

numerous and closely placed, leaving elongated slits between, which are transversely directed; and longitudinal vessels, which are not quite so numerous, and cross the transverse vessels so as to form small quadrangular meshes.

*Tentacles* simple, one ventrally placed, larger than the rest.

*Dorsal Lamina* represented by a series of eight or more tapering languets.

*Dorsal Tubercle*, with a simple aperture.

*Alimentary Canal* short and simple, placed posteriorly to the branchial sac.

*Reproductive Organs* hermaphrodite, placed posteriorly to the branchial sac, in diverticula of the peribranchial cavity.

*Gemmation* from a ventrally-placed stolon formed at the posterior end of the endostyle.

This genus was founded by Péron in 1804.<sup>1</sup> His specimens were obtained in the equatorial Atlantic between Mauritius and Europe during a voyage round the world along with Lesueur, and were very imperfectly described and figured in his memoir, and also in the account of the voyage. The genus is characterized very briefly as follows:—"PYROSOMA. *Corpus liberum, subconicum, extremitate ampliore apertum, vacuum, aperturæ margine intus tuberculis cincto.*" The further description is worthless.

The specific description:—"PYROSOMA ATLANTICUM. *Æquatorio-atlanticum, gregaric-pelagivagum vividissime phosphorescens, coloribus eximiis tunc effulgens in aquis viginti duobus reaumurianis calidioribus occurens, 10-12-14-16 centimetros æquans,*" contains no character which is of any use in determining the species; and the animal was evidently regarded by its first investigator as a zoophyte, consisting of a single polype of which the terminal aperture was the mouth, while the Ascidiozooids were interpreted as simple elongated glands having a phosphorescent function. The plate, drawn by Lesueur, is very little better than the description. It represents the external appearance and a longitudinal section of the colony.

Lamarck<sup>2</sup> shortly afterwards placed *Pyrosoma* in the Radiata beside *Beroë*, but added nothing to the knowledge of its nature.

Péron and Lesueur again met with *Pyrosoma* in a voyage to Nice, and a new species then obtained was described by Lesueur<sup>3</sup> in 1813 under the name of *Pyrosoma elegans*. This differed from *Pyrosoma atlanticum* in having the tubercles on the surface arranged regularly in verticils. A third species which was found at Nice was discussed by Lesueur<sup>4</sup> in a more important paper, *Mémoire sur l'organisation des*

<sup>1</sup> *Mémoire sur le nouveau genre Pyrosoma, Ann. Mus. Hist. Nat., tom. iv. p. 437; also, Péron and Lesueur, Voyage aux Terres austr., tom. i. p. 488, pl. 30, fig. 1.*

<sup>2</sup> *Philosophie Zoologique, tom. i. p. 294, 1809.*

<sup>3</sup> *Nouv. Bull. Soc. Philomath., tom. iii. p. 283.*

<sup>4</sup> *Journal de Physique, tom. lxxx. p. 413.*