

and Gaimard, a species taken by himself in the South Pacific, between Sydney and New Zealand, during the voyage of the "Rattlesnake." Whether this species was actually the same as that found by the "Astrolabe" it is impossible to decide now on account of the deficiencies in Quoy and Gaimard's description; but as Huxley was satisfied as to their identity, and has given us a full description, with figures, of his specimens, it seems best to adopt that description as applying to the species *Doliolum denticulatum*, Quoy and Gaimard. Uljanin,¹ however, while considering that Quoy and Gaimard's species cannot now be determined, refers Huxley's *Doliolum denticulatum* to a new species *Doliolum gegenbauri*, which he describes afresh (1884). This is surely unnecessary. Even if it be admitted that Quoy and Gaimard's species can never be determined positively, and must therefore lapse, yet *Doliolum denticulatum*, Huxley (1851), must take precedence over *Doliolum gegenbauri*, Uljanin (1884), and therefore the only change necessary is to substitute Huxley's name for Quoy and Gaimard's as the authority for the species.

In 1852, Krohn's² paper dealing with the Mediterranean species of the genus gave for the first time an account of some observations on the complicated process of reproduction and life-history. Although Krohn's account was in some respects erroneous, still he was the pioneer in regard to this difficult subject. He found the tailed larva, and he first pointed out that there was an alternation of generations, and recognised some of the leading stages in the life-history. Gegenbaur's³ observations about the same time still further elucidated the matter, and both authors added considerably to the knowledge of the different forms of *Doliolum* present in the Mediterranean. Leuckart's⁴ paper on Salpæ and allied forms, and Keferstein and Ehlers's⁵ memoir on *Doliolum*, added considerably to the knowledge both of the structure and of the embryology of the genus.

The condition of the knowledge of species at that time (1861) was as follows:—

Krohn had described four new species, *Doliolum ehrenbergii* (which he identified with *Doliolum denticulatum*, Quoy and Gaimard. He changed the specific name, because he found that the denticulation was common to various species. This is *not* the same species as Huxley's *Doliolum denticulatum*), *Doliolum mülleri*, *Doliolum nordmanni*, and *Doliolum troschelii*. The last two are, however, "nurse" or immature forms (blastozooids belonging to *Doliolum mülleri*), with nine muscle bands and a dorsal outgrowth; so that only two good species were added, *Doliolum ehrenbergii*, Krohn, and *Doliolum mülleri*, Krohn. Gegenbaur investigated, in addition to Krohn's

¹ Fauna und Flora des Golfes von Neapel, Monogr. x. *Doliolum*, p. 134, Leipzig, 1884.

² Ueber die Gattung *Doliolum*, &c., *Arch. f. Naturgesch.*, Jahrg. 18, Bd. i. p. 53.

³ Ueber die Entwicklung von *Doliolum*, *Zeitschr. f. wiss. Zool.*, Bd. v. p. 13, 1854; and also Bd. vii. p. 283, 1856.

⁴ Zoologische Untersuchungen, Heft ii., Giessen, 1854.

⁵ Zoologische Beiträge, Heft iii. p. 53, Leipzig, 1861.