

forms, which connect the different "good species" of this transformistic group, partly to the great confusion of the voluminous literature on this subject. Most authors have founded their specific distinctions upon slight differences in the variable form of the very contractile pneumatophore and insignificant varieties of colour. The accurate anatomical examination of the siphosome, the composition of the cormidia, and the relations of the different clustered medusomes has been much neglected, and requires a further more critical comparison (compare Huxley, 9, p. 99, and Chun 83, p. 557). Judging from the extended observations of numerous *Physalia* collected in different seas which I have been able to compare recently, I think that the following four species of *Physalia* may be distinguished provisionally:—(1) *Physalia pelagica* (South Atlantic); (2) *Physalia cornuta* (Indian Ocean); (3) *Physalia utriculus* (Pacific); and (4) *Physalia megalista* (Indian Ocean and South Atlantic).

Physalia megalista, Lamk. (Péron, 14, pl. xxix. fig. 1), differs from the three other species in the complete union of all the cormidia, as in *Caravella maxima*; there is wanting here the free interval which separates the small basal cormidium (on the distal end of the trunk) from the main mass of clustered cormidia on the ventral side of the pneumatophore. This interval between the two groups of cormidia (the smaller posterior and the larger anterior), as well as the composition of these cormidia, is different in the three other species of *Physalia*; the structure, too, of the pneumatophore, the number of chambers in its crest, and the mode of attachment of the appendages to the trunk, seem to offer marks for a more accurate distinction of these species. (Compare the figures of the Southern Atlantic *Physalia pelagica* by Eysenhardt, 77, p. 45, Tab. xxxv. fig. 2; of the Indian *Physalia cornuta* by Tilesius, 76, p. 42; and of the Pacific *Physalia utriculus* by Eschscholtz, 1, p. 163, Taf. xiv. figs. 2, 3; and in Cuvier's Règne Animal Illustré, Zoophytes, pl. 58, fig. 4.)

Genus 75b. *Caravella*,¹ Hæckel, 1888.

Definition.—Physalidæ with a polythalamous crest on the dorsal side of the large vesicular pneumatophore. Siphosome with several large main tentacles of about equal size.

The genus *Caravella* comprises those Physalidæ which agree in the possession of a polythalamous crest on the dorsal side of the large pneumatophore with the preceding true *Physalia* (*s. restr.*), but differ from them in the possession of numerous large main tentacles, besides a great number of small accessory tentacles (or palpacles). *Caravella* exhibits therefore the same relation to *Physalia* which the crestless *Arethusa* bears to *Alophota*. The cormidia are in *Caravella* polygastric and loose; the number of siphons

¹ *Caravella*, the old name of *Physalia* as usually employed by the Italian and Spanish sailors (*Medusa caravella*, Linné).