

a regular pavement composed of innumerable small paliform cnidocysts (tk_{11}). The strong cnidofilament protruded from the large bean-shaped cnidocysts is a rather thick and spirally convoluted thread (Pl. VII. fig. 43, A, B). The slender terminal filament of the tentilla (fig. 23, *tf*) is a simple cylindrical blind tube, scarcely half as broad as the battery, and armed with roundish cnidocysts of medium size.

Gastro-canal System.—The system of nutritive vessels of the Aurnectæ is more complicated than that of the other Siphonophoræ (with the exception of the Disconnectæ). It is composed of the following parts:—(1) *The central hypocystic cavity of the trunk* (Pl. IV. fig. 15, *aa*; Pl. VII. fig. 40, *ah*); a large circular horizontal cavity of discoidal form, the apical wall of which is formed by the lower part of the pneumatophore, the basal wall by the uppermost part of the siphosome. (2) *The pericystic cavity of the pneumatosaccus* (Pl. V. fig. 24, *ps*), enclosed between the thicker outer and the thinner inner wall of the pneumatophore; it gives off small irregular lateral branches which pierce the thick wall of the pneumatocodon (fig. 30). (3) *The cavity of the aurophore* (Pl. V. figs. 24–26, *lr*), divided by numerous irregular, partly radial, partly branched septa into a spongy system of lacunar vessels and radial chambers; the basal part of the aurophore-cavity communicates on its upper side with the cavity of the pneumatophore (fig. 24, *ps*), on its lower side with the central main cavity. (4) *The reticulum of truncal canals* (Pl. IV. fig. 15, *ac*; Pl. VII. fig. 40, *ac*), composed of a dense network of numerous irregularly branched and anastomosing vessels, which pierce the thick cartilaginous bulbs of the trunk in every direction; the centre of this truncal reticulum is in *Stephalia* the axial central canal (fig. 40, *ca*) descending vertically from the centre of the main cavity towards the basal central siphon and opening through its mouth. (5) *The ventral budding canal* (Pl. IV. fig. 16, *ic*), running from the ventral median line of the central hypocystic cavity to the ventral series of buds (*i*), and giving off a lateral branch to each bud. (6) *The nectocalycine ducts*, or the peduncular canals of the nectophores (Pl. V. fig. 31, *ns*), arising from the stem-cavity, running horizontally along the basal edge of the peduncle, and giving off a unilateral series of lateral branches which ascend vertically (fig. 31, *nl*). (7) *The four radial canals of each nectophore* (Pl. IV. fig. 17, *nr*; Pl. VII. fig. 39); they arise crossed from the distal end of the peduncular canal, run along the sub-umbrella towards the margin of the nectophore, and are there united by a circular canal (fig. 39, *cc*). (8) *The central canal of each cormidium*, and the network composed of its anastomosing branches, often united by subregular elegant arches with the network of the neighbouring cormidia. (9) *The simple siphon cavity* (Pl. I. fig. 4, *c*) composed of four segments (pedicle, basigaster, stomach, and proboscis); it arises from the superficial canal-network of the cormidium and gives off from the basigaster a lateral branch for the tentacle (tentacular canal, Pl. IV. fig. 21, *c*). (10) *The simple gonostyle canal* (Pl. I. figs. 2, 3, *c*; Pl. II. figs. 7, 8; Pl. VII. fig. 49), arising from the superficial canal network of the