

5. Beyond 2000 fathoms neither Gadidæ nor Salmonidæ nor Notacanthi have been found.

6. The families which descend to the greatest depth at which fishes have been obtained, viz., 2900 fathoms, are Berycidæ, Pediculati, Ophidiidæ, Macruridæ, Sternoptychidæ, Scopelidæ, Stomiatidæ, Murænidæ; also two families which have no representatives in the surface-fauna, viz., the Alepocephalidæ and Halosauridæ, extend to the same enormous depth; and there is no reason why all those deep-sea forms, which are known to live at a depth of nearly 3000 fathoms, should not occur in the greatest abyss of the ocean.

The abundance and variety of fish life decreases with the depth, as is obvious from the following table, which expresses our present knowledge of the subject. There have been found

between	100– 300 fathoms	232 species.	
„	300– 500	„ 142	„
„	500– 700	„ 76	„
„	700–1500	„ 56	„
„	1500–2000	„ 24	„
„	2000–2900	„ 23	„

Of those found between 100 and 300 fathoms 108 also occur above the 100-fathoms limit.

This decrease in the number of species, as shown in this table, is no doubt partly owing to the difficulty of capturing fishes at great depths, a difficulty which increases in proportion to the depth at which the dredge is worked. But it must also be regarded as evidence of the actually diminished variety of fishes. Fishes may be, and no doubt are, locally abundant at the bottom of the ocean; but this abundance is probably one of individuals rather than of distinct forms. We may safely assume, that as the majority of deep-sea fishes are modifications and derivatives of surface forms, they are fewer in number than the latter, especially when we consider that the physical conditions of the abyss are of a very uniform character, and therefore cannot have given rise to the development of numerous specific and generic forms.

This uniformity of the physical character of the lowermost strata of the ocean is also the cause of the almost unlimited horizontal distribution of deep-sea fishes. Pelagic surface-fishes have already a wide range, but are more or less influenced in their distribution by climatic conditions. Deep-sea fishes are no longer subject to this cause of limitation when they have reached a depth of 500 fathoms, where the temperature of the water is as low as 40° F., and perfectly independent of that of the surface water. Therefore, the instances already known of the same genera, and even of the same species occurring in the depths of the eastern and western, northern and southern