

ordinary horny and halichondroid forms, although they have a considerable vertical range, are most abundant in the coralline zone. In the Atlantic, hexactinellid sponges are very abundant to depths of about a thousand fathoms along the coasts of Portugal and Brazil. These forms, which occur in the fossil state in the earlier Paleozoic rocks, and, represented by the *Ventriculidæ* and allied families, abound in the chalk and greensand, show in a marked degree the wide extension in space at the present day of a very uniform abyssal fauna, the same or very similar species of the genera *Aphrocallistes*, *Farella*, *Hyalonema*, *Euplectella*, *Holtenia*, and *Rossella* being apparently cosmopolite. Nearly all the deep-sea sponges of all orders are stalked, or provided with beards or fringes of radiating spicules, or otherwise supplied with means of supporting themselves above the surface of the soft ooze in which they grow.

Among the Cœlenterata the Hydrozoa are not very fully represented at great depths. To this rule, however, some singular exceptions occur. In many of our deepest dredgings, where there was a great lack of carbonate of lime, and animal life appeared to be very scarce, the curved horny tubes of what is probably a species of the genus *Stephanoscyphus* was found adhering to the ear-bones of whales or to concretions of iron and manganese; and on two occasions in the North Pacific, at depths of 1875 and 2900 fathoms, we captured a giant of the class, a species of *Monocaulus* with a stem upward of two metres long, and a head three or four decimetres across the crown of extended tentacles.

True corals referable to the Madreporaria are not abundant in deep water. According to Mr. Moseley's report, about ten genera reach a depth of 1000 fathoms; four genera are found at 1500 fathoms; and a single species extends practically through all depths, ranging from 30 to 2900 fathoms. In the Atlantic especially deep-sea corals are sparsely scattered: two or three species of the genus *Caryophyllia* are among the most com-