

OBSERVATIONS

ON A

CYTHERA

FOUND IN

BASS STRAITS.

BY

DR. JAMES C. COX, M.D., F.L.S., &c.



Sydney

F. W. WHITE, PRINTER, 30 MARKET STREET WEST

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Mr. [unclear]

OBSERVATIONS ON A CYTHEREA, FOUND IN BASS
STRAITS, WITH LIGHT CHESTNUT RAYS OF
COLOUR.

[*Cytherea Diemenensis*, Hanley, not in question.]

BY DR. JAMES C. COX, M.D., F.L.S., &c.

MR. J. E. GRAY, of the British Museum, in 1827 described a *Cytherea Kingii* in the Appendix to Captain Philip P. King's "Narrative of a Survey of the Coasts of Australia," dated 1827, Vol. II., Appendix Mollusca, p. 474. It was not figured at the time. Gray's description of the specimen given to the Museum by Captain King is:—"One inch long and eight-tenths of an inch high; shell ovate, heart-shaped, white or pale brown, with darker brown rays, each formed of several narrow lines; the umbones white, the edge quite entire; the lunule lanceolate, heart-shaped, obscurely defined, the centre rather prominent; inside white; the hinge margin rather broad." He says the shell is very like *Cytherea Loeta*. No habitat is given, but can any one doubt that King obtained this shell in Bass Straits, of which he made the survey: Philip and King's Islands being called after him. King never was at Nicobar Island, where Romer, in his Monograph of the sub-genus *Cytherea* of Lamk., says that *C. Kingii* comes from; nor was he in the West Indies, or at Tihiti. I am assured of this by his son, the Hon. Philip Gidley King, now in Sydney. But, if Captain King had been there, it is not without record that mistakes were made in those early expeditions as to habitats. We have two main facts in the question: one is that the shell was collected by King, and the other is that King surveyed the coast on which we now find a shell corresponding to Gray's description almost in every way.

Dione Kingii, Gray. In Deshayes' Catalogue of the Conchifera or Bivalve Shells in the Collection of the British Museum, 1853, Part I, p. 69, a shell under this name is given, Deshayes giving as a habitat Nicobar Island. Deshayes refers to the author of the species as given in Woods' Index Testaceologicus with Supplement by Sylvania Hanley, dated 1856, p. 203, species 3, Venus, Supplement. Now Hanley in this Supplement places the letters I.T. after Gray's name as author; this signifies that the name given to the shell figured was given by Gray,

with a label on it, and as such was published in the Index Testaceologicus. Gray, as I have shown, described this shell in 1827, and had it in the British Museum, and now we have a record that he gave it to Hanley to figure, no doubt for the first time; to make it certain that this was the shell described by Gray in King's voyage, Hanley gives a reference to King's voyage which I have already given as where Gray described it. Moreover he gives as the habitat "S. Seas," putting it in brackets to show that Gray gave him that habitat. Deshayes, Romer, and others, refer to this shell as being recorded in the Catlow Catalogue No. 55, on p. 38, 1845. Another reference to it will be found in Hanley's Illustrated and Descriptive Catalogue of recent (bivalve) Shells, letterpress Part I, page 106, the date of which is 1843. I have not got this part, and cannot consequently give a quotation from it.

Deshayes, in his Catalogue of Bivalves in the British Museum, quoted, gives a reference to *Cytherea Kingii* (ex parte) in Sowb. Thes. Conch., Vol. II., p. 638, pl. 133, fig. 129; and Romer in his Mon. Genus Veneracea, Venus, sub-genus *Cytherea* p. 96, gives as a reference to this species Sowb. Thes. Conch., Vol. II., p. 638, pl. 133, fig. 130. (Synon. part enclus). The date of Vol. II. is 1855.

Sowerby, in the Thesaurus Conchyliorum, Vol. II., p. 638, Sp. 92, 1855, describes *Cytherea Kingii*, Gray, giving Woods' Index Test. Supp. by Hanley as where the species is described, quite ignoring Gray's description of it in the Appendix to King's survey of the coast of Australia during 1818 and 1822, although Hanley refers to it. Moreover he does not notice Hanley's "S. Seas" habitat, but gives St. Thomas, West Indies, and Nicobar Islands as its habitat.

He describes the species thus:—"Smooth in the middle, shell oval, oblong, not very ventricose, slightly striated at the sides; whitish, generally with chestnut rays, either linear or broad; anterior side short, sloped, with the lunule long and defined; hinder side elongated, rather square, with the dorsal edge rather elevated." Compare this description with the one given by Gray in Appendix to King's voyage, and compare also Sowerby's figure with Hanley's figure in Woods' Index Test. Having done so myself carefully, I feel sure that Sowerby has taken his description from the shell named *Lamarckii* by Gray in the Analyst of 1838, Vol. VIII., p. 308, which Philippi says is from Tahiti, "very like this species." Sowerby, p. 639 of same vol., observes, that this description will include the several varieties which have been differently named, such as *C. Bilunulata* (no author) so labelled in the British Museum, *C. Lamarckii*, Gray, *C. Kingii*, Gray (*C. Morlesta*, Phil.), sic.

Romer, in dealing with this species in his *Monogder Moll.*, Venus, Band I, sub-genus *Cytherea*, dated 1869, page 69, as *Cytherea (Caryatis) Kingii*, Gray, pl. 26, fig. 1, gives *C. modesta* of Philippi (not Sowerby) in *Abbild. I.*, p. 198, pl. 3, fig. 3, as a synonym, and *Dione Philippi*, Desh., as another synonym; but Deshayes makes the *Cytherea Modesta* of Philippi in *Abbild. Conch.*, p. 20, No. 3, pl. 3, fig. 3, 1845 (not Sowerby) as a synonym of *Dione Philippi*, Desh. He moreover makes *Cytherea Kingii* (ex parte) of Sowb. in *Thes. Conch.*, p. 638, another synonym. He makes *C. Bilunulata*, as labelled in British Museum, quoted by Sowerby, as a var. of *Kingii*, a doubtful synonym.

Reeve in his *Monograph of the genus Dione* in the *Conchologia Iconica*, Vol. xiv., pl. 9., fig. 36 a., b., dated on plate 9, October, 1863, has to my mind figured *C. Lamarckii*, Gray, as fig. 36b. His figure 36a is certainly not *Kingii*, Gray, it is *Cytherea Loeta*, Linne., from Philippine Islands. This is Reeve's description of the species:—"Shell ovate, thin, rather compressed, fulvous white, variously stained and rayed with red; most concentrically irregularly striated; anterior side rather short, rounded."

What is supposed to be a var. or synonym of this species, under the name of *Cytherea Modesta* of Philippi is described thus in *Abbildungen Conchylien* by Dr. R. A. Philippi, dated 1845, p. 198 of Vol. II., sp. 3, pl. 3, fig. 3, of *Cytherea*:—"Shell ovately oblong, somewhat compressed, thin; transversely very lightly striated; whitish, ornamented with fulvous rays or yellowish unicolorous rays; area wanting; lunula lanceolate scarcely distinct." The figure is a good one with rather pale-coloured chestnut narrow rays, as it is often obtained in Bass's Straits specimens.

The shell with which this species has been confused, mixed up with, or considered synonymous with, is *Cytherea Lamarckii*, Gray. It was described by Gray in the "Analyst," a monthly periodical of science, published in octavo form in London. Ten volumes of this Journal were issued between 1834 and 1840, when it either ceased or was merged into some other Journal. The description is in Vol. VIII., which was issued in 1838, on p. 306, but not figured. I have never seen this Journal, and cannot hear of a copy of it in New South Wales, otherwise I would give his definition of the species. *C. Lamarckii* is recorded by Hanley in his *Illustrated and Descriptive Catalogue of Recent Bivalve Shells*, the plates of which form a third edition of Woods' *Index Testaceologicus*. It is described on page 103 of the letterpress in Part I., issued in 1843. It was recorded also in the *Catlow Catalogue*, sp. 58, on page 39, but so far still unfigured. This work was published in octavo form in London, and is dated 1845; it is a joint work compiled by Miss Agnes Catlow and

Level Reeve, bearing the title of "The Conchologist's Nomenclator: a catalogue of the recent species of shells included under the sub-kingdom Mollusca, with their authorities, synonyms, and references to works."

It was again recorded by Mons. Deshayes, in his Catalogue of the Conchifera or Bivalves in the British Museum, Part I., p. 69, No. 45, as *Dione Lamarckii*, Gray, 1853, but still not figured.

Sowerby seems first to have figured it, but not as a species; he figured it as a variety of *Cytherea Kingii*, Gray, on pl. 133, fig. 129, Vol. II., p. 638, 1855, from St. Thomas', West Indies, and the var. from Nicobar Island.

Reeve does not record *C. Lamarckii*, Gray, in his Monograph of the genus *Dione* in Vol. XIV., or anywhere else as far as I can ascertain.

Römer, in his Monographie der Mollusken-Gattung, Venus, Band I, sub-genus *Cytherea*, dated 1869, describes this species as *Caryatis Lamarckii*, Gray, on page 97, figured in plate 25, fig. 2 (not 1, as given in reference on page 91), and on the opposite page *Caryatis Kingii*, Gray, is given. I draw attention particularly to his description of the lunula and umbones in these two species. In *Lamarckii* he says: "Lunula lanceolata, obsolete circumscripta, superficialis, medio carinulata, purpurea fusca"; whereas in *Kingii* he says: "Lunula lanceolata, cordata plana, medio carinulata, albida, plerumque rufo-castanea, obsolete circumscripta." In *Kingii* he says: "umbones elati sub-oblique recurvati, apicibus acutis, pæne confinis, in trientem anteriorem collocati"; whereas in *Lamarckii* he says: "umbones tumidi elati sub-oblique, apibus acutus, revoluti in $\frac{1}{2}$ longitudinis siti." Gray merely says of *Kingii* that the umbones are white, and such is the case in all the specimens I have of this Bass Straits shell. To my mind these facts and others, as seen by the two descriptions compared side by side, justify the separation of the two species, and I claim the name of our illustrious Hydrographer, Captain Philip P. King (*Kingii*) to be given to our Bass Straits species, and the name *Lamarckii* should be retained to designate the Tahitian species if Philippi's habitat is correct.

The *Cytherea modesta* of Philippi, in Abbildungen Conchylien, dated 1817, p. 20, *Cytherea*, pl. 2, fig. 3 (not p. 3, fig. 3, as given by mistake), and which Sowerby, on p. 639, gives as equal to *C. Kingii* of Gray, as figured by him of that species, does not represent our Bass Straits species, but it does well represent the St. Thomas species; therefore I consider *Modesta* a variety of Gray's *Lamarckii* and not of Gray's *Kingii*.

Deshayes, in dealing with *C. modesta* of Philippi, gives it the name *Dione Philippi* in British Museum Catalogue Conch., Part I., p. 72, 1833, and makes *Modesta* of Philippi, but not of Sowerby,

a synonym. He further makes *Cytherea Kingii* (ex parte) of Sowerby, as given on p. 638 of the *Thes. Conch.*, a synonym of *Modesta*. The habitat of this *Modesta*, alias *Philippii*, and alias (ex parte) *Kingii*, is from the Philippine Islands. Deshayes appears to have made this change in *Philippii*'s species because Sowerby had previously named a *Cytherea modesta* which Deshayes placed in the same genus as he placed *Philippii*'s *Cytherea modesta*.

Sowerby's *Cytherea modesta* is recorded in the Proceedings of the Zoological Society of London, for 1835, p. 47, "Shells exhibited and accompanied by characters," by Broderip and J. B. Sowerby, not figured then, but Deshayes says Sowerby's figure p. 136, fig. 184, represents this *Modesta* of Sowerby, and is described on p. 627 of the *Thes. Conch.* Vol. II., p. 1855.

Neither Deshayes' *Dione Philippii*, *Cytherea modesta Philippii*, nor his *Dione modesta*, Sowerby, appear to have been procured during the cruise of the *Challenger*.

Some of our Australian collectors have refrained from calling the Bass Straits species in question *Lamarckii*, because a *Venus* was described and figured by Reeve and Sowerby in their Monographs on the genus as *Venus Lamarckii*, Gray, and catalogued as such by Deshayes in the British Museum Catalogue of the Conchifera, 1853, Part I., p. 110, which is found abundantly on the north-east coast and on the northern shores of Australia; several authorities to whom this north-east and northern species was referred, returned the specimens back so named. It was certainly also sent named to me as *Venus Lamarckii*, Gray, by Angas. I refer to what is now definitely determined by Pfeiffer in his Monograph on the genus *Venus*, in Vol. XI., of Martini and Chemnitz Conchilien Cabinet, 1869, as *Venus Lamellaris*, Schumacher, and by Mr. Edgar A. Smith in his Report on the Lamellibranchiata of the *Challenger* Expedition, Vol. XIII., Zoologie, 1885, p. 121, as *Venus-Antigona-Lamellaris*, Schumacher. Hanley is generally credited as the author of the name *Lamarckii* because he catalogued it as *Venus Lamarckii* in his Illustrated and Descriptive Catalogue of recent Bivalve Shells, Part I. of letterpress, p. 113, published in 1843; but the name *Lamarckii* really appears, according to Mr. E. A. Smith's able report on the *Challenger* Expedition, to have been given to this species by Gray in the *Analyst*, Vol. VIII., p. 308, as *Dosinia Lamarckii*. Deshayes also in his Catalogue mentioned of the British Museum Bivalves, gives the reference as *Dosinia Lamarckii*, Gray, in the *Analyst*, Vol. VIII., p. 308, 1838.

If the *Cytherea* were only to be acknowledged as a Subgenus, as Romer makes it in his Monograph der Mollusken-Gattung *Venus*, Band I., 1869, then there might be some doubt or diffi-

culty in retaining the name *Lamarckii* to Gray's specimen from Nicobar Island, St. Thomas' Island, or Tahiti.

It has been suggested that the two specimens in question, *Cytherea Kingii*, Gray, and *Cytherea Lamarckii*, Gray, are one and the same: if so, the name *Kingii* will have precedence and will therefore stand, as it was described in 1827, whereas the *C. Lamarckii*, Gray, was described in 1838.

7 Pitt Street, Kiribilli Point,
North Sydney,

April, 1895.

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