

at the upper part, and there provided with ten or twelve rather thick, cylindrical, tapering tentacles (*t*), about one third as long as the whole upright stem, which is a little over one eighth of an inch high; the other form varies in outline from elongate oval (A) to oval (*Fig. 19*), fusiform (*Fig. 20*), short cylindrical (*Fig. 21*) or long cylindrical (*Fig. 22*), and springs directly upwards, like the first, from the creeping tube. The interior is occupied by a long, cylindrical, hollow tube (*d*), which bears the same relation to the other parts of the body as the proboscis does to the disk of a Medusa. This is, therefore, the medusoid form; but instead of being attached to the upright hydroids of the colony, it bears the character of an independent individual, like the hydroid form (B). The uniformity of the red color of the group is broken by the varied colors of the medusoids, ranging from dead white and light orange, through all shades, to deep orange.

*The Hydroids.*—There is a very close resemblance between the hydroid form (*Fig. 17, B*) of this genus and that of *Clava* (Pl. XXI. *Fig. 2*), especially when the latter is devoid of medusæ-buds (C E); but the medusæ arise from the creeping stolon, and not from the upright hydroids, as in *Clava*. Besides this, the hydroids of the genus *Rhizogeton* taper uniformly from the base to the oral extremity (Pl. XX. *Fig. 17, B m*), there being no club-shaped swelling of the upper extremity, as in *Clava*, and a horny sheath (*e e'*) extends up from the stolons to the base of the head. At certain seasons of the year it might be very difficult to distinguish the hydroids of these two genera from one another, especially if a colony of young *Clava* (Pl. XXI. *Figs. 5, 6, and 7*) should happen to be found by the side of a *Rhizogeton*; but this is not likely to occur, for the two have very different habits; the former is always found on rocks and stones in tide-pools, whilst the latter invariably clings to sea-weeds, and is very much exposed to the dashing of the surf. We have never observed more than ten tentacles in the hydra of *Rhizogeton* (Pl. XX. *Fig. 17, t*). These are very long and stout, quite unlike the graceful, slender tentacles of *Clava*, and are arranged spirally on the head, which comprises nearly one half of the whole height of the stem. They have a structure very similar to that of *Clava*, both in the proportionate thickness of the walls and in the cellular constituents; and the same may be said in regard to the whole body of the hydroid, as well as the stolon (*f*). In regard to the size of the latter we would say, however, that it is nearly as thick as the upright stems of the hydroids.

*The Medusæ-buds.*—We have never seen any other than the male colony of the genus *Rhizogeton*. As has been observed in the beginning of this section, the medusæ-buds of *Rhizogeton* arise from the stolons, and not from the upright stems of the hydroids. From the earliest period (*Fig. 18*), as far as we have seen, to the time when the spermatic particles are discharged, they are covered by a pro-