

## Research Note

### The authorship of *Turrilatirus craticulatus* (Gastropoda: Fasciolaridae: Peristerniinae)

The specific name of the Indo-West Pacific gastropod *Turrilatirus craticulatus* generally has been attributed to Linnaeus, 1758 in the original combination *Murex craticulatus*, but the correct attribution is to Gmelin, 1791, in the combination *Voluta craticulata*.

In the tenth edition of *Systema naturae*, Linnaeus (1758: 755, sp. 495) introduced *Murex craticulatus* without reference to a figure or designated locality. Linné (1767: 1224–1225, sp. 569) repeated the description, added a phrase “*Turbo angulatus*,” cited a figure by Rondelet (1555: 89) and added the locality “*M. Mediterraneo*.” Rondelet’s figure shows a shell with about four angular spire whorls plus a body whorl and a relatively long siphonal canal.

Born (1778; 1780) and Chemnitz (1780) treated a different shell as *M. craticulatus*. Born (1780) and Chemnitz (1780) each re-described what they believed to be *M. craticulatus* Linnaeus and provided new figures, still accepting its Mediterranean locality. Richardson et al. (1979: 165) noted that Chemnitz figs 1382 and 1383 were cited by Born both in 1778 and 1780. That incongruity of dates was explained by Kohn (1964: 153), who provided evidence that Born received plates from Martini at least two years before they were published by Chemnitz. Chemnitz expressed uncertainty regarding the name, concluding that although the original description did not fit exactly, Linnaeus had intended it for a shell that Chemnitz recognized. The shell they described and figured, now well-known as an Indo-West Pacific species, is not the species that Rondelet figured, nor is it the one that Linnaeus described.

Gmelin (1791: 3554, sp. 105) repeated the Linnaean description of the Mediterranean *M. craticulatus*, again citing the Rondelet figure. Some pages earlier, however (1791: 3464), he provided a separate account for a new species, *Voluta craticulata*. The impetus for classification in *Voluta* apparently traces to Schröter (1783: 284), who cited “Martini iv [Chemnitz, 1780] tab. 1382 & 1383; Lister, [1688] Hist. Conch. pl. 919, fig. 13, mala. pl. 967, fig. 22; Seba [1758], pl. 50, figs 55 & 56, pl. 51, figs 31 & 32; Knorr [1764], pl. 3, fig. 6” in a taxon he called *Voluta* sp. Chemnitz had assigned these figures to *M. craticulatus* Linnaeus, but Gmelin cited all of them for *V. craticulata*. By these actions, Gmelin recognized that the species described by Linnaeus was not the shell figured by Chemnitz and Born.

From the start, Gmelin’s distinction was misunderstood. Schreibers (1793: 121, 229) treated *M. craticulatus* and *V. craticulata*, citing correct figures for the latter but attributing both names to Linnaeus. Röding (1798) asso-

ciated *M. craticulatus* (not *V. craticulata*) “Gmel.” with the Chemnitz figures and reclassified the species in *Fusus*. Dillwyn (1817) retained *M. craticulatus* Linnaeus but added *V. craticulata* Gmelin as a synonym. Lamarck (1822) placed *craticulatus* “Lin. Gmel. p. 3554” in *Turbinella* and cited “*Voluta craticulata* Gmel. p. 3464” as a junior synonym, as did Deshayes (1832), who cited the same figures cited by Gmelin. The species was maintained as *T. craticulata* by Schubert and Wagner (1829) and Kiener (1840), both of whom attributed the name to Lamarck as first user of the combination, and by Anton (1838) and Reeve (1847), who attributed the name to Linnaeus.

Deshayes (1843: 386) headed an account “*Turbinella craticulata* Lamk.” but made clear in synonymy and in a footnote that the name’s author was Linnaeus. Deshayes (1843: 457) later suggested that some characters mentioned in the brief original description of *Murex craticulatus* seemed to fit a variety of the Mediterranean species *Fusus syracusanus* (Linnaeus, 1758). This comment appeared in a footnote wherein Deshayes considered but did not accept the Linnaean name as an earlier name for *Fusus strigosus* Lamarck, now *Fusinus rostratus* (Olivi, 1792). Clearly, Deshayes was uncertain about the identity of the Linnaean name.

In another footnote, Deshayes (1843: 386) noted: “Sous ce nom de *craticulata* MM. Schubert et Wagner ont décrit et figuré une espèce très distincte du véritable *Murex craticulatus* de Linné et des autres auteurs.” Similarly, Dodge (1957: 188) noted that Schubert and Wagner (1829: 103) had followed Lamarck’s (1822) synonymy for *Turbinella craticulata*, but their figures showed an entirely different shell that he could not identify. Both Deshayes and Dodge overlooked the fact that the figures were for *T. craticulata* Lamarck “var. b” of Schubert and Wagner (1829: pl. 227, figs 4023 & 4024), which Anton (1838) later renamed *T. wagneri*.

Küster in Küster and Kobelt (1844: 21) cited for *T. craticulata* both *M. craticulatus* Gmel. Lin. p. 3554 and *V. craticulata* Gmelin p. 3464 but also cited for it the figures by Lister, Seba, Knorr, and Chemnitz (but not Rondelet), and attributed authorship to Gmelin.

Hanley (1855) remarked that the shell figured by Kiener (1840) (*i.e.*, the Indo-West Pacific *craticulatus*) “answers very correctly to the description by Linnaeus,” but he soon changed his mind. Hanley (1856: 134) specified that *M. craticulatus* of Wood (1828), the *T. craticulata* of Kiener and others, was based on *V. craticulata* Gmelin, indicating his belief that the name applied to a different species.

Kobelt (1876a: 22) also attributed the name to Gmelin but mistakenly cited for it p. 3554, Gmelin’s page for *M. craticulatus* Linnaeus. Kobelt (1876b: 54) mistakenly cited “*craticulatus* Lam.” (*non* Linnaeus) as a junior



synonym of *Latirus turritus* (Gmelin, 1791), another Indo-Pacific species of *Turrilatirus* Vermeij and Snyder, 2006. Kobelt in Küster and Kobelt (1876: 118; 1877: 58) attributed *T. craticulata* to Gmelin, without mention of Linnaeus.

Tryon (1880: p. 93, pl. 69, fig. 159) identified *Latirus craticulatus* (Linnaeus, 1758) as the Recent Indo-West Pacific species. Tryon's assignment was unanimously followed until Dodge (1957) reviewed the Linnaean name. Dodge agreed that *M. craticulatus* Linnaeus and *V. craticulata* Gmelin applied to separate species, but he said that attribution of the name *craticulatus* Linnaeus to the Indo-West Pacific species had been so consistently accepted that it would be confusing to change it. Nevertheless, he recommended that, for a sound nomenclature, the Linnaean name should be regarded as a *nomen dubium*. On this we concur.

Dodge thought it difficult to disregard Gmelin's considerable synonymy but maintained that Gmelin only increased the confusion begun by Linnaeus because the description of *V. craticulata* is "equivocal," the shell size given by Gmelin is "somewhat too long," and no locality is given. Consequently, he advocated that Gmelin's name be ignored and *craticulatus* auct. be attributed to Dillwyn (1817), who had provided a new description for *M. craticulatus* 'Linnaeus' and cited the above mentioned appropriate figures. Nevertheless, all mentions of the Indo-Pacific species published since Dodge have ignored his recommendations. Most recently, Marais and Kilburn (2010: 128) correctly cited the original combination for the species as *V. craticulata* but attributed the name to Linnaeus.

No evidence supports the association of the Linnaean descriptions, the figure he cited, or the Mediterranean locality with the Indo-West Pacific species. There is no specimen of *Murex craticulatus* in the Linnaean collection (Hanley, 1855), nor was the species contained in the *Museum Ulricae* (Dodge, 1957), so no type material is available.

The remedy that Dodge proposed is impractical. Dillwyn's description and figures he cited may have been appropriate but he, like Born, presented the species as *M. craticulatus* Linnaeus, with Gmelin's name as a synonym, so Dillwyn's *M. craticulatus* is a junior primary homonym of the Linnaean name (ICZN, 1999: 59; Article 57.2), as are those of Born, Chemnitz, etc. The Chemnitz name is also unavailable as it was published in a rejected work (ICZN, 1987: 319). Conversely, Gmelin distinguished *V. craticulata* from *M. craticulatus* Linnaeus by providing separate accounts in different genera for the two species, by providing a separate description for the new species, and by citing figures wherein its identity is unmistakable. Clearly, the first available name for the Indo-West Pacific species is *Voluta craticulata* Gmelin, 1791.

For a discussion of the complex synonymic history of *Murex craticulatus* "Linnaeus" Brocchi, 1814, a Mediterranean muricid, see Houart (2001: 82–84).

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#### William G. Lyons

4227 Porpoise Drive SE  
St. Petersburg, FL 33705 USA  
and  
Academy of Natural Sciences of Drexel University  
Philadelphia, PA 19103 USA  
w.lyons9@knology.net

#### Martin Avery Snyder

Academy of Natural Sciences of Drexel University  
Philadelphia PA 19103, USA  
and  
Muséum National d'Histoire Naturelle  
Paris, FRANCE  
Martin.snyder@gmail.com