Order IV. AURONECTÆ, Haeckel, 1888.
(Pls. I.–VII.)

Auronectæ, Hkl., System der Siphonophoren, p. 43.
Aurophoridæ, Hkl., *ibid.*, p. 6.

Definition.—Siphonophoræ with a large pneumatophore, a corona of nectophores, a peculiar aurophore, and a network of canals in the thickened trunk. Nectosome composed of a horizontal corona of nectophores beyond the voluminous spheroidal pneumatophore, and a singular pneumadenia (the large subspherical aurophore), placed in the dorsal median line of the corona. Siphosome spheroidal, ovate or turnip-shaped, with a thick, bulbous, cartilaginous trunk, traversed by a dense network of anastomosing gastro-canals; its surface densely covered by numerous cormidia, each of which bears a single siphon with a tentacle, and one or more gonodendra.

The order Auronectæ is represented by a few Siphonophoræ of the deep sea, which were discovered by the Challenger, and which differ so widely in their entire organisation from all other animals of their class, that it is impossible to place them in any of the four other orders. The large apical pneumatophore, of an enormous size, is similar to that of the Physalidæ among the Cystonectæ; the corona of numerous nectophores (wanting in these latter) resembles that of some Physonectæ (Circalidæ, Forskalidæ); but the remarkable organ of the nectosome which we call aurophore is found in no other group of Siphonophoræ, and is exclusively peculiar to the Auronectæ. The same holds good of the thickened bulbous trunk of the siphosome, which is traversed by a network of anastomosing canals, similar to the fleshy or cartilaginous cœnosome of the Alcyonidæ.

The few species of Auronectæ which I have examined were preserved in spirit in rather good condition, and seem to represent two different families of this order, Stephalidæ and Rhodalidæ. The smaller Stephalidæ (with the genera *Stephalia*, Pl. VII., and *Stephonalia*, Pl. VI.) seem to be allied to the Circalidæ among the Physonectæ (*Circalia*, Pl. XXI. figs. 1–4). Their bulbous trunk exhibits an axial central canal, with a mouth at the distal end (Pl. VII. figs. 40, 48). The tentacles are simple, without tentilla. The second family contains the larger and more highly developed Rhodalidæ (*Rhodalia* and *Auralia*, Pls. I.–V.). The axial central canal of the bulbous trunk has here disappeared, or is replaced by a central cavity; its distal mouth-opening is lost (Pl. IV. fig. 15). The tentacles are compound, with a series of lateral branches or tentilla, similar to those of the Forskalidæ. The young larval forms of the Rhodalidæ seem to be little different from the adult Stephalidæ.

Nectosome and *Siphosome.*—The two main portions of the corm, swimming and feeding body, are both distinguished in the Auronectæ by a peculiar development. The