a full account of them here.[1] The head of this Hydroid is capable of assuming a great variety of shapes; but most frequently, especially when the animal is in its native haunts, it assumes an extremely extended condition, with its crown of tentacles, the proboscis and buccal tentacles, and the bunches of medusoids stretched to the utmost (Pl. XXIII. *Fig.* 1[b]).[2] The buccal tentacles, when fully extended (Pl. XXIII. *Fig.* 1[b], *t*), are as long as the proboscis (*p*) from the base to the mouth, and very slender and tapering; yet they may at another time be so contracted as to resemble mere protuberances, hardly, if at all, longer than broad (Pl. XXII. *Figs.* 19 and 23, t^2). Between these two extremes there are all grades of length and breadth, as may be seen by referring to our figures. The lower circle of tentacles presents as great a variety of attitudes as the upper one. When the tide flows rapidly, they are usually stretched out in the direction of the current, and seem to undulate with every passing ripple; in still water, however, they are more active, and more apparently under the control of the animal. At one time they are thrown upwards, with a sudden sweep, as if to embrace an intrusive animal (Pl. XXII. *Fig.* 22, *t*), and quickly contracted, and then concentrated about the mouth, along with the buccal tentacles (t^2). On such occasions they very frequently become globular at the tips, so that they might readily be supposed to retain this shape normally.[3] At the next moment, perhaps, the captured creature, proving to be unpalatable, is rejected with as much readiness as it was seized, by throwing back the crown of tentacles (*Figs.* 25 and 28, *t*), and disclosing the interior of the stomach (t^1), with a sudden and sometimes often repeated gaping. Sometimes the contractions of the proboscis (*Fig.* 26, p^1) are so vigorous, and the buccal tentacles (t^2) are laid together so evenly and compactly, that the whole is reduced to the smallest possible space, with nothing to indicate the presence of the tactile organs, but the longitudinal ridges, which extend nearly down to the disk. Again, the larger tentacles, retaining their taper points, simply shorten and thicken transversely (*Fig.* 20, *t*), and, turned either inwards or outwards (*Fig.* 19, *t*), retain a fixed position, while the proboscis swells up into a globular shape (*Fig.* 20, *a*), and at times constricts into two more or less distinctly-defined portions (*Fig.* 19, *a b*). In this last phase the hydroid appears to be in a highly irritated state,

[1] The two species of Thamnocnidia, Th. spectabilis and tenella are identical in every respect, excepting size and the mode of branching, the latter species being considerably smaller than the former, and branching very openly and loosely, and therefore the illustrations of one will be used reciprocally for the other.

[2] The figure here referred to was drawn while the animal was in an upright position, in order to allow the bunches of medusoids to fall back from the proboscis.

[3] If thrown into alcohol in this condition, they would very naturally be described as club-shaped, if they were studied from preserved specimens alone, as may happen in case of specimens brought home from distant expeditions.