as distinct species; which these are will be seen by reference to the Table of Geographical and Bathymetrical Range.

<sup>3</sup> Bronn's *Klass. u. Ordnung. d. Thierreichs, Porifera*, p. 455.