The skeleton of a *Gorgonocephalus* does not differ more from that of an ordinary Ophiuran than those of Ophiurans differ among themselves. All the mouth parts are present (figs. 18, 19); mouth frames (*f*), jaws (*c*), jaw plate (*e*), sockets for two sets of tentacles (*r*,*r'*), and a large peristomial plate (*v*) in two pieces. There is, in addition, a small angle cover (*v'*), which is strongly developed in most Astrophytons, and which Ludwig considers the first under arm plate. The radial shield, genital plate (*o*), and genital scale (fig. 17, *n*) occupy normal positions. In regard to the radial shields, this peculiarity is to be remarked, that they are made up of a series of plates soldered one on the other like tiles. This structure calls attention to the fact that radial shields, which, from their almost constant presence, and their articulation with the genital plate, are usually considered exceptional parts, are truly nothing more than a disk scale, or a series of soldered disk scales. Hinged to the genital plates they regulate the position of the roof of the disk as it is raised or lowered. Moreover, the genital plates themselves, with their genital scales, are nothing more than highly specialised scales of the lower interbrachial space, folded in, and bounding the genital openings on either side. In some genera (*e.g.*, *Ophiomusium*) the genital plate is externally conspicuous as one of the chief pieces of the lower interbrachial space. The arm bones do not essentially differ from those of Ophiurans, except that their joints are simplified so as to be adapted to rolling in a vertical plane. The outer face has the usual transverse hour-glass projection, which is vertical on the inner face.

Passing now to *Euryale*, striking variations present themselves. The proportions and arrangement of the mouth differ much from those of *Gorgonocephalus*. Two large, flattened jaws (Pl. XXXV. fig. 1, *c*) support a small jaw plate (*e*), which carries, not the usual bunch of spines, but a vertical row of flat teeth (*d''*) like those of Ophiurans, or those of *Astroschema*. Seen from above, the jaws (*c*) and mouth frames (*f*) are much more solid than in *Gorgonocephalus*, and the peristomial plate (*v*), instead of being flat and divided, is much swollen and single. While *Gorgonocephalus* has the under arm plates in three pieces at the tip of the arm, and existing at its base only as irregular, broken scales, *Euryale* has them nearly or quite unbroken (figs. 1, 6, *h*) and of a regular form for the whole length of the arm except the terminal twigs. It is at the end of the arm that there is a remarkable difference in the side plates of the two genera. *Gorgonocephalus* has small thick plates clinging close to the arm, while *Euryale* is furnished with long, finger-like projections standing free and bearing prehensile hooks (figs. 8–12).

A side arm plate of the same general character may be found at the tip of the arm of *Ophiothrix pusilla*.[1] Passing towards the disk, these plates grow shorter and wider, and their hooks thicken into club spines (figs. 8, 9, *i*,*g*). Still further inward the side plates are nearly like those of Ophiurans, and carry little conical tentacle scales (or arm spines) on

[1] Bull. Mus. Comp. Zool., vol. iii. p. 10, pl. iii. fig. 28.