extend to the pillars of the actinostome. The structure of these genital pouches is well represented in Wagner's Icones Zootomicæ, Pl. XXXIII. *Fig.* 6, but their relations to the tentacles are incorrectly drawn, the tentacles standing in the radial prolongation of the interval between the main lobe and the lateral lobes of each genital sac. The difference between Pelagidæ and Cyaneidæ consists in this: that in Pelagidæ the tentacles are in the indentations of the interambulacral lobes, which alternate with ocular lobes; while in Cyaneidæ they are inserted upon the lower surface of homologous lobes. These tentacular lobes are by far the most developed in the Cyaneidæ, while in Pelagidæ they have about the same dimensions as the ocular lobes. The family may, therefore, be characterized thus: four ambulacral pouches with one eye in the indentations between its marginal lobes, alternating with four interambulacra, each of which consist of a medial or genital pouch with one eye between its marginal lobes, and two tentacular pouches, alternating with the ambulacral pouches and the genital pouches. The radiating pouches of the Pelagidæ always terminate in simple marginal sacs, without dentritic ramifications, while in all the Cyaneidæ which have been carefully examined, they branch again and again, forming the most elegant marginal ramifications. The genital pouches remain suspended within the main cavity of the body, and do not form pendant and flowing sacs, as in the Cyaneidæ.

From what I know of the mode of development of the Pelagidæ, it differs essentially from that of the Cyaneidæ; for in Pelagidæ the young, hatched from the egg, passes directly into the ephyra form (Pl. XII. *Figs.* 4, 5, 6, 7, 8, 9, 10, 11, 12), while in Cyaneidæ it passes into the scyphostoma and strobila condition before the ephyræ are developed. It follows, therefore, from the observations which I have made upon Pelagia Cyanella, that each egg produces only one Pelagia, while it has long been known that in Cyanea and Aurelia each egg, being transformed into a strobila, produces as many individuals as there are ephyræ freeing themselves from the strobila.

Besides Pelagia and Chrysaora, Gegenbaur also refers the genus Nausithöe to the family of Pelagidæ. I am, however, strongly inclined to consider this genus as based upon young Pelagiæ, representing a stage immediately following that which I have represented in Pl. XII. *Fig.* 12, of the third volume of this work, in which the tentacles are not yet developed, though the tentacular pouches (*Fig.* 12 *a*), which alternate with the ocular pouches (*b*), just begin to be formed. Should Nausithöe prove to be an adult animal, it would have to be considered as a distinct family, inasmuch as it has no tentacular lobes, while all Pelagidæ have eight, alternating with eight ocular lobes. But a comparison between my figures (Pl. XII. *Figs.* 3 and 12) readily shows, that while the young has eight ocular lobes, each with two lappets, the adult has double that number of lappets,