

A note on *Strombus scalariformis* (Caenogastropoda, Strombidae)

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Strombus scalariformis Duclos, 1833, is the first available name for the species commonly known as *Strombus* (now *Canarium*) *haemastoma* G.B. Sowerby 2nd, 1842, and should be used as the valid name. A lectotype for *Strombus scalariformis* is designated.

Key words: Gastropoda, Caenogastropoda, Strombidae, *Canarium*, taxonomy, nomenclature, lectotype, synonymy, priority.

INTRODUCTION

The name *Strombus scalariformis* was first published by Duclos (1833). The description both in Latin and in French was accompanied by a figure (pl. 28), which is here reproduced (Fig. 1), type locality “les mers de la Chine”. Duclos’ (1833) figure of *S. scalariformis* was subsequently copied by Kiener (1843), Tryon (1885), Abbott (1960), Kaicher (1974), and Kronenberg & Berkhout (1984). In 1844 Duclos presented another figure of *S. scalariformis* (pl. 4 figs 9, 10), which is also reproduced here (Fig. 2).

The name *Strombus haemastoma* was first published by Sowerby 2nd (1842: 31) by a brief description and a figure (pl. 7 fig. 51), here reproduced (Fig. 7), without locality.

Subsequent authors treated the name *S. scalariformis* in various ways (see below), either as a valid species without further synonyms, as a valid species but mentioning a possible synonymy with *S. haemastoma*, or as a synonym of *S. haemastoma*, i.e. retaining Sowerby’s name as valid while disregarding the priority of Duclos’ name. More recently, however, Barney (2010) and Meuleman (2011) listed Duclos’ taxon as the valid name in the combination *Canarium scalariformis*, whilst Liverani (2013) retained the name *Canarium haemastoma*. The disagreement regarding the valid name of this species prompted this paper.

Abbreviations: DC = Charcot dredge (Drague Charcot); DW = Warén dredge (Drague Warén); GCKE = Gijs Kronenberg, Eindhoven, The Netherlands, private collection (to be deposited in NCB at some point in the future); ICZN = International Code of Zoological Nomenclature; MNHN = Muséum National d’Histoire Naturelle, Paris, France; NCB = Naturalis Biodiversity Center; NHMUK = Natural History Museum, London, United Kingdom; NMNZ = Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand; RMNH = Rijks Museum van Natuurlijke Historie, collection now in NBC; Stn = Station; ZMA = Zoological Museum Amsterdam, collection now in NCB.

SYSTEMATIC PART

Strombidae Rafinesque, 1815

Canarium Schumacher, 1817

Type species, by monotypy: *Canarium ustulatum* Schumacher, 1817: 219 (= *Strombus urceus* Linnaeus, 1758).

Canarium scalariforme (Duclos, 1833) (Figs 1-8)

Strombus scalariformis Duclos, 1833: pl. 28.

Strombus haemastoma G.B. Sowerby 2nd, 1842: 31, pl. 7 fig. 51.

Strombus scalariformis Duclos. Kiener, 1843: pl. 14 fig. 3; Duclos [in Chenu], 1844: pl. 4 figs 9, 10; Küster, 1845: 72, pl. 20 fig. 4; Adams & Adams, 1854: 260 (for date of publication see Trew, 1992); Kobelt, 1876: 105, pl. 39 fig. 12; Tryon, 1885: 120, pl. 7 fig. 81; Kaicher, 1974: card 491.

Strombus haemastoma Sowerby. Duclos [in Chenu], 1844: pl. 4 figs

17, 18; Reeve, 1850: pl. 5 figs 5a, 5b (lists *Strombus hellii* Rousseau as a synonym); Adams & Adams, 1854: 260 (for date of publication see Trew, 1992); Tryon, 1885: 120, pl. 7 fig. 78; Kaicher, 1974: card 430; Hinton, [1977]: 10, figs 11, 11a.

Strombus elegans Sowerby. Oliver: 524 [non *Strombus elegans* Sowerby 2nd = *Canarium erythrinum* (Dillwyn, 1817)].

Strombus scalariformis M. Smith, 1940: 36, species #502.

Strombus (*Canarium*) *haemastoma* Sowerby, 1842. Abbott, 1960: 82, pl. 20 fig 6; Wagner & Abbott, 1964: 33, species # 09-905; Cernohorsky, 1965: 6, pl. 4 fig. 23; Wagner & Abbott, 1978: 09-654, species # 09-805; Romagna-Manoja, 1980: 16, 18, pl. 3 fig 6; Kronenberg & Berkhout, 1982: 341, pl. 7 fig. 13; Wilson, 1993: 155, pl. 21 fig.6; Brook & Marshall in Brook, 1998: 218.

Strombus (*Canarium*) *scalariformis* Duclos, 1833. Abbott, 1960: 83, pl. 58; Wagner & Abbott, 1964: 34, species # 09-917; Wagner & Abbott, 1978: 09-657, species # 09-965; Kronenberg & Berkhout, 1982: 342, fig. 47.

Strombus (*Canarium*) *haemastoma* Sowerby ii, 1842. Walls, 1980: 96, upper figs p. 95 (lists *S. scalariformis* as synonym of *S. haemastoma*).

Strombus haemastoma G.B. Sowerby II, 1842. Short & Potter, 1987: 34, pl. 16 fig. 5.

Strombus haemastoma Sowerby, 1758 [sic]. Loch, 1990: 5.

Strombus (*Canarium*) *haemastoma* Sowerby I [sic!], 1842. De Turck et al., 1999: 35, pl. 63 figs 1-4.

Strombus haemastoma Sowerby 1832 [sic]. Willan, 2005: 64.

Canarium haemastoma Sowerby I, 1842 [sic!]. ? Thach, 2007: 64, pl. 10 fig. 191b.

Canarium haemastoma (G.B. Sowerby II, 1842). Kronenberg, 2008: 546, pl. 218 fig. 2.

Canarium haemastoma (Sowerby, 1842). Tröndle & Boutet, 2009: 18.

Canarium scalariforme (Duclos, 1833). Barney, 2010: 20; *Canarium scalariforme* (Duclos, 1833). Meuleman, 2011: 97.

Canarium haemastoma (G.B. Sowerby I [sic], 1842). Liverani, 2013: 29.

Not *Canarium haemastoma* Sowerby I, 1842 [sic!]. Thach, 2007: 64, pl. 10 fig. 191a [= *Canarium erythrinum* (Dillwyn, 1817)].

Remark. — The chresonomy as presented above is not exhaustive. Many shell encyclopaedias from roughly the last forty years have not been incorporated.

Type specimens. — *Strombus scalariformis*: one syntype present in MNHN, unnumbered, length 22.3 mm (Figs 3-6). This is the specimen illustrated by Duclos, in Chenu (1844), as can be seen when comparing Fig. 2 with Figs 3-6. The illustration in Duclos (1833) has some differences with the 1844 illustration, and it is not clear whether the 1833 figure is some artistic freedom, or another speci-

men of which the whereabouts are currently unknown. Therefore I hereby designate the specimen present in MNHN, here figured (Figs 3-6) as lectotype of *Strombus scalariformis*. The whereabouts of other possible syntypes (now paralectotypes) are unknown.

Strombus haemastoma: during a visit in December 2008 no material was present in the type collection of NHUK. Type specimens may however be hidden in the general collection (Kathie Way, personal communication).

Type localities. — *Strombus scalariformis*: “Mers de la Chine”. *Strombus haemastoma*: unknown.

Other material examined. — no locality, ex Jousseume, 1916, MNHN unnumbered/3. **Mauritius**: ex H.C. Fulton, RMNH.MOL 17855/1; ex H. Dabbert, coll. J. Mulder, RMNH.MOL 178552/1; ex Linneana, ex M.M. Schepman, ZMA.MOLL 45175/1; MNHN unnumbered/1; ex Staadt, 1969, MNHN unnumbered/3; ex Jousseume, MNHN unnumbered/1; MNHN unnumbered/1; westcoast, at 15 m in sand and coral by diver, October 1985, GCKE 750/1.

La Réunion: N/O “Marion Dufresne” Campagne, 1982: Stn. DC 54: 21°06'S 55°13'E, at 80-83 m, MNHN 1 adult; GCKE 5569/1; St. Denis, GCKE 986/1; St. Gilles, by diver at 30 m, GCKE 5567/1.

Marshall Islands: Kwajalein Atoll, ocean side of west reef at 16 feet in rubbly sand, February 1989, GCKE 5568/1; Marshall Islands, Kwajalein Atoll, ocean side of west reef at 16 feet in rubbly sand, August 1988, GCKE 5570/1.

Guam: Rizal Beach, at 11.5–15.5 m in rubble, ex P. Hessel ZMA.MOLL 187512/2; Orote Point, at 18–21 m in sand pockets, by scuba diving, ex P. Hessel ZMA.MOLL 187537/5; between Guam and Anae Island, on sand at 7-8 m, leg. H. Conley, May 1981, GCKE 6119/1; between Guam and Anae Island, in sand pits at 7-10 m, leg. H. Conley, May 1981, GCKE 6121/1; SE. of Anae Island, on sand at 26-30 m, leg. H. Conley, 27 May 1985, GCKE 6120/1.

Australia: Queensland, Swain Reefs, dredged in rubble at 15-20 m, ex P. Hessel ZMA.MOLL 187546/1.

Solomon Islands: Guadalcanal, GCKE 985/1.

Coral Sea: CHALCAL 1, 1984, Plateau de Chesterfield-Bellona, without further precision, MNHN 2 adult; Stn DC6, 20°57.00'S 161°43.00'E at 45 m, MNHN 1 adult; Stn DC7, 20°50.86'S 161°36.99'E at 62 m, MNHN 1 immature, 1 adult alive, 1 adult; Stn DC17: 19°11.90'S 158°55.80'E at 44 m, MNHN 2 adult; Stn DC39, 20°28.90'S 158°48.70'E at 40 m MNHN 1 adult; Stn DC45, 20°48.93'S 158°30.21'E at 50 m MNHN 2 adult; Stn DC46, 20°52.26'S 158°33.74'E at 65 m MNHN 1 juvenile, 1 immature; Stn DC49, 20°58.20'S 158°35.00'E at 48 m MNHN 2 adult; Stn D55, 21°23.90'S 158°59.60'E at 55 m MNHN 1 immature, 2 adult; Stn DC56, 21°24.40'S 159°08.80'E at 60 m MNHN 1 immature; Stn DC59, 21°40.36'S 159°21.29'E at 56 m MNHN 1 immature, 1 adult; CORAIL 2, July 1988: Stn 2 (by diver) MNHN 6

adult; Stn DW 01, 20°56'S 161°41'E at 59 m, MNHN 4 adult, 1 juvenile; Stn DW 02, 20°50'S 161°37'E at 62 m MNHN 1 immature, 8 adult; Stn DW 04, 20°52'S 161°37'E at 64 m MNHN 6 adult; Stn DW 08, 20°52'S 161°38'E at 63 m MNHN 1 adult; Stn DW 09, 20°53'S 161°35'E at 62 m MNHN 1 adult; Stn DW 10, 20°52'S 161°41'E at 60 m MNHN 1 adult; Stn DW 12, 20°48'S 161°36'E at 59 m MNHN 1 adult; Stn DW 18, 20°44'S 161°00'E at 69 m MNHN 4 adult, 1 adult, crabbed; Stn DW 19, 20°42'S 161°00'E at 77 m MNHN 1 adult; Stn DW 26, 20°22'S 161°05'E at 62 m MNHN 1 adult; Stn DW 28, 20°28'S 160°56'E at 78 m MNHN 1 adult; Stn DW 39, 19°22'S 158°39'E at 63 m MNHN 2 adult; Stn DW 60, 19°15'S 158°57'E at 45 m MNHN 6 adult; Stn DW 69, 19°15'S 158°30'E at 30-52 m MNHN 3 adult; Stn DW 73, 19°12'S 158°23'E at 41 m MNHN 1 adult; Stn DW 85, 19°12'S 158°56'E at 32 m MNHN 2 adult; Stn DW 87, 19°06'S 159°00'E at 31 m MNHN 14 adult; Stn DW 88, 19°06'S 158°56'E at 32 m MNHN 2 adult; Stn DW 89, 19°03'S 158°58'E at 40 m 26.07.1988, MNHN 1 adult; Stn DW 101, 19°09'S 158°26'E at 37 m 27.07.1988, MNHN 1 adult; Stn DW 136, 19°31'S 158°16'E at 37 m 30.07.1988, MNHN 1 adult; Stn DW 138, 19°34'S 158°18'E at 31 m 30.07.1988, MNHN 1 adult; Stn DW 143, 19°37'S 158°25'E at 45 m 30.07.1988, MNHN 1 juvenile; Stn DW 147, 19°37'S 158°14'E at 44 m 30.07.1988, MNHN 1 adult; Stn DW 163, 19°41'S 158°16'E at 23 m 02.08.1988, MNHN 1 adult; Stn DW 166, 19°41'S 158°25'E at 56 m 02.08.1988, MNHN 1 adult.

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New Caledonia: ORSTOM 1984: Stn 200: 22°01'S 165°59'E at 18 m, MNHN 1 adult; Stn 229: 22°39'S 166°40'E at 41 m, MNHN 1 juvenile, 2 adult; Stn 267: 22°22'S 166°15'E at 70 m, MNHN 1 immature; Stn 310: 22°46'S 166°46'E at 31 m, MNHN 1 adult; Stn 340: 22°48'S 166°47'E at 27 m, MNHN 1 adult; Stn 392: 22°48'S 167°02'E at 80m, MNHN 1 adult; ORSTOM, 1985: Stn 433: 18°06'S 162°52'E at 40-67 m, MNHN 1 adult; Stn 436: 18°06'S 162°50'E at 45 m, MNHN 2 juvenile, 3 adult; Stn 445: 18°18'S 163°02'E at 41 m, MNHN 1 immature, 1 adult, 2 adult; Stn 458: 18°27'S 163°02'E at 38 m, MNHN 1 adult; Stn 461: 18°22'S 162°59'E at 35 m, MNHN 1 adult; Stn 477: 18°51'S 163°27'E at 50 m, MNHN 1 juvenile; Stn 478: 18°53'S 163°27'E at 35 m, MNHN 1 juvenile, 1 adult; Stn 488: 18°53'S 163°30'E at 38 m, MNHN 1 adult; Stn 521: 19°05'S 163°38'E at 39 m, MNHN 1 juvenile, 1 immature; Stn 542: 19°06'S 163°10'E at 50 m, MNHN 2 adult; Stn 545: 22°52'S 166°50'E at 37 m, MNHN 1 adult; Stn 553: 22°51'S 166°55'E at 39 m, MNHN 1 adult; ORSTOM, 1986: Stn. 708: 21°24'S 166°05'E at 35 m, MNHN 1 adult; Stn. 725: 21°19'S 165°56'E at 43 m, MNHN 1 adult; ORSTOM 1987: Stn. 795: 21°02'S 165°32'E at 31 m, MNHN 1 adult; ORSTOM, 1988: Stn. 938: 20°38'S 164°17'E at 19 m, MNHN 1 adult; Stn 1026: 20°05'S 163°48'E at 29 m, MNHN 3 adult; ORSTOM 1989: Stn 1182: 19°27'S 163°16'E at 48 m, MNHN 1 adult; Expédition Montrouzier, 1993: Stn 1319: 20°44.7'S 164°15.5'E at 15-20m, MNHN 1 adult; Stn 1322: 20°45.2'S 164°15.2'E at 53-71m, MNHN 1 adult; Stn 1333: 20°40'-20°40.6'S 164°11.2'-164°12.1'E at 30-60 m, MNHN 1 adult; Expédition Paleo surprise, 1999: Stn DW1395: 18°17.6'S

163°01.9'E at 34-36 m, MNHN 1 adult; Stn DW1397: 18°21.9'S 163°03.9'E at 43 m MNHN 1 adult.

Loyalty Ridge 1990: Stn DW 432: 20°20.95'S 166°10.75'E MNHN 1 adult.

Loyalty Islands, Lifou, Atelier Lifou, November 2000: Stn. 1440: 20°47'S 167°08'E at 15-35 m MNHN 1 adult; Stn. 1443: 20°54'S 167°07'E at 48-52 m MNHN 1 adult; Stn. 1459: 20°47'S 167°03'E at 55-80 m MNHN 1 adult, 1 adult; Stn. 1469: 20°54'S 167°00'E at 70-130 m MNHN 1 adult.

Wallis & Futuna: MUSORSTOM 7, 1992: Stn. DW 529: 12°31.4'S, 176°39.6'E, east of Waterwitch Bank (NNW of Matâ'utu, Wallis & Futuna) at 500 m, MNHN 1 adult.

Recent distribution. — Indian Ocean, where it is known from Mauritius and La Réunion, and scattered in the Pacific, where it occurs at Guam and the Marshall Islands, also reported from the Philippine Islands, near Olango Island (Kronenberg, 2008); Australia, Northern Territory, Cartier Reef (Wilson, 1993; Willan, 2005), Queensland (Short & Potter, 1987), Queensland, Great Detached Reef to Fraser Island (Loch, 1990; see material examined); Papua New Guinea (Hinton, 1977); Solomon Islands (see material examined; De Turck et al., 1999); Wallis & Futuna (see material examined); New Caledonia (see material examined); Fiji (Cernohorsky, 1965); Kermadec Islands (Brook & Marshall in Brook, 1998) (Fig. 8), and in Polynesia where it is known from Society and Gambier archipelago's (Tröndle & Boutet, 2009) and also the Tuamoto's (Jean Letourneux, personal communication), see also Fig. 9. In all probability the species will be discovered in other Pacific localities.

Apart from Mauritius and La Réunion the species seems to be absent in the Indian Ocean; e.g. it was not mentioned in the extensive listing by Tan & Low (2014) for Christmas Island and the Cocos (Keeling) Islands. It also seems absent in Indonesia; it was not recorded by Dharma (2005) and has not been recorded from Indonesia since the publication of that book (Bunjamin Dharma, personal communication). The record for Vietnam (Thach, 2007: 64, pl. 10 figs 191a,b) cannot be accepted unreservedly; there are two specimens figured of which fig. 191a appears to represent a specimen of *Canarium erythrinum* (Dillwyn, 1817), whereas fig. 191b might indeed represent *C. scalariforme*, judging from the habitus of the shell, but, as the image represents a dorsal view with very little detail, there is no certainty.

Comparison of specimens from the Indian Ocean with those of the Pacific revealed no differences as far as shell morphology is concerned. Therefore at present there is no justification in describing the Indian Ocean specimens as a species distinct from the Pacific specimens.

Fossil records. — Vanuatu (Abrard, 1946-1947: 62,



Figs 1-8. *Canarium scalariforme* Duclos, 1833. 1, *Strombus scalariformis* after Duclos, 1833. 2, illustration in Duclos, in Chenu, 1844. 3-6, Lectotype of *Strombus scalariformis*, "Mers de la Chine", length 22.3 mm, MNHN Paris (photographs Han Raven); 7, Type figure of *Strombus haemastoma* Sowerby 2nd, 1842; 8, Raoul Island, Kermadec Islands, Raoul Island, ex J. Bollons colln (no date), NMNZ M.272644, length 24.3 mm, width 10.4 mm (photograph Raymond Coory).

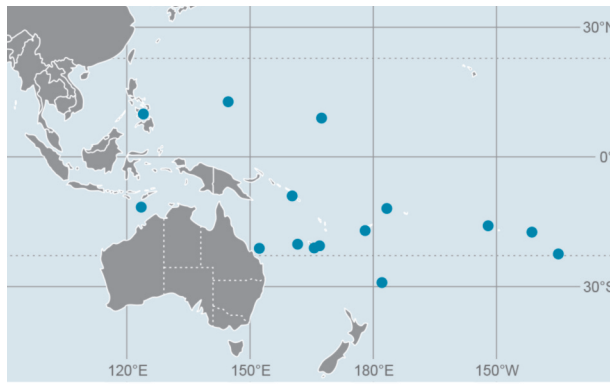


Fig. 9. Map showing records of *Canarium scalariforme* Duclos, 1833 in the Pacific Ocean. General localities such as "Queensland" and "Papua New Guinea" are omitted. See text also.

pl. 4 fig. 29) where it is reported from Malekila, Nua river, Pliocene.

Habitat. — Abbott (1960: 83, as *S. haemastoma*) did not provide any information about the habitat of the species.

Richer de Forgers (1991) listed stations of various expeditions conducted by MNHN. From the descriptions of the bottom in his listing of stations where *C. scalariforme* is reported from, it appears that this species usually occurs on coarse sand bottoms, often with Foraminifera and Halimeda, occasionally on gravel. Living specimens have been encountered at depths varying from c. 15 to 65 m, which corresponds with information provided by Jean Letourneux (personal communication), who indicated that in French Polynesia the species is rare and encountered at 20-60 m depth.

DISCUSSION AND CONCLUSION

In the description of *Strombus scalariformis* by Duclos (1833) there is no indication whatsoever that Duclos thought that he had a teratological specimen in front of him.

After the introduction of *Strombus haemastoma* by G.B. Sowerby 2nd (1842), the authors have treated the name *Strombus scalariformis*, or later *Canarium scalariforme*, in various ways, as can be seen in the chresonomy presented above.

Kiener (1843) did not mention *Strombus haemastoma* at all, although that author was well aware of the work published by G.B. Sowerby 2nd in the previous year (1842), judging from his inclusion of species described there, and noted: "Nous ne connaissons cette jolie petite espèce que d'après la figure qu'en a donnée M. Duclos." (we only know this pretty small species after a figure presented by M. Duclos) (Kiener, 1843: 43) and figured dorsal and apertural views (ibid, pl. 14

fig. 3).

Duclos, in Chenu (1844), distinguished *S. scalariformis* (pl. 4 figs 9, 10) and *S. haemastoma* (pl. 4 figs 17, 18) as valid species.

Küster (1845: 72) recognized *S. scalariformis*, referring to both Duclos (1833) and Kiener (1843), and like Kiener, did not mention *S. haemastoma*.

Kobelt (1876: 105) considered *S. scalariformis* "Eine ganz eigenthümliche Art, für welche die Aufstellung einer eigenen Untergattung wohl gerechtfertigt wäre, ist *Strombus scalariformis* Duclos (Taf. 39 Fig. 12) aus den chinesischen Meeren; das Gehäuse ist klein, wendeltreppenförmig, mit gethürmtem Gewinde, radial gerippt und spiralgestreift, fahlgelb mit rosenrothem, innen gestreiftem Gaumen; die Adams rechnen sie zu *Canarium*." (A very peculiar species, for which the definition of a separate subgenus would be appropriate, is *Strombus scalariformis* (pl. 39 fig. 12) from the Chinese sea; the shell is small, like a wentletrap, with a turreted spire, axial ribs and fine spiral cords, pale yellow with a roseate, lyrate columella, the Adams place it in *Canarium*) and does not mention *S. haemastoma*. Like in many previous and subsequent publications, pl. 39 fig. 12 in Kobelt (1876) is a reproduction of the original illustration by Duclos, 1833.

Tyron (1885: 120) mentioned both *S. haemastoma* and *S. scalariformis*, and said about the latter: "Sculptured and colored like the preceding species [= *S. hellii*, GCK], but differing widely in form."

Smith (1940) did not mention *Strombus haemastoma* at all, but lists *S. scalariformis* as a valid species.

Abbott (1960: 83) in his discussion on *S. scalariformis*, wrote: "I am inclined to suspect that this species may be a form of *haemastoma*," and did not realize that if this would be the case, the name given by Duclos (1833) should take priority. Subsequently, Abbott (1973: 160 [unnumbered page]) wrote: "... is the Wentletrap Conch, *Strombus scalariformis*, known from only one specimen. It was described in 1833 and has not been found since, perhaps because it is a freak." Wagner & Abbott (1964) listed both *S. haemastoma* and *S. scalariformis* as valid species, but noted subsequently in the listing of *S. scalariformis* (1978: 09-657, species 09-965): "Malformed *haemastoma*?" Following the opinion expressed by Abbott (1960; 1973), Kaicher (1974), Wagner & Abbott (1978), and Romagna Manoja (1980), Kronenberg & Berkhout (1984) more or less explicitly stated that *S. scalariformis* could be an abnormal specimen, probably synonymous with the species usually known as *Strombus haemastoma* Sowerby 2nd, 1842, but again, those authors never pointed out that the name *S. scalariformis* was the older one and, if synonymous, should take priority.

Walls (1980) was the first to unambiguously use the name *Strombus haemastoma* (in the subgenus *Ca-*

narium) as the valid name, listing *S. scalariformis* as a synonym of *S. haemastoma*. This opinion was subsequently followed by e.g. De Turck et al. (1999). De Turck et al. (1999), however, did not provide synonymies for the species they discussed, so their opinion regarding *S. scalariformis* is not known.

Kronenberg (2008: 546, caption to pl. 218 fig. 2) used *Canarium haemastoma* (G.B. Sowerby 2nd, 1842) as the valid name, but he noted that "The name *Strombus scalariformis* Duclos, 1833 (= *Canarium scalariforme*) is a senior name for this species, and should in fact have priority. However, the name given by Sowerby is widely used". Due to lack of space within the concept of that book, this was not further discussed.

Since then, lists of strombid taxa were published by Barney (2010) and Meuleman (2011) who both considered *Canarium scalariforme* a valid name, and Liverani (2013) who returned to the use of *Canarium haemastoma*, without mentioning the epithet *scalariformis* or *scalariforme*.

Obviously, the name *Strombus scalariformis* was widely used as valid, even in prevailing usage until Abbott's (1960) influential monograph, and even in a short period after Abbott's (1960).

Scalariform specimens of otherwise regularly coiled species are known from a considerable number of gastropod families, both continental and marine. Strombidae are no exception to this. The ICZN excludes such scalariform (or other teratological) specimens explicitly from the provisions of the International Code of Zoological Nomenclature (The Code) in ICZN Article 1.3.2. However, this Article can only be applied when an author who describes a species is aware that the specimen under description is a teratological specimen. Duclos' 1833 description does not indicate that he (Duclos) was aware of the possible abnormal nature of the specimen before him. Therefore, the name *Strombus scalariformis* Duclos, 1833, is available, see the reasoning by Petit (2003: 50) on *Tibia serrata*.

Strombus scalariformis Duclos, 1833, cannot be considered a nomen oblitum (see ICZN article 23.9.1.1) as Smith (1940), Abbott (1960), Kaicher (1974), Wagner & Abbott (1964; 1978) and Kronenberg & Berkhout (1984) used this name as a valid name.

Although ICZN Article 23.2 pleads for stability for long used names, the chresonomy above makes clear that although *Strombus haemastoma* / *Canarium haemastoma* is in prevalent use since 1900, several authors have treated *Strombus scalariformis* as valid in both the 19th, 20th and 21st century, so there is no stability in this case. Therefore, *Strombus scalariformis* Duclos, 1833 (= *Canarium scalariforme*) must be considered the valid name of the species also known as *Strombus haemastoma* Sowerby 2nd, 1842.

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