“Pisidium zoctanum” Poli, 1876” (Mollusca, Bivalvia) – a ghost-taxon from the Crimean Karani-Koba Cave

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ABSTRACT. The nomen “Pisidium zoctanum” Poli, 1876” was ambiguously used for some bivalve mollusk of the family Sphaeriidae inhabiting Karani-Koba Cave (Crimean Mountains, Karabi Massif). Literature and analysis of available museum material has shown that the nomen is not valid. This is due in part to the fact that this species has never been described and thus appears to be a ghost-taxon. To date, “Pisidium zoctanum” Poli, 1876” was ambiguously used for some bivalve mollusk. The work of G. Poli was published in four volumes, devoted to Sicilian mollusks, between 1791-1827. “Cardium casertanum” (currently belonging to the genus Pisidium Pfeiffer, 1821) appeared in the first volume, within the explanation of plate 16 [Poli, 1791: 68]; proper description was provided in the second volume [Poli, 1795: 65]; illustration was given in plate 16 of the Atlas (1791-1796), which was arranged as a separate fourth volume. No other names spelled similarly to “zoctanum” are present in this monograph. The combination “Pisidium zoctanum” Poli, 1876” is obviously erroneous as a publication as “Poli, 1876” does not exist.

Taking into consideration that neither original description nor correct introduction of the nomen “Pisidium zoctanum” into taxonomic use have been found we explored other literature sources containing data on bivalves from Karani-Koba Cave. We found two relevant publications.

Firstly, in I. Pusanov’s article on Crimean mollusks it is noted that the sample from Karani-Koba Cave was identified by V.A. Lindholm, but only as Pisidium sp. “[Сбор из Карани-Хоба, определен В.А. Линдхольмом лишь как Pisidium sp.”] [Pusanov, 1926(1925): 118]; thus no species name of sphaeriids from this cave was given. Secondly, and much later, the new species Euglesia crimeana Stadnichenko, 1980 was described. The author informs (page 31): “Голотип под № 1 хранится в коллекции Зоологического института АН СССР. Типовое местонахождение: пещера Карани-Хоба. Сбор В.А. Линдхольма” [Stadnichenko, 1980].

The name “Pisidium zoctanum” first appeared without mentioning the year of species description in the 3rd volume of Animalium Cavernarum Catalogus by B. Wolf [1938: 695]. The name was used for the miniature bivalve mollusk of the family Sphaeriidae from Karani-Koba Cave. There are no literature references for this species mentioning in Wolf’s monograph, and thus it should be recognized as the original authorial. The next mentioning of this nomen in the combination “Pisidium zoctanum” Poli, 1876” can be found in the book by V. Kniss [2001: 56, 104] with the reference to Wolf’s Catalogue. Moreover, it is stated that this species is a troglobilic inhabitant of the Karani-Koba Cave. Lastly, “Pisidium zoctanum” Poli, 1876” appeared in the publication of V. Anistratenko [2004: 45, 46] with the reference to V. Kniss [2001] but this time it was classified as a troglobilic species. No other publications with the name “Pisidium zoctanum” have been found.

The first step in the search for the origin of the nomen “Pisidium zoctanum” was an attempt to find the original description of this species in the works of Giuseppe Saverio Poli (years of life: 1746-1825) as his authorship was claimed by above cited references. The work of G. Poli was published in four volumes, devoted to Sicilian mollusks, between 1791-1827. “Cardium casertanum” (currently belonging to the genus Pisidium Pfeiffer, 1821) appeared in the first volume, within the explanation of plate 16 [Poli, 1791: 68]; proper description was provided in the second volume [Poli, 1795: 65]; illustration was given in plate 16 of the Atlas (1791-1796), which was arranged as a separate fourth volume. No other names spelled similarly to “zoctanum” are present in this monograph. The combination “Pisidium zoctanum” Poli, 1876” is obviously erroneous as a publication as “Poli, 1876” does not exist.

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¹ Some systematics arrange the group of minute sphaeriids similar to “casertanum” to the genus Euglesia Leach in Jenyns, 1832, where subgenus Casertiana Fagot, 1892 with type species Cardium casertanum Poli, 1791 is detached [e.g. Pirogov, Starobogatov, 1974; Korniushin, 1996].

Karani-Koba (old spelling Karani-Khoba) is situated on the northern part of Karabi Massif. According Kruber [1915] it is located at 985 m a.s.l., has a huge hall 64 x 30 m and up to 25 m in high. There are some pools there from which mollusks could be collected.
Apart from the literature sources we reviewed labels and museums catalogues concerning bivalve mollusks collected in Karani-Koba Cave. Such materials are preserved in the collections of Zoological Institute of RAS (St.-Petersburg) and V.I. Vernadsky University (Simferopol).

The content of labels and corresponding catalogue cards from Zoological Institute of RAS is given below (hand-writing is marked in bold; translated version in square brackets; strikethroughs are given accordingly to the original catalogue cards; no any spelling corrections were made by authors):

1) *Pisidium*

Label


2) *Pisidium casertanum*

Label


Catalogue card


3) *Euglesa crimeana*

Label


Catalogue card


4) *Euglesa eichwaldi*

Label


Catalogue card


5) *Pisidium personatum Euglesa eichwaldi*

Label


Catalogue card

“Зоол. Инст. А. Н. Пресноводн. жив. *Pisidium personatum Malom*. Лист № 2. №№ п/п
**Pisidium zoctanum** – a ghost-taxon

The content of labels for two sphaeriid samples from the collection of the V.I. Vernadsky University (Simferopol) (two labels per each sample):

Labels of sample 1
a) “Karani-Khoba Cave 22.VI.914.”; b) “N3 Pisidium sp.? det. V. Lindholm”.

Labels of sample 2
a) “Karani-Khoba Cave 22.VI.914.” [“Karani-Khoba Cave 25.VI.914”]; b) “Legit W. Pliguinskii”.

Sphaerid material from Karani-Koba Cave has been deposited in the ZIN collection, and are labeled and catalogued as those which were collected by V.A. Lindholm. However, it is possible they were not collected by V.A. Lindholm, and rather just belonged to his collection. This is possible as the original label is marked: “Collectio W. A. Lindholm. Pisidium. Karani-Choba (Höhle). Fauna Taurica. Krim.”. On this label Lindholm is indicated as the owner of the collection but not necessarily as the collector. The name of collector is visibly absent here. It seems that all other labels and cards from the samples mentioned above, from the ZIN collection, and are labeled containing some Siberian mollusks, but these samples have never been described and appears to be a ghost-taxon or nomen nudum in terms of International Code of Zoological Nomenclature.

We conclude that confusions of this kind sometimes lead to serious taxonomic difficulties. To avoid such errors researchers should be responsible and accurate in nomenclature application.

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**References**


Kruber A.A. 1915. Région karstique des montagnes de Crimée. Moscou, 319 pp. [In Russian, summary in French].


Stadnichenko A.P. 1980. New species of freshwater molluscs (Bivalvia, Cyclidaeae) of the fauna of the USSR. Vestnik Zoologii, 6: 29-34 [In Russian].

Poli I.X. [G.S.]. 1795. Testacea utrusque Siciliae eorumque historia et anatome tabulis aeneis illustrata. Tomus primus. Parmae, Ex Regio Typographio, iv + x + 90 + 50 + 74 + lxxiii p. [In Italian, summary in French].

**Note:**

- **Pisidium personatum**
- **Koba**, kept in the Simferopol University, is labeled.
- Furthermore, it is of interest to note that one of the labels and cards from the collection of the V.I. Vernadsky University (Simferopol) (two labels per each sample):
- a) “Karani-Khoba Cave 22.VI.914.”; b) “N3 Pisidium sp.? det. V. Lindholm”.
- a) “Karani-Khoba Cave 22.VI.914.”; b) “N3 Pisidium sp.? det. V. Lindholm”.
- Sphaerid material from Karani-Koba Cave has been deposited in the ZIN collection, and are labeled and catalogued as those which were collected by V.A. Lindholm. However, it is possible they were not collected by V.A. Lindholm, and rather just belonged to his collection. This is possible as the original label is marked: “Collectio W. A. Lindholm. Pisidium. Karani-Choba (Höhle). Fauna Taurica. Krim.”. On this label Lindholm is indicated as the owner of the collection but not necessarily as the collector. The name of collector is visibly absent here. It seems that all other labels and cards from ZIN, mentioned above, are derived from this original one and contain mistaken data about collector. Furthermore, it is of interest to note that one of the sphaeriid samples from the same cave (Karani-Koba), kept in the Simferopol University, is labeled as collected by V. Pliginsky in 1914. Additionally another sample is labeled as identified (but not collected) by V. Lindholm. It is possible that among the samples mentioned above, from the ZIN collection, at least not all (or even none of them) were collected by Lindholm, but we can not confirm this for sure. The suggestion corresponds with the opinion of other researchers. For example, M. Vinarski [2010: 56] indicated that Lindholm’s collection, containing some Siberian mollusks, but these samples are not accompanied with information regarding the collector or the year of sampling. The name Lindholm in the case only points out the origin from the “collection of Lindholm” which came to ZIN funds in 1935 after his death.
- According to the literature cited above, as well as voucher labels from museum collections, “Pisidium zoctanum Poli” has never been registered. Furthermore, it is absent even in the field labels. Moreover, a species with such a name does not exist at all besides Wolf’s Catalogue and the subsequent publications which cite Wolf’s work. These publications thus have no justified ground to the use of the name. The species “Pisidium zoctanum” has never been described and appears to be a ghost-taxon or nomen nudum in terms of International Code of Zoological Nomenclature.

We conclude that confusions of this kind sometimes lead to serious taxonomic difficulties. To avoid such errors researchers should be responsible and accurate in nomenclature application.

As a result of our research, we have identified and clarified the correct names and collections which may be useful for further studies. Our work provides a valuable contribution to the understanding of the biodiversity of these regions and their taxonomic status.
“Pisidium zoctanum Poli, 1876” (Mollusca, Bivalvia) — таксон-призрак из крымской пещеры Карани-Коба

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РЕЗЮМЕ. Название “Pisidium zoctanum Poli, 1876” по неясным причинам было использовано для какого-то двустворчатого моллюска из семейства Sphaeriidae, обитающего в пещере Карани-Коба (Крым, Караби-Яйла). Анализ литературы и доступных музейных материалов показывает, что это название невалидно: такой вид никогда не был описан и представляет собой название-призрак. Единственным корректно установленным названием для сфери из пещеры Карани-Коба являются пока только Euglesia crimeana Stadnichenko, 1980.