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### THE IDENTITY OF *TURBO POLITUS* LINNAEUS, 1758 (PROSOBRANCHIA. EULIMIDAE) (\*\*)

KEY WORDS: Prosobranchia, Eulimidae, *Melanella*, Nomenclature, Mediterranean.

#### Summary

The identity of *Turbo politus* LINNAEUS, 1758 is discussed, and it is concluded to be an older name for *Eulima intermedia* CANTRAINE, 1835 and *Rissoa sinuosa* SCACCHI, 1836. A neotype is designated to stabilize the nomenclature. The specimen is figured and compared with some similar species of Eulimidae.

#### Riassunto

Posta in discussione l'identità di *Turbo politus* L, 1758 si giunge alla conclusione che si tratta di sinonimo più antico di *Eulima intermedia* CANTRAINE, 1835 e *Rissoa sinuosa* SCACCHI, 1836. La stabilità della nomenclatura viene assicurata con la designazione di un neotipo, che viene raffigurato e posto a confronto con specie simili di Eulimidae.

The name *Turbo politus* was introduced by LINNAEUS (1758: 767) with a very short description and no references to other authors:

«*politus*. 570 T(urbo) testa turrata imperforata glaberrima, apertura ovata. - *Habitat in M. Mediterraneo*.

*Testa Gr. Hordei magnitudinae, albissima, opaca nec pellucida, nitidissima, anfractibus linea excavata tenui, interstinctis.*»

The species was said to originate from the Mediterranean. Later authors have always interpreted the species as belonging to what now is called Eulimidae, but the specific interpretation varies between the different authors. No type material presently exists of this species, although HANLEY (1855) mentioned that one specimen had been present earlier (cf. p. 18). The purpose of this note is to stabilize the concept of the name *Turbo politus* LINNAEUS, 1758.

The first author to use the name *Turbo politus* in anything other than a mere enumeration of names was PULTENEY (1799: 49). Under the name *Strombiformis albus* DA COSTA, 1778, he transferred *Turbo politus* to *Helix* and gave references which make it possible to establish the identity of the species for which he used Linnaeus' name. This conclusion was also reached by BOWDEN & HEPPELL (1968: 326) in their review of the «Dorset Catalogues» by PULTENEY.

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This use of the name «*Helix polita* LINNAEUS» was followed by MONTAGU (1803: 398, 1808: 141). and MATON & RACKET (1807: 210). MONTAGU (1803: 309) also referred to «microscopic» specimens that he had found; these have by later British authors been considered to be specimens of what now is known as *Vitreolina* spp. (FORBES & HANLEY 1850: 233, JEFFREYS 1867: 206). It is, therefore, evident that the early 19th century concept of *Turbo politus* LINNAEUS, more or less covered all the shallow water species of Eulimidae, although the «typical» or «adult» specimens belong to the species for which the names *Strombiformis albus* (= *Balcis alba* and *Melanella alba*) have been used, for the past eighty years.

CANTRAINE (1835: 390) briefly described a Mediterranean species, *Eulima intermedia*, but did not figure it.

SCACCHI (1836: 15) described *Rissoa sinuosa* and gave a good figure of this new species from the Gulf of Naples.

PHILIPPI (1836: 157) employed the name *Melania nitida* LAMARCK, 1804 for a recent Mediterranean species which he later (1844: 144) transferred to *Eulima*. LAMARCK's name was based on an Eocene fossil, and the identity of Philippi's specimens cannot be ascertained, although it has always been considered to be «*Eulima intermedia*» CANTRAINE.

DESHAYES (1838: 453) transferred *Turbo politus* to *Eulima* RISSO, 1826 and gave an extensive synonymy which shows that also *Rissoa bosci* PAYRAUDEAU, 1826 (now *Melanella bosci* (PAYRAUDEAU, 1826)) was covered by *Turbo politus*.

FORBES & HANLEY (1851: 231) considered some British specimens to resemble PHILIPPI's (1836) figures of *Melania nitida* (pl. 9, fig. 17) and used the name *Eulima polita* var. *nitida* for these specimens. The name *Eulima polita* was used as by PULTENEY (1799).

HANLEY (1855: 353) was the first author who questioned the identity of *Turbo politus* L. He mentioned that he had notes about the presence «of a wretched example of *Eulima polita* (THORPE 1844) (*Brit. Marine Conch.* 49)» (= *Strombiformis albus* DA COSTA) in the Linnean collection, but that he had not been able to find it more recently. However, he also mentioned that LINNAEUS had marked in the 10th, edition of *Systema Naturae*, his possession of the species while in the 12th. edition its presence in the collection was not marked.

JEFFREYS (1867: 201) used *Eulima polita* in the accustomed sense and brought into common use CANTRAINE's name *Eulima intermedia* for the variety denoted *Eulima polita* var. *nitida* by FORBES & HANLEY (1867: 203).

MONTEROSATO's use of the names is more difficult to understand because of his habit of introducing new names with very short or no descriptions, but evidently (1884: 100) he included *Rissoa bosci* PAYRAUDEAU and *Eulima polita* sensu JEFFREYS, in his *Eulima polita*, although later, (1890: 158, 1917: 16), he recognized the specific identity of *R. bosci*. Specimens for which PHILIPPI (1836, 1844) used the name *nitida* and JEFFREYS (1867) the name *intermedia* were included under *intermedia* (1878: 96) with several varietal names, which later were given specific status. To this group of names MONTEROSATO (1890) also added «*Eulima distorta* var. *gracilis* JEFFREYS» and a couple of new names (*translucens* BRUSINA MS, MONTEROSATO, 1890; *monterosatoi* de BOURY MS, MONTEROSATO, 1890). This group of «spe-

cies» was (1890) separated generically and a new genus *Acicularia* MONTEROSATO, 1890 (not d'ARCHIAC, 1837) was erected for them.

MARTEL (1905: 327) pointed out that Atlantic specimens of «*Eulima polita*» are persistently larger than Mediterranean specimens, which he considered to belong to another species and that the name *Eulima alba* (Dacosta) should be used for the Atlantic form. He failed, however, to define or restrict the use of *Eulima polita* in a way that can be applied on the present concept of the species involved.

Later authors have followed MARTEL's use of the name *alba* DA COSTA and an application to validate the use of this name has been submitted to the International Commission on Zoological Nomenclature.

The use of the name *Eulima*, *Melanella*, or *Balcis polita* (L.) has varied between different authors, but nobody has tried to establish the identity of this specific name. The discussion below, an attempt to establish this identity, is largely based on unpublished work on the European Eulimidae, which will be published as a monograph on the family.

*Strombiformis albus* DA COSTA as understood by later authors is the largest of the European eulimids; it is the typical form of *Eulima polita* of early British authors and it is a parasite of the holothurian *Neopentadactyla mixta* (Östergren) (CABIOCH et al. 1979). It also occurs in the Mediterranean, but specimens are rare in museum collections and it does not reach as large a size as in the Atlantic. It is figured in figures 1-4. It has been considered the type species of *Balcis* LEACH in GRAY, 1847, and an application to confirm this has been submitted to ICZN. There seem to be no closely related species present in Europe.

The typical form of *Eulima intermedia*, as understood by JEFFREYS is a parasite of several dendrochirote holothurians (WARÉN 1984), living in fairly deep water (20-200 m). It occurs from Scandinavia to the Mediterranean and was named *Acicularia lubrica* MONTEROSATO, 1890. It is here figured in figures 5-8.

*Rissoa bosci* PAYRAUDEAU is an exclusively Mediterranean species, characterized by its very solid shell with distinctly convex whorls (figures 9-10). It is a parasite of aspidochirote holothurians, and is rather rare. It belongs to *Melanella* BOWDICH sensu stricto.

In the Mediterranean there are several less common species of eulimids related to and closely resembling *Acicularia lubrica* MONTEROSATO. The taxonomy of these species is not yet fully understood, but there are several names available for them (*petitiana* BRUSINA, 1869; *crosseana* BRUSINA, 1886; *stalii* BRUSINA, 1869; *praecurta* PALLARY, 1904).

Another group of eulimids that has been involved in the pool of species around the names *polita* and *intermedia* are the species for which JEFFREYS (1867) used the names *Eulima intermedia* var. *rubrotincta* and *Eulima distorta* DESHAYES var. *gracilis* FORBES & HANLEY, 1850. The former of these two names denotes the form for which MONTEROSATO (1890: 159) introduced the new name *pernula* and (1884: 102) considered to be a synonym of *Rissoa sinuosa* SCACCHI, at least in the sense of later authors. The second name MONTEROSATO replaced with *Acicularia monterosatoi* (1890: 160), because of homonymy with *Eulima gracilis* C.B. ADAMS, 1850, which name seems to have been published a few months earlier (cf. CLENCH & TURNER



1950 and WOODWARD 1901). MONTEROSATO figured this species 1917, fig. 34. *Acicularia monterosatoi* normally occurs fairly deep while *A. pernula* is a common shallow water species. *Melanella monterosatoi* and *M. pernula* are figured in figures 11-12 and 13-14 respectively, and both can be classified in the genus *Melanella*.

There are numerous other species of Eulimidae in the Mediterranean, which at some occasion have been identified as *Eulima polita*, but they can be excluded from the discussion below, because they are very rare, deep water species or are strongly curved, the latter a feature that probably should have been mentioned in Linnaeus' description.

As a summary, the following taxa should be considered possible identifications of *Turbo politus* L.:

*Balcis alba* (DA COSTA)

*Melanella bosci* (PAYRAUDEAU)

*Acicularia lubrica* MONTEROSATO

*Melanella* spp. aff. *lubrica* (e.g. *petitiana* BRUSINA, *praecurta* PALLARY)

*Acicularia monterosatoi* MONTEROSATO

*Rissoa sinuosa* SCACCHI = *A. pernula* MONTEROSATO

Of this list the first name can be excluded, because the species is considerably larger than the size indicated by Linnaeus («grani hordei magnitudine», the size of a grain of barley i.e.. 6-8 mm).

*Acicularia lubrica* and *A. monterosatoi* can be excluded because they are rare in shallow water, and it is very unlikely that Linnaeus should have obtained one of these species.

Thus *Acicularia pernula* and the group of shallow water species resembling *A. lubrica* remain. There is no information in the description that supports one of the two cases more than the other and both are about equally common in shallow water. Previous authors have not restricted the use of the name in a way that they can be considered «first reviser» in the sense of the «Code». The only way to restrict the name then is to consider the consequences of the two possibilities.

A. If *Turbo politus* is considered an earlier name for one of the species related to *Acicularia lubrica*, it will simply replace the name of that species.

B. If *Turbo politus* is considered an older name for *Acicularia pernula*, it will also replace *Eulima intermedia* and *Rissoa sinuosa*, and leave the less often misused names of case A. untouched.

After discussing this problem with various malacologists, I have found solution B more appealing and selected a neotype (figure 13) of *Turbo politus* L. from Tunisia, that is deposited in the collections of the Zoological Museum, Uppsala. This specimen will also serve as a neotype of *Eulima intermedia* CANTRAINE, of which species no type material is left in Rijksmuseum van Natuurlijke Historie, Leiden, or in Institut Royal des Sciences Naturelles de Belgique and of *Rissoa sinuosa* SCACCHI of which there is no type material left in Italian collections or in Museum National d'Histoire Naturelle, Paris.

### Description of neotype (figure 13)

Shell of typical eulimid shape, tall and slender, slightly twisted, rather solid and perfectly transparent. Larval shell consists of 2.5-3 slightly convex whorls, height 380  $\mu\text{m}$  and is clearly demarcated from the teleconch by a labial scar. The teleconch consists of 9, almost perfectly flat, perfectly smooth whorls. There are 9 labial scars after the one demarcating the larval shell, with intervals of 1.0, 0.9, 0.9, 0.8, 0.8, 0.8, 1.2 and 1.2 whorls, counted from the larval shell. The suture is rather distinct and the sub-sutural zone occupies about 1/4 of the height of the whorls. The aperture is evenly rounded in its lower part, pointed above. Columellar callus well developed. Outer lip strongly retracted at the suture, which it meets at a right angle, lower part strongly protruding. Height of shell 6.72 mm.

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### EXPLANATION OF FIGURES

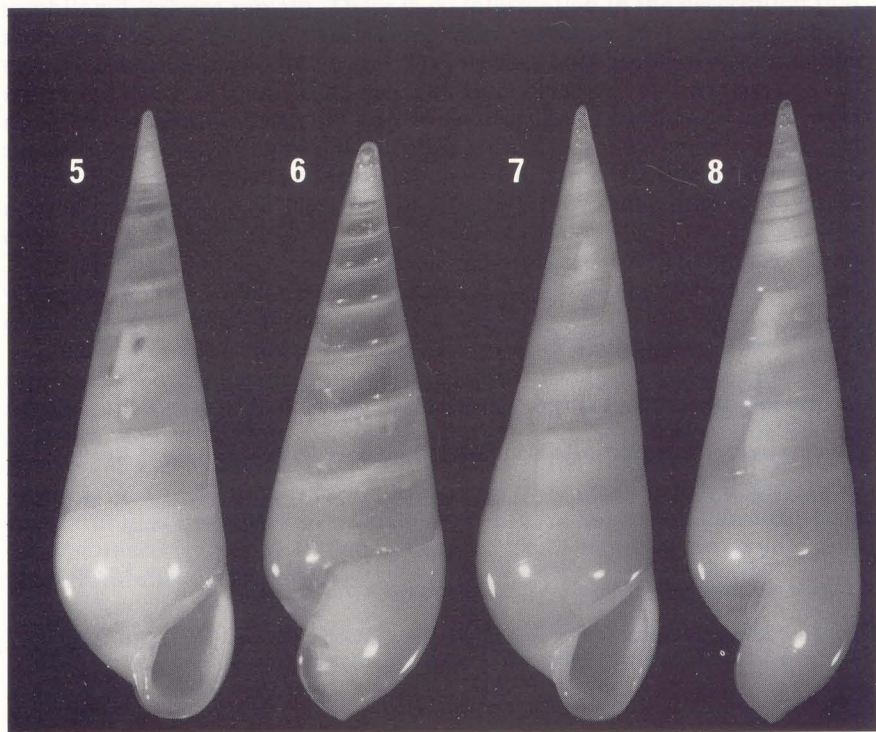
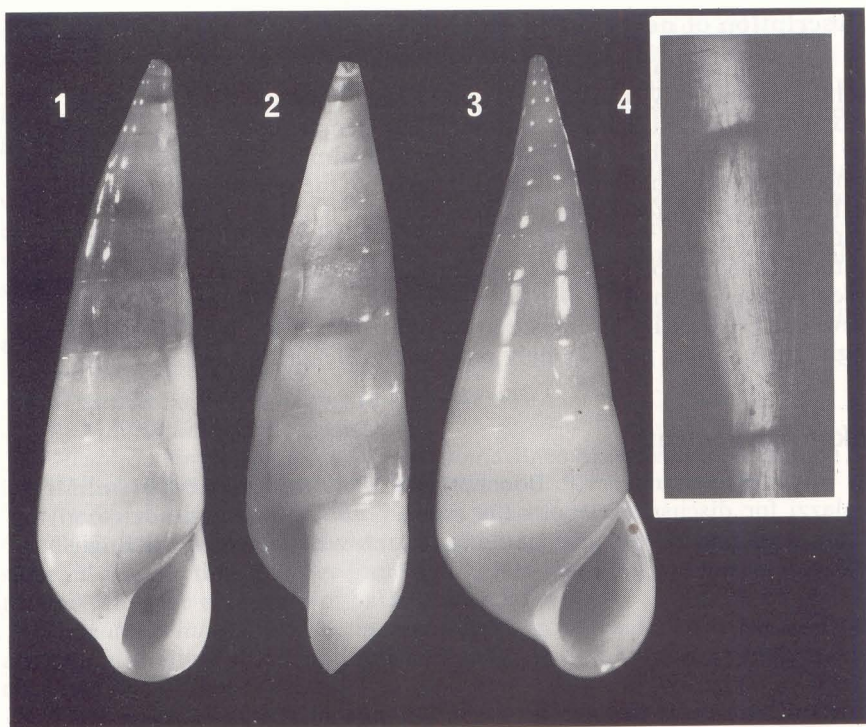
Figs 1-4. *Melanella alba*. 1-2. Bonden, off Gullmarsfjorden, Swedish west coast. 19.1 mm. -3-4. Acitrezza. Sicily, 60 m. Young specimen, 11.3 mm. -4. Detail, showing sculpture of penultimate whorl.

All specimens kept in Swedish Museum of Natural History (SMNH) except when noted.

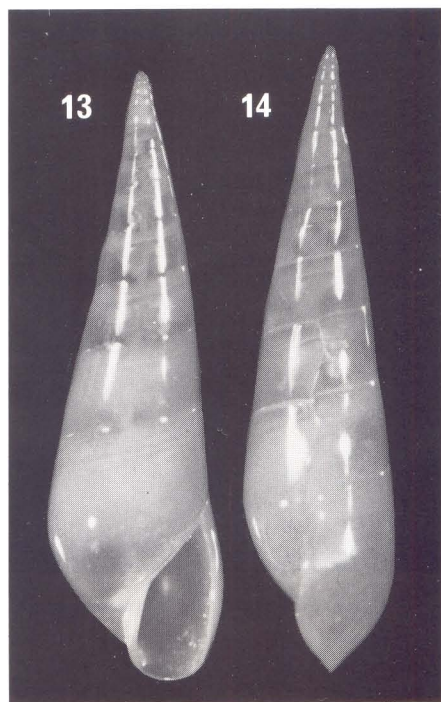
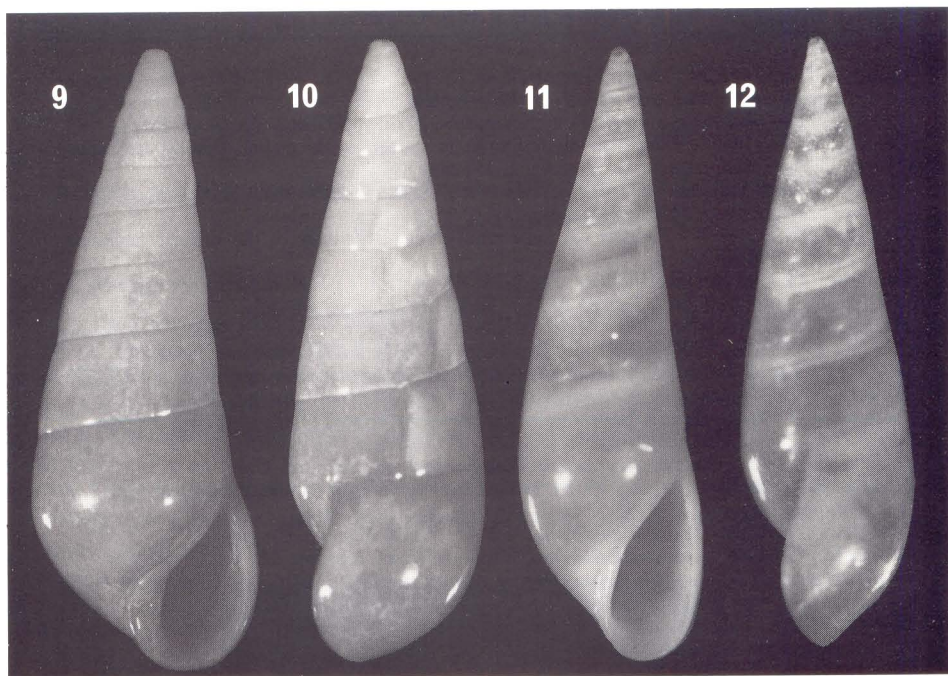
Figs 5-8. *Melanella lubrica*. -5-6. Off Chioggia, Italy, 23-24 m. -5. Female, 9.9 mm. -6. Male, 4.8 mm. -7-8. Baie de Calvi, Corsica, 60-80 m. -7. Female, 8.1 mm. -8. Female, 7.5 mm.

Figs 9-12. -9-10. *Melanella bosci*. Malta, 10.3 mm. - 11-12. *Melanella monterosatoi*, England, -11 Lectotype, 4.7 mm, SMNH 3610L. - 12. Paralectotype, 4.7 mm. SMNH 3610.

Figs 13-14. *Melanella polita*. NW of Mer de Bou Grara, Golf de Gabes. Tunisia. 10-15 m. -13. Neotype, 6.8 mm, Zoological Museum of Uppsala. -14. Same locality, 6.5 mm.







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