# NOTE ON THE GENERA *CALLOCARDIA* AND *VESICOMYA*.

By Edgar A. Smith, F.Z.S., etc.

*Read 9th March*, 1900.

The genus *Callocardia* was founded by A. Adams [1] upon a single left valve, dredged off the Island of Quelpaart in 48 fathoms. His description of the hinge-teeth would not lead one to suppose that the shell in question really belonged to the Veneridæ, and was inseparable from *Caryatis*, a subgenus of *Meretrix*, as already pointed out by Sowerby,[2] who did not, however, describe the hinge in detail, but merely observed that it was almost identical with that of *Caryatis Hungerfordi*, which he described at the same time.

Having recently examined examples of *Callocardia Stearnsii*, Dall, and *C. lepta*, Dall, I was glad of the opportunity of comparing them with the *type* of the genus, and at the same time with *C. Atlantica*, Smith, *C. Pacifica*, Smith, and *C. Adamsii*, Smith, which I had doubtfully assigned to *Callocardia* in the report on the "Challenger" Pelecypoda. The result of this examination would seem to show that

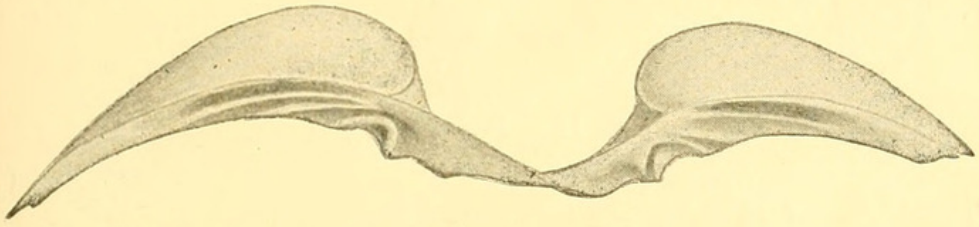

Fig. I.—*Caryatis isocardia.*

Mr. Sowerby was quite right in uniting *Callocardia* with *Caryatis*, and that the other above-named species do not belong to that genus, but should be placed in *Vesicomya*, which was described by Dall [3] as a subgenus of *Callocardia*, for the reception of the three above-named "Challenger" species with *C. pilula*, Dall, *C. venusta*, Dall, and *C. subquadrata* (Jeffr.), Dall, since named *C.* (*Ves.*) *Dalli* by Verrill and Bush.

One of the perfect examples of *Callocardia guttata*, A. Ad., the type of the genus (= *Cytherea* (*Caryatis*) *isocardia*, Sby.), mentioned by Sowerby, was obtained for the Museum, thus enabling me to compare both valves with typical species of *Caryatis*. The hinge of the left valve is described by Adams as consisting of two teeth with a narrow curved pit between them. The anterior tooth is said to be very prominent, angularly bent in the middle, with an anterior and

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[1] Ann. & Mag. Nat. Hist., vol. xiii (1864), p. 307.
[2] Proc. Zool. Soc., 1888, p. 218.
[3] Bull. Mus. Comp. Zool., vol. xii, p. 272.

posterior pit, and with the edge raised into four cusps; the posterior tooth being oblique, narrow, elongate, curved, with the edge raised into two slight points. With the actual valve before me, it is possible to understand this description, except that I can find only three cusps upon the so-called anterior tooth.

By comparing the figure of *C. isocardia*[1] (Fig. I) with those of various species of *Caryatis* given by Römer,[2] the similarity in the hinge is fairly observable, and an examination of the several species, side by side, shows that there is no essential difference between any of these forms. The two diverging teeth beneath the umbo in the left valve of *C. isocardia* do not, however, form such an acute angle as usual in the section *Caryatis*, and the pit between them is peculiarly deep. The teeth of the right valve, although thin and delicate, agree exactly in form and position with those of other species of the genus. Owing to the tenuity of the valves, the muscular scars are very indistinct, and the pallial line is scarcely traceable. It is therefore impossible to say, from the specimens examined, to what extent it may be sinuated.

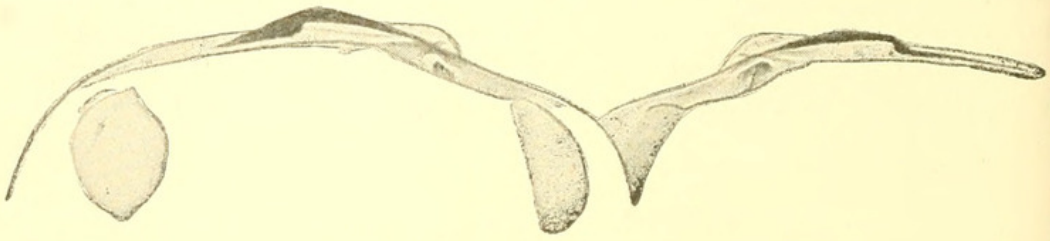

Fig. II.—*Vesicomya lepta.*

The hinge of *Vesicomya* (Fig. II) is lighter and less complicated than that of *Caryatis*, and the different species exhibit slight modifications which could only be understood from enlarged and accurate drawings. The pallial line in this genus is scarcely sinuated in some species, whereas in others it is somewhat deeply inflected. The following species, which are quoted under their original names, probably belong to *Vesicomya*:—

1. Callocardia (?) Atlantica, Smith: Report Challenger Exped. Lamellibr. (1885), p. 157, pl. vi, figs. 8–8*b*.
*Hab.*—West of Azores, in 1,000 fathoms.

2. Callocardia (?) Pacifica, Smith: op. cit., p. 156, pl. vi, figs. 9–9*b*.
*Hab.*—Mid North Pacific, in 2,900 fathoms.

3. Callocardia (?) Adamsii, Smith: op. cit., p. 155, pl. vi, figs. 7–7*b*.
*Hab.*—South of Sierra Leone, in 2,450 fathoms.

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[1] Proc. U.S. Nat. Mus., vol. xii (1899), pl. x, fig. 5.
[2] Novit. Conch. *Venus*, Bd. i, pls. xxii–xxxiii.

*4. Diplodonta pilula, Dall: Bull. Mus. Comp. Zool., vol. ix (1881), p. 136; vol. xii, p. 274, pl. viii, fig. 13, as *Callocardia* (*Vesicomya*) *pilula*.
*Hab.*—Caribbean Sea, 339 fathoms.

*5. Callocardia (Vesicomya) venusta, Dall: Bull. Mus. Comp. Zool., vol. xii (1886), p. 274; vol. xviii (1889), p. 439, pl. xl, fig. 5.
*Hab.*—Off Cuba, 801 fathoms; off North Carolina, 731 fathoms.

*6. Callocardia albida, Dall: Proc. U.S. Nat. Mus., vol. xii (1890), p. 268.
*Hab.*—Off Rio Janeiro, 59 fathoms.

*7. Callocardia Smithii, Dall: Proc. U.S. Nat. Mus., vol. xii (1890), p. 208, pl. x, figs. 1, 2, 3.
*Hab.*—Off Tobago, 880 fathoms.

8. Callocardia Stearnsii, Dall: Proc. U.S. Nat. Mus., vol. xviii (1896), p. 17.
*Hab.*—Off coast of Washington, 786 fathoms.

9. Callocardia lepta, Dall: Proc. U.S. Nat. Mus., vol. xviii (1896), p. 17.
*Hab.*—Gulf of California, 857 fathoms; off Oregon, 786 fathoms.

*10. Callocardia ovalis, Dall: loc. cit., p. 18.
*Hab.*—Gulf of Panama, 1,672 fathoms.

*11. Callocardia gigas, Dall: loc. cit., p. 18.
*Hab.*—Gulf of California, 857 fathoms.

*12. Callocardia (Vesicomya) Dalli, Verrill & Bush: Proc. U.S. Nat. Mus., vol. xx (1898), p. 817.
*Hab.*—Atlantic, off Portugal, 740–1,095 fathoms.

*13. Callocardia Callogonia) Leeana, Dall: Proc. U.S. Nat. Mus., vol. xii (1890), p 269.
*Hab.*—Off Tobago, 880 fathoms.

*14. Callogonia angulata, Dall: op. cit., vol. xviii (1896), p. 19.
*Hab.*—Gulf of Panama, 1,270 fathoms.

* Species thus marked are known to the writer only from the descriptions.