

Nomenclatorial rectifications and comments on some European Neogene nassariid and buccinid Gastropoda

(Prosobranchia: Nassariidae; Buccinidae)

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Abstract

Several primary homonyms have been discovered for Miocene buccinoid gastropods of Europe. Herein we try to clarify these cases by proposing available replacement names. For three taxa new replacement names are introduced: *Nassarius fritzsteineri* nov. nom., (pro *Nassa dispar* BOETTGER 1902), *N. signatodentis* nov. nom. (pro *Buccinum signatum* „PARTSCH“ HÖRNES 1852) and *N. taurinospeciosus* nov. nom. (pro *Nassa speciosa* BELLARDI 1882).

Key words: Gastropoda, Nassariidae, Buccinidae, Paratethys Sea, Mediterranean Sea, Miocene, homonyms, taxonomy

Kurzfassung

Etliche primäre Homonyme fanden sich für miozäne buccinoide Gastropoden Europas. Wir versuchen diese Fälle zu klären und verfügbare Ersatznamen vorzuschlagen. Für drei Taxa werden neue Ersatznamen eingeführt: *Nassarius fritzsteineri* nov. nom., (pro *Nassa dispar* BOETTGER 1902), *N. signatodentis* nov. nom. (pro *Buccinum signatum* „PARTSCH“ HÖRNES 1852) und *N. taurinospeciosus* nov. nom. (pro *Nassa speciosa* BELLARDI 1882).

Schlüsselwörter: Gastropoda, Nassariidae, Buccinidae, Paratethys, Mittelmeer, Miozän, Homonyme, Taxonomie

Introduction

Bearing in mind the slow interchange of communication, distribution of journals and the absence of a register of zoological taxa during the 19th century, duplication of scientific names for the Animal Kingdom was often unavoidable. The re-assignment of species from one genus

to another more appropriate one (e.g. from *Buccinum* to *Nassa* and from *Nassa* to *Nassarius*) was an added cause of the duplication of scientific names. A major factor contributing to molluscan homonymy is the separate monographic treatment of living and extinct species of

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a genus. In generic groups containing numerous species like the Turridae, Buccinidae and Nassariidae, only time and space and the expertise of the author allow the treatment of either living or extinct species. In large species-groups, a monographic treatment of a certain geographical region is also quite common. A malacologist dealing with living species should take into consideration the existence of names previously proposed for fossil species.

Many homonyms and complex synonyms within the gastropod family Nassariidae have been solved and dis-

cussed for extant taxa by CERNOHORSKY (1984). Similarly, HARZHAUSER & KOWALKE (2004) and LANDAU et al. (2009) provided a survey on many Miocene and Pliocene Nassariidae taxa and tried to solve the synonymy for the fossil taxa. Nevertheless, several homonyms with extant species were overlooked for the Miocene taxa. Therefore, it is the purpose of this paper to correct homonymous species-group names within the Nassariidae and Buccinidae with a focus on Miocene taxa from the Paratethys and the Mediterranean seas.

1. New names for primary homonyms

Buccinoidea RAFINESQUE 1815

Nassariidae IREDALE 1916

Nassariinae IREDALE 1916

Nassarius DUMÉRIL 1806

Type species: *Buccinum arcularia* LINNAEUS 1758
– Recent, Indo-Pacific

Nassarius fritzsteiningeri nom. nov.

Nassa (*Niotha*) *dispar* BOETTGER 1902: 20 (non *Nassa dispar* ADAMS 1852)

Nassarius dispar, – HARZHAUSER & KOWALKE 2004: 24 (cum syn)

Remarks: *Nassa dispar* BOETTGER 1902 is a primary homonym of *Nassa dispar* A. ADAMS 1852, which are both treated as *Nassarius* (CERNOHORSKY 1984, HARZHAUSER & KOWALKE 2004). Although this rare species has affinities with the polymorph *Nassarius schoenni* (HÖRNES & AUINGER 1882) the separation on species level seems to be justified. The thin shell, the weak parietal callus, the broad and expanding callus close to the siphonal canal and the rather broad and stepped spire distinguish the species from representatives of *Nassarius schoenni*. It may represent an Early Langhian offshoot of this Miocene shallow water species. We propose *Nassarius fritzsteiningeri* as replacement name for *Nassa dispar* BOETTGER 1902 in honor of the great earth-scientist Fritz Steininger.

Type material: The type specimen is housed in the collection of the Senckenberg Museum in Frankfurt (see ZILCH 1934 for details).

Nassarius signatodentis nom. nov.

Buccinum signatum "PARTSCH" HÖRNES 1852: 142, pl. 12, figs. 7a–b (non *Buccinum signatum* DUNKER 1847)

Nassarius signatus, – HARZHAUSER & KOWALKE 2004: 13, pl. 1, fig. 9 (cum syn)

Remarks: *Buccinum signatum* HÖRNES 1852 is a primary homonym of *Buccinum signatum* DUNKER 1847. Both are treated as *Nassarius* in the modern literature (CERNOHORSKY 1984, HARZHAUSER & KOWALKE 2004). No replacement name exists for the species from the Langhian (= Badenian) of the Paratethys Sea so far. The characteristic sculpture and aperture, described by HARZHAUSER & KOWALKE (2004), allow a clear separation from coeval nassariids of the Mediterranean area described by BELLARDI (1882) and SACCO (1904). When describing the new species, HÖRNES (1852) used the manuscript name *Buccinum signatum* of Paul PARTSCH, who referred to the prominent denticles of the aperture by the species name *signatum*. To adopt this thought we introduce the name "*signatodentis*" as replacement name for the preoccupied "*signatum*".

Type material: The type specimens are stored in the collections of Natural History Museum in Vienna (see HARZHAUSER & KOWALKE 2004 for details).

Nassarius taurinospeciosus nom. nov.

Nassa speciosa BELLARDI 1882: 43, pl. 2, figs. 22 a–b (non *Nassa speciosa* A. ADAMS 1852)

Nassa speciosa, – FERRERO MORTARA et al. 1981: 228, pl. 21, figs. 6 a–b

Remarks: *Nassa speciosa* BELLARDI 1882 is a primary homonym of *Nassa speciosa* A. ADAMS 1852, which are both treated as *Nassarius* (CERNOHORSKY 1984, HARZHAUSER & KOWALKE 2004). Herein we propose *taurinospeciosus* as new name as combination of "*taurino*", referring to the Colli Torinesi, and "*speciosus*", to adopt the original name of BELLARDI (1882). The species was described from the Burdigalian of the Colli Torinesi in Italy. It is characterised by a rather barrel shaped last

whorl and a stepped, rapidly contracting spire of weakly convex whorls. The conspicuous sculpture consists of slightly oblique axial rows of blunt knobs. This species is reminiscent of *Nassarius poelsensis* (HILBER 1879) from the Langhian of the Paratethys Sea (HARZHAUSER & KOWALKE 2004) and might represent its ancestor. Differences between both species are 1. the point of maximum convexity and maximum diameter of the last whorl, which is at the transition between flank and base in *N. poelsensis* but in the adsutural third of the whorl in *N. taurinospeciosus*, 2. the knobby nodes which are subquadrangular

in *N. taurinospeciosus* and always spirally elongated in *N. poelsensis*. Moreover, the inner lip of *N. poelsensis* is more callous and the outer lip is thickened.

Another reminiscent species is *Nassarius crossei* (MAYER 1862) from the Burdigalian of Saucats in France (described in detail by PEYROT 1925) which differs in its more spherical last whorl and the densely spaced and flatter nodes.

Type material: The type specimen is stored in the Museo Regionale di Scienze Naturali in Torino, Italy (see FERRERO MORTARA et al. 1981 for details).

2. Problematic species

Nassarius obesus (BELLARDI 1882) species inquirenda

Nassa obesa BELLARDI 1882: 94, pl. 6, figs. 8a–b (non *Nassa obesa* NEVILL & NEVILL, 1875)

Remarks: *Nassa obesa* BELLARDI 1882 is a primary homonym of *Nassa obesa* NEVILL & NEVILL 1875. *Nassa obesa* BELLARDI 1882 was described from the Luigi Di Rovasenda collection as very rare shell from the Middle Miocene locality Albugnano in the Colli Torinesi in Italy. The specimen, along with parts of that collection, was destroyed during the Second World War (pers. comm. Daniele ORMEZZANO, Museo Regionale di Scienze Naturali, Torino; July 2010) and no additional material is known so far to the authors.

BELLARDI (1882) gives a detailed description of this 21 mm high and 9.5 mm broad shell. Its stout ovoid outline, with coalescing spire whorls and the straight, prominent, blunt axial ribs which form a wavy suture are very characteristic. Another typical feature is the small, pointed protoconch which allows a separation from su-

perficially similar species such as *Nassarius subovatus* (BELLARDI 1882). A morphologically very similar species is *Nassarius hochstetteri* (HOERNES & AUINGER 1882) from the Langhian of the Paratethys Sea. It develops a similar stout, drop-shaped ovoid outline and a very similar sculpture of blunt ribs which tips protrude into the interspaces of the ribs of the precursor whorl. Apertural features with distinct denticles in the outer lip and a small parietal denticle are also comparable in both species. Differences, however, are the strong denticle of the outer lip close to the posterior canal of the Italian specimen, its much larger size, attaining more than the double height of *N. hochstetteri* and the low protoconch of the latter species. *Nassarius bearnensis* (PEYROT 1925) from the Middle Miocene of France is reminiscent of BELLARDI's species as well but lacks the two prominent denticles close to the posterior canal, is more globose and develops more axial ribs.

Thus, this seems to be a good species but no substitute name can be proposed until new material turns up.

3. Primary homonyms with available replacement names

Nassarius agatensis (BELLARDI 1882)

Nassa agatensis BELLARDI 1882: 27, pl. 1, figs. 22 a–b

Nassa pulchra [sic!] D'ANC. – BELLARDI 1882: 29, pl. 1, figs. 24 a–b (non *Nassa pulchra* "ANCONA" DE STEFANI & PANTANELLI 1878)

Nassa coarctata EICW. [sic!] Varietà A. BELLARDI 1882: 28 (non *Nassa coarctata* EICHWALD 1830)

Nassa (*Arcularia*?) *coarctata* EICHW. var. *acuminata* SACC. (= var. A. BELL.) – SACCO 1904: 63, pl. 15, figs. 31–32 (non *Nassa acuminata* MARRAT 1880)

Nassa Saccoi TRENTANOVE 1911: 55, pl. 4, figs. 34–37

Nassa Cocchii TRENTANOVE 1911: 58, pl. 4, figs. 32–33, 38

Remarks: *Nassarius pulcher* ("ANCONA" DE STEFANI & PANTANELLI 1878) is a Pliocene species described from Siena in Italy. BELLARDI (1882) treated Tortonian specimens from Stazzano and Sant' Agata also as "*Nassa pulchra* D'ANC." [note that *pulchra/pulcher* is a valid and distinct latin notation with the same meaning as *pulchra/pulcher*]. TRENTANOVE (1911) compared Pliocene and Late Miocene shells, recognised several morphological differences and introduced "*Nassa Saccoi*" and "*Nassa Cocchii*" as new names for the Miocene species. Unfortunately, BELLARDI (1882) and SACCO (1904) already described several morphological closely related

species from the Tortonian of Stazzano and Sant' Agata, such as *Nassarius agatensis* (BELLARDI 1882), *Nassarius praecedens* (BELLARDI 1882) and *Nassarius agatensis ventricosulus* (SACCO 1904). These taxa may represent mere morphotypes of a single polymorph species similar to the Middle Miocene *Nassarius dujardini-schoenni-edlaueri* complex (HARZHAUSER & KOWALKE 2004). In this case, these names gain priority over *Nassarius saccoi* (TRENTANOVE 1911) and *Nassarius cocchii* (TRENTANOVE 1911). A clear decision is impossible within the frame of this paper and will need a detailed morphometric analysis of all taxa.

The name *Nassa coarctata acuminata* was introduced as a nomen nudum by SACCO (1890) and formalised as variety name of *Nassa coarctata* EICHWALD 1830 in his monograph 1904. *Nassa coarctata acuminata* SACCO 1904 is a primary homonym of *Nassa acuminata* MARRAT 1880. *Nassa coarctata* EICHWALD 1830 is a synonym of *Nassarius volhynicus* (ANDRZEJOWSKI 1830) which is endemic to the Middle Badenian (= late Langhian, early Serravallian) of the Polish-Ukrainian Carpathian Fore-deep (HARZHAUSER & KOWALKE 2004). Therefore, a close phylogenetic relation to the Tortonian Italian species is unlikely.

Type material: The material of BELLARDI (1882) is stored in the collections of the Museo Regionale di Scienze Naturali in Torino, Italy (see FERRERO MORTARA et al. 1981 for details).

***Nassarius attiguus* (BELLARDI 1882)**

Nassa acuminata BELLARDI 1882: 38, pl. 2, figs. 12 a–b (non *Nassa acuminata* MARRAT 1880)

Nassa attiguua BELLARDI 1882: 253.

Nassa (Phrontis) attigua, – SACCO 1904: 64

Remarks: *Nassa acuminata* BELLARDI 1882 is a primary homonym of *Nassa acuminata* MARRAT 1880. BELLARDI (1882) corrected his species into *Nassa attigua* on the last page of his monograph containing the chapter “correzioni principali” which is dated to the 10th December 1882. We have included this taxon because the corrections on the last page are easily overlooked.

Type material: The type specimen was part of the MICHELOTTI collection (fide BELLARDI 1882) which is partly preserved in the collection of the Museo di Paleontologia e Geologia dell'Università di Roma (CLEEVELY 1983) but seems to have been lost.

***Nassarius cerithiformis* (HILBER 1879)**

Buccinum cerithiforme “AUINGER” HILBER 1879: 15, pl. 2, fig. 8

Buccinum cerithiforme var. *crassa* VETTERS 1910: 144 (non *Buccinum crassum* KOCH in PHILIPPI 1849, non *Buccinum crassum* GMELIN 1791, nec *Buccinum crassum* NYST 1843)

Nassarius cerithiformis, – HARZHAUSER & KOWALKE 2004: 27, pl. 3, fig. 18 (cum syn.)

Remarks: *Buccinum cerithiforme* var. *crassa* VETTERS 1910 is a primary homonym of *Buccinum crassum* KOCH in PHILIPPI 1849. VETTER's variety, however, is a stout morphotype of *Nassarius cerithiformis* (HILBER 1879) and no replacement name is needed (see HARZHAUSER & KOWALKE 2004).

Type material: The type specimens of *Nassarius cerithiformis* are stored in the collections of the Natural History Museum in Vienna (see HARZHAUSER & KOWALKE 2004 for details).

***Nassarius edlaueri* (BEER-BISTRICKÝ 1958)**

Buccinum obliquum HILBER 1879: 12, pl. 2, fig. 3 (non *Buccinum obliquum* GMELIN 1791 nec *B. obliquum* KIENER 1841)

Hinia (Hinia) edlaueri BEER-BISTRICKÝ 1958: 55, pl. 2, fig. 11

Nassarius edlaueri, – HARZHAUSER & KOWALKE 2004: 25, pl. 2, figs. 13–14 (cum syn.)

Remarks: *Buccinum obliquum* HILBER 1879 is a primary homonym of *Buccinum obliquum* GMELIN 1791 and *Buccinum obliquum* KIENER 1841. The next available substitute name is *Hinia edlaueri* BEER-BISTRICKÝ 1958. See HARZHAUSER & KOWALKE (2004) for a description and further discussions on that species from the Miocene of the Paratethys Sea.

Type material: No type was defined by BEER-BISTRICKÝ (1958) but from her description it is clear that she referred to the specimen illustrated in HÖRNES (1852: 153, pl. 12, fig. 22) as *Buccinum miocenicum* which is stored in the collection of the Natural History Museum in Vienna.

***Nassarius salbriacensis* (PEYROT 1925)**

Nassa (Hinia) salbriacensis PEYROT 1925: 94, pl., 2, figs. 22–24

Nassa (Hinia) dollfusi PEYROT, 1925: 96, pl. 2, figs. 25–27 (non *Nassa dollfusi* HARMER 1914)

Remarks: *Nassa dollfusi* PEYROT 1925 is a primary homonym of *Nassa dollfusii* HARMER 1914. The shells from the Langhian of Saubrigues in France, described by PEYROT (1925) are probably only less ornamented morphs of *Nassarius salbriacensis* (PEYROT 1925) from the same locality. This similarity was already discussed by PEYROT (1925) who mentions the more numerous axial ribs and more prominent nodes of the last whorl of *N. salbriacensis* as main differences and emphasizes the similarities in shape and apertural features.

Type material: The type specimens are stored in the collections of the Muséum National d'Histoire Naturelle, Paris.

***Nassarius volhynicus* (ANDRZEJOWSKI 1830)**

Nassa volhynica ANDRZEJOWSKI 1830: 97, pl. 4, fig. 5

Nassa coarctata EICHWALD 1830: 223

Nassa coarctata var. *elongata* FRIEDBERG 1911: 72, textfig. 21 (non *Nassa elongata* MARRAT 1874)

Remarks: *Nassa coarctata* var. *elongata* FRIEDBERG 1911 is a primary homonym of *Nassa elongata* MARRAT 1874. The variety name introduced by FRIEDBERG (1911) refers to a slightly more elongate morphotype of the polymorph *Nassarius coarctata* EICHWALD 1830 which is a synonym of *Nassarius volhynicus* (ANDRZEJOWSKI 1830) and therefore no replacement name is needed (see HARZHAUSER & KOWALKE 2004 for a discussion on the synonymy).

Type material: The whereabouts of the type material are unclear.

Dorsaninae COSSMANN 1901

Akburunella KOLESNIKOV 1935

Type species: *Nassa akburunensis* ANDRUSSOV 1902 – Sarmatian, Russia, Eastern Paratethys

Akburunella caucasica (KUDRIAVTZEV 1928)

Nassa scalaris ANDRUSSOV 1902: 492, pl. 9, figs. 3–5 (non *Nassa scalaris* BORSON, 1825 nec *Nassa scalaris* ADAMS, 1852)

Buccinum scalaris causicum KUDRIAVTZEV 1928: 16, pl. 2, figs. 6–7

Akburunella scalaris, – HARZHAUSER & KOWALKE 2004: 40, pl. 7, fig. 5 (cum syn.)

Remarks: *Nassa scalaris* ANDRUSSOV 1902 is a primary homonym of *Nassa scalaris* BORSON 1825 and A. ADAMS 1852. The endemic Paratethyan genus *Akburunella*, in which *Nassa scalaris* ANDRUSSOV has to be placed, has a very variable sculpture. This led to the introduction of varietal and subspecies names by authors such as KOLESNIKOV (1935) and KUDRIAVTZEV (1928). Therefore, *Buccinum scalaris causicum* KUDRIAVTZEV 1928, which is a slightly less slender morphotype of *Akburunella scalaris* (ANDRUSSOV 1902), is the next available replacement name for the preoccupied *Nassa scalaris* ANDRUSSOV 1902.

Type material: The type material is stored in the collection of the Central Geological Museum of the Russian Academy of Sciences in St.-Petersburg.

Buccinidae RAFINESQUE 1815

Phos MONTFORT 1810

Type species: *Buccinum senticosum* LINNAEUS 1758 – Recent, Pacific.

Phos lineolatus (GRATELOUP 1834)

Nassa lineolata GRATELOUP 1834: 277

Buccinum lineolatum, – GRATELOUP 1847: pl. 36, fig. 36 (non *Buccinum lineolatum* LAMARCK 1809)

Buccinum eolus ORBIGNY 1852: 86

Nassa (Hinia?) avitensis PEYROT 1925: 98, pl. 3, figs. 81–83

Dorsanum lineolatum, – LOZOUET et al. 2001: 61, pl. 26, figs. 4 a–b (cum syn)

Remarks: This Miocene European taxon was affiliated with various genus names: it was introduced as *Nassa lineolata* by GRATELOUP 1834. Later it was assigned to *Buccinum* by GRATELOUP 1847. PEYROT (1925) and HÖLZL (1958) list it as *Nassa* and HARZHAUSER & KOWALKE (2004) treat it as *Nassarius* whilst LOZOUET et al. (2001) consider it a *Dorsanum*. Based on comparison with extant Indo-Pacific representatives of *Phos*, such as *Phos naucratoros* WATSON 1882, we consider GRATELOUP's shell a slender *Phos*. ORBIGNY (1852) introduced *Buccinum eolus* as replacement name as *Buccinum lineolatum* was in his opinion preoccupied by *Buccinum lineolatum* LAMARCK 1822 [sic! – instead of 1809]. He referred to the iconography of GRATELOUP (1847) and not to the original paper of GRATELOUP (1834) in which the taxon was introduced as *Nassa lineolata*. [The extant Australian *Buccinum lineolatum* is now treated as *Cominella lineolata* (LAMARCK 1809) (WILSON 1994)]. *Nassa lineolata* GRATELOUP 1834, however, would be a secondary homonym of *Planaxis lineolatus* RISSO 1826 if placed into *Nassarius*. In our opinion, *Nassa lineolata* GRATELOUP is a *Phos*, *Buccinum lineolatum* LAMARCK is a *Cominella* and only *Planaxis lineolatus* RISSO is a *Nassarius* and no secondary synonym exists. If *Nassa lineolata* GRATELOUP is considered to be a *Nassarius*, the next available name is *Nassa avitensis* PEYROT 1925 which is considered to be conspecific with *Nassa lineolata* by LOZOUET et al. (2001).

Type material: The type of *Nassa lineolata* is probably still stored in the Grateloup collection of the University of Bordeaux. Unfortunately, the collection was partly destroyed and except for few gastropod groups most material awaits revision and rearrangement (CAHUZAC et al. 2004).

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