

CATALOGUE OF THE CASSIDIDAE IN THE RIJKSMUSEUM VAN NATUURLIJKE HISTORIE

by

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In order to give a survey of all the Cassididae that are now known, I have adopted the same method as for the preceding families dealt with in this catalogue (cf. "Zool. Meded.", vol. 14, pp. 224—231, 1932 & vol. 16, pp. 33—59, 1933): besides those species of which the Rijksmuseum van Natuurlijke Historie possesses specimens, I have, as far as possible, also included those species which have been described till now, but of which we possess no specimens. Moreover I have also mentioned the principal synonyms.

For the division of this family in genera, subgenera and sections, I have again adopted the system used by Thiele in his "Handbuch der systematischen Weichtierkunde". For the revision of the Australian species the publications of Iredale have proved very useful.

Just as in my previous lists, the first letter, indicating the position in the catalogue of specimens of the same locality and collector, is followed by the number of specimens in our possession. After that comes the locality, followed by the name of the collector or donor. If the locality or donor is unknown, I have replaced them by a sign of interrogation. In the case of specimens kept in spirit, the number of the jar takes the place of the letter indicating the position.

Genus *Cassis* Scopoli, 1777

I. Subgenus *Cassis* s. s.

Sect. *Cassis* s. s.

C. cornuta (Linné)

Buccinum cornutum Linné, Syst. nat., ed. 10, p. 735, No. 384, 1758. — Syst. nat., ed. 12, p. 1198, No. 445, 1767.

Cassidea cornuta Bruguière, Encycl. méth., Vers, vol. 1, p. 434, No. 17, 1792.

Zool. Meded. XVIII.

8*

Cassis labiata Chemnitz, Syst. Conch. Cab., vol. 11, p. 71, pl. 184, fig. 1790 & pl. 185, fig. 1791, 1795.

Cassis cornuta Lamarck, Anim. s. Vert., vol. 7, p. 219, No. 2, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 20, No. 2, 1844.

a. 3. Indian Ocean,? — b. 3. Amboyna, Hoedt. — c. 1. Timor, Zijnen Wartel. — d. 6. Billiton Isl. (E. of Sumatra), Mrs. Vosmaer. — e. 2. Moluccas, Reinwardt. — f. 1. Borneo,? — g. 2. Philippines, A. v. d. Valk. — h. 1. Nossi Bé (near Madagascar), Pollen & Van Dam. — i. 5. ?, ? — j. 1. Ceram, Hoedt. — k. 2. Batjan Isl. (Moluccas), ? — l. 2. Gebee Isl. (Moluccas), Bernstein. — m. 3. Waigeo Isl. (N.W. of N. Guinea), Bernstein. — n. 1. Obi Is., Bernstein. — o. 1. New Guinea, Macklot. — p. 2. Aroe Is., Von Rosenberg. — q. 2. Nias Isl. (near Sumatra), E. E. W. G. Schröder. — r. 3. Banda Is., from E. F. Jochim's collection. — s. 2. Amboyna, from E. F. Jochim's collection. — t. 2. Boeton Isl. (near Celebes), from E. F. Jochim's collection. — u. 8. Madura, from E. F. Jochim's collection. — v. 1. Samoa Is., W. von Bulow. — w. 2. Madjene (Celebes), F. H. Verschoor van Nisse. — x. 1. Medan (E. Sumatra), J. C. B. Hüner. — y. 1. Laboean Badjan (Simeuloe Isl.), E. Jacobson. — z. 1. Madura, Mangold.

Most full-grown specimens show on the last whorl three spiral belts provided with tubercles. The tubercles with which the uppermost belt near the shoulder is provided, differ rather considerably in length in the various shells. In a few specimens (i, k, u) we find four instead of three tubercled belts.

Nearer to the canal we generally find a fourth belt, which, however, is smooth and is often wanting in old specimens.

Moreover there is sometimes an indication of a fifth belt, situated still more to the base.

C. flammea (Linné)

Buccinum flammeum Linné, Syst. nat., ed. 10, p. 736, No. 386, 1758. — Syst. nat., ed. 12, p. 1199, No. 448, 1767.

Cassidea flammea Bruguière, Encycl. méth., Vers, vol. 1, p. 429, No. 13, 1792.

Cassis flammea Lamarck, Anim. s. Vert., vol. 7, p. 220, No. 4, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 22, No. 4, 1844.

a. 3. Indian Ocean,? — b. 6. ?, ? — c. 1. Westcoast of Curaçao, A. J. van Koolwijk. — d. 1. Curaçao, Epp. — f. 12. ?, ?

C. madagascariensis Lamarck.

Cassis madagascariensis Lamarck, Anim. s. Vert., vol. 7, p. 219, No. 1, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 20, No. 1, 1844.

Cassis cameo Stimpson, Silliman's Am. Journ. of Sci., p. 443, 1860.

a. 1. West-Indies, Kraepelin & Holm. — b. 4. ?, ? — c. 2. ?, J. L. Storm van 's Gravesande. — d. 1. Tortugas (Florida), H. Boschma.

C. spinosa (Gronovius)

Buccinum Spinosum Gronovius. Meuschen, Zoophylac. Gronov., fasc. 3, p. 302, No. 1344, pl. 19, fig. 9, 1781.

Buccinum tessellatum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 20, 1790.

Buccinum maculosum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 22, 1790.

Buccinum Rumpfii Gmelin, Syst. nat., vol. 1, pars 6, p. 3491, No. 90, 1790.

Cassidea fasciata Bruguière, Encycl. méth., Vers, vol. 1, p. 430, No. 14, 1792.

Cassis coronata Bolten. Roeding, Mus. Boltenianum, p. 29, No. 358, 1798.

Cassis Rumphii Paetel, Cat. conch. Samml., vol. 1, p. 219, 1887.

a. 1. Robertsport (Liberia), Demery. — b. 3. Pacific Ocean, ?

C. tuberosa (Linné)

Buccinum tuberosum Linné, Syst. nat., ed. 10, p. 735, No. 382, 1758. — Syst. nat., ed. 12, p. 1198, No. 447, 1767.

Buccinum striata Gronovius. Meuschen, Zoophylac. Gron., fasc. 3, p. 302, No. 1345, pl. 19, fig. 18, 1781.

Cassidea tuberosa Bruguière, Encycl. méth., Vers, vol. 1, p. 436, No. 18, 1792.

Cassis rotundata Perry, Conch., pl. 33, fig. 1, 1811.

Cassis tuberosa Lamarck, Anim. s. Vert., vol. 7, p. 220, No. 3, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 21, No. 3, 1844.

a. 2. Suriname, ? — b. 1. West-Indies, Kraepelin & Holm. — c. 1. Aruba, A. J. van Koolwijk. — d. 1. ?, from Hoogeveen's collection. — e. 1. Cap Haitien (Haiti), W. Visser. — f. 1. ?, from Cosijn's collection. — g. 2. ?, ?

Sect. *Hypocassis* Iredale

C. fimbriata Quoy & Gaimard

Cassis fimbriata Quoy & Gaimard, Voy. de l'Astrolabe, Zool., p. 596, pl. 43, figs. 7, 8, 1833.

Cassis bicarinata Jonas, Arch. f. Naturgesch., vol. 1, p. 343, pl. 10, fig. 2, 1839.

Cassis bicarinata var. *decrensensis* Hedley, Rec. Austral. Mus. Sydney, vol. 14, p. 47, 1923.

The differences between *Cassis fimbriata* Q.G. and *C. bicarinata* Jonas in my opinion are too small to consider them as two good species, as is done by Hedley (Rec. Austral. Mus. Sydney, vol. 14, p. 46, 1923). They might at best be considered as two forms of one species.

a. 1. Atlantic Ocean, Old Collection.

The locality, "Atlantic Ocean", of our specimen is undoubtedly wrong.

Sect. *Nannocassis* Iredale

C. nana Tenison-Woods

Cassis nana Tenison-Woods, Proc. Linn. Soc. New S. Wales, vol. 4, p. 108, 1879.

C. torva Iredale

Nannocassis torva Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 329, 1927.

II. Subgenus **Cypraecassis** Stutchbury, 1837Sect. **Levenia** Gray**C. coarctata** (Gray)

Buccinum coarctatum Gray, Wood, Ind. testac., suppl., pl. 4, fig. 5, 1825.

Cassis coarctata Kiener, Icon. coq. viv., Cassis, p. 19, No. 10, pl. 8, fig. 15, 1835.

a & b. 2. Galapagos, Cuming & Verreaux. — c. 1. Gulf of California, H. ten Kate.

Sect. **Cypraecassis** s. s.**C. crumena** (Bruguière)

Cassidea crumena Bruguière, Encycl. méth., Vers, vol. 1, p. 428, No. 12, 1792.

Buccinum plicatum (non Linné) Dillwyn, Descr. catal. rec. shells, vol. 2, p. 588, No. 13, 1817.

Cassis testiculus var. Kiener, Icon. coq. viv., Cassis, p. 21 a, pl. 4, fig. 7, 1835.

Cassis testiculus var. β Reeve, Conch. Icon., Cassis, sp. 10 a, pl. 4, fig. 10 a, 1848.

a. 1. Cape de Verd Is., H. C. Fulton.

Our specimen is quite analogous to that represented by Kiener (Icon. coq. viv., Cassis, pl. 4, fig. 7, 1835).

C. rufa (Linné)

Buccinum rufum Linné, Syst. nat., ed. 10, p. 736, No. 385, 1758. — Syst. nat., ed. 12, p. 1198, No. 446, 1767.

Buccinum pullum Born, Testac. Mus. Caes. Vindob., p. 245, 1780.

Buccinum pennatum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 21, 1790.

Buccinum ventricosum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 25, 1790.

Cassidea rufa Bruguière, Encycl. méth., Vers, vol. 1, p. 433, No. 16, 1792.

Cassida os-tauri Humphrey, Mus. Calonnianum, p. 19, 1797.

Buccinum rufum junior Dillwyn, Descr. catal. rec. shells, vol. 2, p. 590, 1817.

Cassis rufa Lamarck, Anim. s. Vert., vol. 7, p. 224, No. 13, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 30, No. 13, 1844.

a. 10. Indian Ocean, ? — b. 1. Tjilatjap (S. Java), Overdijk. — c. 3. Amboyna, Hoedt. — d. 1. Timor, Zijnen Wartel. — e. 3. Waigeo Isl. (near N. Guinea), Bernstein. — f. 3. Nossi-Bé (near Madagascar), Pollen & Van Dam. — g. 1. Mayotte (Madagascar), Pollen & Van Dam. — h. 1. West-Indies, Kraepelin & Holm. — i. 3. ?, ? — j. 1. Skroë (New Guinea), K. Schädler. — k. 2. Nias Isl. (near Sumatra), E. E. W. G. Schröder. — l. 1. North coast of N. Guinea, P. E. Moolenburgh. — m. 1. Samoa Is., W. von Bulow. — n. 1. Mozambique, M. J. de Graag. — o. 1. Madjene (Celebes), F. H. Verschoor van Nisse. — p. 1. Poeloe Tello (Batoe Is.), ? — q. 1. Poeloe Pandjang (Simeuloe Isl.), E. Jacobson. — r. 1. Medan (E. Sumatra), J. C. B. Hüner.

This *Cassis* shows, as is well known, six spiral belts, three or four of which are provided with tubercles. One of the specimens of *i* has a tubercled belt between the first belt on the shoulder and the second one lower down, owing to the middle one of the spiral lines bearing a row of tubercles.

C. tenuis (Gray)

Buccinum tenuis Gray. Wood, Ind. testac., suppl., pl. 4, 1825.

Cassis Massenae Kiener, Icon. coq. viv., Cassis, p. 17, No. 9, pl. 8, fig. 14, 1835.

Cassis tenuis Reeve, Conch. Icon., Cassis, sp. 13, pl. 6, fig. 13, a, b, c, 1848.

a. 2. Galapagos, Cuming. — b. 1. ?, from Schmeltz's collection.

C. testiculus (Linné)

Buccinum Testiculus Linné, Syst. nat., ed. 10, p. 736, No. 387, 1758. — Syst. nat., ed. 12, p. 1199, No. 449, 1767.

Cassidea testiculus Bruguière, Encycl. méth., Vers, vol. 1, p. 426, No. 10, 1792.

Cassis testiculus Lamarck, Anim. s. Vert., vol. 7, p. 225, No. 15, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 32, No. 15, 1844.

a. 4. Curaçao, A. J. v. Koolwijk. — b. 2. Haiti, Ricord. — c. 1. West-Indies, Kraepelin & Holm. — d. 10. ?, from Hoogeveen's collection. — e. 1. Congo, D. Veth. — f. 1. Jamaica, G. C. Robson. — g. 10. ?, from Cosijn's collection.

In a few specimens (b, g, d) it occurs that, in contradiction to what we usually see, there is a more or less distinct varix at about the middle of the last whorl.

var. *bicincta* nov. var. (fig. 1)

Testa parva, spira depressa, anfractu ultimo tuberculorum seriebus duabus superne ornata.

This variety is smaller (my specimens measure 37,5 mm, 40 mm and 35,5 mm) and has flatter whorls than most typical *testiculus* specimens. The last whorl shows a distinct shoulder set with tubercles, 9 to 12 in number. A little lower down there is a second row of tubercles shifted a little with respect to the first.

In consequence of these peculiarities the specimens remind one at first sight vaguely of *Cassis crumena* (Brug.). I did find one of our specimens in the collection under this name, and it is mentioned as such in the "Catalogue systématique des Mollusques" by Horst and Schepman, p. 182. Apart, however, from the fact that *C. crumena* is much larger and usually has a higher whorl, while the finer sculpture differs, this variety shows two rows of tubercles shifted with respect to each other, while *C. crumena* has only one row of plicated tubercles or rather folds running

lengthwise. In the diagnosis of *C. crumena* Bruguière (Encycl. méth., Vers, vol. 1, p. 428, 1792) indicates this by saying "plicato tuberculosa"



Fig. 1. *Cassis testiculus* (L.)
var. *bicincta* nov. var. × 2.

— b. 1. ?, L. P. Pouderoyen. — c. 1. ?, from Hoogeveen's collection.

and he further writes "garni vers le haut de gros tubercules oblongs". I wish to emphasize this, because Tryon (Manual of Conch., vol. 7, p. 273, 1885) wrongly states "upper part of body-whorl with one or two rows of low tubercles".

Another of our specimens is in almost every respect similar to the first object; the tubercles of the second row, however, are here shifted over a greater distance in comparison to those in the first.

Our third specimen is a transition of the variety to the species; the tubercles are here only vaguely indicated.

Of the last two specimens b and c no locality is mentioned, whilst I doubt whether the locality of a is correct.

a. 1. Indian Ocean, ? (type specimen).

Genus *Phalium* Link, 1807

I. Subgenus *Phalium* s. s.

Ph. areola (Linné)

Buccinum Areola Linné, Syst. nat., ed. 10, p. 736, No. 389, 1758. — Syst. nat., ed. 12, p. 1199, No. 451, 1767.

Cassidea areola Bruguière, Encycl. méth., Vers, vol. 1, p. 423, No. 8, 1792.

Bezoardica areolata Schumacher, Essai nouv. syst., p. 248, 1817.

Cassis areola Lamarck, Anim. s. Vert., vol. 7, p. 222, No. 9, 1822. — Anim. s. Vert., éd. Desh., p. 27, No. 9, 1844.

Semicassis (Phalium) areola Brazier, Proc. Zool. Soc. London, p. 837, 1872.

a. 8. Indian Ocean, ? — b. 7. Tjilatjap (S. Java), Overdijk. — c. 4. Amboyna, Hoedt. — d. 4. Misool (W. of N. Guinea), Bernstein. — e. 1. Timor, Zijnen Wartel. — f. 1. Madjene (Celebes), F. H. Verschoor van Nisse. — g. 10. Madura, from E. F. Jochim's collection. — h. 4. Menado (Celebes), from E. F. Jochim's collection. — i. 2. Ternate (Moluccas), from E. F. Jochim's collection. — j. 3. Amboyna, from E. F. Jochim's collection. —

k. 1. Madura, ? — l. 4. Celebes, Miss E. J. Koperberg. — m. 1. Amboyna, Ch. Jellema.

var. ex colore *küsteri* nov. nom.

The specimens under letters g and e belong to the variety indicated by Küster (Martini & Chemnitz. Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 34, 1857) as Var. A, which variety I propose to name: *küsteri*.

Ph. bandatum (Perry)

Cassidea bandata Perry, Conch., pl. 34, fig. 2, 1811.

Cassis coronulata Sowerby, Catal. Shells Tankerville, App., p. 20, 1825.

Casque bezoar jeune Kiener, Icon. coq. viv., Cassis, pl. 1, 1835.

Semicassis (Phalium) coronulata Brazier, Proc. Zool. Soc. London, p. 838, 1872.

Phalium bandatum Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 332, 1927.

a. 3. Indian Ocean, ? — b. 2. Billiton Isl. (E. of Sumatra), ? — c. 1. Eno-shima (Japan), H. v. Oordt v. Lauwenrecht. — d. 3. Amboyna, Ch. Jellema. — e. 1. Borneo, Colonial Exhibition Amsterdam. — f. 4. ?, from Cosijn's & Hoogeveen's collection. — g. 1. Menado (Celebes), ?

Ph. decussatum (Linné)

Buccinum decussatum Linné, Syst. nat., ed. 10, p. 736, No. 388, 1758. — Syst. nat. ed. 12, p. 1199, No. 450, 1767.

Cassidea decussata Bruguière, Encycl. méth., Vers, vol. 1, p. 425, No. 9, 1792.

Cassis decussata Lamarck, Anim. s. Vert., vol. 7, p. 223, No. 11, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 29, No. 11, 1844.

a. 4. Tjilatjap (S. Java), Overdijk. — b. 1. Timor, Zijnen Wartel. — c. 8. ?, Cab. Raye. — d. 1. Tandjoeng Priok (near Batavia), W. F. de Priester. — e. 1. ?, ? — f. 1. Cheribon (N. Java), from E. F. Jochim's collection.

Ph. exaratum (Reeve)

Cassis exarata Reeve, Conch. Icon., Cassis, sp. 32, pl. 12, fig. 32, a, b, 1848.

subsp. *agnita* (Iredale)

Phalium agnitum Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 332, pl. 32, fig. 10, 1927.

Ph. glaucum (Linné)

Buccinum glaucum Linné, Syst. nat., ed. 10, p. 737, No. 391, 1758. — Syst. nat., ed. 12, p. 1200, No. 453, 1767.

Buccinum galea-ferrea Martyn, Universal Conchol., pt. 3, pl. 91, 1786.

Cassidea glauca Bruguière, Encycl. méth., Vers, vol. 1, p. 419, No. 3, 1792.

Cassida bezoar Humphrey, Mus. Calonianum, p. 19, 1797.

Bezoardica vulgaris Schumacher, Essai nouv. syst., p. 248, 1817.

Cassis glauca Lamarck, Anim. s. Vert., vol. 7, p. 221, No. 6, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 24, No. 6, 1844.

a. 11. Indian Ocean, ? — b. 2. Billiton Isl. (E. of Sumatra), Mrs. Vosmaer. — c. 2. Amboyna, Hoedt. — d. 1. Menado (Celebes), Bernstein. — e. 1. Gulf of Gorontalo (Celebes), Von Rosenberg. — f. 2. Timor, Wienecke. — 1286. 1. Amboyna, Forsten. — h. 1. ?, ? — i. 1. Fakfak (N.W. New-Guinea), Palmer v. d. Broek. — j. 5. Madura, from E. F. Jochim's collection. — k. 4. Menado (Celebes), from E. F. Jochim's collection. — l. 1. Amboyna, Ch. Jellema. — m. 1. Celebes, Miss E. J. Koperberg. — n. 1. Boesak (N. Celebes), ? — o. 1. Aden, H. Strengers & L. E. Nobel. — p. 1. Nossi-Bé (near Madagascar), Pollen & v. Dam.

Ph. plicatum (Linné)

Buccinum plicatum Linné, Syst. nat., ed. 12, p. 1198, No. 444, 1767. Synon. plerisque exclus.

Cassis plicata (pars) Martini, Syst. Conch. Cab., vol. 2, p. 68, not. pl. 37, figs. 379, 380, 1773.

Buccinum cassideum plicis Chemnitz, Syst. Conch. Cab., vol. 10, p. 191, pl. 153, figs. 1459, 1460, 1788.

Buccinum plicatum var. β Gmelin, Syst. nat. p. 3479, No. 10, 1790.

Buccinum Fimbria Gmelin, Syst. nat., p. 3479, No. 39, 1790.

Cassis plicaria Lamarck, Anim. s. Vert., vol. 7, p. 222, No. 8, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 25, No. 8, 1844.

a. 2. Tjilatjap (S. Java), Overdijk. — b. 1. Amboyna, Hoedt. — c. 1. ?, ? — d. 1. Indian Ocean, J. J. Haver Droeze.

Ph. strigatum (Gmelin)

Cassis laevis, undata Martini, Syst. Conch. Cab., vol. 2, p. 41, pl. 34, fig. 356 A, 1773.

Buccinum cassideum strigatum Chemnitz, Syst. Conch. Cab., vol. 10, p. 189, pl. 153, figs. 1457, 1458, 1788.

Buccinum rugosum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 27, 1790.

Buccinum strigatum Gmelin, Syst. nat., vol. 1, pars 6, p. 3477, No. 179, 1790.

Cassidea areola B Bruguière, Encycl. méth., Vers, vol. 1, p. 424, No. 8 B, 1792.

Cassis zebra Lamarck, Anim. s. Vert., vol. 7, p. 223, No. 10, 1822. — Anim. s. Vert., éd. Desh., p. 28, No. 10, 1844.

Cassis undata Deshayes. Lamarck, Anim. s. Vert., éd. Desh., p. 28 foot note, 1844.

Buccinum rugosum Gmelin 1790 had already been preoccupied by *Buccinum rugosum* Linné 1771 (Mantissa plantarum, p. 549, 1771) = *Cassidaria*.

a. 2. Japan, P. F. von Siebold. — b. 3. ?, from Dalen's & Hoogeveen's collection.

Under a is an adult specimen, with a rather low spira, of which all the whorls are without any varices.

II. Subgenus *Semicassis* Mörch, 1852Sect. *Semicassis* s. s.**Ph. africanum** (Fulton)

Cassis africana Fulton, Ann. & Mag. of Nat. Hist., vol. 6, ser. 10, p. 686, pl. 18, fig. 3, 1930.

Ph. anceps (Adams)

Semicassis anceps Adams, Genera rec. Moll., vol. 1, p. 215, pl. 23, fig. 2, 1858.

Ph. bisulcatum (Schubert & Wagner)

Cassis bisulcata Schubert & Wagner, Syst. Conch. Cab., vol. 12, p. 68, pl. 223, figs. 3081, 3082, 1829.

a. 6. Indian Ocean, ? — b. 1. Tjilatjap (S. Java), Overdijk. — c. 4. Banka Isl. (E. of Sumatra), v. d. Bossche. — d. 6. Amboyna, Hoedt. — e. 1. Japan, ? — f. 1. Amboyna, from E. F. Jochim's collection. — g. 2. Madura, from E. F. Jochim's collection. — h. 2. Menado (Celebes), from E. F. Jochim's collection. — i. 7. ?, ? — j. 2. Boesak (N. Celebes), ? — 1284. 1. Amboyna, Forsten.

Ph. booleyi (Sowerby)

Cassis booleyi Sowerby, Journ. Malac., vol. 7, p. 163, fig., 1900.

Perhaps a variety of *Ph. bisulcatum* (Schub. Wagn.).

a. 1. Andaman Is., H. C. Fulton.

Ph. canaliculatum (Bruguière)

Cassidea canaliculata Bruguière, Encycl. méth., Vers, vol. 1, p. 423, No. 7, 1792.

Cassis canaliculata Lamarck, Anim. s. Vert., vol. 7, p. 228, No. 22, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 37, No. 22, 1844.

a. 5. Ceylon, ? — b. 1. ?, from Hoogeveen's collection.

Ph. crossei (Hidalgo)

Cassis Crossei Hidalgo, Journ. de Conch., vol. 44, p. 217, 1896.

It is peculiar that Hidalgo has not included this species, which he states to occur in the Philippines, in his "Catalogo mol. test. de las Islas Filipinas" (1904—1905).

Ph. faurotis (Jousseume)

Faurotis faurotis Jousseume, Mém. Soc. Zool. France, vol. 1, p. 188, 1888.

Ph. fortisulcatum (Smith)

Cassis (Semicassis) fortisulcata Smith, Proc. Malac. Soc. London, vol. 6, p. 21, fig. in text, (1903) 1904.

Ph. granulatum (Born)

Buccinum granulatum Born, Testac. Mus. Caes. Vindob., p. 248, 1780.

Buccinum inflatum Shaw, Natural. Miscell., 5, pl. 22, fig. 959, 1789.

Buccinum Areola var. β Gmelin, Syst. nat., vol. 1, pars 6, p. 3475, No. 17, 1790.

Buccinum trifasciatum Gmelin, Syst. nat., vol. 1, pars 6, p. 3477, No. 30, 1790.

Buccinum Cassideum tessellatum Chemnitz, Syst. Conch. Cab., vol. 11, p. 76, pl. 186, figs. 1792, 1793, 1795.

Cassis granulosa Lamarck, Anim. s. Vert., vol. 7, p. 227, No. 20, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 35, No. 20, 1844.

Cassis inflata Reeve, Conch. Icon., Cassis, sp. 22, pl. 9, fig. 22c, 1848.

a. 10. ?, from Dalen's collection. — b. 1. ?, "Old Collection". — c. 2. ?, from Hooegeveen's collection. — d. 2. ?, from Cosijn's collection.

subsp. abbreviata (Lamarck)

Cassis abbreviata Lamarck, Anim. s. Vert., vol. 7, p. 224, No. 12, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 30, No. 12, 1844.

Cassis minuta Menke, Synopsis meth. Moll., No. 806, 1828.

Cassis abbreviata Kiener, Icon. coq. viv., Cassis, p. 33, pl. 15, fig. 31, 1835.

a. 3. ?, from Dalen's collection. — b. 1. ?, from Hooegeveen's collection.

subsp. abbreviata (Lm.) var. centiquadrata (Valenciennes)

Cassis centiquadrata Valenciennes. Humboldt & Bonpland, Recueil d'observ. de Zool., vol. 2, p. 310, 1833.

Cassis inflata var. β Reeve, Conch. Icon., Cassis, No. 22 a, b, pl. 9, figs. 22a, b, 1848.

a. 1. Gulf of California, H. ten Kate. — b. 1. ?, ? — c. 1. ?, from Cosijn's collection.

Under b is a monstrosity, caused by an old fracture that has been only partly regenerated (fig. 2).

subsp. abbreviata (Lm.) var. doliata (Valenciennes)

Cassis doliata Valenciennes. Humboldt & Bonpland, Recueil d'observ. de Zool., vol. 2, p. 311, 1833.

a. 4. Gulf of California, H. ten Kate.

subsp. abbreviata (Lm.) var. lactea (Kiener)

Cassis lactea Kiener, Icon. coq. viv., Cassis, p. 35, No. 22, pl. 16, fig. 35, 1835.

Ph. japonicum (Reeve)

Cassis japonica Reeve, Conch. Icon., Cassis, sp. 23, pl. 9, fig. 23, 1848.

Cassis saburon Adanson var. *Japonica* Tryon, Manual of Conch., vol. 7, p. 275, pl. 5, figs. 76, 77, 1885.

a. 5. Japan, ?

var. *minor* Küster

Cassis japonica var. *minor* Küster. Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 43, No. 17, pl. 52, fig. 9, 1857.

a. 1. Japan, ?

var. *pfeifferi* (Hidalgo)

Cassis Pfeifferi Hidalgo, Journ. de Conch., vol. 19, p. 226, 1871 & vol. 20, p. 143, pl. 7, fig. 2, 1872. — Catalogo mol. test., p. 156, 1904—1905.

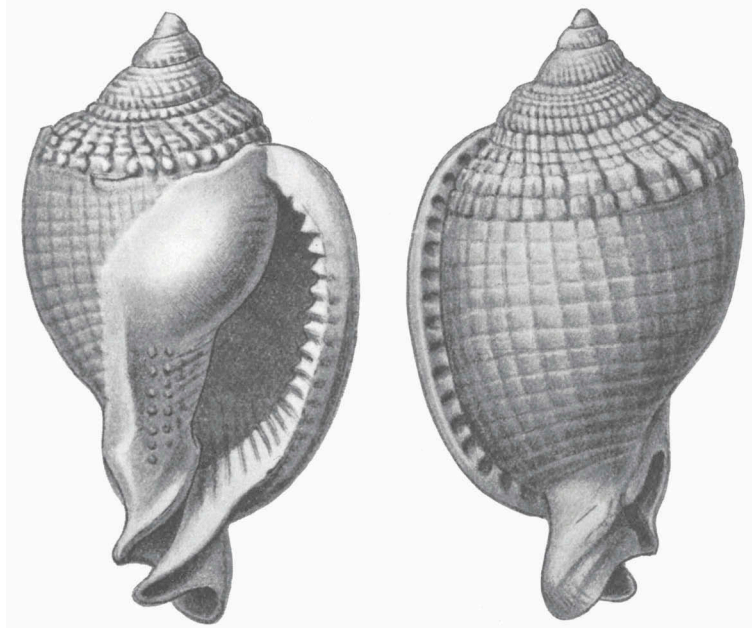


Fig. 2. *Phalium granulatum* (Born) subsp. *abbreviata* (Lm.)
var. *centiquadrata* (Valenciennes), monstrosity $\times 1\frac{1}{2}$.

Ph. microstoma (Martens)

Cassis microstoma Martens, Gastropoden deutschen Tiefsee-Exp., A. Syst. - geogr. Teil, p. 112, pl. 3, fig. 12, 1903.

Ph. pila (Reeve)

Cassis Saburon (non Bruguière) Schubert & Wagner, Syst. Conch. Cab., vol. 12, pl. 223, figs. 3077, 3078, 1829. — Syst. Conch. Cab., vol. 3, pt. 1, Cassis, pl. 43, figs. 1, 2, 1857.

Cassis pila Reeve, Conch. Icon., Cassis, sp. 21, pl. 9, fig. 21, 1848.

Cassis saburon Küster. Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 38, pl. 51, figs. 7, 8, 1857.

Semicassis saburon (non Brugière) Brazier, Proc. Zool. Soc. London, p. 837, No. 1, 1872.

Semicassis pila Brazier, Proc. Linn. Soc. New S. Wales, vol. 1, p. 234, 1876.

Cassis saburon Adanson var. *pila* Tryon, Manual of Conch., vol. 7, p. 275, pl. 5, fig. 75, 1885.

Semicassis diuturna Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 335, pl. 32, fig. 9, 1927.

Iredale (Rec. Austral. Mus. Sydney, vol. 15, p. 335, 1727) gives this species a new name, on account of the fact that Reeve in a foot-note to *Cassis saburon* (Conch. Icon., sp. 11, pl. 5, 1848) refers to a picture in Martini (Syst. Conch. Cab., vol. 2, p. 10, vignette No. 18, figs. 1, 2, 1773) of a species which, according to the latter author, also occurs in the West-Indies, whereas, as is well-known, *C. pila* is East Indian.

I have not succeeded in finding in Martini a passage in which this author clearly indicates which *Cassis*-species he has pictured in the vignette No. 18, figs. 1, 2. We can at best gather from the text ("Bewohnern der Sturmhauben", pp. 11—14) that he gives a description of the anatomy of certain *Cassis*-species, among which *C. saburon* is also included. In the description of *Cassis ventricosa* (Martini, Syst. Conch. Cab., vol. 2, pp. 27—31, 1773), under which name Martini has united several species and which is referred to by Iredale, the vignette No. 18, figs. 1, 2 is not mentioned at all; it is therefore by no means certain whether the above mentioned figures refer to *C. ventricosa*, and whether, therefore, the localities in question, a.o. the West-Indies, are those of the specimens figured in this vignette.

But even if Iredale's statement were correct, and if the *Cassis* pictured in the vignette did occur in the West-Indies, still, in view of the fact that the diagnosis, the figure, and the locality given of *Cassis pila* by Reeve (Conch. Icon., sp. 21, pl. 9, fig. 21, 1848) are perfectly correct, I do not see that there is any reason for this change of name. We should then be equally justified in rejecting the name *Cassis madagascariensis* Lamarck, on the ground that this author gives Madagascar as type locality, whereas it is a native of the West-Indies.

a. 2. ?, from Dalen's collection. — b. 1. Tjilatjap (S. Java), Overdijk. — c. 1. Amboyna, Hoedt. — d. 1. Misool (W. of New Guinea), ? — e. 1. Banka Isl. (E. of Sumatra), v. d. Bossche. — f. 1. Moluccas, ? — g. 3. Indian Ocean, ? — h. 3. Billiton Isl. (E. of Sumatra), Mrs. Vosmaer. — i. 2. Mauritius, Frank. — j. 2. ?, from Dalen's collection. — k. 2. Boesak (N. Celebes), ? — l. 1. Madura, Mangold. — m. 2. Tapatoean (Atjeh),

H. E. Wempe. — n. 1. Madura, from E. F. Jochim's collection. — o. 2. Menado (Celebes), from E. F. Jochim's collection. — p. 2. Amboyna, from E. F. Jochim's collection. — q. 1. Madjene (Celebes), F. H. Verschoor van Nisse. — r. 2. Medan (E. Sumatra), J. C. B. Hüner. — s. 4. Aden, H. Strengers & L. E. Nobel. — 1285. 1. Japan, P. F. von Siebold.

var. **craticulata** (Euthyme)

Cassis craticulatus Euthyme, Bull. soc. malac. France, vol. 2, p. 250, 1885.

Ph. saburon (Bruguière)

Le Saburon Adanson, Hist. nat. Sénégal, Coquillages, p. 112, pl. 7, fig. 8, 1757.

Cassidea saburon Bruguière, Encycl. méth., Vers, vol. 1, p. 420, No. 4, 1792.

Buccinum areola var. Von Salis, Reisen in versch. Prov. Königr. Neap., p. 367, No. 37, 1793.

Buccinum saburon Dillwyn, Descr. catal. rec. shells, vol. 2, p. 594, No. 22, 1817.

Cassis saburon Lamarck, Anim. s. Vert., vol. 7, p. 227, No. 21, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 36, No. 21, 1844.

Buccinum areola Delle Chiaje, Poli, Testac. utriusque Siciliae, vol. 3, pt. 2, p. 56, pl. 48, figs. 3, 4, 1826—76.

Cassis pomum Schubert & Wagner, Syst. Conch. Cab., vol. 12, p. 71, pl. 223, figs. 3084, 3085, 1829.

Cassis texta Bronn var. *striata* Philippi, Fauna Moll. utr. Siciliae, vol. 1, p. 217, 1836.

Cassis nucleus Küster, Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 43, No. 32, pl. 52, figs. 3, 4, 1857.

Cassis Saburoni Locard, Cat. gén. Moll. de France, pp. 147 (footnote) & 556, 1886.

a. 2. ? Indian Ocean, ? — b. 3. Algiers, P. Buitendijk. — c. 1. Japan, ? — d. 2. Lisbon, A. L. Brandhorst.

The specimens, present in the collection under *a* and *c*, are typical specimens of *Phalium saburon* (Brug.), so that we have to do with an exchange or an erroneous statement of localities. It has, indeed, been pointed out long ago that *Ph. saburon* occurs neither in the Indian Ocean nor in Japan (vide a.o. Lischke, Jap. Meeres-Conch., vol. 1, p. 63, 1869 and Dunker, Index moll. maris Japon., pp. 64 & 262, 1882) and that the specimens mentioned from these localities, are mostly wrongly identified specimens of *Ph. pila* (Rv.) or belong to a deviating form of *Ph. japonicum* (Rv.).

var. **adansoni** (Locard)

Cassis Adansoni Locard, Cat. gén. Moll. de France, pp. 556 & 148, 1886.

var. **monterosatoi** nov. nom.

Cassis saburon Bruguière var. ex forma *abbreviata* Monterosato, Enum. e Sinon.

conch. Mediterr., p. 42, 1878. — Giorn. sci. nat. ed econom., vol. 13, p. 102, 1878.

Cassis Saburon Bruguières var. ex forma *abbreviata* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 65, 1882.

The name *abbreviata*, given to this variety by Monterosato (1878), has been preoccupied by *Cassis abbreviata* Lamarck (Anim. s. Vert., vol. 7, p. 224, No. 12, 1822), so that I propose to call it *monterosatoi*.

var. *varicosa* Bucquoy, Dautzenberg & Dollfus

Cassis Saburon Kiener, Icon. coq. viv., Cassis, pl. 14, fig. 27, 1835.

Cassis texta Bronn var. b Philippi, Fauna Moll. utr. Siciliae, vol. 1, p. 217, 1836.

Cassis Saburon Bruguières. Var. ex forma *varicosa* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 65, 1882.

Ph. umbilicatum (Pease)

Cassis umbilicata Pease, Proc. Zool. Soc. London, p. 436, 1860.

Ph. undulatum (Gmelin)

Buccinum undulatum Gmelin, Syst. nat., vol. 1, pars 6, p. 3475, No. 18, 1790.

Buccinum gibbum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 24, 1790.

Cassidea sulcosa (non Born) Bruguière, Encycl. méth., Vers, vol. 1, p. 422, No. 6, 1792.

Buccinum areola (pars) Von Salis, Reisen in versch. Prov. Königr. Neap., p. 367, 1793.

Cassis sulcosa Lamarck, Anim. s. Vert., vol. 7, p. 226, No. 19, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 34, No. 19, 1844.

Cassis undulata Philippi, Fauna Moll. utr. Siciliae, vol. 2, p. 187, 1844.

a. 4. Algiers, Guyon. — b. 1. Sardinia, Cantraine. — c. 3. Suriname, ? — e. 1. ? Haiti, Ricord.

var. *ampullacea* Monterosato

Cassis undulata L. Var. ex forma *ampullacea* Monterosato, Enum. e Sinon. conch. Mediterr., p. 42, 1878. — Giorn. sci. nat. ed econom., vol. 13, p. 102, 1878.

var. *crassa* Monterosato

Cassis undulata L. Var. ex forma *crassa* Monterosato, Enum. e Sinon. conch. Mediterr., p. 42, 1878. — Giorn. sci. nat. ed econom., vol. 13, p. 102, 1878.

var. *elongata* Monterosato

Cassis sulcosa Kiener, Icon. coq. viv., Cassis, pl. 12, fig. 22, 1835.

Cassis undulata Hidalgo, Molusc. marinos España etc., p. 2, pl. 3, fig. 1, 1870.

Cassis undulata L. Var. ex forma *elongata* Monterosato, Enum. e Sinon. conch. Mediterr., p. 42, 1878. — Giorn. sci. nat. ed econom., vol. 13, p. 102, 1878.

Cassis undulata Gm. var. ex forma *elongata* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 67, 1882.

Cassis Gmelini Locard, Cat. gén. Moll. de France, pp. 556 & 148, 1886.

a. 1. Tripoli, ?

var. *levilabiata* de Gregorio

Cassis undulata var. *levilabiata* de Gregorio, Bull. soc. malac. Ital., vol. 10, p. 113, 1884.

var. *marchesei* nov. nom.

Cassis undulata L. Var. ex forma *granulata* Monterosato, Enum. e Sinon. conch. Mediterr., p. 42, 1878. — Giorn. sci. nat. ed econom., vol. 13, p. 102, 1878.

This name, given by the Marchese di Monterosato, has been preoccupied by *Phalium granulatum* (Born) (*Buccinum granulatum* Born, Testac. Mus. Caes. Vindob., p. 248, 1780), I therefore call this variety: var. *marchesei*.

var. *pusio* nov. nom.

Cassis sulcosa var. *minor* Küster. Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 44, No. 10, pl. 53, figs. 3, 4, 1857.

The name: "*minor*" has already been used by Küster (Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 43, No. 17, 1857) for a variety of *Ph. japonicum* (Rv.).

var. *varicosa* Monterosato

Cassis undulata L. Var. ex forma *varicosa* Monterosato, Enum. e Sinon. conch. Mediterr., p. 42, 1878. — Giorn. sci. nat. ed econom., vol. 13, p. 102, 1878.

Sect. *Antephalium* Iredale**Ph. adcocki** (Sowerby)

Cassis Adcocki Sowerby, Proc. Malac. Soc. London, vol. 2, p. 14, fig. in text p. 14, (1895) 1896.

Cassidea adcocki Verco, Trans. Roy. Soc. S. Austral., vol. 36, p. 217, 1912.

Ph. bituberculosum (v. Martens)

Cassis bituberculosa v. Martens, Sitzungsber. Gesellsch. naturf. Freunde Berlin, p. 23, 1901. — Gastropoden deutschen Tiefsee-Exp., A. Syst.-geogr. Teil, p. 111, pl. 3, fig. 11, 1903.

Ph. semigranosum (Lamarck)

Cassis semigranosa Lamarck, Anim. s. Vert., vol. 7, p. 228, No. 23, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 37, No. 23, 1844.

Buccinum semigranosum Wood, Index testac., suppl., pl. 4, fig. 2, 1828.

Semicassis semigranosa Angas, Proc. Zool. Soc. London, p. 168, 1865.

Cassidea semigranosa Verco, Trans. Roy. Soc. S. Austral., vol. 36, p. 217, 1912.

a. 1. New Holland, ?

Ph. sinuosum (Verco)

Cassidea sinuosa Verco, Trans. Roy. Soc. S. Austral., vol. 28, p. 141, pl. 26, figs. 7—9, 10 a—c, 1904.

Antephalium sinuosum Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 353, 1927

subsp. *angustata* Cotton & Godfrey

Antecephalum sinuosum angustatum Cotton & Godfrey, S. Austral. natur. Adelaide, vol. 13, p. 17, 1931.

Sect. *Xenophalium* Iredale**Ph. royanum** (Iredale)

Cassidea royana Iredale, Proc. Malac. Soc. London, vol. 11, p. 179, fig. in text, 1914.

subsp. *hedleyi* (Iredale)

Xenophalium hedleyi Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 333, pl. 31, figs. 4, 5, 1927.

Ph. wyvillei (Watson)

Cassis (Bezoardica) wyvillei Watson, Rep. voy. "Challenger", Zool., vol. 15, Gastropoda, p. 408, pl. 14, fig. 13, 1886.

Sect. *Xenogalea* Iredale**Ph. angasi** (Iredale)

Xenogalea angasi Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 350, pl. 32, fig. 15, 1927.

Ph. cicatricosum (Gronovius)

Buccinum Cicatricosum Gronovius, Meuschen, Zoophylac. Gronov., fasc. 3, p. 303, No. 1350, pl. 19 (s. pl. 2), figs. 1, 2, 1781.

Buccinum recurvirostrum Gmelin, Syst. nat., vol. 1, pars 6, p. 3477, No. 29, 1790.

Buccinum recurvirostrum Wood, Index testac., p. 105, pl. 22, fig. 30, 1828.

Cassis granulosa juv. Kiener, Icon. coq. viv., Cassis, p. 30, pl. 16, fig. 34, 1835.

Cassis recurvirostrum Reeve, Conch. Icon., Cassis, sp. 16, pl. 7, fig. 16, 1848.

Xenogalea lucrativa Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 347, pl. 32, fig. 11, 1927.

a. 1. ? St. Thomas, F. van Calker. — b. 2. Australia, H. C. Fulton.

Ph. insperatum (Iredale)

Semicassis (Casmaria) pyrum Brazier, Proc. Zool. Soc. London, p. 838, No. 6, 1872.

Xenogalea insperata Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 349, pl. 31, fig. 8, 1927.

Ph. labiatum (Perry)

Cassidea labiata Perry, Conch., pl. 34, fig. 1, 1811.

Cassis achatina Lamarck, Anim. s. Vert., vol. 7, p. 226, No. 16, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 33, No. 16, 1844.

Buccinum achatinum Wood, Index testac., p. 105, pl. 22, fig. 22, 1828.

Semicassis (Casmaria) achatina Brazier, Proc. Zool. Soc. London, p. 838, No. 5, 1872.

Xenogalea labiata Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 347, pl. 31, fig. 1, 1927.

It is true that Chemnitz (Syst. Conch. Cab., vol. 11, p. 71, 1795), has described a "*Cassis labiata*", but it is well known that this author did not apply the binary nomenclature, and his names as "*Cassis labiata*", "*Buccinum Cassideum tessellatum*" are only the first words of his diagnosis of this species. From the standpoint of the binary nomenclature Chemnitz's names are therefore worthless, so that *Cassis labiata* (Perry) 1811 must not be considered as homonymous with "*Cassis labiata*" Chemnitz, 1795.

a. 1. New Holland, ?

subsp. *collectea* (Finlay)

Phalium n. sp. Finlay, Trans. & Proc. N. Zealand Inst., vol. 57, pl. 20, figs. 62, 63, 1926.

Xenogalea collectea Finlay, Trans. & Proc. N. Zealand Inst., vol. 59, p. 246, 1928.

var. *inornata* Pilsbry

Cassis achatina var. *inornata* Pilsbry, Catal. mar. Moll. Japan, p. 49, pl. 2, fig. 17, 1895.

a. 1. Kii (Niphon), H. C. Fulton.

var. *iredalei* nov. var.

Cassis achatina Krauss. Südafrikan. Moll., p. 115, 1848.

Cassis achatina Küster. Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, Cassis, pl. 50, figs. 3, 4, 1857.

Ph. testa minore, ventricosovata, maculis rufis aperte sagittatis seriatim picta; anfractu ultimo superne plus minusve subangulato; labro levi vel infra indistincte denticulato.

The African specimens of *Ph. labiatum* are smaller and more ventricose, with a more or less distinct shoulder, the outer lip being smooth or provided with indistinct teeth towards the base. The marking, too, of this variety shows deviations, it consists of four rows of redbrown openly arrow-headed spots.

I have named this variety after Iredale, to whom so many valuable contributions to Australian conchology are due.

a. 1. South Africa, G. van Roon (type specimen). — b. 3. Port Elizabeth (S. Africa), J. L. Staid. — c. 2. Port Elizabeth, L. de Priester.

Ph. nashi (Iredale)

Xenogalea nashi Iredale, Rec. Austral. Mus. Sydney, vol. 18, p. 214, pl. 23, fig. 18, 1931.

Ph. niveum (Brazier)

Cassis nivea Brazier, Proc. Zool. Soc. London, p. 616, pl. 44, fig. 1, 1872.
Xenogalea nivea Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 344, pl. 32, fig. 13, 1927.

Ph. paucirugis (Menke)

Cassis paucirugis (pars) Menke, Moll. Nov. Holland. Spec., p. 23, No. 107, 1843.
Semicassis (*Casmaria*) *paucirugis* Angas, Proc. Zool. Soc. London, p. 168, 1865.
Xenogalea paucirugis Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 345, pl. 31, fig. 2, 1927.

a. 1. ?, from Dalen's collection.

Ph. pyrum (Lamarck)

Cassis pyrum Lamarck, Anim. s. Vert., vol. 7, p. 226, No. 17, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 33, No. 17, 1844.
Semicassis (*Casmaria*) *paucirugis* Brazier, Proc. Zool. Soc. London, p. 838, No. 4, 1872.
Cassis tumida Petterd, Pap. & Proc. Roy. Soc. Tasmania, p. 321, 1886.
Semicassis pyrum Tate & May, Proc. Linn. Soc. New S. Wales, vol. 26, p. 373, 1901.
Cassis pyrum v. Martens, Gastropoden deutschen Tiefsee-Exp., A. Syst.-geogr. Teil, pp. 54, 56 note 12, 1903.
Phalium pyrum Iredale, Proc. Linn. Soc. New S. Wales, vol. 49, p. 254, 1924.
Xenogalea pyrum Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 339, pl. 32, figs. 14, 16, 1927.

a. 4. New Holland, ?

subsp. **powelli** (Finlay)

Phalium n. sp. Finlay, Trans. & Proc. N. Zealand Inst., vol. 57, pl. 20, fig. 64, 1926.
Xenogalea powelli Finlay, Trans. & Proc. N. Zealand Inst., vol. 59, p. 247, 1928.

var. **intercedens** v. Martens

Cassis pyrum var. *intercedens* v. Martens, Gastropoden deutschen Tiefsee-Exp., A. Syst.-geogr. Teil, pp. 54 & 56 note 12, 1903.

var. **zeylanica** (Lamarck)

Cassis zeylanica Lamarck, Anim. s. Vert., vol. 7, p. 226, No. 18, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 33, No. 18, 1844.
Cassis pyrum Reeve, Conch. Icon., *Cassis*, pl. 11, fig. 29c, 1848.
Cassis pyrum Var. A. Küster. Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, *Cassis*, p. 30, pl. 49, figs. 3, 4, 1857.

a. 4. Ceylon, from Raye's collection. — b. 1. Ceylon, E. Deyrolle. — c. 2. Muizenberg (South Africa), J. L. Staid. — d. 1. Port Elizabeth (South Africa), L. de Priester.

Ph. sophia (Brazier)

- Cassis sophia* Brazier, Proc. Zool. Soc. London, p. 617, pl. 44, fig. 2, 1872.
Semicassis (Casmaria) sophiae Brazier, Proc. Zool. Soc. London, p. 838, 1872.
Cassis sophiae Brazier, Proc. Zool. Soc. London, p. 838, 1872.
Cassidea pyrum sophiae Iredale, Proc. Malac. Soc. London, vol. 9, p. 71, No. 47, 1910.
Cassidea pyrum Oliver, Trans. & Proc. N. Zealand Inst., vol. 47, p. 529, (1914) 1915.
Xenogalea sophia Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 343, pl. 32, fig. 12, 1927.

Ph. spectabile (Iredale)

- Xenogalea spectabilis* Iredale, Rec. Austral. Mus. Sydney, vol. 17, p. 178, pl. 38, fig. 6, 1929.

Ph. stadiale (Hedley)

- Cassidea turgida* Hedley, Scient. res. trawling exp. "Thetis", Austral. Mus. Sydney, Memoir 4, pt. 6, p. 340, pl. 36, fig. 1, 1903.
Cassidea recurvirostrum (non Gmelin) Hedley, Scient. res. trawling exp. "Thetis", Austral. Mus. Sydney, Memoir 4, pt. 6, p. 341, 1903.
Cassidea stadialis Hedley, Biol. Res. Fishing Exper. "Endeavour", vol. 2, pt. 2, p. 72, pl. 10, fig. 4, 1914.
Cassis achatina var. *stadialis* Gatliff & Gabriel, Proc. Roy. Soc. Victoria, vol. 29, p. 108, 1916.
Xenogalea stadialis Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 341, pl. 31, fig. 3, 1927.

var. **finlayi** (Iredale)

- Cassidea stadialis* (non Hedley) Finlay, Trans. & Proc. N. Zealand Inst., vol. 55, p. 525, pl. 52, figs. 3, a, b, c, 1924.
Xenogalea finlayi Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 342, 1927.

Ph. thomsoni (Brazier)

- Cassis (Casmaria) thomsoni* Brazier, Proc. Linn. Soc. New S. Wales, vol. 1, p. 8, 1875.
Cassidea pyrum Lm. var. *thomsoni* Hedley, Scient. res. trawling exp. "Thetis", Austral. Mus. Sydney, memoir 4, pt. 6, p. 341, pl. 36, figs. 2, 3, 1903.
Cassidea thomsoni Hedley, Biol. Res. Fishing Exper. „Endeavour“, vol. 2, pt. 2, p. 73, 1914.
Xenogalea thomsoni Iredale, Rec. Austral. Mus. Sydney, vol. 15, p. 342, pl. 31, figs. 6, 7, 1927.
 a. 1. Eden (New S. Wales), H. C. Fulton.

var. **palinodia** Iredale

- Xenogalea thomsoni palinodia* Iredale, Rec. Austral. Mus. Sydney, vol. 18, p. 215, pl. 23, fig. 20, 1931.

Sect. *Casmaria* H. & A. Adams**Ph. cernica** (Sowerby)

Cassis cernica Sowerby, Proc. Zool. Soc. London, p. 211, pl. 11, fig. 19, 1888.

Cassidea cernica Iredale, Proc. Malac. Soc. London, vol. 9, p. 73, 1910.

subsp. **perryi** (Iredale)

Cassidea Perryi Iredale, Proc. Malac. Soc. London, vol. 10, p. 227, pl. 9, fig. 17, 1912.

Ph. erinaceum (Linné)

Buccinum Erinaceus Linné, Syst. nat., ed. 10, p. 736, No. 390, 1758. — Syst. nat. ed. 12, p. 1199, No. 452, 1767.

Cassidea erinaceus Bruguière, Encycl. méth., Vers, vol. 1, p. 418, No. 2, 1792.

Cassis denticulata Bolten. Roeding, Mus. Boltenianum, p. 32, No. 379, 1798.

Cassis erinaceus Lamarck, Anim. s. Vert., vol. 7, p. 229, No. 25, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 38, No. 25, 1844.

Cassis vibex var. β Reeve, Conch. Icon., Cassis, sp. 15 a, pl. 7, fig. 15 a, d, 1848.

Cassis vibex L. Var. A. Küster. Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, Cassis, p. 13, pl. 38, fig. 6, 1857.

a. 12. Indian Ocean, ? — b. 5. Timor, Zijnen Wartel. — c. 1. Banka Isl. (E. of Sumatra), v. d. Bossche. — d. 3. Amboyna, Hoedt. — e. 1. Skroë (N. Guinea), K. Schädler. — f. 1. Fak-fak (N.W. New-Guinea), Palmer v. d. Broek. — g. 3. Madura, from E. F. Jochim's collection. — h. 2. Amboyna, from E. F. Jochim's collection. — i. 2. Boeroe Isl. (Sunda Is.), Zadelhoff. — j. 1. Poeloe Babi (near Simeuloe Isl.), E. Jacobson. — k. Laboean Badjan (Simeuloe Isl.), E. Jacobson. — l. 1. Fak-fak (N.W. New-Guinea), from E. F. Jochim's collection.

var. **kalosmodix** (Melvill)

Cassis kalosmodix Melvill, Journ. of Conch., vol. 4, p. 43, 1883. — Journ. of Conch., vol. 11, p. 177, 1905.

var. **vibex** (Linné)

Buccinum Vibex Linné, Syst. nat., ed. 10, p. 737, No. 392, 1758. — Syst. nat., ed. 12, p. 1200, No. 454, 1767.

Cassidea vibex Bruguière, Encycl. méth., Vers, vol. 1, p. 417, No. 5, 1792.

Cassis vibex Lamarck, Anim. s. Vert., vol. 7, p. 228, No. 24, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 38, No. 24, 1844.

Casmaria vibex Brazier, Proc. Linn. Soc. New S. Wales, vol. 1, p. 234, 1876.

a. 17. Indian Ocean, ? — b. 12. Amboyna, Hoedt. — c. 2. Banka Isl. (E. of Sumatra), v. d. Bossche. — d. 4. Timor, Zijnen Wartel. — e. 2. Misool (W. of New Guinea), ? — f. 2. Mayotte Isl. (Comoro Is.), Pollen & v. Dam. — g. 1. Friendly Is. (Oceania), ? — h. 1. Caracas, J. A. Herklots. — i. 5. Indian Ocean, from Dalen's & Hoogeveen's collection. — j. 1.

Haiti, Ricord. — k. 1. Borneo, J. Semmelink. — l. 3. Madura, from E. F. Jochim's collection. — m. 1. Banda Is., from E. F. Jochim's collection. — n. 1. Bali, M. A. Gooszen. — o. 1. Celebes, Miss E. J. Koperberg. — p. 1. Nossi Bé (near Madagascar), E. Deyrolle. — q. 1. Seroei (Isl. Japén), L. de Priester. — r. 1. Bay of Sinabang (Simeuloe Isl.), E. Jacobson. — s. 1. Boesak (N. Celebes), ? — t. 4. Indian Ocean, ?

All the four specimens of t have a varix on the middle of the last whorl or placed nearer to the mouth.

Ph. glabratum (Dunker)

Cassis glabrata Dunker, Zeitschr. f. Malakozool., vol. 9, p. 62, 1852. — Novitates conch., p. 35, No. 32, pl. 11, figs. 1, 2, 1858—1870.

a. 1. Indian Ocean, ?

Ph. ponderosum (Gmelin)

Buccinum ponderosum Gmelin, Syst. nat., vol. 1, pars 6, p. 3477, No. 28, 1790.

Buccinum nodulosum Gmelin, Syst. nat., vol. 1, pars 6, p. 3479, No. 38, 1790.

Buccinum biarmatum Dillwyn, Descr. catal. rec. shells, vol. 2, p. 599, 1817.

Buccinum pantherina (pars) Dillwyn, Descr. catal. rec. shells, vol. 2, p. 599, 1817.

Cassis torquata Reeve Var. β Reeve, Conch. Icon., *Cassis*, sp. 1, pl. 1, fig. 1 c, 1848.

Cassis torquata Reeve Var. A. Küster, Martini & Chemnitz, Syst. Conch. Cab., vol. 3, pt. 1, *Cassis*, p. 15, No. 9, pl. 39, fig. 5, 6, 1857.

a. 12. ?, ? — b. 1. Poeloe Sebangka (Lingga Arch.), L. de Priester. — c. 2. Banda Is., ? — d. 1. Celebes, Miss E. J. Koperberg. — e. 1. Tijger Is., Van der Ven. — f. 1. Wetar Isl. (N. of Timor), K. Schädler. — g. 8. Indian Ocean, from Dalen's collection. — h. 2. Banka Isl. (E. of Sumatra), v. d. Bossche. — i. 7. Amboyna, Hoedt. — j. 4. Timor, Zijnen Wartel. — k. 1. Friendly Is. (Oceania), ? — l. 1. Moluccas, ? — m. 2. Amboyna, Ch. Jellema. — n. 1. Banda Is., ?

var. quadrata (Link)

Phalium quadratum Link, Beschreib. Nat. Sammlung Rostock, vol. 3, p. 113, 1807.

Buccinum pantherina (pars altera) Dillwyn, Descr. catal. rec. shells, vol. 2, p. 599, 1817.

Cassis torquata Reeve, Conch. Icon., *Cassis*, sp. 1, pl. 1, fig. 1 a, b, 1848.

Cassidea quadrata Mörch, Catal. conch. Yoldi, p. 112, 1852.

Semicassis (Casmaria) torquata Brazier, Proc. Zool. Soc. London, p. 838, No. 7, 1872.

Cassidea nodulosa Gmelin var. *torquata* Hedley, Report Austral. Assoc. Adv. Science, Brisbane, p. 361, (1909), 1910.

a. 7. Indian Ocean, ? — b. 3. Banka Isl. (E. of Sumatra), v. d. Bossche. — c. 1. Amboyna, Hoedt. — d. 1. Timor, Zijnen Wartel. — e. 1. Nossi-Bé (near Madagascar), Pollen & v. Dam. — f. 3.?, from Hoogeveen's collec-

tion. — g. 1. Wetar Isl. (N. of Timor), K. Schädler. — h. 2. Amboyna, Ch. Jellema. — i. 1. ? Amboyna, E. E. W. G. Schröder. — j. 1. Amboyna, from E. F. Jochim's collection. — k. 3. Menado (Celebes), from E. F. Jochim's collection. — l. 2. Celebes, Miss E. J. Koperberg.

Ph. tenuilabris (Menke)

Cassis tenuilabris Menke, Synopsis meth. Moll., p. 87, 1828.

Ph. turgidum (Reeve)

Cassis turgida Reeve, Conch. Icon., Cassis, No. 25, pl. 10, fig. 25, 1848.

var. **unicolor** Dautzenberg

Cassis vibex Audouin, Descr. Egypte, vol. 22, Expl. planches Savigny, p. 186, 1827.
Cassis (Casmaria) turgida Reeve var. *unicolor* Dautzenberg. Mem. Inst. d'Egypte, vol. 11, p. 88, pl. 10 (6), fig. 6, 1926.

It is not without some hesitation, and only on the authority of Dautzenberg, that I conserve this form as a variety of *Phalium turgidum* (Rv.).

Dautzenberg (Mém. Inst. d'Egypte, vol. 11, p. 88, 1926) writes: "Le type du *turgida* est orné de flammules brunes. Je possède un exemplaire sans flammules tout à fait semblable à la figure de Savigny." The lack of the flamed marking is therefore the only difference between this variety and typical *Cassis turgida* Reeve.

If we now refer to the diagnosis of this *Cassis* (Reeve, Conch. Icon., Cassis, sp. 25, 1848) we read a.o. "Cassis... columella valde contorta,... labro undique dentato-spinoso", while at the end of the description, where the author once more emphasizes the typical features of this species, it says „the columella is remarkably twisted. The lip is dentately spinous throughout", which is also clearly to be seen on pl. 10, fig. 25c.

In Savigny's picture (pl. 10 [6], fig. 6), referred to by Dautzenberg, we see on the contrary an unwound, straight columella and a lip with sharp teeth, so "labrum spinosum" and not "dentato-spinosum", and a smooth inner side. The whole shell, therefore, reminds one more of *Cassis torquata* Reeve [= *Ph. ponderosum* (Gm.) var. *quadrata* (Link)] than of an unflamed variety of *C. turgida*. The typical *C. torquata*, however, as described and pictured by Reeve, has 5-6 teeth, whereas in Savigny's plate we count 12 teeth and the "row of equidistant, square, spots on the lower part of the shell" is wanting. I have found that this absence of the lower row of spots is no exception, while the number of teeth may be greater than 6; in our collection specimens with 8 teeth are not rare, while plate 38, fig. 386 of Martini (Syst. Conch. Cab., vol. 2, 1773), referred to by Reeve for *C. torquata*, represents a specimen with 11 teeth.

Pachybatron Gaskoin, 1853**P. cassidiforme Gaskoin**

Pachybatron cassidiforme Gaskoin, Ann. & Mag. of Nat. Hist., vol. 11, ser. 2, p. 356, pl. 12, figs. 1, 2, 3, 1853.

Pachybatron marginelloideum Chenu, Man. de Conch., vol. 1, p. 209, fig. 1141, 1859.

P. marginelloideum Gaskoin

Pachybatron marginelloideum Gaskoin, Ann. & Mag. of Nat. Hist., vol. 11, ser. 2, p. 357, pl. 12, figs. 4, 5, 6, 1853.

Pachybatron cassidiforme Chenu, Man. de Conch., vol. 1, p. 209, fig. 1142, 1859.

Pachybatron marginelloides Paetel, Cat. Conch. Samml., vol. 1, p. 221, 1887.

Lambidium Link, 1807**Sect. Oniscidia Swainson****L. cancellatum (Sowerby)**

Oniscidia cancellata Sowerby, Genera of Shells, pt. 24, pl. 5, figs. 1, 2, 3, 1824.

Cassidaria cancellata (non Lamarck) Kiener, Icon. coq. viv., Cassidaria, p. 7, No. 4, pl. 2, fig. 4, 1835.

a. 1. Galapagos Is., ? — b. 2. ?, from Dalen's collection.

L. cithara (Watson)

Oniscia cithara Watson, Journ. Linn. Soc. London, vol. 15, p. 266, 1880. — Rep. voy. „Challenger”, Zool., vol. 15, p. 410, pl. 34, fig. 6, 1886.

L. dennisoni (Reeve)

Oniscia Dennisoni Reeve, Proc. Zool. Soc. London, p. 21, 1842. — Conch. Icon., Oniscia, sp. 6, pl. 1, fig. 6, 1849.

L. exquisitum (Adams & Reeve)

Oniscia exquisita Adams & Reeve, Zool. of voy. „Samarang”, Mollusca, p. 35, pl. 5, figs. 3 a, b, 1848.

L. grande (Adams)

Onisciu grandis Adams, Proc. Zool. Soc. London, p. 185, 1853.

L. macandrewi (Sowerby)

Oniscia macandrewi Sowerby, Proc. Zool. Soc. London, p. 567, pl. 28, figs. 1, 2, 1888.

Oniscia MacAndrewi Sowerby. Mar. investig. in S. Africa, Mollusca, p. 229, 1903.

a. 1. ?, ?

L. ponderosum (Hanley)

Oniscia ponderosa Hanley, Proc. Zool. Soc. London, p. 255, pl. 42, figs. 9, 10, 1858.
Morum ponderosa Adams, Genera rec. Moll., vol. 2, p. 621, 1858.

a. 1. Japan, Sowerby & Fulton.

L. praeclarum (Melvill)

Morum praeclarum Melvill, Proc. Malac. Soc. London, vol. 13, p. 69, fig. in text p. 69, 1918.

Sect. Lambidium s.s.**L. oniscus (Linné)**

Strombus Oniscus Linné, Syst. nat., ed. 12, p. 1210, No. 502, 1767.

Morum purpureum Bolten, Roeding, Mus. Boltenianum, p. 53, No. 672, 1798.

Oniscia triseriata Menke, Synopsis meth. Moll., p. 64, 1828.

Morum oniscus Adams, Genera rec. Moll., vol. 1, p. 219, pl. 23, fig. 7, 1858.

Oniscia oniscus Reeve, Conch. Icon., Oniscia, sp. 1, pl. 1, fig. 1, 1849.

a. 8.?, from Hoogeveen's & Tobias' collections.

var. lamarckii (Deshayes)

Cassidea oniscus Bruguière, Encycl. méth., Vers, vol. 1, p. 432, No. 15, 1792.

Strombus oniscus Wood, Index testac., pl. 22, fig. 21, 1828.

Oniscia oniscus Sowerby, Genera of Shells, pt. 24, pl. 5, fig. 4, 1830.

Cassidaria oniscus Kiener, Icon. coq. viv., Cassidaria, p. 9, No. 5, pl. 2, fig. 5, 1835.

Oniscia Lamarckii Deshayes. Lamarck, Anim. s. Vert., éd. Desh., vol. 10, p. 12, No. 1, 1844.

a. 5. Curaçao, Koolwijk. — b. 1. Jamaica, ? — c. 1. ?, J. L. Storm van 's Gravesande.

L. strombiforme (Reeve)

Oniscia Strombiformis Reeve, Proc. Zool. Soc. London, p. 91, 1842. — Conch. Icon., Oniscia, sp. 2, pl. 1, fig. 2, 1849.

L. tuberculosum (Sowerby)

Oniscia tuberculosa Sowerby, Genera of Shells, Oniscia, p. 2, 1824.

a. 3. Galapagos Is., Cuming. — b. 2. Gulf of California, H. ten Kate.

var. xanthostoma (Adams)

Morum xanthostoma Adams, Proc. Zool. Soc. London, p. 174, 1853.

Oniscia tuberculosa Reeve, Conch. Icon., Oniscia, sp. 5a, pl. 1, fig. 5a, 1842.

Sconsia Gray, 1847**Sc. barbudensis Higgins & Marrat**

Sconsia Barbudensis Higgins & Marrat, Liverpool Mus., Rep. 1, Proc. liter. & phil. Soc. Liverpool, vol. 31, p. 411, Moll. of the "Argo" Exped., pl. 1, fig. 1, 1876.

Cassidaria Barbudensis Tryon, Manual of Conch., vol. 7, p. 281, pl. 10, fig. 17, 1885.

Cassidaria Barbudensis Paetel, Cat. Conch. Samml., vol. 1, p. 220, 1887.

Sc. grayi Adams

Sconsia Grayi Adams, Proc. Zool. Soc. London, p. 136, pl. 28, fig. 6, 1854.

Sc. striata (Lamarck)

Cassidaria striata Lamarck, Anim. s. Vert., vol. 7, p. 216, No. 4, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 10, No. 4, 1844.

Cassidaria laevigata Sowerby, Quart. Journ. Geol. Soc. London, vol. 6, p. 47, pl. 10, fig. 2, 1850.

Cassidaria laevigata Sowerby, Quart. Journ. Geol. Soc. London, vol. 6, p. 47, pl. 17, fig. 10, 1866.

a. 1. ?, ?

Cassidaria Lamarck, 1812

C. acuta (Gray)

Cassidaria acuta Gray, Zool. Beechey's Voy., Moll. an., p. 121, 1839.

Cassidaria Deshayesi Duval, Rev. zool., p. 278, 1841. — Journ. de Conch., vol. 11, p. 70, pl. 1, fig. 9, 1863.

C. adriatica (Coen)

Morio adriatica Coen, Boll. R. Comitato Talassogr. Italiano, Mem. 46, p. 26, 1914. — Atti soc. Ital. sci. nat., vol. 58, p. 133, pl. 6, fig. 3, 1919.

var. *aequistriata* Coen

Morio adriatica Coen var. ex forma *aequistriata* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 133, pl. 6, fig. 4, 1919.

C. alcocki (Smith)

Morio Alcocki Smith, Ann. & Mag. of Nat. Hist., vol. 18, ser. 7, p. 170, 1906.

C. coronadoi (Crosse)

Cassis Coronadoi Crosse, Journ. de Conch., vol. 15, p. 64, pl. 4 & 5, fig. 1, 1867.

C. cylindrica (Coen)

Morio cylindrica Coen, Atti soc. Ital. sci. nat., vol. 58, p. 134, pl. 6, fig. 6, 1919.

a. 1. Mediterranean, ?

C. echinophora (Linné)

Buccinum Echinophorum Linné, Syst. nat., ed. 10, p. 735, No. 381, 1758. — Syst. nat., ed. 12, p. 1198, No. 443, 1767.

Buccinum strigosum Gmelin, Syst. nat., vol. 1, pars 6, p. 3476, No. 26, 1790.

Buccinum ochroleucum Gmelin, Syst. nat., vol. 1, pars 6, p. 3477, No. 32, 1790.

Cassidea echinophora Bruguière, Encycl. méth., Vers, vol. 1, p. 437, No. 19, 1792.

Buccinum diadema Brocchi, Conch. foss. subapennina, p. 323, pl. 4, fig. 13, 1814.

Buccinum nodosum Dillwyn, Descr. catal. rec. shells, vol. 2, p. 586, No. 10, 1817.

- Echinora tuberculosa* Schumacher, Essai nouv. syst., p. 249, 1817.
Cassidaria echinophora Lamarck, Anim. s. Vert., vol. 7, p. 215, No. 1, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 6, No. 1, 1844.
Cassidaria tyrrhenum Sowerby, Genera of Shells, fig. 2, 1830.
Morio echinophorus Bronn, Italiens Tertiärgeb., p. 28, 1831.
Cassis intermedia Grateloup, Conch. foss. bassin Adour, pl. 46, fig. 7, 1840.
Cassidaria thyrrhena (pars) Philippi, Fauna Moll. utr. Siciliae, vol. 2, p. 186, 1844.
 a. 7. Gulf of Genoa, F. Cantraine. — b. 1. ? Haiti, Ricord. — c. 2. Mediterranean, ? — d. i. ? Madura, from E. F. Jochim's collection. — e. 1. Rovigno, Miss M. J. de Graag. — f. 1. Algiers, P. Buitendijk.

The number of varieties that are described from this species, so variable in form and sculpture, is very high, I indicate here the principal ones.

var. **badiostoma** Coen

Morio echinophora L. var. *badiostoma* Coen, Boll. R. Comitato Talassogr. Italiano, Mem. 13, p. 53, 1924.

var. **cassidula** Coen

Morio echinophora L. var. ex forma *cassidula* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 131, pl. 5, fig. 7, 1919.

var. **globosa** Bucquoy, Dautzenberg & Dollfus

Cassidaria echinophora L. var. ex forma *globosa* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 70, pl. 9, fig. 2, 1882.
Cassidaria Dautzenbergi Locard, Cat. gén. Moll. de France, pp. 558, 150, 1886.

var. **mutica** (Locard)

Cassidaria echinophora Var. A Tiberi, Journ. de Conch., vol. 11, p. 154, 1863.
Cassidaria echinophora Hidalgo, Moluscos mar. España, pl. 11, fig. 1, 1870.
Cassidaria rugosa Granger, Catal. Moll. test. littor. Cette, p. 9, 1879.
Cassidaria mutica Locard, Cat. gén. Moll. de France, pp. 558, 150, 1886.

Tiberi describes this variety as follows: "*Cassidaria echinophora* Var. A, *mutica*, *cingulis carens*, *coeterum typo similis*". Locard calls this variety "*Cassidaria mutica* Tiberi", which is incorrect, the word "*mutica*" being only part of Tiberi's description, not the name, as it has been called "Var. A" by this author. It is therefore more correct to call this shell: "*Cassidaria mutica* Locard or *C. echinophora* (L.) var. *mutica* (Locard).

a. 2. Mediterranean, ?

var. **obsoleta** Bucquoy, Dautzenberg & Dollfus

Cassidaria echinophora Var. B Tiberi, Journ. de Conch., vol. 11, p. 154, 1863.
Cassidaria echinophora L. var. ex forma *obsoleta* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 70, pl. 8, fig. 4, 1882.

Morio echinophora L. var. ex forma *rugosa* (non Linné) Coen, Atti soc. Ital. sci. nat., vol. 58, p. 131, pl. 5, fig. 2, 1919.

a. 2. Mediterranean, F. Cantraine. — b. 1. Isola di Torignona (Sicily), Vito Beltrani. — c. 1. Positano (Italy), G. Stiasny. — d. 1. Gulf of Genoa, F. Cantraine.

var. *ovalis* Coen

Morio echinophora L. var. ex forma *ovalis* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 131, pl. 5, fig. 4, 1919.

var. *solida* Bucquoy, Dautzenberg & Dollfus

Cassidaria echinophora Hidalgo, Moluscos mar. España, pl. 21, fig. 1, 1870.

Cassidaria echinophora L. var. ex forma *solida* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 70, pl. 9, fig. 1, 1882.

Cassidaria Bucquoyi Locard, Cat. gén. Moll. de France, pp. 557, 150, 1886.

var. *subnodulosa* Bucquoy, Dautzenberg & Dollfus

Cassidaria echinophora L. var. ex forma *subnodulosa* Bucquoy, Dautzenberg & Dollfus, Moll. mar. Roussillon, vol. 1, p. 70, pl. 8, fig. 3, 1882.

var. *tenuis* Coen

Morio echinophora L. var. ex forma *tenuis* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 132, pl. 5, fig. 5, 1919.

var. *tuber* Coen

Morio echinophora L. var. ex forma *tuber* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 131, pl. 5, fig. 6, 1919.

var. *tufa* Coen

Morio echinophora L. var. ex forma *tufa* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 132, pl. 5, fig. 8, 1919.

monstr. *chiamentii* Coen

Morio echinophora L. var. *Chiamentii* Coen, Journ. de Conch., vol. 73, p. 276, pl. 2, 1929.

monstr. *depressa* (Philippi)

Cassidaria depressa Philippi, Fauna Moll. utr. Siciliae, vol. 2, p. 186, pl. 27, fig. 3, 1844.

A teratological form of *Cassidaria echinophora*, vide Petit de la Saus-saye (Journ. de Conch., vol. 2, p. 250, 1851) and Locard (Cat. gén. Moll. de France, p. 151 footnote, 1886).

monstr. *mazzinoi* Coen

Morio echinophora L. var. *Mazzinoi* Coen, Journ. de Conch., vol. 72, p. 78, pl. 5, figs. 5, 6, 1928.

C. granulosa (Schepman)

Morio granulosa Schepman, Prosobr. "Siboga" Exp., Mon. 49¹ b, p. 123, pl. 10, fig. 4, 1909.

Morio granulata Schepman, Prosobr. "Siboga" Exp., Mon. 49¹ b, pl. 10, fig. 4, 1909.

C. lineata (Schepman)

Morio lineata Schepman, Prosobr. "Siboga" Exp., Mon. 49¹ b, p. 124, pl. 10, fig. 5, 1909.

C. provincialis (Martin)

Pyrula provincialis Martin, Journ. de Conch., vol. 2, p. 248, pl. 8, fig. 4, 1851.

Cassidaria echinophora Var. D Tiberi, Journ. de Conch., vol. 11, p. 154, 1862.

Probably a teratological form of *C. echinophora* (L.), vide Petit de la Saussaye (Journ. de Conch., vol. 2, p. 250, 1851) and Locard (Cat. gén. Moll. de France, p. 151 footnote, 1886).

C. rugosa Linné

Buccinum rugosum (non auct.) Linné, Mantissa plantarum, p. 549, 1771.

Buccinum cassideum Thyrrhenum Chemnitz, Syst. Conch. Cab., vol. 10, p. 192, pl. 153, figs. 1461, 1462, 1788.

Buccinum echinophorum γ Gmelin, Syst. nat., vol. 1, pars 6, p. 3472, No. 9, 1790.

Cassidaria thyrrhena Lamarck, Anim. s. Vert., vol. 7, p. 216, No. 2, 1822. — Anim. s. Vert., éd. Desh., vol. 10, p. 8, No. 2, 1844.

Cassidaria rugosa Hidalgo, Moluscos mar. España, p. 5, pl. 1, fig. 1, 1870.

a. 1. Mediterranean, ? — b. 1. ?, from Tobias' collection.

var. **globosior** Coen

Morio thyrrhena Chemn. var. *globosior* Coen, Atti soc. Ital. sci. nat., vol. 58, p. 135, pl. 6, fig. 2, 1919.

a. 3. Algiers, P. Buitendijk.

C. simplex (Coen)

Morio simplex Coen, Atti soc. Ital. sci. nat., vol. 58, p. 133, pl. 6, fig. 5, 1919.