

Description of a new form of Naked-Eyed Medusa (*Thaumantias achroa*), with brief histological details. By T. SPENCER COBBOLD, Esq., M.D. Communicated by the Secretary.

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(Abstract.)

THIS specimen was obtained from the shore of the Firth of Forth, and presented the following characters:—The form and general aspect of the *umbrella* resembles that of the more typical species, being hemispherical, transparent, colourless, smooth, slightly elongated vertically when in a state of rest, the transverse diameter measuring rather more than the third of an inch and becoming much increased during contraction, the length of the disk at the same time being proportionately lessened. The circumferential portion of the *umbrella* is fringed by 24 tentacula of extreme delicacy and unusual length; also by eight ocelli, a circular gastro-vascular canal, and a well-defined shelf-like veil directed inwards. The *tentacula*, while relaxed and motionless, are fully three times the length of the disk, their particular number and arrangement ($5 \times 4 + 4$) also constituting a satisfactory mark of identification. Amplified fifty diameters, they exhibit a finely granular and ringed appearance, analogous to that of the prehensile labiate organs of *Hydroïda*; even with an ordinary pocket-lens indications of knotting may be seen at the extremities of the cirrhi. To the naked eye the tentacular bulbs appear colourless and homogeneous, but under a magnification of 300 diameters linear, the sub-epidermic tissues display numerous closely packed oval or fusiform cells, which refract light very strongly. Near the extremity of the thread, the cells are more cogently developed, and being placed at a right angle to the axis of the filament, appear to stand out from the investing epidermis. At the upper part the tentacula exhibit lateral lines in their interior, denoting the presence of a central canal, the markings becoming more conspicuous near the bulb. Within the bulb the limiting membrane of an otolithic vesicle was discernible, but there were apparently no vibratory movements within the cavity. The *ocelli*, eight in number (2×4), are placed round the circular margin of the disk, at intervals between every third tentacle—an arrangement somewhat peculiar. Each ocellus consists of a transparent vesicle containing a round nucleus, and in addition five bright yellow, highly refracting globules, the central and superior one being the largest. The *sub-umbrella* is placed

rather higher than midway between the marginal ring and the convex surface of the disk. The depth of the concavity lessened during contraction, but not uniformly so, it being observed that the upper part remained unaffected to the extent of a third of its area, from the summit downwards, forming, as it were, a *point d'appui* for the development of contractile action throughout the remainder of the membrane. The proboscidiiform *peduncle* has all the features common to the genus. The *gastro-vascular* canals—four radiating and one circumferential—contain two kinds of corpuscles; the smaller are rather less in diameter than human-blood globules, while the larger, apparently mother-cells, are nearly three times greater, possessing nuclei of variable size, but frequently identical in character with the lesser corpuscles. They moved in a moderately rapid and regular manner, their course in the radiating vessels being continuous from one half of the hemisphere to the other. Thus, two vessels carried the particles from the marginal canal, convergingly, to the central point of intercommunication, on the one hand, and two conveyed the same elements from the centre, divergingly, on the other. The *reproductive glands*, four in number, elongated or semiclavate, are placed on the inferior surface of the sub-umbrella, a short way distant from the margin, and in the course of the radiating canals. Each gland was subdivided by one of the radiating vessels traversing its long axis. The subjacent ova at the surface generally displayed an outer cell-wall, with its included transparent albumen, a second membrane surrounding the molecular yolk, and a third constituting the germinal spot, within which were three or four rounded particles, beautifully distinct. Deeper in the organ were similar cells, smaller in size and imperfectly developed, evidently destined to supply the place of those ripe for expulsion.

To facilitate identification, it may be remarked that *Thaumantias inconspicua* has the disk wider and more flattened, purplish-coloured glands and twenty tentacles. *T. punctata* has thirty-two tentacula, and is a larger species, with the umbrella more depressed, and *T. Thomsoni* has but sixteen tentacula. There is no other British species for which *Thaumantias achroa* can be readily mistaken.