

12th Family. GERYONIDÆ *Esch.* (restricted).

Geryonia *Pér.* and *LeS.* (non *Less.*), restricted.—*Liriope* *Less.* (non *Gegenb.*).

G. proboscidalis *Esch.*—*Medusa proboscidalis* *Forsk.*; *M-Edw.*, in *Cuv. Règn. An.*, Pl. 52, fig. 3.—*Geryonia hexaphylla* *Pér.* and *LeS.* (non *Br.*)—*Mediterranean* (*Forskål*).

G. hexaphylla *Br.*, Pl. 18 (non *Pér.* and *LeS.*)—*Bonin Islands* (*Mertens*).

13th Family. LEUCKARTIDÆ *Agass.*¹—*Geryonidæ* *Esch.* (p. p.).

Leuckartia *Ag.*—*Geryonia* *Leuck.* (non *Auct.*).

L. proboscidalis *Ag.*—*Geryonia proboscidalis* *Leuck.* (non *Auct.*), *Arch. Nat.*, 1856, Pl. 1, fig. 1.—*Nice* (*Leuckart*).

¹ After having satisfied myself that the bitentaculated *Medusæ* thus far referred to the genus *Saphenia* belong to two different families, *Saphenia Forbes* to the *Nucleifera*, and *Saphenia Esch.* to the *Geryonopsidæ*, it occurred to me that, among the proboscidal *Geryonidæ*, there might also be representatives of different families. I was led to this supposition by the great diversity of types included in that family by earlier naturalists, and even by *Forbes*. The result of my comparisons are here submitted to the criticisms of those who may have an opportunity of testing the value of my suggestions. That the *Geryonopsidæ* differ from the *Leuckartidæ* I have no doubt, having had an opportunity of examining several representatives of the two families. But there does not occur, along the American coast, a representative of the *Geryonia proboscidalis* of Europe, so that my inference upon this type are solely based upon a careful comparison of the descriptions and figures of *Forskål*, *Mertens*, *Milne-Edwards*, *Gegenbaur*, and *Leuckart*. On comparing the figures of this species published by *Forskål* and *Milne-Edwards*, it may at once be noticed, that, while they agree in every prominent feature, they differ strangely from that of *Leuckart*. *Gegenbaur's* minute description of the same type differs equally from the description given by *Leuckart*. *Gegenbaur* says distinctly, "the proboscis is characterized by the absence of distinct canals," "its interior forms a large cavity," and "from

the circular tube arise centripetal, caecal appendages." In *Leuckart's* *Geryonia proboscidalis* there are no "centripetal appendages;" moreover, it appears to agree in every respect with the other species described by him under the name of *Geryonia exigua*, of which he says, that the "stomach is small, about a line long." He says distinctly, that above the stomach there is "no funnel-shaped cavity," and that "the radiating canals arise immediately from it." We have thus *Geryonidæ*, with flat, heart-shaped dilatations of the radiating tubes, as genital organs, which agree with the *Geryonopsidæ* in the structure of their chymiferous system and its ramification, and others which do not. The latter are *Gegenbaur's* type, long known from *Forskål's* description and figure, and for which the name of *Geryonidæ* must be retained; for the other, first accurately described by *Leuckart*, I propose the name of *Leuckartidæ*, and to the latter family the genus *Liriope* *Gegenb.* (not *Less.*) also belongs. It will be noticed that the form of the genital organs of the *Leuckartidæ* is the reverse of that of the *Geryonidæ*; the heart-shaped genital organs of the genuine *Geryonidæ* pointing toward the circular tube, and those of the *Leuckartidæ* toward the stomach, while in *Geryonopsidæ* they extend evenly along the chymiferous tubes, as in the *Oceanidæ*. If I am not mistaken, the true *Geryonidæ* should be referred to the *Discophoræ haplostomea*, while the *Leuckartidæ* are genuine *Hydroids*.