



**Тезисы докладов
Международного семинара
по биоразнообразию и эволюции моллюсков**

26–27 сентября 2019

Владивосток, Россия



**Abstracts
of the International Seminar
on Biodiversity and Evolution of Mollusks**

September 26–27, 2019

Vladivostok, Russia



**Vladivostok - Владивосток
2019**

Ministry of Science and Higher Education
Far Eastern Branch of the Russian Academy of Sciences
A.V. ZHIRMUNSKY NATIONAL SCIENTIFIC CENTER
OF MARINE BIOLOGY

RUSSIAN FAR EAST MALACOLOGICAL SOCIETY

Министерство науки и высшего образования
Дальневосточное отделение Российской академии наук
НАЦИОНАЛЬНЫЙ НАУЧНЫЙ ЦЕНТР МОРСКОЙ БИОЛОГИИ
ИМ. А.В. ЖИРМУНСКОГО
ДАЛЬНЕВОСТОЧНОЕ МАЛАКОЛОГИЧЕСКОЕ ОБЩЕСТВО

ABSTRACTS
*of the International Seminar
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УДК 594

Abstracts of the *International Seminar on Biodiversity and Evolution of Mollusks*,
September 26–27, 2019, Vladivostok, Russia. Compiled by K.A. Lutaenko. Vladivostok:
NSCMB FEB RAS and RFEMS, 2019. 82 p.

Тезисы докладов Международного семинара по биоразнообразию и эволюции
моллюсков, 26–27 сентября 2019 г., Владивосток, Россия. Сост. К.А. Лутаенко. Вла-
дивосток: ННЦМБ ДВО РАН, ДВМО. 82 с.

Утверждено к печати Ученым советом
Национального научного центра морской биологии им. А.В. Жирмунского ДВО РАН

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Skeneidae and Anatomidae in the seas of the Eurasian Arctic

Ekanerina N. Krol¹, Ivan O. Nekhaev²

¹*Research Laboratory "Monitoring and Conservation of Natural Arctic Ecosystems",*

Murmansk Arctic State University, Murmansk 183038, Russia

e-mail: krol.katerina@gmail.com

²*Laboratory of Macroecology and Biogeography of Invertebrates,*

St. Petersburg State University, St. Petersburg 199034, Russia

e-mail: inekhaev@gmail.com

Representatives of the families Skeneidae and Anatomidae are micromolluscs with adult size usually not exceeded 3 mm. These snails are the only tiny microvetigastropods known from the Arctic waters. Like many others small organisms, they remain poorly studied and their taxonomical and morphological diversity is underestimated in many regions of the world. In the Arctic and subarctic regions, species composition of microvetigastropods is satisfactory described by Warén (1991, 1993) for Skeneidae and by Høisæter and Geiger (2011) for Anatomidae only in the waters around Greenland, Iceland, and Norway. Morphological characters of shell and radula are still remaining the only usefull tools in their taxonomy.

Little known about microvetigastropods from the Arctic regions East to the Norwegian Seas. The numerous faunistic studies often do not try to identify tiny organisms and reduce diversity of Anatomidae to *Anatoma crispata* (Flemming, 1828) and recognize only two skeneids – *Skenea trochoidea* (Friele, 1876) and *Skenea basistriata* (Jeffreys, 1877). Gorbunov (1946) described one more species – *Ganesa bujnitzkii* (Gorbunov, 1946), from the region between the Laptev and the East Siberian seas. Its taxonomical status remains unclear so far. In addition, Nekhaev (2014) mentioned a possibly undescribed *Skenea cf. trochoidea* from the Kola Peninsula.

We studied collections of the Zoological Institute of Russian Academy of Sciences (St. Petersburg, Russia) and the Laboratory of Macroecology and Biogeography of Invertebrates, St. Petersburg State University (St. Petersburg, Russia). Material was collected in the Eurasian Arctic seas: Barents, Kara, Laptev, and East Siberian, while samples from the White and Chuckchi seas were absent in the studied material. Also, we had seen reference collections (including type specimens) stored in the Swedish Museum of Natural History (Sweden) and Zoological Museum of Bergen University (Norway). All specimens of microvetigastropods were studied under the stereomicroscope, after that 35 shells (15 for Anatomidae, 20 for Skeneidae) and 16 radulae (7 for Anatomidae, 9 for Skeneidae) of selected specimens were studied with a scanning electronic microscope.

As a result, we found three species of the family Anatomidae instead of one living in the region. There are *Anatoma crispata*, *Anatoma schanderi* Høisæter et Geiger, 2011 and *Anatoma* sp. n. The new species from the northwestern Barents Sea can be recognized

from all other representatives of the family by its flat spire. We also suggest that *Anatoma schioettei* Høisæter et Geiger, 2011 described from the upper slope of Greenland is actually a conchological variety of *Anatoma crispata*. Both species differ by a sutsel (space between the start of selenizone and suture of the subsequent whorl in *Anatoma schioettei* relatively larger) and number of axials (e.g. 22 in *Anatoma crispata* vs 15 in *Anatoma schioettei* on teleoconch I). However, these characters were quite variable in our material and we found intermediate forms. Moreover, studied specimens do not have distinct differences in shell shape, radular morphology and size of protoconch.

We found two empty shells of *Anatoma schanderi* from the waters around New-Siberian Islands. The species was previously known only from Nova Scotia to the Norwegian Sea. This species is the only representative of the family known from the waters east to the Barents Sea.

According to our preliminary analysis, at least five species of the family Skeneidae live in the regions: *Skenea rugulosa* (Sars G.O., 1878), *Skenea trochooides*, *Skenea basis-triata*, *Skenea ossiansarsi* (Warén, 1991) and “*Rugulina*” *bujnitzkii* (Gorbunov, 1946). *Skenea cf. trochooides* noted by Nekhaev (2014) was considered as a form of *Skenea trochooides*.

We studied two syntypes of *Ganesa bujnitzkii* which are the only known representatives of the species. Due to the similar pattern of the shell sculpture we suggest that this species is related with the genus *Rugulina* Palazzi, 1988.

In addition, with a high probability, two more species *Skenea polita* and *Skenea ferruginea* are also inhabit the Barents and Kara seas.

The study was supported by the Russian Scientific Foundation under the grant no. 18-74-00010 (examination of ZIN collection and morphological studies). Study of the recent material from the Barents Sea was able to support of grant Council of the President of the Russia under grant no. MK-4797.2018.4. Work with the scanning electronic microscope was performed at the Research park of St. Petersburg State University Interdisciplinary Center for Nanotechnology.

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of the Russian Far East
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