

therefore, as in all Craspedotæ, the sexual products originate from the ectoderm, whilst the reverse is the case in the Acraspedotæ, where, in both sexes, they are formed by the endoderm. The ripe spermatozoa and the ripe ova are therefore thrown outside immediately in the Craspedotæ or "Cryptocarpæ," whilst in the Acraspedæ or "Phanerocarpæ" they first pass into the gastrovascular system, and are then ejected by the oral opening; the former are therefore properly "Ectocarpæ," the latter "Entocarpæ" (Hertwig, 1879). When Eschscholtz, the meritorious founder of the system of the Medusæ, 1829, distinguished the two principal divisions of this class as "Cryptocarpæ" and "Phanerocarpæ" according to the different formation of their reproductive organs, he expressed prophetically an important difference, whose peculiar character was first more accurately recognised fifty years later.

## CLASS II. ACRASPEDÆ, Gegenbaur, 1856.

PHANEROCARPÆ, Eschscholtz, 1829.      STEGANOPHTALMÆ, Forbes, 1848.

SCYPHOMEDUSÆ, Ray-Lankester, 1877.      PHACELLOTÆ, Hæckel, 1878.

Medusæ with gastral filaments or phacellæ; with endodermal genitalia (or sexual products from the internal germinal layer); without true velum (often with velarium); with true marginal lobes of the umbrella; without double centralised nerve ring. Phylogenetic descent (probably universal) and ontogenetic descent (at present still in the majority) derived from scyphopolyps with gastral filaments or from scyphostoma. Ontogenesis usually alternation of generations (in the form of strobilogenesis) often connected with metamorphosis. The sexual acraspede generation is formed by terminal gemmation from the asexual scyphostoma generation.

### Order V. STAUROMEDUSÆ, Hæckel, 1877.

Acraspedæ without sense clubs, with simple tentacles or marginal anchors (adhesive tentacle rudiments). Originally eight principal tentacles (sometimes rudimentary).

Besides these eight principal tentacles there are often small secondary tentacles (usually in bunches upon eight adradial marginal lobes). Stomach having four wide perradial gastral pouches, which are separated by four narrow interradianal septa or fused selvages, and connected on the umbrella margin by a circular sinus. Genitalia, four interradianal horseshoe-shaped swellings or four pair of adradial swellings, which are developed in the subumbrel wall of the gastral pouches from their endoderm, and project wholly or partially into their cavity.