

depth, as shown by the graph (Fig. 474). We see, for instance, that in the southern section, if we want to get individuals of an average size of 30 mm., we must fish 250 metres farther down than we would in the northern section.

The vertical distribution of *Cyclothone signata* is very different from that of *C. microdon*. We have captured many individuals at a depth of 300 metres, at any rate, in our southern section. The bulk, however, were found at a depth of 500 metres. In the hauls made at greater depths, the quantity diminished so rapidly that we may assume that a large portion of the fishes were caught during the process of hauling in, and that there is only a comparatively thin layer below 500 metres in which they live. In a vertical haul from a depth of 4500 metres to 1500 metres we caught no individuals of this species, but, on the other hand, we secured three individuals in a haul from 1350 metres to 450 metres.

Cyclothone signata is, accordingly, found in an intermediate layer with a maximum in the number of individuals at about 500 metres. In the case of this species, too, we note that the younger individuals are mainly to be found high up in the water (notice particularly the southern stations), and that the same size is to be found deeper in the southern section than in the northern (see Figs. 473 and 474).

Vertical
distribution of
AcanthePHYRA.

We have a remarkable parallel to the vertical distribution of these two species of fish in the case of the species of red prawns. These latter, along with the black fishes, form a populous and characteristic "community." We have come across no fewer than about forty species of pelagic prawns, of which we shall here refer only to *AcanthePHYRA multispina* and *A. purpurea*.

AcanthePHYRA multispina shared with *Cyclothone microdon* the peculiarity that the largest and oldest individuals were found in the nets towed at the greatest depths, say, at 1000-1500 metres (see Fig. 475). At depths between 500 and 750 metres we met with medium-sized specimens, and in the upper layers, from 50 to 150 metres, we found the larvæ. These larvæ were taken in quantities, whereas formerly only a single individual collected by the Prince of Monaco, described by Coutière as *Hoplocaricyphus similis*, but now identified as a larva of *AcanthePHYRA multispina*, was known.

AcanthePHYRA purpurea resembles *Cyclothone signata*, in that its distribution is chiefly confined to an intermediate layer between 500 and 750 metres in depth. Our appliances