

genera) of Gymnosomata were known. But since then, the number of forms, both generic and specific, has increased in a very remarkable manner, chiefly owing to the results of several scientific expeditions.

During the first half of this century, it was, above all, French naturalists who, as a result of their travels, described new Gymnosomatous Pteropoda. It is sufficient to name Quoy and Gaimard, Rang, d'Orbigny, and Souleyet.

But, more recently, explorations of the great oceanic basins have been carried on in a more scientific and methodical manner and with much more perfect means of investigation. One may say that this new era was inaugurated by the Challenger Expedition, and several nations have already followed the example of England in this department. But, notwithstanding the great progress that these recent scientific expeditions have been the means of effecting in zoology, the Gymnosomatous Pteropoda have remained but little studied and a comparatively little known group.

The Gymnosomatous Pteropoda include but few species, they are difficult to gather, and very few naturalists have busied themselves with the task. The published descriptions of a great number of these species are very often incomplete and based on insufficient characters; and the figures which represent them are unfortunately nearly always imperfect.<sup>1</sup> The types from which these descriptions have been elaborated have now been lost, so that it is excessively difficult to distinguish between the series of forms hitherto named.

In these circumstances, it appeared useful to attempt to bring a little order and light into this chaos. Accordingly, while engaged with the description of the Gymnosomatous Pteropoda collected by H.M.S. Challenger (which description will form the essential part of this Report), I have made, at the request of Mr. John Murray, a critical examination of all the known genera and species of this interesting group of Mollusca.

Besides the animals collected by the Challenger Expedition, I have had the advantage of being able to study specimens from several museums and scientific expeditions, viz. :—

1. The Pteropoda belonging to the Museum of Brussels.
2. The valuable collection of Gymnosomatous Pteropoda in the Museum of Hamburg.
3. The Gymnosomatous Pteropoda of the U.S. National Museum at Washington (a collection of great interest).
4. The Pteropoda of the "Triton" expedition.
5. The Pteropoda collected by the Italian ship "Vettor Pisani," during its scientific voyage round the world (1882–85).
6. The Pteropoda collected by Mr. John Rattray, F.R.S.E., during the cruise of the S.S. "Buccaneer," off the west coast of tropical Africa (1885–86).
7. The Pteropoda for sale at the Zoological Station at Naples.

I take this opportunity to thank especially Professor Spencer F. Baird, and Mr. Wm. H. Dall, who obligingly sent to me the Gymnosomatous Pteropoda in the U.S.

<sup>1</sup> The zoologists who deserve the most of these reproaches are indisputably Quoy and Gaimard.