

From the above table it will be seen that (excluding the type form, concerning which no information has been published in this regard), not one of the species of *Cirroteuthis* has been found at a depth less than 600 fathoms, and, therefore, if we are justified in taking the depth to which the dredge or trawl descended as representing the depth from which the specimens were obtained, we must certainly regard them as deep-sea forms.

It is, however, well known to all who are familiar with the methods of deep-sea dredging that this cannot be at once assumed. Indeed, in one case, namely that of *Cirroteuthis pacifica*, the MS. Station Book kept on board the Challenger states that the specimen came from the surface, but it appears certain that this was merely an assumption based upon the supposed nature of the animal, and cannot be held as conclusive evidence in regard to the occurrence of these animals on the surface.

On the other hand, it is not a little noticeable that this family should have remained among the greatest of zoological rarities until deep-sea dredging was practised, and that then specimens should have been procured with comparative frequency. Negative evidence is proverbially unsatisfactory, but had they been surface organisms one would have expected that the voyages of the older zoologists would have shown us some trace of creatures which are too remarkable to have been passed over in silence had they been observed.

The fact that the animals in question should have been so long known from one locality in the Arctic regions is probably to be explained, as v. Willemoes-Suhm has hinted, by this being one more instance of a type found in the abyssal regions near the equator and in temperate regions of the globe, whilst it approaches near to the surface in the Polar regions (see p. 65). The probability that this hypothesis is correct is increased by a consideration of the temperatures of the various localities at which the specimens were found; a glance at the table shows that while the surface temperature in these various places varied as much as from 43° to 80° F., the bottom temperature was comparatively constant, ranging between 35°·6 and 41°·8 F.

Furthermore, eggs containing embryos undoubtedly belonging to this genus have been dredged by Professor Verrill in deep water, 428 to 1106 fathoms, and it would seem unreasonable to suppose that animals living at the surface should lay eggs and leave them to sink through so great a distance, during which time they would be exposed to great danger from the attacks of their enemies.

The two other genera discovered by Professor Verrill do not seem to be so certainly deep-sea animals as *Cirroteuthis*, for they have both been met with at depths of less than 300 fathoms, although they appear also to range to a depth of over 1000 fathoms.

In discussing this matter it must not be forgotten that there are animals with a very extensive bathymetrical range, e.g., *Amphilepis norvegica*, among the Ophiuroidea, and *Bathyactis symmetrica* among the Corals, but these are exceptions, and from the reasons