

Indo-Pacific Chamidae – Part V
Chama pacifica* — *Chama dunkeri

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9. *Chama pacifica* Broderip, 1835

Synonyms:

- Chama foliacea* Quoy & Gaimard, 1835
- Chama claasseni* Jonas, 1846
- Chama meyeri* Jonas, 1846
- Chama broderipi* Reeve, 1846
- Chama divaricata* Reeve, 1846
- Chama multisquamosa* Reeve, 1846
- Chama sulphurea* Reeve, 1846
- Chama reflexa* Reeve, 1846
- Chama purpurata* Chenu, 1846
- Chama delesserti* Chenu, 1846
- Chama elongata* Chenu, 1846
- Chama aeruginosa* Chenu, 1846
- Chama rubea* Reeve, 1847 [?]
- Chama carditaeformis* Reeve, 1847
- Chama segmentina* Clessin, 1889
- Chama convexa* Clessin, 1889
- Chama fragum* var. *douvillei* 'Jousseau' Lamy, 1921

Broderip, 1835a. Proc. Zool. Soc. Lond.: 149.

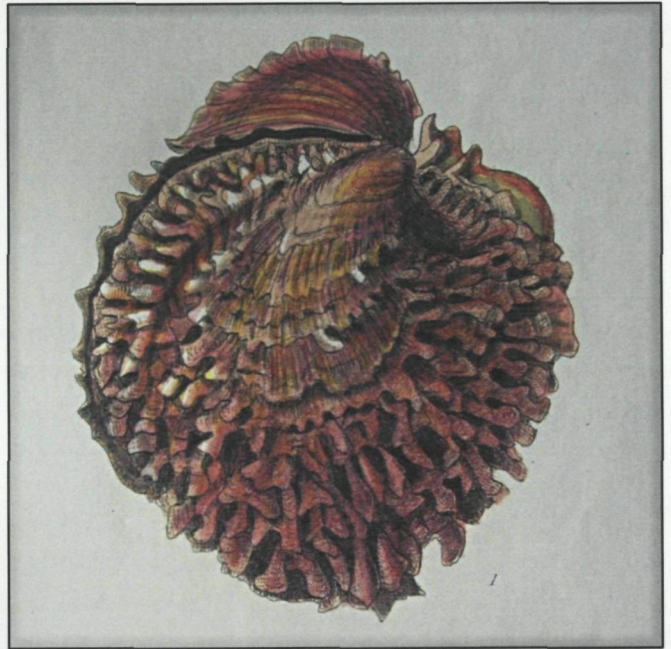
Broderip, 1835b. Trans. Zool. Soc. Lond.: 303-304, pl. 29, fig. 1.

“*Chama testa rubra, purpurea vel lutea, lamellis creberrimis, foliis seu squamulis brevioribus interdum albidis; limbo interno crenato.*”

[translated: shell red, purple or yellow, with very dense lamellae, leaves or very short scales which are sometimes white; inner margin crenated.]

“*Hab. In Oceano Pacifico. (Lord Hood’s Island, Pearl Islands)*” [=type locality]

Broderip remarked that the infinite varieties of this species in shape and colour defy description. He differentiated the species from *Ch. florida*: the latter has smooth inner margins whereas they are strongly crenulated in *Ch. pacifica*.



The figured type in Broderip, 1835b



The lectotype in NHMUK

The lectotype (Delsaerd, 1986: pl. 7, fig. 1) is kept in NHMUK (reg. no. 1950.11.1.54). The left valve measures 78.8 x 65.4 mm, the right (upper) valve 64.7 x 64.4 mm. The lectotype (from the Collection Cuming) was excellently figured in Broderip (1835b). The original description also mentioned that “Cuming’s specimens were obtained by diving. They were attached to *Aviculae* (*Meleagrinae* Lam., *Margaritae* Leach.) at a depth ranging from three to seven fathoms” and that many shells of this species were brought from the Pearl Islands by Samuel Stutchbury.



The left valve of the lectotype

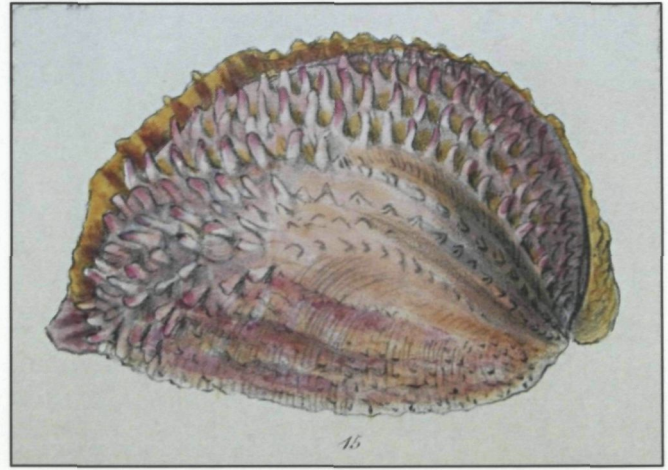
The inside of the valves of the lectotype is tinged with vividly pink, especially the margin. One of the characteristics of *Ch. pacifica* is the orange, pink or red-coloured inside of the valves in contrast to *Ch. dunkeri* from Japanese waters.

Reeve, 1846b. Conch. Icon. Vol. IV. *Chama*. Sp. 15. *Chama pacifica*, pl. III, fig. 15. The English description:

“THE PACIFIC CHAMA. Shell oblong-ovate, circuitously triangular, upper valve divaricately striate, posteriorly squamate, scales somewhat distant, erect, lower valve obliquely ridged and scaled, internal margins of the valves minutely crenulated; purple-like stained with orange, scales pale livid lake.”

The figured specimen is an atypical, beautiful one; its sculpture is quite rare; the shell form was named *Ch. segmentina* by Clessin (1889).

Ch. pacifica is the most attractive and the most variable species of this family of bivalves. The extreme variability causes the many synonyms.



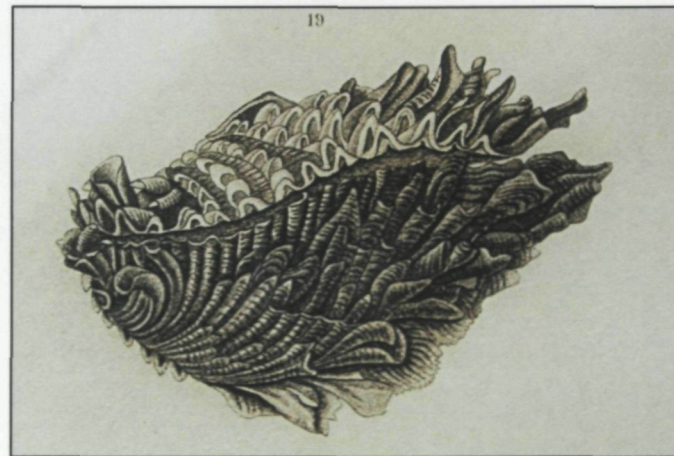
Reeve, 1846: pl. III, fig. 15

Distribution: Indo-Pacific, from the Red Sea to Polynesia. Line Islands (Palay, 1996). Not in the Hawaiian archipelago. As a Lessepsian immigrant, the species has invaded the Mediterranean Sea. Records in the Suez Canal (Moazzo, 1939) and of the coasts of Israel, Lebanon, Turkey, Greece, Cyprus (Crocetta & Russo, 2013). Nowadays well-established on the coast of Turkey.

Chama foliacea Quoy & Gaimard, 1835

Quoy & Gaimard, 1835. Voy. de l’Astrolabe. Zoologie. T. III: 478-479. — 1833. Atlas: pl. 78, fig. 19.

“CAME FOLIACEE. *Cama foliacea*, nob. *Chama*, *testa elongato-ovali, subtriquetra, imbricata, croceo-rubente, intus albo-violacea; lamellis obliquis canaliculatis.*”



The figured type of *Chama foliacea* (pl. 78, fig. 19)

Quoy & Gaimard described their type specimen extensively (French description). [a.o.:] The inside of the left valve white, margin on the right coloured with violet, mantle line (pallial line) also tinged with violet; more numerous lamellae on the right valve white with pale roseate. “Habite l’île de Vanikoro” [=type locality]. Vanikoro is one of the Santa Cruz Islands (= Temotu Province) in SE Solomon Islands.

Hedley (1899: 506) listed *Ch. foliacea* as a synonym of *Ch. imbricata* Broderip, 1835 and questioned which specific name had been published first. However, this does not matter as *Ch. foliacea* was a preoccupied name: Gmelin (I, pars VI, 311 *Chama*: p. 3304, sp. 18) had already described a *Ch. foliacea*, which was considered a nomen dubium by Huber (2010: 674). *Ch. foliacea* Quoy & Gaimard is undoubtedly a synonym of *Ch. pacifica*.

Chama meyeri Jonas, 1846

Jonas, 1846. Zeitschr. Malakoz.: 127.

The most important elements of the long and difficult Latin description were translated by Lamy (1921: 240) as: "*Chama*... qui offre des côtes rayonnantes garnies de squames recourbées de couleur rouge brique dans la région antérieure, tandis que sur la région postérieure elles sont blanches, plus grandes et disposées en trois series longitudinales". From the Latin description we add that the inside of the valves is white, tinged with purple and with crenulated margins.

"Habit. in Mari rubro" [=Red Sea, type locality]. Jonas described a var. "*testa minore, suborbiculare, squamis radiantibus fere omnibus albis*" [translated: a smaller shell, nearly round, with nearly all the rayed scales white]. Length of the type "59 mm". Named in honour of the owner A.B. Meyer.

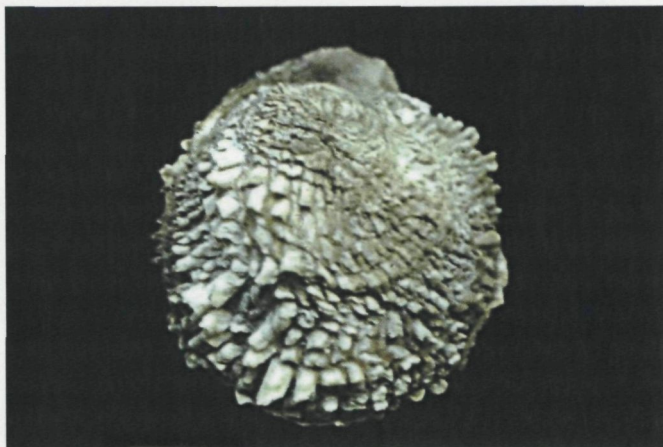
Lamy (1921; 1928:328) synonymised *Ch. meyeri* with *Ch. reflexa* Reeve, 1846, which is considered a synonym of *Ch. pacifica*. Jonas did not give a figure nor a reference to a figure.

Chama claasseni Jonas, 1846

Jonas, 1846. Zeitschr. Malakoz.: 127.

The most important characteristics in the Latin description: A heavy red shell, with rayed white scales; inside white with purple and crenulated margins. "Hab. in Mari rubro" [Red Sea = type locality].

The original description mentioned that the type measured 65 mm and was named in honour of the owner, J.C. Claassen. Jonas did not give a figure nor a reference to a figure. Below one of the specimens from Coll. Jousseume in MNHN identified by Lamy. He also considered *Ch. claasseni* a form of *Ch. reflexa* and thus a synonym (Lamy, 1921; 1928). These two forms of *Ch. pacifica*, described by Jonas, are not at all typical of Red Sea specimens and can be found everywhere in the Indo-Pacific distribution of the species.



Specimen from Suez (Coll. Jousseume) identified "*Ch. claasseni*" by Lamy. MNHN.

Chama broderipi Reeve, 1846

Reeve, 1846b. Conch. Icon. Vol. IV. *Chama*. Sp. 2, *Chama broderipi*, pl. I, fig. 2.

The English description: "BRODERIP'S CHAMA. Shell oblong-ovate, somewhat triangular, upper valve very closely ornamented with very irregular narrow oblong vaulted spines, the lower with slightly plicated imbricated lamellae, both valves radiately striated towards the umbones; margins of the valves within very minutely crenulated; upper valve purple-red, scales whitish, lower with the scales uniform orange-red, interior white, margins purple.

Chama Pacifica var., Broderip.

Hab. Lord Hood's Island, Pacific Ocean (found attached to large *Aviculae* at a depth of six fathoms); Cuming." [= type locality].

Reeve dedicated the species to W.J. Broderip, "the author of the admirable, though limited paper on *Chama* in the Trans. Zool. Soc, who, I think, has erred in including this under the head of *C. pacifica*; there appears to be an uniformity of character in this variety distinct from that species, which is of a more oblong crescent shape, with the spines fewer and more erect, and of a peculiar livid purple colour".

The holotype is kept in NHMUK: left valve 91.0 x 66.0 mm, right valve 66.1 x 57.7 mm.

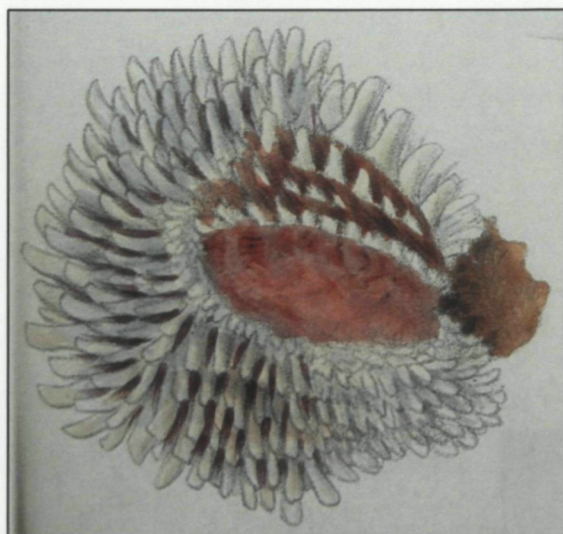
Broderip was right in considering this specimen (see below) as a variety of *Ch. pacifica*. The sculpture of both valves, the colours outside and inside, the crenulated margins, etc., correspond with all characteristics of *Ch. pacifica*.



The figured holotype in Reeve, 1846b



Holotype of *Ch. broderipi* in NHMUK



The figured type in Reeve, 1846b



Inside of the left valve of the holotype

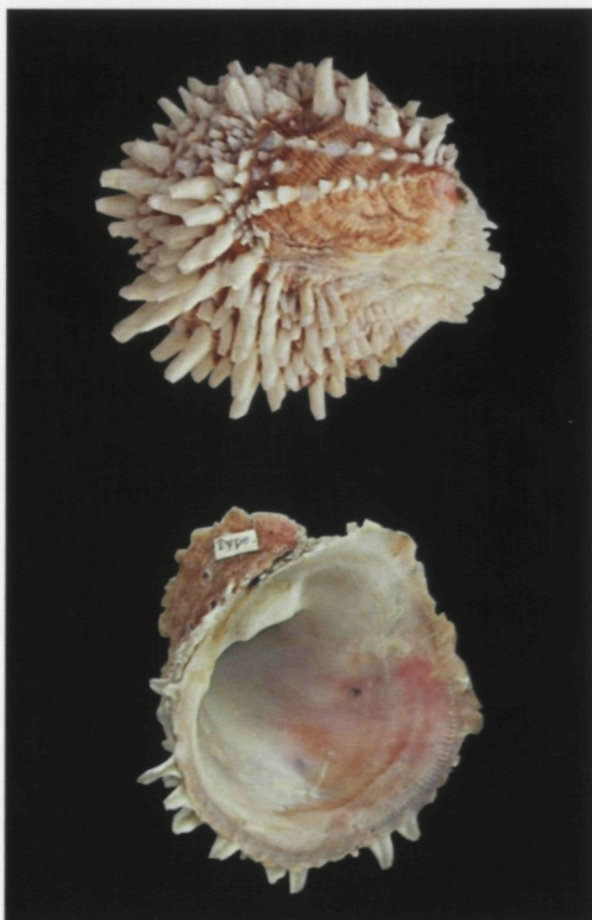
Chama divaricata Reeve, 1846

Reeve, 1846b. Conch. Icon. Vol. IV. *Chama*. Sp. 20.
Chama divarivcata, pl. IV, fig. 20.

English description: "THE DIVARICATE CHAMA. Shell orbicular, somewhat oblique, very finely divaricately wrinkled with striae near the umbones, then

rough and profusely armed with rather long spine-shaped erect vaulted scales; margins of the valves crenulated internally; bright red and purple, scales ivory white, interior white, purple-red towards the margins. Hab. Catbalonga, Island of Samar, Philippines (attached to masses of coral); Cuming." [= type locality].

The lectotype (selected: Delsaerd, 1986: 116, pl. II, fig. 5) and two paralectotypes are kept in NHMUK (1950.11.1.31-3). The lectotype measures 65.5 x 58.9 mm and was quite well-figured in the original description.



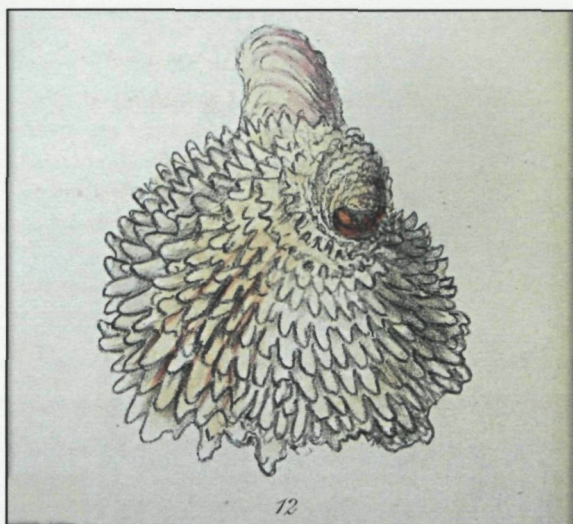
Lectotype of *Ch. divaricata* in NHMUK

Again a beautiful form of *Ch. pacifica*. It only differs from *Ch. broderipi* by the superb, long spines. The two paralectotypes also have very long spines.

Chama multisquamosa Reeve, 1846

“THE MANY-SCALED CHAMA. Shell ovate, rather flattened, valves very closely strongly and irregularly scaled throughout, scales of the upper valve rather erect, of the lower flatly pressed down, internal margins of the valves very finely crenulated; whitish, tinged with rose, scales snowy white, interior white, tinged with rose.

Hab. Matnog, Island of Luzon, Philippines (attached to coral); Cuming.” [= type locality]



The figured holotype in Reeve, 1846b



The holotype of *Ch. multisquamosa* in NHMUK

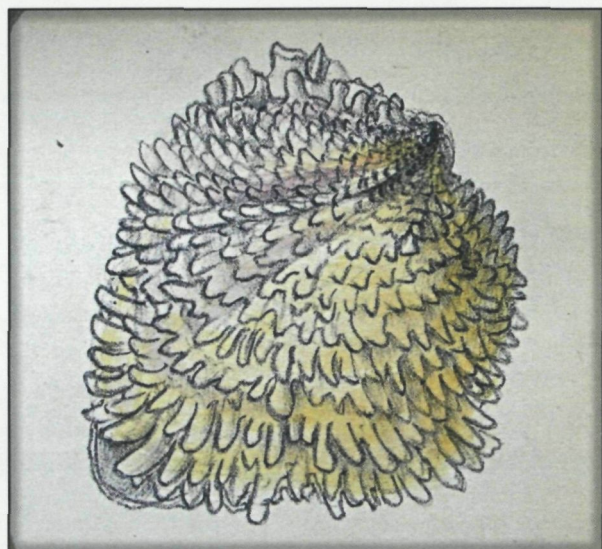
Chama sulphurea Reeve, 1846

Reeve, 1846b. Conch. Icon. Vol. IV. *Chama*. Sp.14. *Chama sulphurea*. Pl. III, fig. 14.

English description: “THE SULPHUR CHAMA. Shell somewhat triangularly ovate, rather flattened, upper valve squamate throughout, scales numerous, irregular, short, pressed down, near the margin longer and more erect, lower valve obliquely ridged, ridges rather broad, squamate at the margin; internal margins of the valves very minutely crenulated; pale yellow, somewhat indistinctly rayed from the umbones with purple.

Hab. Calapan, Island of Mindoro, Philippines (attached to stones); Cuming”. [= type locality].

Four syntypes are kept in NHMUK: 61.5 x 49.3 mm, 50.3 x 38.1 mm, 51.3 x 44.2 mm, 51.2 x 50.5 mm; the latter is the accurately figured syntype. The only new characteristic is the lemon colour (“*sulphurea*”). The sculpture is very comparable to that of the former taxon.



The figured syntype in Reeve, 1846b



Syntype of *Ch. sulphurea* in NHMUK

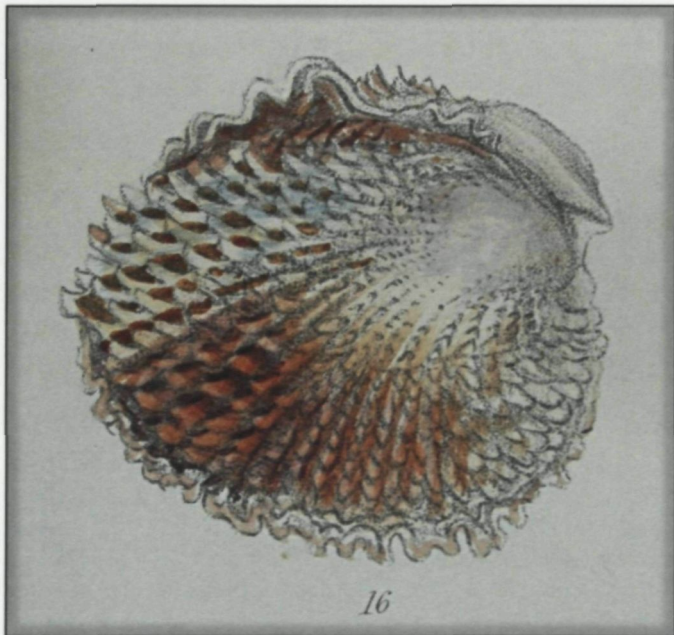
Chama reflexa Reeve, 1846.

Reeve, 1846b. Conch. Icon. Vol. IV. *Chama*. Sp.16.
Chama sulphurea. Pl. IV, fig. 16.

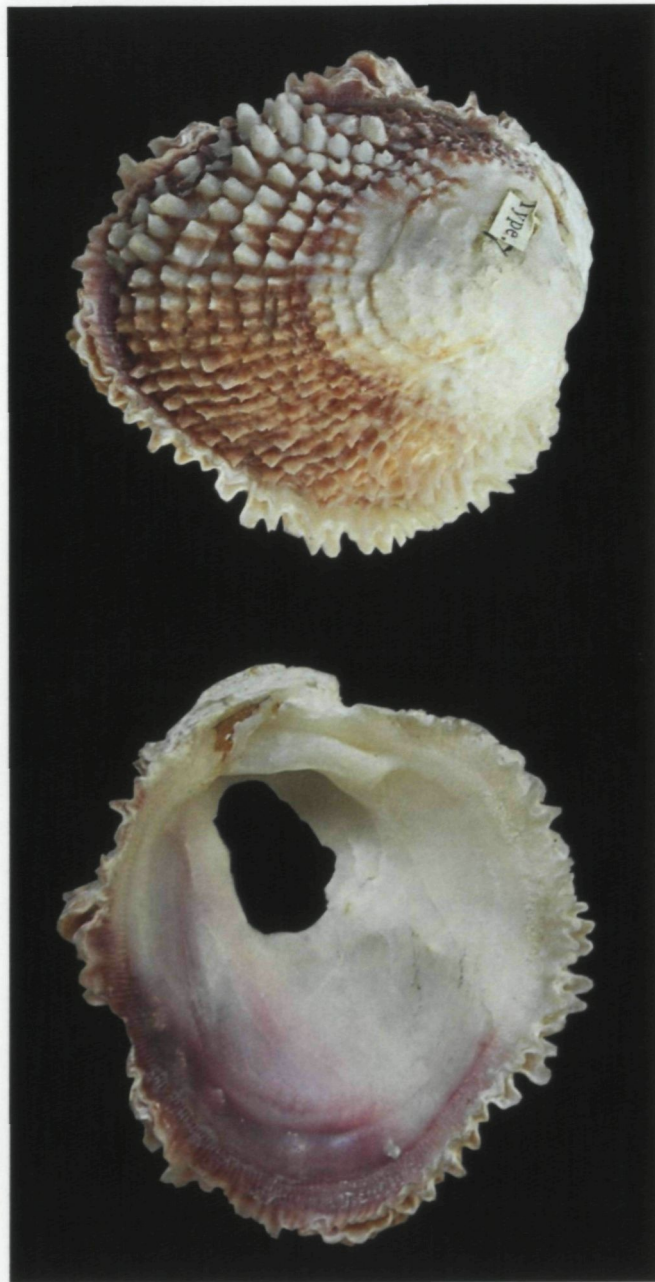
English description: "THE REFLECTED CHAMA. Shell orbicular, rather flat, margin of the lower valve reflected, upper valve ornamented with concentric rows of short vaulted scales, the lower with irregular imbricated lamellae, internal margins of the valves very minutely crenulated; reddish purple, white towards the umbones, posterior scales only of the upper valve white or straw-coloured, interior white, rich purple posteriorly. Hab. Darnley Island, North Australia; Jukes" [= type locality].

The lectotype (selected: Delsaerd, 1986, pl. I, fig. 4) is kept in NHMUK (1950.11.1.28). Left valve 50.8 x 43.8 mm, upper valve 44.1 x 36.3 mm. The lectotype was accurately figured in Reeve, 1846b. Two paralectotypes are also kept in NHMUK.

Ch. reflexa is just the flat, lightweight form of *Ch. pacifica*. Its type locality is in northern Australia, but it is found everywhere throughout the distribution range of the species. It is remarkable that Reeve's *Ch. broderipi*, *Ch. divaricata*, *Ch. multisquamosa*, *Ch. sulphurea* and *Ch. reflexa* were not described in his earlier article in Proc. Zool. Soc. Lond. which means that he split the varieties of *Ch. pacifica* into "species" after that article.



The figured type in Reeve, 1846b



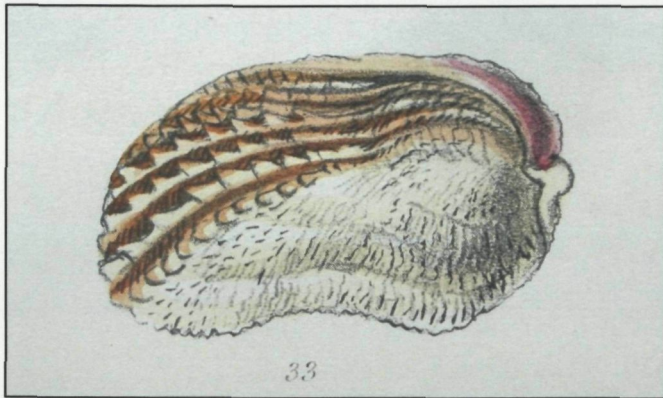
Lectotype of *Ch. reflexa* in NHMUK

Chama carditiformis Reeve, 1847

Reeve, 1847a. Proc. Zool. Soc. London: 119.
Reeve, 1847b. Conch. Icon. Vol. IV. *Chama*. Sp. 33.
Chama carditiformis. Pl. VI, fig. 33.

English description: "THE CARDITA-SHAPED CHAMA. Shell transversely oblong, both valves radiately very minutely ridged with appressed scales, posterior the larger, margins of the valves crenulated; white, interstices between the ridges on the posterior side scarlet-red. Hab — ?"

The holotype of *Ch. carditiformis* is kept in NHMUK (1950.11.1.56) and measures 44.6 x 27.8 mm. It is recognisable in Reeve's figure, but the sculpture in the latter is exaggerated. It is just an oblong form of *Ch. pacifica* and not uncommon.



The figured holotype in Reeve, 1847b



Holotype of *Ch. carditaeformis* in NHMUK

Chama rubea Reeve, 1847 ?

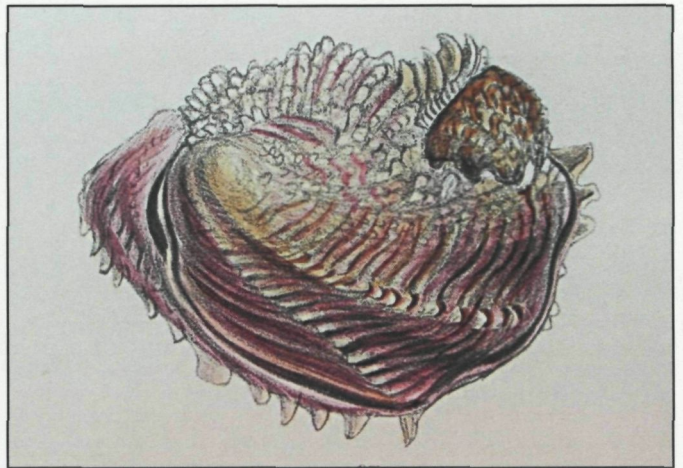
Reeve, 1847a. Proc. Zool. Soc. London: 120.
 Reeve, 1847b. Conch. Icon. Vol. IV. *Chama*. Sp. 37.
Chama rubea. Pl. VII, fig. 37.

“THE RUDDY CHAMA. Shell ovate, circuitously triangular, both valves rudely flexuous and appressly laminated, with a very few scales, margins of the valves very finely crenulated; purple-red, scales whitish, interior white, purple at the edge.

Hab. Cagayan, Island of Mindanao, Philippines (attached to stones); Cuming” [= type locality].

Huber (2010: 674) considered *Ch. rubea* a synonym of *Ch. pacifica*: “Almost identical in sculpture to *meyeri*, but more vividly red or red-purple colored [...] Undoubtedly Chenu’s *purpurata* is the same and even the earlier name for this beautiful color form as stated by Hidalgo”. However, specimens of *Ch. mexicana* Carpenter, 1857 from Baja California, Mexico, are very comparable with the figured type of *Ch. rubea* and bear all characteristics mentioned in Reeve’s description. Yet, this would mean that his type locality is doubtful. On the other hand, in Reeve (1847b) *Ch. rubea* is preceded by *Ch. venosa*, *Ch. echinata*, *Ch. janus*, and followed by *Ch. exogyra* (all from Pacific America), but also followed by

Ch. jukesii (from Australia); all these species are figured on Reeve’s pl. VII. The figured type specimen of *Ch. rubea* is absent in the type collection of NHMUK.



The figured type in Reeve, 1847b

Chama aeruginosa Chenu, 1846

Delsaerdt (1986: 80) synonymised *Ch. aeruginosa* Chenu (not Lamarck, 1819) with *Ch. pacifica*, but due to a printing error Chenu’s figure and the specimen in coll. author were printed mirrored. Below two of the three figures of *Ch. aeruginosa* in Chenu, 1846 (pl. 5, figs. 7 and 7b). 7b is the inside of the left valve. For *Ch. aeruginosa* Lamarck, 1819 see the article on *Chama asperella*.

Huber (2010) correctly added *Ch. elongata* Chenu, *Ch. purpurata* Chenu and *Ch. delessertii* Chenu to the synonyms.



Ch. aeruginosa in Chenu, 1846.

10. *Chama dunkeri* Lischke, 1870

Synonym: *Chama semipurpurata* Lischke, 1870

Lischke, 1870. Malakozologische Blätter. Vol. 17: 27.
 Lischke, 1871. Japanische Meeres-Conchylien. 2: 128-129, pl. 8, figs. 3-4.

“Testa oblonga, subtrigona, solida, basi attenuata, antice subtruncata, aurantio-coccinea; intus alba, postice et infra aurantio late limbata; valva sinistra in latere affixa, in parte libera angulo fere recto ascendens et lamellis concentricis, appressis, plicatis instructa; valva dextra fere plana, squamis erectis, concentricis irregulariterque radiatim dispositis, antice angustioribus et in lamellas plicatas confluentibus ornata, sulca profundo rubro, ab umbone ad basim decurrente exarata, area postica lamellis modo parculis, squamulas pupureas gerentibus munita; margo valvarum subtiliter crenulatus. — Alt. speciminis maximi 72, long 48, lat. 43 millim.”

[translated: Shell oblong, somewhat triangular, solid, narrowing below, anteriorly somewhat truncated, orange-scarlet; white inside, behind and below broadly margined with orange; left valve laterally attached, the free part angular, nearly straightly ascending and with concentric crushed lamellae; right valve nearly flat, decorated with erected, concentric and irregular, radial scales, and confluent into folded lamellae, a red groove from the umbo to the margin, the area behind with a sculpture of small lamellae, and purple scales; the margin of the valves minutely crenulated within.]

In his long German description, Lischke mentioned 5 complete specimens and one left valve. This species is not that different from *Ch. ambigua* in its colouration, yet differs in the many characteristics of its form and sculpture. He mentioned that the species reminds one of *Ch. broderipi*, but after comparison it is different from all known species. “Habitat ad Nagasaki” [= type locality].

Huber (2010: 676) summarised the description very well: “This is a comparatively large, solid, elongated species with rather short, irregularly spines, orange-red with purple traces, with finely crenulate margins. [...] uncommon valid species”. This author illustrates the species with a beautiful specimen of 72 mm (p. 282).

To distinguish the species from *Ch. pacifica* at first sight: The inside of the valves is white as opposed to the vividly colored inside of *Ch. pacifica* (orange to red).

Distribution: Japan (endemic ?).



The figured syntypes in Lischke, 1871



Syntypes in fig. 4 and fig. 3



The syntype fig. 3, inside of the valves



The syntype fig. 4: inside of the valves

[photos of the syntypes: S. Curth

© Aquazoo Löbbecke Museum, Düsseldorf, Germ.]

Chama semipurpurata Lischke, 1870

Lischke, 1870. Malakozoologische Blätter. Vol. 17: 27.
Lischke, 1871. Japanische Meeres-Conchylien. 2: 130,
pl. 8, fig. 1.

The original Latin description: “Testa ovata, basi attenuata; valva sinistra alba, in latere affixa, parte libera erecta, squamis angustis, depressis, concentricis dispositis, pupureis instructa; valva dextra fere plana, antice alba,

postice purpurea, squamis creberrimis, erectis, angustis, subspinosus undique munita; pagina interna alba, in margine subtiliter crenulata. — Alt. speciminis maximi 60, long 41, lat. 26 mill. Habitat ad Nagasaki". [= type locality].

[translated: Shell ovate, narrowing below; left valve white, laterally attached, the free part erected, decorated with concentric, narrow, crushed, purplish scales; right valve nearly flat, anteriorly white, posteriorly purple, with very short, erected, narrow spines; white inside, margin minutely crenulated.]

The Latin description is copied here to compare it with that of *Ch. dunkeri*: most of the characteristics are the same. A very good discussion was given by Huber (2010: 676, under *Ch. dunkeri*). His conclusion is right: "*Ch. semipurpurata* is a colour/shape form of *Ch. dunkeri*".



The figured syntype in Lischke, 1871

Syntype of Lischke, pl. 8, fig. 1



inside of the syntypes' valves

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- [a] [= Savigny, 1817. Description de l'Égypte pendant l'Expédition de l'armée française. Histoire Naturelle. Jonas described some species from the famous "Planches de Savigny" a.o. *Chama corbierei*]
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PLATE XII

Chama pacifica Broderip, 1835

- | | | | |
|----|----------------|---|----------|
| 1. | 46.3 x 35.1 mm | Leg. Rev. Fr. V. Vallons SSCC, 1965: Tuamotu.
(= type locality). Left valve attached to coral. | [Ch.221] |
| 2. | 32.3 x 27.8 mm | Leg. Mrs. M. Marescot: Tupai Isl., Tuamotu. | [Ch.222] |
| 3. | 38.9 x 30.5 mm | Leg. P. Clarkson, 10.1986: wreck at Bonegi,
- 40-50m, Guadalcanal, Solomon Islands.
Specimen with the most attractive sculpture. | [Ch.244] |
| 4. | 60.5 x 40.5 mm | Leg. J. Kengalu: wreck at Bonegi, W of Honiara,
Guadalcanal, Solomon Islands.
Ex private collection J. Kengalu, 7.1995.
The most colourful specimen from Solomon Islands. | [06752] |
| 5. | 74.4 x 43.7 mm | Leg. J. Kengalu: wreck at Bonegi, W of Honiara,
Guadalcanal, Solomon Islands.
Forma <i>segmentina</i> . Right (free) valve 57.0 x 33.8 mm. | [Ch.274] |
| 6. | 71.9 x 50.5 mm | Leg. J. Kengalu, 1985: wreck at Bonegi, -30m,
Guadalcanal, Solomon Islands.
Cluster of 3 specimens, was attached to iron wall
inside wreck. | [Ch.215] |
| 7. | 68.4 x 51.4 mm | Leg. P. Clarkson, 10.1986: wreck at Bonegi,
- 40-50m, Guadalcanal, Solomon Islands.
Right valve 57.7 x 45.2 mm (outside and inside)
Left valve was attached to iron wall inside wreck. | [Ch.251] |

XII



1



2



3



4



5



6



7



PLATE XIII

Chama pacifica Broderip, 1835

- | | | | |
|-----|----------------|--|----------|
| 1. | 63.5 x 48.5 mm | Solomon Islands. Ex Coll. E. Le Compte.
Forma <i>divaricata</i> Reeve, 1846. | [03618] |
| 2. | 69.5 x 46.8 mm | Leg. P. Clarkson, 9.1986: wreck at Bonegi,
20-40m, Guadalcanal, Solomon Islands.
Right valve was attached to iron wall inside wreck. | [Ch.249] |
| 3. | 53.7 x 47.6 mm | Leg. N. Trevor, 1980: Wilson Isl., Capricorn Group,
Qld., Australia. Under coral slabs on exposed reef, -3m.
Forma <i>multisquamosa</i> Reeve, 1846. | [Ch.185] |
| 4. | 55.1 x 48.1 mm | Leg. N. Trevor, 12.12.1982: Humpy Isl., Keppel Bay,
Qld., Australia. Right valve 45.8 x 41.8 mm. | [Ch.183] |
| 5. | 44.1 x 28.1 mm | Balut Isl., Philippines. | [Ch.321] |
| 6. | 40.0 x 32.0 mm | Olango Isl., -10-25m, Philippines.
Forma <i>divaricata</i> Reeve, 1846. | [Ch.433] |
| 7. | 49.3 x 29.8 mm | Bohol, 2013, -10-25m, Philippines.
Forma <i>divaricata</i> Reeve, 1846. | [Ch.432] |
| 8. | 49.7 x 37.7 mm | Cebu, Philippines.
Forma <i>convexa</i> Clessin, 1889. | [Ch.397] |
| 9. | 48.8 x 45.7 mm | Calitoban, 2011, Bohol, Philippines.
Attached (reddish) part of the left valve 23 x 14 mm. | [Ch.436] |
| 10. | 60.0 x 43.0 mm | Bohol, 1995, Philippines.
Right valve 49.2 x 40.7 mm. | [Ch.305] |
| 11. | 54.7 x 42.2 mm | Olango Isl., 2013, -10-25m, Philippines.
Juvenile attached, 20 x 14mm. | [Ch.434] |
| 12. | 51.2 x 28.0 mm | Balut Isl., 1996, Philippines.
Forma <i>carditaeformis</i> Reeve, 1847. | [Ch.315] |

XIII



PLATE XIV

Chama pacifica Broderip, 1835

- | | | | |
|-----|--|---|----------|
| 1. | 36.6 x 24.1 mm | Balut Isl., Philippines. | [Ch.352] |
| 2. | 50.0 x 34.5 mm | Balut Isl., Philippines. | [Ch.316] |
| 3. | 47.0 x 31.2 mm | Balut Isl., Philippines. | [Ch.352] |
| 4. | 38.4 x 29.2 mm | Balut Isl., Philippines. | [Ch.352] |
| 5. | 49.8 x 40.1 mm | Balut Isl., Philippines. | [Ch.316] |
| | Specimens sent by M.O. Montilla in 1996: thought to belong to a new species. | | |
| 6. | 79.3 x 76.0 mm | Balut Isl., Philippines. Cluster of 2 specimens.
The orange specimen 70.8 x 59.5 mm. | [Ch.354] |
| 7. | 70.1 x 76.0 mm | Leg. H. Morisson, 2014: under steel plates of wreck of
'Hatsu Taka', -30-32m, offshore E Malaysia,
4°50' N — 103°27' E. Cluster of 3 specimens. | [Ch.448] |
| 8. | 62.5 x 49.8 mm | Locality unknown. Ex Coll. Eaton Shell Shop (London)
" <i>Chama aeruginosa</i> Lamarck" in Chenu: pl. 5, fig. 7. | [Ch.81] |
| 9. | 57.3 x 56.6 mm | Data = 7. Right valve with juveniles of <i>Ch. pacifica</i> . | [Ch.448] |
| 10. | 62.4 x 48.9 mm | Leg. H. Morisson, 2012: on rubble on wreck of
"Samui", -30-38m, off Tenganau, NE Malaysia.
5°18' N — 103°18' E. | [Ch.382] |
| 11. | 56.6 x 45.4 mm | Leg. H. De Brauwer, 20.10.1980:
Giftun el Kabir Isl., Egypt, Red Sea.
Forma <i>convexa</i> Clessin, 1889. | [Ch.111] |
| 12. | 121 x 61 mm | Data = 7. Cluster of 4 specimens. | [Ch.451] |

PLATE XV

Chama pacifica Broderip, 1835

- | | | | |
|----|----------------|---|----------|
| 1. | | Raja Isl., Thailand. Don. Ed. Wils. | [Ch.150] |
| | 29.6 x 29.5 mm | <i>Ch. lazarus</i> (left) and <i>Ch. pacifica</i> (right) together
attached to coral.
<i>Ch. pacifica</i> | |
| 2. | 60.0 x 79.5 mm | Leg. A. Verhecken, 5.04.1983: Jolly Boys Island,
S Andaman Isls. during the "Andaman Expedition"
by our Royal Belgian Society for Conchology.
Cluster of 4 specimens of <i>Ch. pacifica</i> .
Forma <i>Ch. reflexa</i> Reeve, 1846. | |
| 3. | 80.2 x 79.6 mm | Leg. A. Delsaerdt, 9.04.1983: Red Skin Isl.,
S Andaman Isls. ("Andaman Expedition")
Right valve 61.5 x 44.2 mm. | [0793] |
| 4. | 80.6 x 56.8 mm | Leg. A. Verhecken, 9.04.1983: Red Skin Isl.,
S Andaman Isls. ("Andaman Expedition"). | [Ch.476] |

XIV



XV



1



2



3



4



XVI

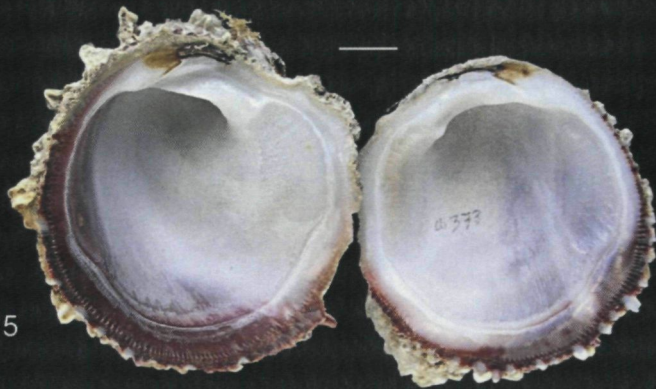
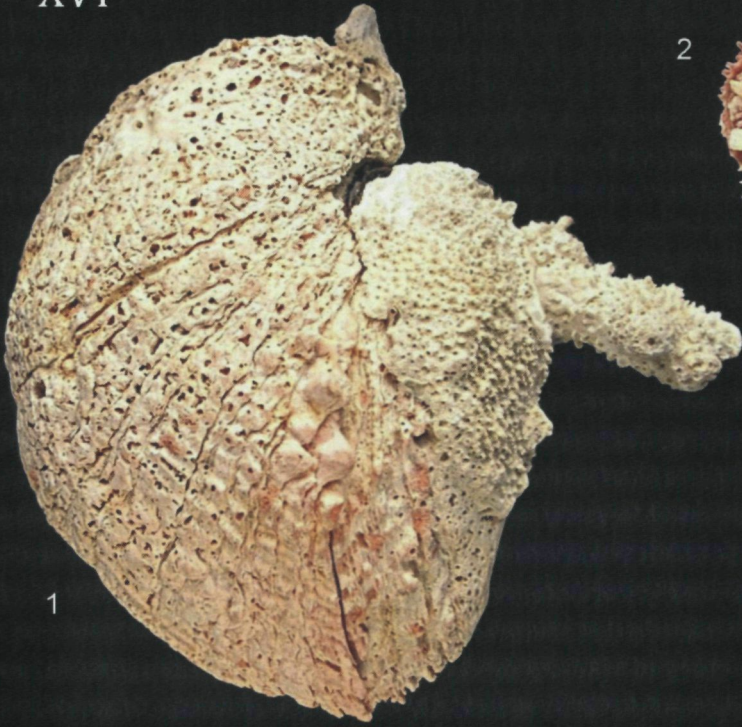


PLATE XVI

Chama pacifica Broderip, 1835

- | | | | |
|----|----------------|---|----------|
| 1. | 99.7 x 77.8 mm | Leg. A. Delsaerdt, 9.04.1983: Red Skin Isl.,
on rocks -1.50m, S Andaman Islands.
("Andaman Expedition") | [0795] |
| 2. | 30.9 x 20.3 mm | Leg. D. Peled, 4.1976: northern Eilat, -2-4m, on rocks,
Israel, Red Sea.
Forma <i>claasseni</i> Jonas, 1846. | [Ch.22] |
| 3. | 43.0 x 29.7 mm | Leg. Dov Peled, 4;1978: southern Eilat, -2-4m,
on rocks, Israel, Red Sea.
Forma <i>meyeri</i> Jonas, 1846. | [Ch. 21] |
| 4. | 51.9 x 42.5 mm | Leg. J. Papoport. (in letter 10.05.1993) "Found 3 kms
from shore at a depth of 15-23m, off Haifa Bay,
Mediterranean Sea. | [Ch.303] |
| 5. | 47.8 x 49.0 mm | Leg. A. van den Bruele, 29.08.2010: San Nicolas Isl.,
on rocks -1-15m, Turkey, Mediterranean Sea.
Inner margins with violet colour. | [Ch.373] |
| 6. | 60.1 x 52.0 mm | Data = 4. | [Ch.303] |
| 8. | 26.6 x 19.3 mm | Ex Coll. M.O.Montilla: Punta Engano, Mactan Isl.,
Philippines.
Juvenile specimen for comparison with specimen 7. | |

Chama dunkeri Lischke, 1870

- | | | | |
|----|----------------|---|----------|
| 7. | 27.7 x 22.6 mm | Leg. M. Chino, 1978: Murato, Kochi, Japan.
Right valve 24.9 x 19.9 mm. | [Ch.284] |
| 9. | 27.1 x 28.2 mm | Cape Chiono, Wakayama pref., Japan.
Right valve 1.89 x 25.5 mm. | [Ch.285] |