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## Taxonomical notes on Euro-Siberian freshwater molluscs.

### 1. *Turbo patulus* Da Costa, 1778 is not a senior synonym of *Limneus ampla* Hartmann, 1821 (Mollusca: Gastropoda: Lymnaeidae)

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**ABSTRACT.** The nomenclatorial history and the current taxonomic treatment of the species name *Limneus ampla* Hartmann, 1821 (Gastropoda: Pulmonata: Lymnaeidae) have been reviewed. It was established that this name cannot be regarded as a junior synonym of *Turbo patulus* Da Costa, 1778, as it has been suggested by Kruglov and Starobogatov [1983]. The original description of *Turbo patulus* contradicts the original drawing of the shell; moreover, the species's author obviously used this name in a quite wide sense, therefore it might be attached to different Palaearctic species of the (sub)genus *Radix* Montfort, 1810. Moreover, the species *L. ampla* does not occur in waterbodies of Britain, therefore it hardly could be described by Da Costa under the name *Turbo patulus*. To prevent possible troubles with using of these taxonomic names in future, we designate the lectotypes of *Turbo patulus* (based on its original picture) and *Limneus ampla* here.

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The basic principles of the zoological nomenclature are stability and universality in the scientific names as well as the priority of publication. These rules force taxonomists to look for the oldest available name among a set of names that can be attached to a given taxon [International Commission..., 1999]. In many well-investigated animal groups, such as freshwater molluscs, the history of taxonomic studies can be traced up to the middle of the XVIII century [Linnaeus, 1758, 1767] that sometimes creates a special problem for malacologists who want to judge on the identity of one or another species. It is well known that most species names introduced in older taxonomic papers are often not accompanied with clear and detailed description or differential diagnosis as well as with adequate drawings of whole animals or their diagnostically significant parts. The two last editions of "Systema Naturae" [Linnaeus, 1758, 1767] can present an excellent example of this kind.

One can imagine at least three possible ways to

avoid these intrinsic disadvantages of earliest taxonomic publications:

1. We may examine the type materials of a given species. This is the most reliable way, though some of older taxonomists' collections are not available now [Dance, 1986]. If the type specimen has not been clearly designated by the author, one can designate a lectotype of a given species. It is worthy to note that a lectotype can be designated on the basis of the original description or drawings, if a reviser is aware that the type series is lost [ICZN Art. 74.4].

2. We may try to collect topotypic specimens to add new information to an original description. This method has repeatedly been used in freshwater gastropod systematics [Meier-Brook, 1964, 1983; Falkner, 1984, 1985; Jackiewicz, 1988; Paraense, Pointier, 2003], though it has certain restrictions as well. For example, the type habitat might be not indicated by the species's author or be indicated in rather fuzzy manner ("Habitat in Siciliae", "frequens in Europea stagnis" and so on). Besides, the type habitat may have been altered or destroyed completely. If topotypic specimens are available, there is a possibility of designating a neotype [ICZN Art. 75.3.6; 75A] to provide stable application of a given name.

3. At last, we can exploit the tradition of cross-referencing, which is used in European scientific literature since the medieval epoch. As a rule, taxonomists of XVIII-XIX centuries supplied their species descriptions with lists of synonyms, indicating, who of their predecessors or contemporaries discuss this species. Thus, the tracing of these references allow us to produce well-grounded hypotheses about identity of species under disputation, even if the type materials and habitats are lost.

In this note, we investigate some nomenclatorial questions concerning the freshwater gastropod species name *Turbo patulus* Da Costa that was ambiguously used in subsequent malacological literature during XIX-XX centuries.