expanding to form clubs, and are armed with very minute suckers; I have not observed anything like a specialised tactile organ in either of these tentacles, or I should be disposed to suggest an analogy between them and the long streaming fringes found in certain deep-sea fish. The fact remains, however, that this form of tentacle is the only structural character which I have observed to be common to any two deep-sea Cephalopods. The stomach of one of Professor Verrill's specimens contained fragments of Crustacea, but we have no other information regarding its habits and mode of life.

It must be admitted that the evidence that this form came from the deep sea is by no means conclusive, but it is very suggestive that no individuals should have been taken in a surface net, while they seem to be not very uncommonly brought up by the deep-sea trawl.

Five species of *Octopus* (see p. 229), have been brought up from depths of over 500 fathoms, a particularly interesting fact since we are accustomed to consider these animals as being characteristic of shallow waters. It seems unlikely, however, that they live at the surface, for from what we know of the habits of this genus as observed in aquaria, they seem rather to frequent the bottom, hiding in crevices of the rocks, and clinging to them by their suckers, swimming only as a means of passing from one hiding place to another; the same remark applies also to the three species of *Eledone* (*Eledone verrucosa*, *Eledone rotunda* and *Eledone brevis*), which also appear in the lists of deep-water forms.

Eledonella has only been twice obtained and on both occasions by a dredge that had been down to the abyssal regions (1100 and 2949 fathoms), but its semitransparent consistency, resembling that of *Cranchia* and *Taonius*, is suggestive of its being a pelagic organism.

Alloposus mollis furnishes another problem for future investigation, both as regards its habits and its systematic position. All the specimens obtained in a perfect state have been brought up from considerable depths, and the tissues have a soft gelatinous character, recalling *Cirroteuthis*; perhaps this may be in some way correlated with deep-sea life; Günther has pointed out that abyssal fish when brought up to the surface present a marked flaccidity of their tissues.

As regards the single specimen which forms the type of the new genus *Promachoteuthis*, I feel quite unable to give any opinion as to its habits. It was brought up by the deep-sea trawl from a depth of 1875 fathoms, off the coast of Japan, but I have failed to find any sufficient evidence to show whether it came from the surface or the bottom.

The Taonoteuthids (*Calliteuthis*, *Histioteuthis*, &c.) form a group, whose bathymetrical distribution presents a still unsolved problem; perhaps the truth is that the species vary in this respect. Vérany records that his specimens of *Histioteuthis* were taken by the dredge; *Calliteuthis* has been taken by deep-sea dredges in depths varying from 345 to 2369 fathoms; the only specimen known of *Histiopsis* was brought up by a trawl which