

detect with its imperfect organ of vision. Several species were discovered in the South Pacific as well as the South Atlantic, at depths varying from 520 to 2650 fathoms."

When taken from the trawl these fishes were always dead, and the long pectoral rays were erected like an arch over the head, requiring considerable pressure to make them lie along the side of the body; when erected they resembled Pennatulids like *Umbellula*.

On the voyage from the Cape Verde Islands to Bahia the tow-net was worked with greater regularity and more successfully than during the early part of the cruise. The method of lowering and towing it at depths of 50 and 100 fathoms beneath the surface while the ship was dredging and sounding was adopted, and proved a great success. In this way many animals were taken during the day which had previously only been captured on the surface at night.

Except during calm weather, very few animals were found near the surface in the day time. Mr Murray's researches led him to conclude that the great majority of pelagic organisms live at various depths down to, and even deeper than, 100 fathoms during the day time and rough weather, and only come to the surface during the night and in calm weather. In this trip along the course of the Guinea and Equatorial Currents pelagic life was much more abundant and varied, both in individuals and species, than anywhere else in the North or South Atlantic.

The occurrence of the following organisms was noted during the trip. The greatest profusion of life was observed in the Guinea Current during calms, when the sea literally teemed with life, and the most magnificent displays of phosphorescent light occurred at night.

Trichodesmium, and other Oscillatoria.

Large specimens of *Coscinodiscus* and other Diatoms, free and attached to Copepods and other organisms.

Rhabdospheres, Coccospheres.

Pyrocystis noctiluca and *Pyrocystis fusiformis*.

Amœba and amœboid particles.

Peridinium tripos (single and in catena), and other species.

Vorticella, *Acineta*, *Podophrya* (on Pteropod shells), and other Infusoria.

Many Radiolaria (compound and simple).

Pulvinulina, *Sphæroidina*, *Globigerina*, *Hastigerina*, *Orbulina*, *Candeina*, and *Pullenia*.

Hydromedusoid stocks (on Pteropod shells).

Hydromedusæ.

Physalia, *Diphyes*, *Verella*, *Porpita*, and many other Siphonophora.

Semper's Cœlenterate larva.¹

Scyphomedusæ.

¹ *Zeitschr. f. wiss. Zool.*, Bd. xvii. pp. 407-411, 1867.