

## SECTION IV.

## TUBULARIA COUTHOUYI AG.

*Proles hydroidea.* *Adull.*—We have always found this species in the same localities, and under the same conditions, as *Parypha crocea* and *Thamnocnidia spectabilis*, and never in pure sea-water, so essential to its very closely related European congener, the *Tubularia indivisa*. It is usually found in clusters of not more than four or five, and occasionally eight or ten, individuals, springing from a few closely tangled, knotty, root-like tubes. Each stem (Pl. XXIV. *Fig. 1, a b c d*) bears a single head, and runs up from three to six inches, having, in the average, a diameter of one twelfth of an inch, but tapering a little toward the base, where it is connected with the diminutive, tangled, stolonie tubules. The whole stem, from the base of the head to the lower extremity, is covered by a horny sheath, which is more or less ringed, or jointed, sometimes very regularly, at intervals of an eighth of an inch, or constricted once or twice, and then again smooth throughout.

The head resembles very closely that of *Parypha crocea*, described page 249, except that the tentacles of the proboscis (Pl. XXIV. *Fig. 1, v p*), amounting to fifty, are disposed in three or four indistinctly defined series (*Fig. 4, t t<sup>b</sup> t<sup>c</sup> t<sup>d</sup>*). In each series they are successively shorter than the next inner, or higher ones, and the outermost (*t<sup>d</sup>*) are mere papillæ. The head is much larger than that of *Parypha crocea* or *Thamnocnidia spectabilis*, and so are also the stem and the medusoids (*b*); in fact, *Tubularia Couthouyi* has an average of double the diameter of these species, and its tentacles, when fully expanded, form a coronet measuring an inch and a half across.

The medusoids are present, and full of completely developed young, from March to December. It is not probable, however, that the same head bears full-grown medusoids all this time; on the contrary, at one and the same date, some of the largest hydroids bear only a few young buds, and others are crowded to the utmost with highly-developed medusoids casting their young. The branches which bear the medusoids are disposed in longitudinal rows, with three or four in each, so that, transversely, they form three or four circles around the base of the proboscis. The sexes are separate, on different stocks, and may be readily distinguished with the naked eye by the shape of the medusoids, the males being elongate oval, or pyriform (*Figs. 2 and 3, b, and 5, d*), and the females, globular or broadly oval (*Figs. 1, b, and 1<sup>b</sup>, 1<sup>c</sup>, d*).