umbrella of the Velellidæ may be called either amphithect or bilaterally-radial. It is characterised by three unequal dimensive axes, each perpendicular to the other two; one being allopolar (with unequal poles), the other two isopolar (with equal poles). The allopolar axis is the vertical main axis, its upper or apical pole determined by the top of the sail, its lower or basal pole by the mouth of the central siphon. The greater isopolar axis is the sagittal axis of the disc (the major axis of the ellipse), which divides it into two equal symmetrical halves, right and left. The smaller isopolar axis is the transverse or frontal, which is perpendicular to the latter, and separates the disc also into two equal halves, dorsal and ventral; it corresponds to the minor axis of the ellipse.

The *octoradial character* of their amphithect ground-form is always indicated by the origin and course of the eight primary gastro-canals, which arise from the base of the central siphon; secondly, it is marked by the centre of the pneumatophore, which exhibits more or less distinctly eight radial chambers around the simple central chamber; thirdly, it is often indicated by the radial arrangement of eight primary marginal tentacles and of other parts. The umbrella of the Velellidæ is therefore composed originally of eight equal parameres (or homotypical radial parts), like that of the Porpitidæ and Discalidæ; but it differs from that of the latter in the fact that the parameres are disposed in pairs, so that the disc may be regarded also as composed of four paired quadrants; and sometimes the limits of these are sharply marked off by four marginal incisions of the pneumatophorous disc.

The quadriradial appearance, the body seeming to be composed of four parameres (as in the most Medusæ), is mainly obvious in the more highly developed Velellidæ. But regarding their phylogenetic origin from the Porpitidæ, we must assume that this fundamental form has arisen from a true octoradial type composed of eight parameres. In no case can we regard this fundamental form as uniradial, a point of view which is represented by Chun.[1] I agree perfectly with the explanation of the origin of the sail which Chun there gives (*loc. cit.*, p. 15); but I cannot agree with his promorphological deductions. I cannot concede at all that uniradial fundamental forms exist anywhere.

A *true asymmetry*, mentioned by many authors in the umbrella of the Velellidæ, does not exist; for in every case the two halves of the body, which are separated by any possible meridional section (through the vertical main axis), are perfectly equal; and the dorsal and ventral halves cannot be distinguished by any character; the right and left halves being likewise equal one to another. The so-called "asymmetry" in the disc of many Velellidæ is only the beginning of a spiral twisting, caused by a slight dislocation of the vertical sail, turning more or less around the vertical main axis. But in the elliptical *Rataria* (and also in the similar Ratarula-larvæ of *Velella* and *Armenista*) the sail is placed in the sagittal plane, and its later dislocation from this plane is a secondary alteration, comparable to the turning of the sail in a boat sailing before the wind.

[1] Chun, Fauna and Flora des Golfes von Neapel, i., Ctenophoren, 1880, p. 14.