Pyrosomes, published in 1815. In this work the true nature of *Pyrosoma* is recognised, some of the former errors in the description corrected, and the genus is removed from the Radiata and placed in the Mollusca alongside *Salpa*. A detailed description, with figures, of the new species *Pyrosoma giganteum* is given, and some of the features in which it differs from the other known species *Pyrosoma atlanticum* and *Pyrosoma elegans* are pointed out. The figures illustrating this paper are good,[1] and are of great assistance in determining the species.

Savigny, to whom we naturally turn for accurate information upon every genus of the Tunicata known in his day, gives a detailed account of the structure of *Pyrosoma giganteum* in his second memoir.[2] His investigations are quite independent of those of Lesueur, and were made upon specimens from Nice sent by Risso to Cuvier, and placed by the latter in the hands of Savigny. The genus was then for the first time properly characterised, his description forming, in fact, with a few slight alterations and additions, the definition now employed.

Savigny divided the species into two groups :—

I. Pyrosomata verticillata—containing the single species *Pyrosoma elegans*, Lesueur; and

II. Pyrosomata paniculata—containing the two species *Pyrosoma atlanticum*, Péron, and *Pyrosoma giganteum*, Lesueur.

Of these two sections of the genus, the first is characterised by having the Ascidiozooids arranged in verticils or regular rings, some of which at regular intervals project beyond the others. The second section has the colony formed of Ascidiozooids, not verticillate, but arranged in very irregular circles in which the more prominent ones are irregularly scattered. If this character, the arrangement of the Ascidiozooids in the colony, is to be depended upon, then none of the Challenger specimens belong with certainty to the first section of the genus, and a specimen in the Zoological Museum of University College, Liverpool, obtained, named as *Pyrosoma elegans*, from the Zoological Station, Naples, does not belong to that species, since its Ascidiozooids are irregularly scattered. There are also other points in which it does not agree with the descriptions of Lesueur and Savigny.

Of the two species belonging to the second section, Savigny distinguishes *Pyrosoma atlanticum* from *Pyrosoma giganteum*, as having a more conical shape, and as differing in the form of the external projecting ends of the Ascidiozooids—those of *Pyrosoma atlanticum* being subulate, while in *Pyrosoma giganteum* they are hemispherical or conical, the larger ones having their extremities lanceolate and finely denticulate. Savigny divided the specimens of *Pyrosoma giganteum* which he examined into three kinds or varieties, which will be discussed farther on under the species.

[1] For a detailed criticism of Lesueur's paper, see Huxley, *Trans. Linn. Soc. Lond.*, vol. xxiii. p. 194, 1862.

[2] Mémoires, pp. 52 *et seq.*