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Checklist of the Amphipoda (Crustacea) from continental waters of Russia, with data on alien species

Контрольный список Amphipoda (Crustacea) континентальных вод России, со сведениями о чужеродных видах

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КЛЮЧЕВЫЕ СЛОВА: амфиподы, таксономия, номенклатура, биоразнообразие, распространение, биогеография, чужеродные виды.

ABSTRACT. A checklist of the amphipod fauna from continental water bodies, streams and subterranean waters of the Russian Federation is provided (based on data for the end of 2013). Species are divided into 11 ecological and biogeographic groups: Holarctic, West Palearctic, Baltic Sea Estuarine, Siberia-Pacific Coast (East Palearctic), Amphi-Pacific, Caucasus, Central Asiatic and Baikalian, and three groups of escapees (emigrants) from the Baikalian, Ponto-Caspian and Arctic Oceans. Twenty-six families, 110 genera and 581 species and subspecies are reported. Species that constitute the autochthonous complex of Lake Baikal comprise 61% of the fauna (276 species, and 78 subspecies). The current taxonomic and the nomenclatural problems of amphipods from the Baikalian and Caspian groups are discussed. A separate list of alien species (or invaders) for continental waters of Russia is provided.

РЕЗЮМЕ. Приведен таксономический контрольный список видов амфипод, зарегистрированных в континентальных водоемах, водотоках и подземных водах Российской Федерации (по данным на конец 2013 г.). Виды подразделены на 11 эколого-биогеографических групп: голарктические, западно-палеарктические, балтийские эстуарные, сибирско-тихоокеанского региона (восточно-палеарктические), амфипацифические, кавказские, центрально-азиатские, байкальские, эмигранты из Байкала, виды понто-каспийского происхождения, эмигранты из Северного Ледовитого океана. На данный момент отмечено 26 семейств, 110 родов и 581 вид и подвид амфипод. На виды, составляющие автохтонный комплекс озера Байкал, приходится 61% состава фауны (276 видов и 78 подвидов). Даны пояснения, касающиеся современных проблем таксономии и номенклатуры байкальских и каспийских амфипод. Отдельно приведен список чужеродных видов, или видов-вселенцев в континентальные водоемы регионов России вне их первоначального ареала.

Introduction

A faunal inventory of our planet remains an urgent task. A basic taxonomic knowledge is necessary for bio-evolutionary studies as well as for understanding biogeography. The Amphipoda are one of the most successful and rapidly evolving malacostracan orders, displaying a tremendous diversity in marine, terrestrial and continental waters. We attempt to list the amphipods inhabiting the continental waters of the Russian Federation.

Our biogeographic analysis was limited to the borders of the Russian Federation (as of 2013). There are several reasons why we did not distinguish natural geographic areas. First, there is no generally accepted biogeographic regionalization scheme for continental waters. For example, Northern Eurasia can belong either to the Palearctic region or to the Holarctic region. Furthermore, the Palearctic southern boundary is de-

termined in several different ways. Second, historically, biogeographic analysis of the amphipod fauna was confined to separate regions. For example, the amphipod fauna of the Russian Altai Mountains is considered relatively well studied [Martynov, 1930] while the Mongolian Altai still remains a "blind spot" and we can only presume that the Altai Mountain fauna has a certain historical unity.

We summarize the fragmentary biogeographical data on the amphipod fauna in different regions and discuss the current taxonomy, taking into account different points of view. We refer to a number of relevant taxonomic studies on Russian amphipods in order to increase international readers' awareness of the little known "Russian literature".

In addition, we analyse the range extension and the current biogeographic state of alien species (invaders) among amphipods in continental waters of Russia. In the frame of this paper we use the term "alien species" to specify the taxa that spread beyond their historically native range over the last 100 years, or species introduced to a new range where they established themselves and spread over the region. The introduced species are a special case of alien species, namely the species that have been transported due to human activities, either intentionally or accidentally, to a region in which they did not occur in historical times and are now reproducing in the wild [Jeschke, Strayer, 2005].

In Russia with its extensive territory (the total area measuing 17 075 thou km^2), the donor regions for alien species are other regions of the same country or other countries and continents. For separate eurybiotic species of amphipods that have capacity for active migrations in rivers to considerable distances, and for rapid reproduction, the distribution rate is high. The majority of alien amphipods penetrated the Baltic Sea basin from the basins of the Volga River, Caspian Sea, Black Sea and the Sea of Azov after the construction of artificial canals, reservoirs and drainage systems and the formation of waterways (canal-river network). The Volga-Don, Volga-Baltic, Dnieper-Vistula and Danube-Rhine systems are the most important waterways for the dispersal of amphipods over the European continent from the Ponto-Caspian basin to the Baltic Sea (for details, see: [Berezina, 2007a]).

Material and methods

All species from the continental waters of Russia, with the exception of the Caspian and Aral Lakes (derivatives of the ancient Tethys Ocean), were included. However, alien species that originated from the Caspian Sea and naturalized in other regions of Russia were included. It should be noted that we avoid the word "freshwater amphipods", and use "amphipods of continental waters" because some amphipod species occur in brackish-water estuaries, salt lakes and mineral springs. Also, some species are able to be tolerant and reproduce successfully over a wide range of salinity. For example, *Gammarus lacustris* Sars, 1863 is reported for salinities ranging from 0.3 to 25 g/l [Takhteev, 2009]. On the other hand, we have not included on the list stenohaline marine species, such as *Marinogammarus finmarchicus* (Dahl, 1938) or *Spasskogammarus spasski* Bulycheva, 1952, although they were found in the mouths of creeks, rivers, and in the upper horizons of intertidal and subtidal zones, at salinities above 5‰ (5 g/L). This boundary was accepted by the Venice System for the Classification of Marine Waters (1958) as the upper border of freshwater origin fauna distribution [Khlebovich, 1974].

The genera and species lists are based on valid families; all controversial cases will be mentioned in the text where appropriate. In the generic list we affiliate each specific genus to one of the three ecological complexes (Paleolimnic, Mesolimnic and Neolimnic) which was originally proposed for Lake Baikal fauna [Martinson, 1967] and later extended to all inhabitants of continental waters [Starobogatov, 1970; Baikalogy, 2012]. Each complex was referred to the time of isolation from marine ancestors, the duration of which conditionally determines its ecological features. It should be noted that we highlight here the age of all three complexes, although our views disagree with the view maintained by Martinson [1967] and Starobogatov [1970] (see below).

The "Paleolimnic complex" includes the ancient freshwater inhabitants, separated from the marine relatives in the Mesozoic era (Jurassic, Cretaceous). For example, the underground amphipod family Crangonyctidae is attributed to the Paleolimnic complex, taking into account their amphiboreal distribution in Eurasia and North America.

The "Mesolimnic complex" derives from the marine ancestors in the early Cenozoic era, from the Paleocene to the Oligocene. In particular, freshwater species of the genus *Gammarus* belong to this complex as derivatives of the Tethys Ocean period [Hou *et al*., 2011] as well as all endemic amphipods of Lake Baikal [Starobogatov, 1970; Takhteev, 2000b; Baikalogy, 2012].

The "Neolimnic complex" is the youngest, from the late Cenozoic era, and relates to Miocene, Pliocene, Pleistocene and, probably in some cases, to the Holocene. The distribution of the Neolimnic complex species is restricted to areas of marine transgression during these periods, such as the lakes and river estuaries of the Arctic Ocean basin, and coasts and islands in the Asian-Pacific part of Russia. For example, this complex includes representatives of the families Gammaracanthidae, Pontoporeiidae, Oedicerotidae, Uristidae, Anisogammaridae and Hyalidae. Also, species of Ponto-Caspian origin, inhabiting the continental waters within the specified period, were attributed to the Neolimnic complex.

The zoogeographical division of Russian continental water bodies based solely on the Amphipoda creates difficulties in choosing the guiding principle. Initially, we relied on the geography and origin of the taxa. In this case, the construction of a single zoogeog-

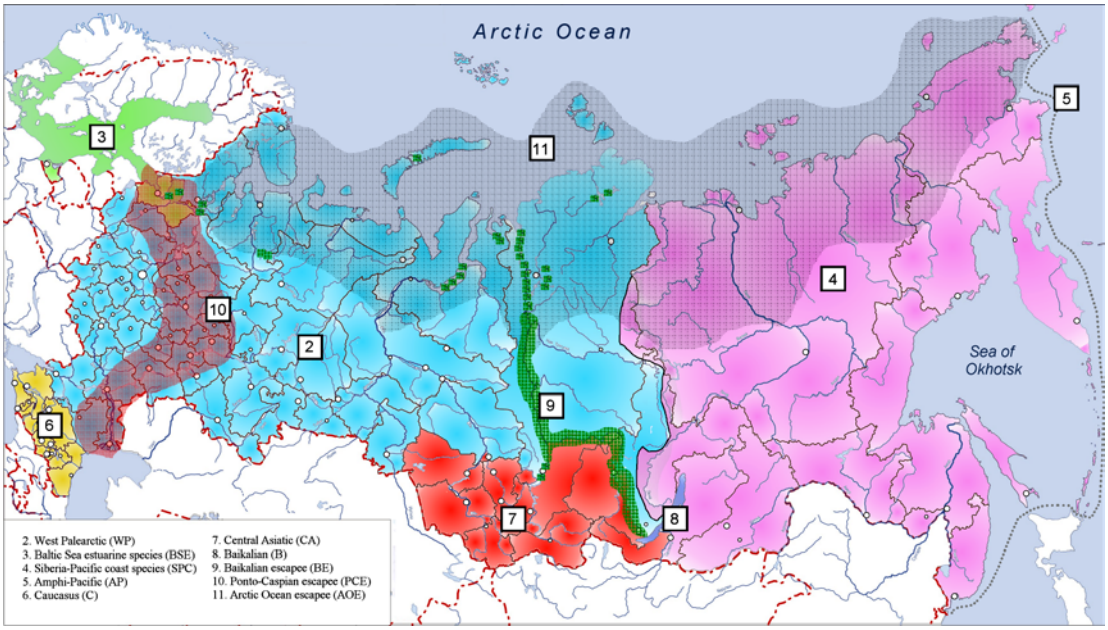

Fig. 1. Map displaying the distribution of the biogeographic groups of amphipod species in Russia. Group 1 "Holarctic" (H) is not shown; it occurs throughout the territory.

Рис. 1. Карта, отображающая распространение биогеографических групп видов амфипод в России. Замечание: группа № 1 "Голаркты" (Holarctic, H) не показана, распространена по всей территории.

raphy for subterranean and epigean species does not make sense, because it will be artificial and can be realized only on the supra-genus levels. In general, we are committed to the view of Darlington, who defined three zoogeographical classes [Chernov, 1975]. Therefore, to obtain a qualitative picture of the fauna, a number of species groups have been allocated based on their present geographical distribution and partly on centers of origin (Fig. 1). Eleven amphipod species groups were distinguished for the biogeographic analyses within this paper.

1. **Holarctic** (**H**). Species distributed in the Northern Hemisphere on both continents, such as the limnophilic *Gammarus lacustris* and the alien *Gammarus tigrinus* Sexton, 1939, are referred to this group.

2. **West Palearctic** (**WP**). The group includes species which are wide-spread in Europe and/or Asia but not farther east than the west coast of Lake Baikal in the south and the Taimyr Peninsula in the north. The Baikal mountain system and Lake Baikal is an important zoogeographic barrier for many aquatic and terrestrial faunal groups. Taimyr is the watershed between the basins of the majority of Siberian rivers including the Ob' and Yenisei rivers on the west and the Lena river on the east of Russia.

3. **Baltic Sea estuarine species** (**BSE**). The species from the Baltic Sea region were distinguished as a separate group because the Baltic Sea is the unique ecosystem, being only slightly saline (brackish). The Mediterranean and the Ponto-Caspian origin species including *Corophium volutator* (Pallas, 1766), characterized by an Amphi-Atlantic distribution, were placed in this group.

4. **Siberia-Pacific coast species** (**SPC**). This complex includes species from the Russian Far East and Eastern Siberia, which extend west not further than eastern coast of Lake Baikal and the Lena river basin.

5. **Amphi-Pacific** (**AP**). This group includes species from both sides of the Pacific Ocean and includes only one terrestrial amphipod *Traskorchestia ochotensis* (Brandt, 1851).

6. **Caucasus** (**C**). Only endemic species from the genera *Gammarus*, *Niphargus, Lyurella* and *Synurella* were found in freshwater ecosystems of the Caucasus.

7. **Central Asiatic** (**CA**). Species inhabiting the mountain zones of Central Asia. Several species of *Gammarus* are endemic to specific mountain systems. Asian species of the genus *Stygobromus* (mainly North American), tending to the mountain zones of the Altai and Baikalian Siberia, are also referred to this group.

8. **Baikalian** (**B**). All species endemic and subendemic to Lake Baikal are included.

9. **Baikalian escapee** (**BE**). This group consists of species of Baikalian origin that were found in the Angara and Yenisei rivers, and rarely in northern latitudes including the Ob' river estuary and northwestern Russian lakes but not in Lake Baikal. In particular, the "glacial relicts" *Pallasea quadrispinosa* Sars, 1867 and *Pallasea laevis* Ekman, 1923 belong to this group. The former species inhabits the Northern regions of both the European and Asian parts of the country (see Fig. 1, group 9), and the status of the latter species needs to be tested; it was found on the Novaya Zemlya archipelago and recently (presumably) in the cave waters in the North of European Russia [Sidorov *et al.*, 2011].

10. **Ponto-Caspian escapee** (**PCE**). The species within this group originate from the basins of the Caspian and Black Seas and the Sea of Azov including the lower courses of large rivers emptying into the seas. This group includes species from the upstream migratory complex in the rivers of the Sea of Azov and the Caspian and Black Seas (Volga, Kama, and Don), and all Ponto-Azov-Caspian origin species that have penetrated the Baltic Sea basin in connection with the construction of artificial canals, and with other human-mediated vectors. Species endemic to the Sea of Azov and the Black and Caspian Seas are not included in this group and on the checklist.

11. **Arctic Ocean escapee** (**AOE**). This group includes relict species of the late Cenozoic marine transgressions, such as *Gammaracanthus* spp., and *Monoporeia affinis* (Lindström, 1855). In the literature, they are often named the "glacial relicts", but this is not quite correct. The transgressions of the ocean to land did not occur during periods of glaciations; they tok place at interglacial periods due to an increase in water mass runoff to the ocean, and the thermal expansion of the water. Some views of the existence of periglacial dammed lakes that could serve as the natural "gateways" for marine fauna elements [Grosswald, 1998, etc.] are still a disputed topic.

Taxonomic notes

The amphipod genus *Gammarus* is characterized by a variety of species amongst the Palearctic groups. The number of new species continues to grow. In the summary of Barnard & Barnard [1983] there were 117 species, mostly freshwater. According to Hou *et al*. [2013], the total number of species is more than 200. The genus needs further revision; given the fact that parallel speciation in different mountain ranges of Asia from the same ancestral forms may be assumed. On the other hand, we have attempted to unite all species recorded in Russia within three groups according to Stock [1967] and Karaman & Pinkster [1977].

A difficult situation has arisen with the taxonomy of Lake Baikal amphipods. A partial revision was presented by Bousfield [1977], Barnard & Barnard [1983] and Takhteev [2000b, 2012]. One of us (Takhteev, V.V.) described 32 new species and subspecies and made redescriptions for more than 40 taxa based primarily on the type material (see Takhteev, 1992a, b, 1993, 1995, 1997, 1999a, 2000a, b; Takhteev, Levashkevich, 2006). However, a series of publications by Kamaltynov [1999, 2001, 2009] have consistently introduced new families and subfamilies, the "old" genera were fragmented into a number of a new genera, and numerous subspecies of amphipods (totaling 65) were elevated to distinct species. As a result, the system proposed by R.M. Kamaltynov contains 10 families and 13 subfamilies of amphipods (excluding nominative). In addition, 19 new genera (excluding replacement names) were established, and 12 subgenera were assigned to generic rank by Kamaltynov, almost without any taxonomic evidence or analyses for the proposed changes [Kamaltynov, 2001, 2009]. He has not provided keys to the genera and species; as a result, the new taxa are difficult to determine.

Kamaltynov [2001] proposed four new names, established from the undefended elevation to species level of the previously known intraspecific variations that were never described properly. For two of these four species (*Micruropus stelleri* Kamaltynov, 2001 and *M. tomilovi* Kamaltynov, 2001) he referred to the drawings of the separate body appendages in a paper of Bazikalova [1962] and gave to these figures the status of holotype [sic!]. And it is even not known these figures refer to the same specimen. The third species, *Hyalellopsis linevichae* Kamaltynov, 2001, was established by reference to the description of *Hyalellopsis tixtonae* Sowinsky, 1915 in a monograph by Bazikalova [1945], in the belief that she, under this name, incorrectly described the new taxon. A review of the type material *H. tixtonae* indicates that Sowinsky [1915] and Bazikalova [1945] described the same form, and the name *H. linevichae* is a **nomen nudum**. For the fourth species, *Carinurus karamani* Kamaltynov, 2001, the author mentions a single specimen (syntype), but its description is not provided. In this case, Kamaltynov referred briefly to the differences of "*Carinurus belkini* forma A" in Bazikalova [1935, 1945]. As no type material was provided, and no proper descriptions or diagnoses prepared, we consider none of these names to be valid. Kamaltynov also revised the Caspian Sea fauna and created two new families: Behningiellidae and Iphigenellidae. The justification for the new families is brief [Kamaltynov, 2001], and his definitions imply that the revision by the previous authors was incomplete.

Similarly, we also cannot agree with the proposal of Kamaltynov [2001, 2009], considering 65 subspecies of Lake Baikal amphipods to be an independent species. These nomenclatural changes have been made by "a package or a horde", based on the facts (sometimes single) of co-occurrence of a different subspecies of a single species in the same samples. Unfortunately, this is already reflected in the WoRMS database (http://www.marinespecies.org/aphia.php?p=taxdetails&id=720708). We are firmly confident that every single case of a change of rank of the taxon requires a special justification. Suffice it to say that Dybowski [1874] described many subspecies in general as varieties (var.). In the subspecies, they were included for formal reasons, following the first edition of the International Code of Zoological Nomenclature [1961], where all pre-existing variations were given the subspecies status. Bazikalova [1945] described taxa as subspecies in the presence of a series of transitional forms to the nominative subspecies. Hence, without a specific justification for the change, we continue to consider the subspecies from the Lake Baikal in the same rank to be valid.

It is necessary to adhere to the principle of conservation and promote stability of the existing system, as long as there are no compelling reasons to change it. There is also a clear need to assign criteria for systematization of families and genera. One of the authors (Takhteev, V.V.) believes that a taxonomic revision of a polymorphic group, such as amphipods of Lake Baikal, must use the *archaetypical method* [Takhteev, 2000a, 2010, 2012] (see also Lyubarsky, 1996, pp. 12, 69–72, 102–107). Since the morphological boundaries of many taxa (families and genera) intergrade, they can only be distinguished from one another with difficulty, whereas some species and genera possessing a sharply deviating character must be allocated as the archetype ("core" of the taxon). A taxonomic diagnosis must be based on the main plan of morphology of the archetype form. A taxonomic rank identical with the "core" should not be assigned for peripheral and aberrant forms. Otherwise there arises an artificial inflation of taxa where many taxa are fragmented, creating an abundance of "dwarf" taxonomic groups of the highest rank, and the ranks themselves become worthless. All taxonomic ranks above the species level are inclusive groups, whereas only the species rank is exclusive. For example, there is no need to placethe the species *Baikalogammarus pullus* (Dybowsky, 1874) in the monotypic family Baikalogammaridae Kamaltynov, 2001. This is a peripheral group in the family Micruropodidae, and its only sole representative is characterized by archetypical features of this family, such as the small size, lack of cuticular armature and spines on urosome, one article in accessory flagellum of antenna 1 as well as other shared features [Takhteev, 2012].

In this publication, we do not discuss the macrosystematics of the Baikalian amphipods in detail but emphasize highlight that Takhteev's [2000b] system was adopted. On the other hand, from the perspective of the archaetypical approach we agree with some proposals made by Kamaltynov [2001], such as the establishment of the family Micruropodidae (but its composition was revised, and some of the taxa were assigned to the family Carinogammaridae Tachteew, 2000), and the subfamilies Hyalellopsinae and Parapallaseinae [Takhteev, 2010, 2012]. We also recognize some new genera proposed by Kamaltynov, such as genus *Profundalia,* and the two subgenera *Babr* and *Dorogostajskia*.

The genus *Profundalia* Kamaltynov, 2001 includes only one species *P. tenuis*, which Bazikalova [1971] decided to exclude from the genus *Eulimnogammarus*, but did not specify to which genus it is belong. This species has a small size (less than 5 mm), one-articulate outer ramus on uropod 3, and lacks cuticular armature on the body segments and spines on urosome, which is typical for the family Micruropodidae. On the other hand, in the accessory flagellum of antenna 1 there are up to four articles, and antenna 1 is not smaller than the body length. We believe that *P. tenuis* is among the species with an unclear taxonomic status.

The genus *Babr* Kamaltynov et Väinölä was reported in Kamaltynov [2001]; later, it was characterized in detail by Daneliya *et al*. [2009]. They transferred *Pallasea* (*Pallasea*) *baikali baikali* and *Pallasea* (*Pallasea*) *baikali nigromaculata* to the aforementioned genus, and the subspecies *Pallasea* (*Pallasea*) *baikali inermis* was synonymized with *Babr baikali*. In our opinion, the taxonomic problem of *Pallasea* needs additional studies involving both morphological and molecular methods. In particular, *Pallasea baikali inermis* is a local endemic subspecies which inhabits shallow waters of the Selenga river delta. The morphological differences of this endemic subspecies are, probably, the result of specific environmental conditions in the delta area and it may be genetically identical with the nominative subspecies. In this paper, we accept *Pallasea* as a single genus but with four well-defined subgenera, namely *Pallasea*, *Babr*, *Homalogammarus* and *Pentagonurus*.

Dorogostajskia Kamaltynov, 2001 was introduced as a substitute name for *Spinacanthus* Dorogostajsky, 1930 *nomen praeoccupatum* [Kamaltynov, 2001]. We regard *Dorogostajskia* as a subgenus of *Brandtia* due to the presence of transitional forms between these taxa (*Brandtia (Dorogostajskia) insularis*). Bazikalova [1948] assigned *Spinacanthus* (currently *Dorogostajskia*) to the subgenus rank because of this. However, Kamaltynov [1992, 1999] returned this taxon to the genus rank again, and then identified some of the species as a discrete genus *Dedyuola* [Kamaltynov, 2001]. Clearly, the status and composition of this genus needs further attention. We support the assumption that *Dorogostajskia* is a subgenus, and a recent revision of *Brandtia (Dorogostaiskia) parasitica* (Dybowsky, 1874) as consisting of five subspecies [Daneliya, Väinölä, 2014] is reflected in the checklist.

The remaining taxa proposed by Kamaltynov are poorly substantiated and not included on our list as well as some Baikalian species designated in publications as the new species but have not been formally described. Two families established by Kamaltynov for the Caspian amphipods (Behningiellidae and Iphigenellidae) based on published data are included on the list but their status needs verification on the original materials.

The status of the Baikalian endemic genus *Hyalellopsis* Stebbing, 1899 with four subgenera (*Hyalellopsis* s.str., *Boeckaxelia* Bazikalova, 1948, *Dorogammarus* Bazikalova, 1945 and *Gammarosphaera* Bazikalova, 1936) requires further clarification. We support such a subdivision according to Bazikalova [1948] but with the only difference that it remains independent of *Gammarosphaera* (Bazikalova synonymized *Gammarosphaera* with *Hyalellopsis*). Perhaps, the subgenus *Boeckaxelia* should include *Cheirogammarus inflatus* [Sowinsky, 1915]. However, the only available specimen of *C. inflatus* (holotype) is dissected, and the status of this species remains unclear.

To specify the type species of some Baikalian genera, the following fact must be taken into account. Opinion 105 of the International Commission of Zoological Nomenclature withdrew the work of Dybowski

[1926/1927], but about the publication [Dybowski, 1924] nothing is said, i.e. it should be considered valid. Also, Opinion 105 proclaims only the new generic names of Dybowski invalidated: "That all of the new names published in Dybowski's paper, "Synoptisches Verzeichnis mit kurzer Besprechung der Gattungen und Arten dieser Abteilung der Baikalflohkrebse" (Bul. internat. Acad. polonaise d. Sci. et d. Lettres, 1926, No. 1–2b, Jan.–Feb., pp. 1–77), are hereby suppressed under Suspension of the Rules on the ground that the application of the Rules in accepting them "will clearly result in greater confusion than uniformity".

At the same time, Dybowski [1924, 1926] designated the type species for a number of the genera proposed by other authors. Taking into account that paper published in 1924, it has not been formally rejected and these designations should be recognized. This explains the difference in indication of the type species on our list and other authors [Bazikalova, 1945; Kamaltynov, 1992, 1999, 2001]. According to Dybowski [1924], all subsequent designations should be considered invalidated, except where Dybowski [1924] unnecessarily renamed the genera.

It should also be recognized that the taxonomy of the genera *Chaetogammarus* and *Echinogammarus* is also confused and is still far from being clearly determined. Karaman [1977] synonymized some formerly used generic names (*Marinogammarus* Schellenberg, 1937, *Chaetogammarus* Martynov, 1924) with the name *Echinogammarus* Stebbing, 1899 uniting all gammarid species with a scale-like endopodite of uropod 3. This view was supported later by Karaman & Barnard [1979] and Barnard & Barnard [1983] and the name *Echinogammarus* was used for *E. ischnus* until 1995. Stock [1995] discussed generic diagnoses of the two genera and suggested that those species almost completely lacking setation on the pereiopods, urosome, coxal plates and on the ventral margins of the epimeral plates belong to *Chaetogammarus* and those with the presence of longer setae on the same parts belong to *Echinogammarus*. Stock [1995] returned to the name *Chaetogammarus* for a group of taxa of *Echinogammarus* sensu Karaman, restricting this last name only to the *Echinogammarus berilloni* group [Pinkster, 1973].

Finally, we realize that the checklist and the system of supraspecific taxa presented is, to some extent, these author's viewpoint; it may contain some shortcomings and should be discussed and developed further.

Data composition and designations

Throughout the paper information is provided and structured in the following manner:

Table 1: The hierarchical taxonomic position of the genera (taxa of the subfamily rank are mentioned), indicating the following data:

– number of valid species and subspecies in each genus (in parentheses)

– eco-zoogeographical characteristic of the genera: **p** — paleolimnic (taxa have no presumptive marine ancestors; synonym — Old Limnetic), **m** — mesolimnic (taxa with distant marine ancestors), and **n** — neolimnic (taxa with recent marine ancestors).

Table 2: Checklist in alphabetic order (taxa of the subgenus rank indicated, consisting of the species names). Within the checklist we provide:

– valid species and genus names with author and year;

– list of *principal* species synonyms;

– (original combination) of binomial species name if different from the present one;

– type species of genera shown by '•', if the type species is absent in Russia, it is indicated separately;

– fixation of type species indicated in [brackets];

– taxon described erroneously or needing re-examination (doubt about validity) shown by the asterisk '*';

– taxon probably extinct — '†'.

List of alien amphipod species of Russia

The dispersal rate of alien amphipods, and also of many other groups of organisms is often associated with human activities. In different cases, the factors can act additionally or antagonistically with one another or with natural processes. Destruction of natural barriers between different basins of Europe in the 19th and 20th centuries is considered to be one of the most important factors, which has resulted in range expansion of many species in different directions from southern basins of the Volga River, the Caspian Sea, the Black Sea and the Sea of Azov to European Russian continental waters situated in more northern regions. The case study area in the European Russia encompasses large lakes, namely Ladoga, Onega, Peipsi and Il'men', reservoirs and small water bodies of the Volga, Kama and Don river basins as well as the rivers flowing into the Baltic Sea (Neva and Narva), the Curonian and Vistula lagoons and the associated reservoirs of Kaliningrad oblast.

During the 1950s–1980s, large-scale intentional introductions of crustaceans were a major vector of amphipod invasions in inland waters of European Russia and Siberia. Enrichment of fish production was the principal motivation for the introductions. The large-scale mass transportations of amphipods (even unknown species), conducted in the former U.S.S.R. during the second part of the last century, were often not documented, which made it difficult to determine the invasion routes. It is known that at least 30 amphipod species of Ponto-Caspian origin, three species of Baikalian origin (*Micruropus possolskii*, *M. wohlii*, and *Gmelinoides fasciatus*), and formely so-called "glacial relicts" (Arctic Ocean escapee in the present study), such as *Monoporeia affinis* and *Pallasea quadrispinosa*, were used for intentional introductions through the former U.S.S.R. area [Gordeev, 1954; Greze, 1958; Ioffe, 1968; Zadoenko *et al*. 1985; Berezina, 2007a].

Table 1.The hierarchical taxonomic position of the genera.
Таблица 1. Положение родов в таксономической иерархии.

Order Amphipoda Latreille, 1816		
Suborder Gammaridea Latreille, 1802		
Superfamily Crangonyctoidea Bousfield, 1973		
Family CRANGONYCTIDAE Bousfield, 1973		
Amurocrangonyx Sidorov et Holsinger, 2007	(1)	p
Crangonyx Bate, 1859	(1)	p
Lyurella Derzhavin, 1939	(1)	p
Stygobromus Cope, 1872	(3)	p
Synurella Wrzesniowski, 1877	(7)	p
Family NIPHARGIDAE Bousfield, 1977		
Niphargus Schiödte, 1847	(9)	m
Family PSEUDOCRANGONYCTIDAE Holsinger, 1989		
Procrangonyx Schellenberg, 1934	(1)	p (?)
Pseudocrangonyx Akatsuka et Komai, 1922	(16)	p (?)
Superfamily Hadzioidea S. Karaman, 1943		
Family MELITIDAE Bousfield, 1973		
Melita Leach, 1814	(1)	n
Superfamily Gammaroidea Latreille, 1802		
Family ACANTHOGAMMARIDAE Garjajew, 1901		
Subfamily Acanthogammarinae Garjajew, 1901		
Acanthogammarus Stebbing, 1899	(16)	m
Brandtia Bate, 1862	(18)	m
Burchania Tachteew, 2000	(1)	m
Carinurus Sowinsky, 1915	(11)	m
Coniurus Sowinsky, 1915	(3)	m
Propachygammarus Bazikalova, 1945	(4)	m
Subfamily Hyalellopsinae Kamaltynov, 1999		
Cheirogammarus Sowinsky, 1915	(1)	m
Hyalellopsis Stebbing, 1899	(26)	m
Subfamily Garjajewiinae Tachteew, 2000[1]		
Garjajewia Sowinsky, 1915	(6)	m
Koshovia Bazikalova, 1945	(1)	m
Paragarjajewia Bazikalova, 1945	(2)	m
Plesiogammarus Stebbing, 1899	(9)	m
Family ANISOGAMMARIDAE Bousfield, 1977		
Eogammarus Birstein, 1933	(6)	n
Jesogammarus Bousfield, 1979	(1)	n
Locustogammarus Bousfield, 1979	(4)	n
Spinulogammarus Tzvetkova, 1972	(1)	n
Family BEHNINGIELLIDAE Kamaltynov, 2001		
Behningiella Derzhavin, 1948	(1)	n
Cardiophilus G.O. Sars, 1896	(2)	n
Zernovia Derzhavin, 1948	(1)	n
Family CARINOGAMMARIDAE Tachteew, 2000		
Carinogammarus Stebbing, 1899	(3)	m
Echiuropus Sowinsky, 1915	(19)	m
Gmelinoides Bazikalova, 1945	(2)	m (p?)
Pseudomicruropus Bazikalova, 1962	(5)	m
Family CASPICOLIDAE Birstein, 1945		
Caspicola Derzhavin, 1945	(1)	n

Table 1 (contituing)
Таблица 1 (продолжение)

Family GAMMARIDAE Leach, 1814		
Abyssogammarus Sowinski, 1915	(5)	m
Akerogammarus Derzhavin et Pjatakova, 1967	(2)	n
Amathillina Grimm in G.O. Sars, 1894	(5)	n
Axelboeckia Stebbing, 1899	(1)	n
Baku Karaman et Barnard, 1979	(1)	n
Bazikalovia Tachteew, 2000	(4)	m
Cephalogammarus Karaman et Barnard, 1979	(1)	n
Corophiomorphus Bazikalova, 1945	(10)	m
Derzhavinella Birstein, 1938	(2)	n
Echinogammarus Stebbing, 1899[2]	(3)	n (m?)
Eulimnogammarus Bazikalova, 1945	(61)	m
†*Fluviogammarus* Dorogostaisky, 1916	(4)	m
Gammarus J.C. Fabricius, 1775	(26)	m (p?)
Gmelina G.O. Sars, 1894	(2)	n
Gmelinopsis G.O. Sars, 1896	(2)	n
Heterogammarus Stebbing, 1899	(3)	m
Kuzmelina Karaman et Barnard, 1979	(1)	n
Lanceogammarus Karaman et Barnard, 1979	(1)	n
Lobogammarus Bazikalova, 1945	(1)	m
Macropereiopus Sowinsky, 1915	(8)	m
Odontogammarus Stebbing, 1899	(9)	m
Ommatogammarus Stebbing, 1899	(6)	m
Scytaelina Stock, Mirzajani, Vonk, Naderi et Kiabi, 1998	(1)	n
Shablogammarus Carausu, Dobreanu et Manolache, 1955	(2)	n
Sowinskya Derzhavin, 1948	(1)	n
Yogmelina Karaman et Barnard, 1979	(6)	n
Family IPHIGENELLIDAE Kamaltynov, 2001		
Iphigenella G.O. Sars, 1896	(1)	n
Family MACROHECTOPODIDAE Sowinsky, 1915		
Macrohectopus Stebbing, 1906	(1)	m
Family MICRUROPODIDAE Kamaltynov, 1999		
Baikalogammarus Stebbing, 1899	(1)	m
Crypturopus Sowinsky, 1915	(5)	m
Homocerisca Bazikalova, 1945	(4)	m
Micruropus Stebbing, 1899	(42)	m
Micruropodidae (?) – incertae sedis		
Profundalia Kamaltynov, 2001	(1)	m
Family PACHYSCHESIDAE Tachteew, 1998[3]		
Pachyschesis Bazikalova, 1945	(16)	m
Family PALLASEIDAE Tachteew, 2000 (1995 – nomen nudum)		
Subfamily Pallaseinae Tachteew, 2000		
Gymnogammarus Sowinsky, 1915	(1)	m
Hakonboeckia Stebbing, 1899	(1)	m
Leptostenus Bazikalova, 1945	(1)	m
Metapallasea Bazikalova, 1959	(1)	m
Pallasea Bate, 1862	(18)	m
Poekilogammarus Stebbing, 1899	(26)	m
Subfamily Parapallaseinae Kamaltynov, 1999[4]		
Ceratogammarus Sowinsky, 1915	(3)	m
Parapallasea Stebbing, 1899	(6)	m
Pallaseidae (?) – incertae sedis		
Polyacanthisca Bazikalova, 1937	(1)	m

Table 1 (contituing)
Таблица 1 (продолжение)

Family PONTOGAMMARIDAE Bousfield, 1977		
Compactogammarus Stock, 1974	(1)	n
Dikerogammarus Stebbing, 1899	(9)	n
Niphargogammarus Birstein, 1945	(4)	n
Niphargoides G.O. Sars, 1894	(3)	n
Obesogammarus Stock, 1974	(5)	n
Pandorites G.O. Sars, 1895	(1)	n
Paraniphargoides Stock, 1974	(3)	n
Pontogammarus Sowinsky, 1904	(7)	n
Stenogammarus Martynov, 1924	(7)	n
Uroniphargoides Stock, 1974	(1)	n
Superfamily Eusiroidea Bousfield, 1979		
Family EUSIRIDAE Stebbing, 1888		
Paramoera Miers, 1875	(3)	n
Sternomoera Barnard et Karaman, 1991	(2)	n
Family GAMMARACANTHIDAE Bousfield, 1989		
Gammaracanthus Bate, 1862	(3–4 ?)	n
Superfamily Oedicerotoidea Lilljeborg, 1865		
Family OEDICEROTIDAE Lilljeborg, 1865		
Acanthostepheia Boeck, 1871	(1)	n
Deflexilodes Bousfield et Chevrier, 1996	(1)	n
Oediceros Krøyer, 1842	(1)	n
Superfamily Lysianassoidea Dana, 1849		
Family URISTIDAE Hurley, 1963		
Onisimus Boeck, 1871	(5)	n
Superfamily Phoxocephaloidea Sars, 1891		
Family PONTOPOREIIDAE Dana, 1853		
Pontoporeia Krøyer, 1842	(1)	n
Monoporeia Bousfield, 1989	(1)	n
Superfamily Talitroidea Rafinesque, 1815		
Family DOGIELINOTIDAE Gurjanova, 1953		
Subfamily Dogielinotinae Gurjanova, 1953		
Allorchestes Dana, 1849	(1)	n
Dogielinotus Gurjanova, 1953	(1)	n
Family HYALIDAE Bulycheva, 1957		
Subfamily Hyalinae Bulycheva, 1957		
Parallorchestes Shoemaker, 1941	(1)	n
Family TALITRIDAE Rafinesque, 1815		
Orchestia Leach, 1814	(2)	n
Paciforchestia Bousfield, 1982	(1)	n
Platorchestia Bousfield, 1982	(3)	n
Traskorchestia Bousfield, 1982	(2)	n
Trinorchestia Bousfield, 1982	(1)	n
Suborder Corophiidea Leach, 1814		
Superfamily Corophioidea Leach, 1814		
Family COROPHIIDAE Leach, 1814		
Subfamily Corophiinae Leach, 1814		
Chelicorophium Bousfield et Hoover, 1997	(10)	n

Table 1 (contituing)
Таблица 1 (продолжение)

Corophium Latreille, 1806	(1)	n
Monocorophium Bousfield et Hoover, 1997	(1)	n
Family KAMAKIDAE Myers et Lowry, 2003		
Subfamily Kamakinae Myers et Lowry, 2003		
Kamaka Derzhavin, 1923	(1)	n

[1] Proposed as subfamily group in Takhteev [1997: 51], not named.
[2] see section "Taxonomic notes".
[3] Preliminary diagnosis of this family was published in Takhteev [1998], but not in Kamaltynov [1999].
[4] Initially proposed in Acanthogammaridae [Kamaltynov, 1999].

The ability of most amphipods to migrate long distances is a common behavioral trait and has facilitated their natural range expansion. According to the migration theory by Birstein [1935], the upstream migration of species in the rivers of the Sea of Azov and the Caspian and Black seas has resulted in the rapid dispersal of many amphipods from the south to the north of the former U.S.S.R. By the mid-20th century, the Ponto-Caspian amphipods *Echinogammarus ischnus, Dikerogammarus haemobaphes, D. villosus* and *Obesogammarus obesus* reached the middle part of the Volga River spreading upstream more than 4000 km from their native area [Berezina, 2007a].

In some cases, amphipods can be transferred to long distances as attached organisms by decapods, and birds [Rachalewski *et al.*, 2013]. In other cases, large specimens of migrating amphipods were able to transport attached invertebrates (molluscs, rotifers and infusorians, etc.) being as a possible vector of accidental introductions for other species of invertebrates. For example, it is known that specimens of *D. villosus* have transported juveniles of the mollusc *Dreissena* spp. during migration upstream of the Ponto-Caspian rivers [Dedyu, 1963].

Below is a list of the species of allochthonous origin for Russian inland waters or so-called alien species. The recorded alien species were all placed in five complexes according to their origin.

1. **Ponto-Caspian** (**PC**) and the **Mediterranean** (**Med.**). The Ponto-Caspian complex includes species from the Caspian, Azov and Black seas, and from the watershed. The main vectors of their introduction to the Baltic Sea basin from southern latitudes are range extension across the Volga, Kama and Don rivers systems, due to the construction of artificial canals and reservoirs connecting different basins; transportation in ballast waters and the associated meta-cenosis of ships, and intentional introduction for fihery purposes. We included *O. cavimana* in this group considering the Medditerenian region to be its native area. It is also assumed, however, that according to the latest molecular data [Ketmaier, De Matthaeis, 2010], a so-called *O. cavimana* might be regarded as a species complex of a different origin.

2. **Circumtropical** (**CT**). This complex includes only one species *Platorchestia platensis.*

3. **North American** (**NA**). The North American complex includes the species that penetrated due to the development of the trans-Atlantic shipping.

4. **Baikalian** (**B**). The Baikalian complex includes species of Lake Baikal genesis, and species that are common for the Angara and Yenisei rivers and, more rarely, for the Ob' River. Their spread was primarily the result of the intentional introduction and a further range extension.

5. **Local immigrants** (**Loc.**). Local immigrants are species that penetrated Russia or its different regions from other European countries or other farther regions of Russia due to range extension. *Gammarus lacustris* Sars is one of the representative species in this group, although this species has a wide natural distribution in the European and Asian parts of Russia. It was introduced in Estonian, European Russian and Siberian lakes in order to increase the fish production or the abundance of native population. Attempts to acclimatize *Gammarus lacustris* from the Siberian population in Lake Pskovsko-Chudskoe were made during 1970–1975 [Timm, Timm, 1993]. In Eastern Siberia, fishermen used this species as a fish bait. They transfered a large number of *G. lacustris* adult specimens from one lake to another during a short fishing periods thus facilitating its successful re-introduction and local dispersal [Bekman, 1954].

The total list of alien species of European Russia includes 32 species. The largest number of species is represented by the species of the Ponto-Azov and the Caspian fauna complex (24 species) (Table 3).

Results and Discussion

The continental waters of Russia support 26 families, 110 genera and 581 species and sub-species of amphipods. Excluding species with uncertain taxonomic status, the Baikalian species account for 61% of fauna (276 species and 78 subspecies), the Ponto-Caspian species comprise 13% (78 species), the coastal brackish marine fauna 8% (47 species), and 6% (35 species) are subterranean. Relicts of marine transgressions make up 2% (10 species), and terrestrial species less than 2% (9 species) [Takhteev, Sidorov, 2012]. The proportion of the species that expanded their range or even invaded the territory of Russia due to human activities constitutes 5.5% of the entire fauna (32 species).

Table 2. Checklist.
Таблица 2. Контрольный список видов.

FAMILY ACANTHOGAMMARIDAE Garjajew, 1901 [12 Genera (G), 98 Species and subspecies (S)][1]

1. ***Acanthogammarus*** Stebbing, 1899
1. *Acanthogammarus* (*Acanthogammarus*) *brevispinus* Dorogostaisky, 1922 B
2. *Acanthogammarus* (*Acanthogammarus*) *godlewskii* (Dybowsky, 1874) B
•*Gammarus godlewskii* Dybowsky, 1874 (original combination) [designated by Dybowsky, 1924]
3. *Acanthogammarus* (*Acanthogammarus) gracilispinus* Tachteew, 2000 B
4. *Acanthogammarus* (*Acanthogammarus*) *lappaceus lappaceus* Tachteew, 2000 B
5. *Acanthogammarus* (*Acanthogammarus*) *lappaceus longispinus* Tachteew, 2000 B
6. *Acanthogammarus* (*Acanthogammarus*) *maculosus* Dorogostaisky, 1930 B
7. *Acanthogammarus* (*Acanthogammarus*) *subbrevispinus* Bazikalova, 1945 B
8. *Acanthogammarus* (*Acanthogammarus*) *victorii* (Dybowsky, 1874) B
9. *Acanthogammarus* (*Brachyuropus*) *flavus flavus* (Garjajew, 1901) B
10. *Acanthogammarus* (*Brachyuropus*) *flavus curtus* Bazikalova, 1945 B
11. *Acanthogammarus* (*Brachyuropus*) *flavus rodionowi* Dorogostaisky, 1922 B
12. *Acanthogammarus* (*Brachyuropus*) *flavus sowinskii* Bazikalova, 1945 B
13. *Acanthogammarus* (*Brachyuropus*) *grewingkii* (Dybowsky, 1874) B
14. *Acanthogammarus* (*Brachyuropus*) *korotneffii* (Garjajew, 1901) B
15. *Acanthogammarus* (*Brachyuropus*) *nassonowi* (Dorogostaisky, 1922) B
16. *Acanthogammarus* (*Brachyuropus*) *reichertii* (Dybowsky, 1874) B

2. ***Brandtia*** Bate, 1862
17. *Brandtia* (*Brandtia*) *latissima acera* (Dybowsky) in Dorogostaisky, 1916 BE
18. *Brandtia* (*Brandtia*) *latissima dicera* (Dybowsky) in Dorogostaisky, 1916 BE
19. *Brandtia* (*Brandtia*) *latissima extima* Dorogostaisky, 1930 B
20. *Brandtia* (*Brandtia*) *latissima intermedia* Dorogostaisky, 1930 B
21. *Brandtia* (*Brandtia*) *latissima lata* (Dybowsky, 1874) B
22. *Brandtia* (*Brandtia*) *latissima latior* (Dybowsky, 1874) B
23. •*Brandtia* (*Brandtia*) *latissima latissima* (Gerstfeldt, 1858) [primary monotypy] B
Gammarus latissimus Gerstfeldt, 1858 (original combination)
24. *Brandtia* (*Brandtia*) *latissima polyspina* Dorogostaisky, 1930 B
25. *Brandtia* (*Dorogostajskia*) *armata armata* (Dybowsky, 1874) B
syn.: *Dedyuola armata* (Dybowsky, 1874), in: Kamaltynov [2001]
26. *Brandtia* (*Dorogostajskia*) *armata ongureni* (Garjajew, 1901) B
syn.: *Dedyuola ongureni* (Garjajew, 1901), in: Kamaltynov [2001]
27. *Brandtia* (*Dorogostajskia*) *birsteini* Bazikalova, 1948 B
28. *Brandtia* (*Dorogostajskia*) *insularis* (Dorogostaisky, 1930) B
29. *Brandtia* (*Dorogostajskia*) *margaritae* Bazikalova, 1959 B
syn.: *Dedyuola margaritae* (Bazikalova, 1959), in: Kamaltynov [2001]
30. *Brandtia* (*Dorogostaiskia*) *parasitica hanajevi* (Daneliya et Väinölä, 2014) B
31. *Brandtia* (*Dorogostaiskia*) *parasitica kamaltynovi* (Daneliya et Väinölä, 2014) B
32. *Brandtia* (*Dorogostajskia*) *parasitica parasitica* (Dybowsky, 1874) B
33. *Brandtia* (*Dorogostaiskia*) *parasitica stenocephala* (Daneliya et Väinölä, 2014) B
34. *Brandtia* (*Dorogostaiskia*) *parasitica ushkaniensis* (Daneliya et Väinölä, 2014) B

3. ***Burchania*** Tachteew, 2000
35. •*Burchania meissneri* (Bazikalova, 1935) [primary monotypy] B
Hakonboeckia meissneri Bazikalova, 1935 (original combination)

4. ***Carinurus*** Sowinsky, 1915
36. *Carinurus amentatus* G. Karaman, 1976 B
37. *Carinurus bazikalovae* G. Karaman, 1976 B
38. *Carinurus belkinii* (Garjajew, 1901) B
39. *Carinurus bicarinatus* Bazikalova, 1935 B
40. *Carinurus bifrons* G. Karaman, 1976 B
41. *Carinurus microphthalmus* (Sowinsky, 1915) B

Table 2 (contituing)
Таблица 2 (продолжение)

42. *Carinurus obscurus* Dorogostaisky, 1922 B
43. *Carinurus platycarinus* (Sowinsky, 1915) B
44. *Carinurus reissnerii* (Dybowsky, 1874) B
45. *Carinurus solskii* (Dybowsky, 1874) B
•*Gammarus solskii* Dybowsky, 1874 (original combination) [primary monotypy]
46. *Carinurus werestschagini* Bazikalova, 1935 B

5. ***Cheirogammarus*** Sowinsky, 1915
47. •*Cheirogammarus inflatus* Sowinsky, 1915 [primary monotypy] B

6. ***Coniurus*** Sowinsky, 1915
48. •*Coniurus palmatus* Sowinsky, 1915 [designated by Bazikalova, 1945] B
49. *Coniurus radoschkowskii* (Dybowsky, 1874) B
50. *Coniurus wadimi* Sowinsky, 1915 B

7. ***Garjajewia*** Sowinsky, 1915
51. *Garjajewia cabanisii cabanisii* (Dybowsky, 1874) B
•*Gammarus cabanisii* Dybowsky, 1874 (original combination) [designated by Bousfield, 1977]
52. *Garjajewia cabanisii ninae* Bazikalova, 1945 B
53. *Garjajewia cabanisii pleshanovi* Tachteew et Levashkevich, 2006 B
54. *Garjajewia dershawini* Sowinsky, 1915 B
55. *Garjajewia dogieli* Bazikalova, 1945 B
56. *Garjajewia sarsi* Sowinsky, 1915 B

8. ***Hyalellopsis*** Stebbing, 1899
57. *Hyalellopsis* (*Boeckaxelia*) *carpenterii carpenterii* (Dybowsky, 1874) B
58. *Hyalellopsis* (*Boeckaxelia*) *carpenterii elegans* (Dorogostaisky, 1930) B
59. *Hyalellopsis* (*Boeckaxelia*) *carpenterii profundalis* (Bazikalova, 1945) B
60. *Hyalellopsis* (*Boeckaxelia*) *potanini* (Dorogostaisky, 1922) B
61. *Hyalellopsis* (*Boeckaxelia*) *rubra* (Garjajew, 1901) B
62. *Hyalellopsis* (*Dorogammarus*) *castanea* (Dorogostaisky, 1930) B
63. *Hyalellopsis* (*Gammarosphaera*) *insularis* (Bazikalova, 1936) B
64. *Hyalellopsis* (*Hyalellopsis*) *bicolorata* Bazikalova, 1948 B
65. *Hyalellopsis* (*Hyalellopsis*) *carinata* Sowinsky, 1915 B
66. *Hyalellopsis* (*Hyalellopsis*) *costata* Sowinsky, 1915 B
67. *Hyalellopsis* (*Hyalellopsis*) *czyrnianskii* (Dybowsky, 1874) B
•*Gammarus czyrnianskii* Dybowsky, 1874 (original combination) [designated by Stebbing, 1899]
68. *Hyalellopsis* (*Hyalellopsis*) *depressirostris* Sowinsky, 1915 B
69. *Hyalellopsis* (*Hyalellopsis*) *eugeniae* Sowinsky, 1915 B
70. *Hyalellopsis* (*Hyalellopsis*) *grisea* Dorogostaisky, 1930 B
71. *Hyalellopsis* (*Hyalellopsis*) *hamata* Sowinsky, 1915 B
72. *Hyalellopsis* (*Hyalellopsis*) *irinae* Bazikalova, 1959 B
73. *Hyalellopsis* (*Hyalellopsis*) *latipes latipes* Bazikalova, 1945 B
74. *Hyalellopsis* (*Hyalellopsis*) *latipes selengensis* Bazikalova, 1945 B
75. *Hyalellopsis* (*Hyalellopsis*) *macrocephala* Bazikalova, 1945 B
76. *Hyalellopsis* (*Hyalellopsis*) *nana* Bazikalova, 1959 B
77. *Hyalellopsis* (*Hyalellopsis*) *setosa* Sowinsky, 1915 B
78. *Hyalellopsis* (*Hyalellopsis*) *stebbingi* Sowinsky, 1915 B
79. *Hyalellopsis* (*Hyalellopsis*) *taczanowskii* (Dybowsky, 1874) B
80. *Hyalellopsis* (*Hyalellopsis*) *tixtonae tixtonae* Sowinsky, 1915 B
81. *Hyalellopsis* (*Hyalellopsis*) *tixtonae glabra* Bazikalova, 1945 B
82. *Hyalellopsis* (*Hyalellopsis*) *variabilis* Dorogostaisky, 1930 B

9. ***Koshovia*** Bazikalova, 1945
83. •*Koshovia mirabilis* Bazikalova, 1975 [primary monotypy] B

10. ***Paragarjajewia*** Bazikalova, 1945
84. *Paragarjajewia petersii microphthalma* Bazikalova, 1948 B

Table 2 (contituing)
Таблица 2 (продолжение)

85. *Paragarjajewia petersii petersii* (Dybowsky, 1874) B
•*Gammarus petersii* Dybowsky, 1874 (original combination) [primary monotypy]

11. ***Plesiogammarus*** Stebbing, 1899
86. *Plesiogammarus brevis brevis* Bazikalova, 1975 B
87. *Plesiogammarus brevis mazepowae* Tachteew, 1997 B
88. *Plesiogammarus brevis inquaesitus* Tachteew, 1997 B
89. *Plesiogammarus gerstaeckeri* (Dybowsky, 1874) B
•*Gammarus gerstaeckeri* Dybowsky, 1874 (original combination) [primary monotypy]
90. *Plesiogammarus longicornis* Sowinsky, 1915 B
91. *Plesiogammarus martinsoni martinsoni* Tachteew, 1997 B
92. *Plesiogammarus martinsoni impransus* Tachteew, 1997 B
93. *Plesiogammarus timoshkini* Tachteew, 1997 B
94. *Plesiogammarus zienkowiczii* (Dybowsky, 1874) B

12. ***Propachygammarus*** Bazikalova, 1945
95. *Propachygammarus bicornis* (Dorogostaisky, 1930) B
96. *Propachygammarus dryshenkoi* (Garjajew, 1901) B
•*Dybowskia dryshenkoi* Garjajew, 1901 (original combination) [designated by Barnard, Barnard, 1983]
97. *Propachygammarus lamellispinis* (Bazikalova, 1945) B
98. *Propachygammarus maximus* (Garjajew, 1901) B

1. FAMILY ANISOGAMMARIDAE Bousfield, 1977 [4 G 12 S]

13. ***Eogammarus*** Birstein, 1933
99. *Eogammarus barbatus* (Tzvetkova, 1965) SPC
100. *Eogammarus itotomikoae* Tomikawa, Morino, Toft et Mawatari, 2006 SPC
101. *Eogammarus kygi* (Derzhavin, 1923) SPC
•*Gammarus kygi* Derzhavin, 1923 (original combination) [designated by Tzvetkova, 1975]
102. *Eogammarus possjeticus* (Tzvetkova, 1967) SPC
103. *Eogammarus schmidti* (Derzhavin, 1927) SPC
104. *Eogammarus tiuschovi* (Derzhavin, 1927) SPC

14. ***Jesogammarus*** Bousfield, 1979
105. *Jesogammarus* (*Annanogammarus*) *annandalei* (Tattersall, 1922) SPC
•*Gammarus annandalei* Tattersall, 1922 (original combination) [designated by Bousfield, 1979]

15. ***Locustogammarus*** Bousfield, 1979
106. *Locustogammarus aestuariorum* (Tzvetkova, 1972) SPC
107. *Locustogammarus hirsutimanus* (Kurenkov et Mednikov, 1959) SPC
108. **Locustogammarus intermedius* Labay, 1996 SPC
109. *Locustogammarus locustoides* (Brandt, 1851) SPC
•*Gammarus locustoides* Brandt, 1851 (original combination) [designated by Bousfield, 1979]

16. ***Spinulogammarus*** Tzvetkova, 1972
110. *Spinulogammarus ochotensis* (Brandt, 1851) SPC
•*Gammarus ochotensis* Brandt, 1851 (original combination) [designated by Tzvetkova, 1972]

2. FAMILY BEHNINGIELLIDAE Kamaltynov, 2001 [3 G 4 S][2]

17. ***Behningiella*** Derzhavin, 1948
111. •*Behningiella brachypus* Derzhavin, 1948 PCE

18. ***Cardiophilus*** G.O. Sars, 1896
112. •*Cardiophilus baeri* G.O. Sars, 1896 [primary monotypy] PCE
113. *Cardiophilus marisnigri* Miloslavskaja, 1931 PCE
syn.: *Cardiophilus miloslavskajae* Carausu, 1955

Table 2 (contituing)
Таблица 2 (продолжение)

19. ***Zernovia*** Derzhavin, 1948
114. •*Zernovia volgensis* Derzhavin, 1948 [designated by Derzhavin, 1948] PCE

3. FAMILY CARINOGAMMARIDAE Tachteew, 2000 [4G 29 S]

20. ***Carinogammarus*** Stebbing, 1899
115. *Carinogammarus cinnamomeus* (Dybowsky, 1874) B
•*Gammarus cinnamomeus* Dybowsky, 1874 (original combination) [designated by Bazikalova, 1945]
116. *Carinogammarus wagii wagii* (Dybowsky, 1874) B
117. *Carinogammarus wagii pallidus* (Dorogostaisky, 1922) B

21. ***Echiuropus*** Sowinsky, 1915
118. *Echiuropus* (*Asprogammarus*) *bathyphilus* (Bazikalova, 1975) B
119. *Echiuropus* (*Asprogammarus*) *bekmanae* Mekhanikova, Chapelle et De Broyer, 2001 B
120. *Echiuropus* (*Asprogammarus*) *macropsis* (Bazikalova, 1975) B
121. *Echiuropus* (*Asprogammarus*) *puer* (Bazikalova, 1975) B
122. *Echiuropus* (*Asprogammarus*) *pulchelliformis* (Bazikalova, 1975) B
123. *Echiuropus* (*Asprogammarus*) *pulchellus* (Dybowsky, 1874) B
124. *Echiuropus* (*Asprogammarus*) *rhodophthalmus rhodophthalmus* (Dybowsky, 1874) B
125. *Echiuropus* (*Asprogammarus*) *rhodophthalmus brachyurus* (Bazikalova, 1975) B
126. *Echiuropus* (*Asprogammarus*) *rhodophthalmus microphthalmus* (Dybowsky, 1874) B
127. *Echiuropus* (*Asprogammarus*) *rhodophthalmus strenuus* (Bazikalova, 1975) B
128. *Echiuropus* (*Asprogammarus*) *seidlitzii* (Dybowsky, 1874) B
129. *Echiuropus* (*Echiuropus*) *levis* Bazikalova, 1945 B
130. •*Echiuropus* (*Echiuropus*) *macronychus macronychus* Sowinsky, 1915 [primary monotypy] B
131. *Echiuropus* (*Echiuropus*) *macronychus brevicaudatus* Sowinsky, 1915 B
132. *Echiuropus* (*Echiuropus*) *macronychus sempercarinatus* (Bazikalova, 1975) B
133. *Echiuropus* (*Echiuropus*) *morawitzii* (Dybowsky, 1874) B
134. *Echiuropus* (*Echiuropus*) *perplexus* (Bazikalova, 1975) B
135. *Echiuropus* (*Smaragdogammarus*) *gulekani* (Bazikalova, 1975) B
136. *Echiuropus* (*Smaragdogammarus*) *smaragdinus* (Dybowsky, 1874) B

22. ***Gmelinoides*** Bazikalova, 1945
137. **Gmelinoides fasciatoides* (Gurjanova, 1929)[3] BE (?)
138. *Gmelinoides fasciatus* (Stebbing, 1899) B
•*Brandtia fasciata* Stebbing, 1899 [designated by Bousfield, 1977]

23. ***Pseudomicruropus*** Bazikalova, 1962
139. *Pseudomicruropus chargoensis* (Sowinsky, 1915) B
140. *Pseudomicruropus lepidiformis* Bazikalova, 1962 B
141. *Pseudomicruropus lepidus* (Bazikalova, 1945) B
142. *Pseudomicruropus rotundatulus magnus* Bazikalova, 1962 B
143. •*Pseudomicruropus rotundatulus rotundatulus* (Bazikalova, 1945) [designated by Bousfield, 1977] B
Micruropus (*Gammarisca*) *rotundatulus* Bazikalova, 1945 (original combination)

4. FAMILY CASPICOLIDAE Birstein, 1945 [1 G 1 S]

24. ***Caspicola*** Birstein, 1945
144. *Caspicola knipowitschi* (Derzhavin, 1944) PCE
•*Caspiella knipowitschi* Derzhavin, 1944 (original combination) [primary monotypy]

5. FAMILY COROPHIIDAE Leach, 1814 [3 G 12 S]

25. ***Chelicorophium*** Bousfield et Hoover, 1997
145. *Chelicorophium chelicorne* (G.O. Sars, 1895) PCE

Table 2 (contituing)
Таблица 2 (продолжение)

146. *Chelicorophium curvispinum* (G.O. Sars, 1895) PCE
•*Corophium curvispinum* G.O. Sars, 1895 (original combination) [designated by Bousfield, Hoover, 1997]
147. *Chelicorophium maeoticum* (Sowinsky, 1898) PCE
148. *Chelicorophium monodon* (G.O. Sars, 1895) PCE
149. *Chelicorophium mucronatum* (G.O. Sars, 1895) PCE
150. *Chelicorophium nobile* (G.O. Sars, 1895) PCE
151. *Chelicorophium robustum* (G.O. Sars, 1895) PCE
152. *Chelicorophium sowinskyi* (Martynov, 1924) PCE
153. *Chelicorophium spinulosum* (G.O. Sars, 1896) PCE
154. **Chelicorophium spongicolum* (Welitchkovsky, 1914)[4] PCE

26. ***Corophium*** Latreille, 1806
Type species: *Oniscus volutator* Pallas, 1766, primary monotypy.

155. *Corophium volutator* (Pallas, 1766) PCE, BSE
156. *Corophium orientale* Schellenberg, 1928 PC

27. ***Monocorophium*** Bousfield et Hoover, 1997
Type species: *Corophium insidiosum* Crawford, 1937, designated by Bousfield & Hoover [1997].

157. *Monocorophium steinegeri* (Gurjanova, 1951) SPC

6. FAMILY CRANGONYCTIDAE Bousfield, 1973 [4 G 12 S]

28. ***Amurocrangonyx*** Sidorov et Holsinger, 2007
158. *Amurocrangonyx arsenjevi* (Derzhavin, 1927) SPC
•*Eucrangonyx arsenjevi* Derzhavin, 1927 (original combination) [primary monotypy]

29. ***Crangonyx*** Bate, 1859
Type species: *Crangonyx subterraneus* Bate, 1859, primary monotypy.

159. *Crangonyx chlebnikovi* Borutzky, 1928 WP

30. ***Lyurella*** Derzhavin, 1939
Type species: *Lyurella hyrcana* Derzhavin, 1939, primary monotypy.
160. *Lyurella shepsiensis* Sidorov, 2015 C

31. ***Stygobromus*** Cope, 1872
Type species: *Stygobromus vitreus* Cope, 1872, primary monotypy.

161. *Stygobromus anastasiae* Sidorov, Holsinger et Takhteev, 2010 CA
162. *Stygobromus mikhaili* Sidorov, Holsinger et Takhteev, 2010 CA
163. *Stygobromus pusillus* (Martynov, 1930) CA

32. ***Synurella*** Wrześniowski, 1877
164. *Synurella ambulans* (F. Müller, 1846) WP
•*Gammarus ambulans* F. Müller, 1846 (original combination) [designated by Wrześniowski, 1877]
syn.: *Synurella meschtscherica* Borutzky, 1929
165. *Synurella behningi* Birstein, 1948 C
166. *Synurella derzhavini* Behning, 1928 WP
167. *Synurella donensis* Martynov, 1919 WP
168. *Synurella jakutana* Martynov, 1931 SPC
169. *Synurella levanidovae* G. Karaman, 1991 SPC
170. *Synurella stadukhini* Derzhavin, 1930 SPC

Table 2 (contituing)
Таблица 2 (продолжение)

FAMILY DOGIELINOTIDAE Gurjanova, 1953 [2 G 2 S]

33. ***Allorchestes*** Dana, 1849
Type species: *Allorchestes compressa* Dana, 1852, designated by Chevreux & Fage [1925].

171. *Allorchestes malleola* Stebbing, 1899 SPC
syn.: *Allorchestes vladimiri* Derzhavin, 1937

34. ***Dogielinotus*** Gurjanova, 1953
172. *Dogielinotus moskvitini* (Derzhavin, 1930) SPC
•*Allorchestes moskvitini* Derzhavin, 1930 (original combination) [designated by Gurjanova, 1953]

7. FAMILY EUSIRIDAE Stebbing, 1888 [2 G 5 S]

35. ***Paramoera*** Miers, 1875
Type species: *Paramoera australis* Miers, 1875, designated by Miers [1875].

173. *Paramoera anivae* Labay, 2012 SPC
174. *Paramoera* (*Ganigamoera*) *myslenkovi* Sidorov, 2010 SPC
175. *Paramoera* (*Ganigamoera*) *tiunovi* Sidorov, 2010 SPC
176. **Paramoera* (*Paramoera*) *udehe* (Derzhavin, 1930) SPC

36. ***Sternomoera*** Barnard et Karaman, 1991
177. *Sternomoera moneronensis* Labay, 1997 SPC
178. *Sternomoera yezoensis* (Uéno, 1933) SPC
•*Paramoera yezoensis* Uéno, 1933 (original combination) [designated by Barnard, Karaman, 1991]

8. FAMILY GAMMARACANTHIDAE Bousfield, 1989 [1 G 3 (4?) S]

37. ***Gammaracanthus*** Bate, 1862
Type species: *Gammarus loricatus* Sabine, 1821, designated by Bate [1862].

179. *Gammaracanthus loricatus aestuariorum* Lomakina in Gurjanova, 1951 AOE
syn.: *Gammaracanthus loricatus ostiorum* Lomakina in Gurjanova, 1951
180. *Gammaracanthus loricatus caspius* (G.O. Sars, 1896) AOE (?)
181. *Gammaracanthus lacustris* Sars, 1867 AOE
syn.: *Gammaracanthus relictus* G.O. Sars, 1895
syn.: *Relictacanthus lacustris* (G.O. Sars, 1867)
182. **Gammaracanthus loricatus baicalensis* Sowinski, 1915[5] AOE (?)

9. FAMILY GAMMARIDAE Leach, 1814 [26 G 171 S]

38. ***Abyssogammarus*** Sowinski, 1915
183. *Abyssogammarus gracilis gracilis* Sowinski, 1915 B
184. *Abyssogammarus gracilis minor* Bazikalova, 1945 B
185. •*Abyssogammarus sarmatus sarmatus* (Dybowsky, 1874) [designated by Bazikalova, 1945] B
186. *Abyssogammarus sarmatus echinatus* Bazikalova, 1935 B
187. *Abyssogammarus swartschewskii* Sowinski, 1915 B

39. ***Akerogammarus*** Derzhavin et Pjatakova, 1967
188. *Akerogammarus contiguus* (Pjatakova, 1962) PCE
189. •*Akerogammarus knipowitschi* Derzhavin et Pjatakova, 1967 PCE

40. ***Amathillina*** Grimm in G.O. Sars, 1894
190. *Amathillina affinis* G.O. Sars, 1894 PCE

Table 2 (contituing)
Таблица 2 (продолжение)

191. •*Amathillina cristata* Grimm in G.O. Sars, 1894 [designated by G.O. Sars, 1894] PCE
192. *Amathillina maximovitschi* G.O. Sars, 1896 PCE
193. *Amathillina pusilla* G.O. Sars, 1896 PCE
194. *Amathillina spinosa* Grimm in G.O. Sars, 1896 PCE

41. ***Axelboeckia*** Stebbing, 1899
195. *Axelboeckia spinosa* (Grimm in G.O. Sars, 1894) PCE
•*Boeckia spinosa* Grimm in G.O. Sars, 1894 (original combination) [primary monotypy; by G.O. Sars, 1894]

42. ***Baku*** Karaman et Barnard, 1979
196. *Baku paradoxus* (Derzhavin in Derzhavin et Pjatakova, 1967) PCE
•*Pontogammarus paradoxus* Derzhavin, 1967 (original combination) [primary monotypy]

43. ***Bazikalovia*** Tachteew, 2000
197. *Bazikalovia minima* (Bazikalova, 1945) B
198. *Bazikalovia obsoleta* (Bazikalova, 1945) B
199. *Bazikalovia simplex* (Sowinsky, 1915) B
•*Microgammarus simplex* Sowinsky, 1915 (original combination) [designated by Takhteev, 2000]
200. *Bazikalovia simpliciformis* (Bazikalova, 1975) B

44. ***Cephalogammarus*** Karaman et Barnard, 1979
201. *Cephalogammarus macrocephalus* (G.O. Sars, 1896) PCE
•*Gammarus macrocephalus* G.O. Sars, 1896 (original combination) [designated by Karaman, Barnard, 1979]

45. ***Corophiomorphus*** Bazikalova, 1945
202. *Corophiomorphus calceolatus* (Sowinsky, 1915) B
203. *Corophiomorphus crassicornis* (Sowinsky, 1915) B
204. *Corophiomorphus gracilicornis* (Bazikalova, 1945) B
205. *Corophiomorphus kietlinskii* (Dybowsky, 1874) B
206. *Corophiomorphus laevis* (Sowinsky, 1915) B
207. *Corophiomorphus macrophthalmus* (Bazikalova, 1945) B
208. *Corophiomorphus pachycerus* (Bazikalova, 1945) B
209. *Corophiomorphus sophiae* (Dybowsky, 1874) B
•*Gammarus sophiae* Dybowsky, 1874 (original combination) [designated by Barnard, Barnard, 1983]
210. *Corophiomorphus stanislavii* (Dybowsky, 1874) B
211. *Corophiomorphus tenuipes* (Sowinsky, 1915) B

46. ***Derzhavinella*** Birstein, 1938
212. *Derzhavinella cava* Stock, Mirzajani, Vonk, Naderi et Kiabi, 1998 PCE
213. •*Derzhavinella macrochelata* Birstein, 1938 [primary monotypy] PCE

47. ***Echinogammarus*** Stebbing, 1899
Type species: *Gammarus berilloni* Catta, 1878, selected by Chevreux & Fage [1925]

214. *Echinogammarus foxi* (Schellenberg, 1928) PC
215. *Echinogammarus ischnus* (Stebbing, 1899) PCE
syn.: *Gammarus tenellus* Sars, 1896
syn.: *Gammarus sowinskyi* Behning, 1914
syn.: *Chaetogammarus tenellus behningi* Martynov, 1919
syn.: *Chaetogammarus ischnus* (Stebbing, 1899)
216. **Echinogammarus placidus* (Grimm in G.O. Sars, 1896) PC
217. *Echinogammarus trichiatus* (Martynov, 1932) PCE
syn.: *Chaetogammarus tenellus major* Cărăuşu, 1943

Table 2 (contituing)
Таблица 2 (продолжение)

218. *Echinogammarus warpachowskyi* (G.O. Sars, 1894) syn.: *Chaetogammarus warpachowskyi* (G.O. Sars, 1894)	PCE
48. ***Eulimnogammarus*** Bazikalova, 1945[6]	
219. *Eulimnogammarus* (*Eulimnogammarus*) *burkani* Bazikalova, 1945	B
220. *Eulimnogammarus* (*Eulimnogammarus*) *cruentus* (Dorogostaisky, 1930)	B
221. *Eulimnogammarus* (*Eulimnogammarus*) *cyanoides* (Sowinsky, 1915)	B
222. *Eulimnogammarus* (*Eulimnogammarus*) *czerskii* (Dybowsky, 1874)	B
223. *Eulimnogammarus* (*Eulimnogammarus*) *grandimanus* Bazikalova, 1945	B
224. *Eulimnogammarus* (*Eulimnogammarus*) *heterochirus* Bazikalova, 1945	B
225. *Eulimnogammarus* (*Eulimnogammarus*) *lividus lividus* (Dybowsky, 1874)	B
226. *Eulimnogammarus* (*Eulimnogammarus*) *lividus angarensis* (Dorogostaisky, 1916)	BE
227. *Eulimnogammarus* (*Eulimnogammarus*) *maackii maackii* (Gerstfeldt, 1858)	B
228. *Eulimnogammarus* (*Eulimnogammarus*) *maackii brevicauda* Bazikalova, 1957	BE
229. *Eulimnogammarus* (*Eulimnogammarus*) *macrochirus* (Bazikalova, 1945)	B
230. *Eulimnogammarus* (*Eulimnogammarus*) *messerschmidtii* Bedulina et Tachteew, 2014	B
231. *Eulimnogammarus* (*Eulimnogammarus*) *verrucosus verrucosus* (Gerstfeldt, 1858) [designated by Bazikalova, 1945]	B
•*Gammarus verrucosus* Gerstfeldt, 1858 (original combination)	
232. *Eulimnogammarus* (*Eulimnogammarus*) *verrucosus oligacanthus* Bazikalova, 1945	B
233. *Eulimnogammarus* (*Eulimnogammarus*) *viridiformis* (Sowinsky, 1915)	B
234. *Eulimnogammarus* (*Eurybiogammarus*) *affinis* (Sowinsky, 1915)	B
235. *Eulimnogammarus* (*Eurybiogammarus*) *aheneoides* Bazikalova, 1945	B
236. *Eulimnogammarus* (*Eurybiogammarus*) *aheneus aheneus* (Dybowsky, 1874)	B
237. *Eulimnogammarus* (*Eurybiogammarus*) *aheneus asetus* Bazikalova, 1945	B
238. *Eulimnogammarus* (*Eurybiogammarus*) *aheneus setosus* (Dybowsky, 1874)	B
239. *Eulimnogammarus* (*Eurybiogammarus*) *brachycoxalis* Bazikalova, 1945	B
240. *Eulimnogammarus* (*Eurybiogammarus*) *byrkini* (Sowinsky, 1915)	B
241. *Eulimnogammarus* (*Eurybiogammarus*) *capreolus* (Dybowsky, 1874)	B
242. *Eulimnogammarus* (*Eurybiogammarus*) *epimeralis* (Sowinsky, 1915)	B
243. *Eulimnogammarus* (*Eurybiogammarus*) *fuscus fuscus* (Dybowsky, 1874)	B
244. *Eulimnogammarus* (*Eurybiogammarus*) *fuscus aureus* (Dorogostaisky, 1916	BE
245. *Eulimnogammarus* (*Eurybiogammarus*) *fuscus longicornis* Bazikalova, 1945	B
246. *Eulimnogammarus* (*Eurybiogammarus*) *ibex ibex* (Dybowsky, 1874)	B
247. *Eulimnogammarus* (*Eurybiogammarus*) *ibex atrichus* Bazikalova, 1945	B
248. *Eulimnogammarus* (*Eurybiogammarus*) *kusnezowi* (Sowinsky, 1915)	B
249. *Eulimnogammarus* (*Eurybiogammarus*) *muriniformis* Bazikalova, 1945	B
250. *Eulimnogammarus* (*Eurybiogammarus*) *murinus* (Dybowsky, 1874)	B
251. *Eulimnogammarus* (*Eurybiogammarus*) *parvexiformis* Bazikalova, 1945	B
252. *Eulimnogammarus* (*Eurybiogammarus*) *parvexii* (Dybowsky, 1874)	B
253. *Eulimnogammarus* (*Eurybiogammarus*) *polyarthrus* (Dybowsky, 1874)	B
254. *Eulimnogammarus* (*Eurybiogammarus*) *proximus* (Sowinsky, 1915)	B
255. *Eulimnogammarus* (*Eurybiogammarus*) *rachmanowi* (Sowinsky, 1915)	B
256. *Eulimnogammarus* (*Eurybiogammarus*) *saphirinus* (Dybowsky, 1874)	B
257. *Eulimnogammarus* (*Eurybiogammarus*) *schamanensis* (Dybowsky, 1874)	B
258. *Eulimnogammarus* (*Eurybiogammarus*) *similis* (Sowinsky, 1915)	B
259. *Eulimnogammarus* (*Eurybiogammarus*) *stenophthalmus* (Dybowsky, 1874)	B
260. *Eulimnogammarus* (*Eurybiogammarus*) *toxophthalmus* (Dybowsky, 1874)	B
261. *Eulimnogammarus* (*Eurybiogammarus*) *ussolzewii ussolzewii* (Dybowsky, 1874)	B
262. *Eulimnogammarus* (*Eurybiogammarus*) *ussolzewii abyssorum* (Dybowsky, 1874)	B
263. *Eulimnogammarus* (*Eurybiogammarus*) *violaceus* (Dybowsky, 1874)	B
264. *Eulimnogammarus* (*Eurybiogammarus*) *virgatus* (Dorogostaisky, 1930)	B
265. *Eulimnogammarus* (*Philolimnogammarus*) *cyanellus* Bazikalova, 1945	B
266. *Eulimnogammarus* (*Philolimnogammarus*) *cyaneus cyaneus* (Dybowsky, 1874)	B
267. *Eulimnogammarus* (*Philolimnogammarus*) *cyaneus angarensis* Bazikalova, 1957	BE
268. *Eulimnogammarus* (*Philolimnogammarus*) *cyaneus comatus* (Dorogostaisky, 1916)	BE
269. *Eulimnogammarus* (*Philolimnogammarus*) *exiguus* Bazikalova, 1945	B

Table 2 (contituing)
Таблица 2 (продолжение)

270. *Eulimnogammarus* (*Pililimnogammarus*) *immundus* Bazikalova, 1945 B
271. *Eulimnogammarus* (*Pililimnogammarus*) *inconspicuus* Bazikalova, 1945 B
272. *Eulimnogammarus* (*Pililimnogammarus*) *marituji* Bazikalova, 1945 B
273. *Eulimnogammarus* (*Pililimnogammarus*) *melanochlorus* (Dorogostaisky, 1930) B
274. *Eulimnogammarus* (*Pililimnogammarus*) *testaceus* (Dybowsky, 1874) B
275. *Eulimnogammarus* (*Pililimnogammarus*) *viridis viridis* (Dybowsky, 1874) B
276. *Eulimnogammarus* (*Pililimnogammarus*) *viridis canus* (Dybowsky, 1874) B
277. *Eulimnogammarus* (*Pililimnogammarus*) *viridis olivaceus* (Dybowsky, 1874) B
278. *Eulimnogammarus* (*Pililimnogammarus*) *viridulus* Bazikalova, 1945 B
279. *Eulimnogammarus* (*Pililimnogammarus*) *vittatus* (Dybowsky, 1874) B

49. †***Fluviogammarus*** Dorogostaisky, 1916[7]
280. † *Fluviogammarus angarensis* Bazikalova, 1945 BE
281. † *Fluviogammarus brachyurus* (Dorogostaisky, 1916) BE
282. † *Fluviogammarus intermedius* Bazikalova, 1945 BE
283. •† *Fluviogammarus larviformis* Dorogostaisky, 1916 [primary monotypy] BE

50. ***Gammarus*** J.C. Fabricius, 1775

balcanicus species group
284. *Gammarus balcanicus* Schäferna, 1922 WP, CA
syn.: *Gammarus angustatus* Martynov, 1930
285. *Gammarus suifunensis* Martynov, 1925 SPC

locusta species group
286. *Gammarus duebeni* Liljeborg, 1852 WP
287. *Gammarus inaequicauda* Stock, 1996 WP
288. *Gammarus kamtschaticus* Tzvetkova, 1972 SPC
289. *Gammarus locusta* (Linnaeus, 1758) WP
290. *Gammarus oceanicus* Segerstråle, 1947 WP
291. *Gammarus setosus* Dementieva, 1931 WP
292. *Gammarus spooneri* G. Karaman, 1991 WP
syn.: *Gammarus salinus* Spooner, 1947
293. *Gammarus wilkitzkii* Birula, 1897 SPC
294. *Gammarus zaddachi* Sexton, 1912 WP

pulex species group
295. *Gammarus aequicauda* (Martynov, 1931) PCE
296. **Gammarus angulatus* (Martynov, 1930) CA
297. **Gammarus barnaulensis* Schellenberg, 1937[8] CA (?)
298. **Gammarus caucasicus* Martynov, 1932 C
299. **Gammarus chostensis* Martynov, 1932 Ñ
300. **Gammarus crispus* Martynov, 1932 Ñ
301. *Gammarus dabanus* Tachteew et Mekhanikova, 2000 CA
302. *Gammarus jacksoni* Morino et Whitman, 1995 SPC
303. *Gammarus komareki* Schäferna, 1922 WP
304. *Gammarus korbuensis* Martynov, 1930 CA
305. *Gammarus koreanus* Uéno, 1940 SPC
306. *Gammarus lacustris* Sars, 1863 H
syn.: *Gammarus pulex extensus* Martynov, 1931
syn.: *Gammarus pulex karae* Birula, 1937
syn.: *Gammarus lacustris krokurensis* Kurenkov et Mednikov, 1959
307. *Gammarus pellucidus* Gurjanova, 1929 WP, SPC (?)
308. *Gammarus pulex* (Linnaeus, 1758)[9] WP
•*Cancer pulex* Linnaeus, 1758 (original combination) [designated by Latreille, 1810]
309. *Gammarus teletzkensis* Martynov, 1930 CA
310. *Gammarus tigrinus* Sexton, 1939 H, BSE

Table 2 (contituing)
Таблица 2 (продолжение)

51. ***Gmelina*** G.O. Sars, 1894
311. *Gmelina aestuarica* (Carausu, 1943) PCE
312. •*Gmelina costata* G.O. Sars, 1894 [designated by G.O. Sars, 1894] PCE

52. ***Gmelinopsis*** G.O. Sars, 1896
313. *Gmelinopsis aurita* G.O. Sars, 1896 PCE
314. •*Gmelinopsis tuberculata* G.O. Sars, 1896 [designated by G.O. Sars, 1896] PCE

53. ***Heterogammarus*** Stebbing, 1899
315. *Heterogammarus capellus capellus* (Dybowsky, 1874) B
316. *Heterogammarus capellus sowinskii* (Bazikalova, 1945) B
317. *Heterogammarus sophianosii* (Dybowsky, 1874) B
•*Gammarus sophianosii* Dybowsky, 1874 (original combination) [designated by Stock, 1969]

54. ***Kuzmelina*** Karaman et Barnard, 1979
318. *Kuzmelina kusnezowi* (Sowinsky, 1894) PCE
•*Gmelina kusnezowi* Sowinsky, 1894 (original combination) [designated by Karaman, Barnard, 1979]

55. ***Lanceogammarus*** Karaman et Barnard, 1979
319. *Lanceogammarus andrussovi* (G.O. Sars, 1896) PCE
•*Gammarus andrussowi* G.O. Sars, 1896 (original combination) [designated by Karaman, Barnard, 1979]

56. ***Lobogammarus*** Bazikalova, 1945
320. •*Lobogammarus latus* Bazikalova, 1945 [primary monotypy] B

57. ***Macropereiopus*** Sowinsky, 1915
321. *Macropereiopus albulus* (Dybowsky, 1874) B
322. *Macropereiopus florii* (Dybowsky, 1874) B
•*Gammarus florii* Dybowsky, 1874 (original combination) [designated by Dybowski, 1924]
323. *Macropereiopus grandimanus* Bazikalova, 1975 B
324. *Macropereiopus leucophthalmus* (Sowinsky, 1915) B
325. *Macropereiopus mirus* Bazikalova, 1975 B
326. *Macropereiopus parvus* Bazikalova, 1945 B
327. *Macropereiopus wagneri wagneri* Sowinsky, 1915 B
328. *Macropereiopus wagneri dagarskii* Sowinsky, 1915 B

58. ***Odontogammarus*** Stebbing, 1899
329. *Odontogammarus bekmanae* Tachteew, 1999 B
330. *Odontogammarus brevipes* Dorogostaisky, 1930 B
331. *Odontogammarus calcaratus calcaratus* (Dybowsky, 1874) B
•*Gammarus calcaratus* Dybowsky, 1874 (original combination) [designated by Dybowski, 1924]
332. *Odontogammarus calcaratus caeculus* Tachteew, 1999 B
333. *Odontogammarus calcaratus improvisus* Dorogostaisky, 1930 B
334. *Odontogammarus calcaratus pulcherrimus* Dorogostaisky, 1930 B
335. *Odontogammarus demianowiczi* Dorogostaisky, 1930 B
336. *Odontogammarus korotnewi* (Sowinsky, 1915) B
337. *Odontogammarus margaritaceus* (Dybowsky, 1874) B

59. ***Ommatogammarus*** Stebbing, 1899
338. *Ommatogammarus albinus* (Dybowsky, 1874) B
339. *Ommatogammarus carneolus carneolus* (Dybowsky, 1874) B
340. *Ommatogammarus carneolus amethystinus* (Dybowsky, 1874) B
341. *Ommatogammarus carneolus melanophthalmus* Dorogostaisky in Bazikalova, 1945 B
342. *Ommatogammarus flavus* (Dybowsky, 1874)[10] B
•*Gammarus flavus* Dybowsky, 1874 (original combination) [designated by Dybowski, 1924]
343. *Ommatogammarus hyacinthinus* (Dybowsky, 1874) B

Table 2 (contituing)
Таблица 2 (продолжение)

60. ***Scytaelina*** Stock, Mirzajani, Vonk, Naderi et Kiabi, 1998
344. •*Scytaelina simplex* Stock, Mirzajani, Vonk, Naderi et Kiabi, 1998 PCE

61. ***Shablogammarus*** Carausu, Dobreanu et Manolache, 1955
345. *Shablogammarus chablensis* (Carausu, 1943) PCE
•*Gammarus chablensis* Carausu, 1943 (original combination) [primary monotypy]
346. *Shablogammarus subnudus* (G.O. Sars, 1896) PCE

62. ***Sowinskya*** Derzhavin, 1948
347. •*Sowinskya macrocera* Derzhavin, 1948 [primary monotypy] PCE
63. ***Yogmelina*** Karaman et Barnard, 1979
348. *Yogmelina brachyura* (Derzhavin et Pjatakova, 1967) PCE
349. *Yogmelina cocolita* G.S. Karaman et J.L. Barnard, 1979 PCE
syn.: *Yogmelina pusilla* Carausu, 1943
350. *Yogmelina laeviuscula* (G.O. Sars, 1896) PCE
351. *Yogmelina limana* G.S. Karaman et J.L. Barnard, 1979 PCE
352. *Yogmelina ovata* (Martynov, 1924) PCE
353. *Yogmelina pusilla* (G.O. Sars, 1896) PCE
•*Gmelina pusilla* G.O. Sars, 1896 (original combination) [designated by Karaman, Barnard, 1979]

10. FAMILY HYALIDAE Bulycheva, 1957 [2 G 2 S]

64. ***Parallorchestes*** Shoemaker, 1941
354. *Parallorchestes ochotensis* (Brandt, 1851) SPC
•*Allorchestes ochotensis* Brandt, 1851 (original combination) [designated by Shoemaker, 1941]
syn.: *Parhyale kurilensis* Iwasa, 1934

11. FAMILY IPHIGENELLIDAE Kamaltynov, 2001 [1 G 1 S]

65. ***Iphigenella*** G.O. Sars, 1896
355. •*Iphigenella acanthopoda* G.O. Sars, 1896 [primary monotypy] PCE

12. FAMILY KAMAKIDAE Myers et Lowry, 2003 [1 G 1 S]

66. ***Kamaka*** Derzhavin, 1923
356. •*Kamaka kuthae* Derzhavin, 1923 [primary monotypy] SPC

13. FAMILY MACROHECTOPODIDAE Sowinsky, 1915 [1 G 1 S]

67. ***Macrohectopus*** Stebbing, 1906
357. *Macrohectopus branickii* (Dybowsky, 1874) B
•*Constantia branickii* Dybowsky, 1874 (original combination) [primary monotypy]

14. FAMILY MELITIDAE Bousfield, 1973 [1 G 1 S]

68. ***Melita*** Leach, 1814
Type species: *Cancer palmata* Montagu, 1804, primary monotypy.

358. *Melita nitidaformis* Labay, 2003 SPC

15. FAMILY MICRUROPODIDAE Kamaltynov, 1999 [4G 52 S]

69. ***Baikalogammarus*** Stebbing, 1899
359. *Baikalogammarus pullus* (Dybowsky, 1874) B
•*Gammarus pullus* Dybowsky, 1874 (original combination) [primary monotypy; by Stebbing, 1899]

70. ***Crypturopus*** Sowinsky, 1915
360. *Crypturopus inflatus* (Dybowsky, 1874) B

Table 2 (contituing)
Таблица 2 (продолжение)

•*Gammarus inflatus* Dybowsky, 1874 (original combination) [designated by Dybowski, 1924]
361. *Crypturopus pachytus* (Dybowsky, 1874) B
362. *Crypturopus rugosus* (Dybowsky, 1874) B
363. *Crypturopus tenuipes* Bazikalova, 1945 B
364. *Crypturopus tuberculatus* (Dybowsky, 1874) B

71. ***Homocerisca*** Bazikalova, 1945
365. *Homocerisca caudata* Bazikalova, 1945 B
366. *Homocerisca perla* (Dybowsky, 1874) B
•*Gammarus perla* Dybowsky, 1874 (original combination) [designated by Barnard, Barnard, 1983]
367. *Homocerisca perloides* Bazikalova, 1945 B
368. *Homocerisca tenuicauda* Bazikalova, 1975 B

72. ***Micruropus*** Stebbing, 1899
369. *Micruropus asper* Bazikalova, 1962 B
370. *Micruropus brevicauda* Bazikalova, 1945 B
371. *Micruropus ciliodorsalis ciliodorsalis* Sowinsky, 1915 B
372. *Micruropus ciliodorsalis rostratus* Bazikalova, 1962 B
373. *Micruropus cristatus* Dorogostaisky, 1936 B
374. *Micruropus dybowskii* Bazikalova, 1945 B
375. *Micruropus eugenii* Bazikalova, 1959 B
376. *Micruropus fixsenii* (Dybowsky, 1874) B
•*Gammarus fixsenii* Dybowsky, 1874 (original combination) [designated by Dybowski, 1924; the later designation [Bazikalova, 1945] of *Gammarus wohlii* Dybowsky, 1874 is invalid]
377. *Micruropus galasii* Bazikalova, 1962 B
378. *Micruropus glaber glaber* (Dybowsky, 1874) B
379. *Micruropus glaber murini* Bazikalova, 1945 B
380. *Micruropus ivanowi ivanowi* Bazikalova, 1945 B
381. *Micruropus ivanowi garjajewi* Bazikalova, 1945 B
382. *Micruropus klukii* (Dybowsky, 1874) B
383. *Micruropus koshowi crassicauda* Bazikalova, 1962 B
384. *Micruropus koshowi koshowi* Bazikalova, 1945 B
385. *Micruropus koshowi setosus* Bazikalova, 1945 B
386. *Micruropus laeviusculus dubius* Bazikalova, 1945 B
387. *Micruropus laeviusculus laeviusculus* (Sowinsky, 1915) B
388. *Micruropus littoralis crassipes* Sowinsky, 1915 B
389. *Micruropus littoralis littoralis* (Dybowsky, 1874) B
390. *Micruropus macroconus calceolaris* Bazikalova, 1945 B
391. *Micruropus macroconus gurjanowae* Bazikalova, 1945 B
392. *Micruropus macroconus macroconus* Bazikalova, 1945 B
393. *Micruropus macroconus tenuis* Bazikalova, 1945 B
394. *Micruropus minutus* (Sowinsky, 1915) B
395. *Micruropus mozi* Bazikalova, 1945 B
396. *Micruropus parvulus* Bazikalova, 1945 B
397. *Micruropus possolskii* Sowinsky, 1915 B
398. *Micruropus pupilla* Bazikalova, 1962 B
399. *Micruropus pusillus* Bazikalova, 1962 B
400. *Micruropus semenowi* Bazikalova, 1945 B
401. *Micruropus talitroides angarensis* Dorogostaisky, 1916 BE
402. *Micruropus talitroides eurypus* Bazikalova, 1945 B
403. *Micruropus talitroides latus* Bazikalova, 1962 B
404. *Micruropus talitroides talitroides* (Dybowsky, 1874) B
405. *Micruropus ushkani* Bazikalova, 1945 B
406. *Micruropus vortex angarensis* Bazikalova, 1962 BE
407. *Micruropus vortex vortex* (Dybowsky, 1874) B
408. *Micruropus vortex vorticellus* Bazikalova, 1945 B
409. *Micruropus wohlii platycercus* (Dybowsky, 1874) B
410. *Micruropus wohlii wohlii* (Dybowsky, 1874) B

Table 2 (contituing)
Таблица 2 (продолжение)

16. FAMILY NIPHARGIDAE Bousfield, 1977 [1 G 9 S]

73. ***Niphargus*** Schiödte, 1847
Type species: *Niphargus stygius* Schiödte, 1849, primary monotypy.

elegans-valachicus species group[11]
411. *Niphargus cubanicus* Birstein, 1954 C
412. *Niphargus potamophilus* Birstein, 1954 C

skopljensis species group
413. **Niphargus submersus* (Derzhavin, 1945) C

stygius-puteanus species group
414. *Niphargus abchasicus* Martynov, 1932 C
415. *Niphargus caelestis* G.S. Karaman, 1982 C
syn.: *Niphargus stygius longidactylus* Birstein, 1952
416. *Niphargus krasnodarus* Karaman, 2012 C
417. *Niphargus latimanus* (Birstein, 1952) C
syn.: *Niphargus stygius latimanus* Birstein, 1952
418. *Niphargus pseudolatimanus* (Birstein, 1952) C
syn.: *Niphargus stygius pseudolatimanus* Birstein, 1952

tatrensis species group
419. *Niphargus smirnovi* Birstein, 1952 C

17. FAMILY OEDICEROTIDAE Lilljeborg, 1865 [3 G 3 S]

74. ***Acanthostepheia*** Boeck, 1871
Type species: *Amphithonotus malmgreni* Goes, 1866, primary monotypy.

420. *Acanthostepheia incarinata* Gurjanova, 1929 AOE

75. ***Deflexilodes*** Bousfield et Chevrier, 1996
Type species: *Monoculodes tenuirostratus* Boeck, 1871, designated by Bousfield, Chevrier [1996].

421. *Deflexilodes minutus* (Gurjanova, 1929) AOE

76. ***Oediceros*** Krøyer, 1842
Type species: *Oediceros saginatus* Krøyer, 1842, primary monotypy.

422. *Oediceros minor* Gurjanova, 1930 AOE

18. FAMILY PACHYSCHESIDAE Tachteew, 1998 [1 G 16 S]

77. ***Pachyschesis*** Bazikalova, 1945
423. *Pachyschesis acanthogammarii* Tachteew, 2000 B
424. *Pachyschesis bazikalovae* G. Karaman, 1976 B
425. *Pachyschesis bergi* Bazikalova, 1945 B
426. *Pachyschesis branchialis* (Dybowsky, 1874) B
•*Gammarus branchialis* Dybowsky, 1874 (original combination) [designated by Barnard, Barnard, 1983]
427. *Pachyschesis bumammus* Tachteew, 2000 B
428. *Pachyschesis crassus* (Sowinsky, 1915) B
429. *Pachyschesis cucuschonok* Tachteew, 2000 B
430. *Pachyschesis indiscretus* Tachteew, 2000 B
431. *Pachyschesis inquilinus* Tachteew, 2000 B
432. *Pachyschesis karabanowi* Tachteew, 2000 B

Table 2 (contituing)
Таблица 2 (продолжение)

433. *Pachyschesis lamakini* Tachteew, 2000 B
434. *Pachyschesis pinguiculus* Tachteew, 2000 B
435. *Pachyschesis punctiommatus* Tachteew, 2000 B
436. *Pachyschesis rarus* Tachteew, 2000 B
437. *Pachyschesis sideljowae* Tachteew, 2000 B
438. *Pachyschesis vorax* Tachteew, 2000 B

19. FAMILY PALLASEIDAE Tachteew, 2000 (Tachteev 1995a, nomen nudum) [8 G 57 S]

78. ***Ceratogammarus*** Sowinsky, 1915
439. *Ceratogammarus acerus* Bazikalova, 1937 B
440. *Ceratogammarus cornutus* (Sowinsky, 1915) B
441. •*Ceratogammarus dybowskii* Sowinsky, 1915 [primary monotypy] [designated by Barnard, Barnard, 1983] B

79. ***Gymnogammarus*** Sowinsky, 1915
442. •*Gymnogammarus macrurus* Sowinsky, 1915 [primary monotypy] B

80. ***Hakonboeckia*** Stebbing, 1899
443. •*Hakonboeckia strauchii* (Dybowsky, 1874) [primary monotypy; by Stebbing, 1899] B

81. ***Leptostenus*** Bazikalova, 1945
444. •*Leptostenus leptocerus* (Dybowsky, 1874) [primary monotypy] B

82. ***Metapallasea*** Bazikalova, 1959
445. •*Metapallasea galinae* Bazikalova, 1959 [primary monotypy] B

83. ***Pallasea*** Bate, 1862
446. *Pallasea* (*Homalogammarus*) *brandtii brandtii* (Dybowsky, 1874) B
447. *Pallasea* (*Homalogammarus*) *brandtii flaviceps* Dorogostaisky, 1922 B
448. *Pallasea* (*Homalogammarus*) *brandtii tenera* Sowinsky, 1915 B
449. *Pallasea* (*Babr*) *baikali baikali* Stebbing, 1899 B
450. *Pallasea* (*Babr*) *baikali inermis* Sowinsky, 1915 B
451. *Pallasea* (*Babr*) *baikali nigromaculata* Dorogostaisky, 1922 B
452. *Pallasea* (*Pallasea*) *cancelloides* (Gerstfeldt, 1858) B
453. *Pallasea* (*Pallasea*) *cancellus angarensis* Dorogostaisky, 1916 BE
454. *Pallasea* (*Pallasea*) *cancellus cancellus* (Pallas, 1767) B
•*Oniscus cancellus* Pallas, 1772 (original combination) [primary monotypy, designated by Barnard, Barnard, 1983]
455. *Pallasea* (*Pallasea*) *cancellus gerstfeldtii* (Dybowsky, 1874) B
456. *Pallasea* (*Pallasea*) *grubii arenicola* Dorogostaisky, 1922 B
457. *Pallasea* (*Pallasea*) *grubii grubii* (Dybowsky, 1874) B
458. *Pallasea* (*Pallasea*) *kesslerii* (Dybowsky, 1874) B
459. *Pallasea* (*Pallasea*) *maligna* Tachteew, 2000 B
460. *Pallasea* (*Pallasea*) *quadrispinosa* Sars, 1867 BE
syn.: *Pallasea laevis* Ekman, 1923[12] BE
461. *Pallasea* (*Pentagonurus*) *dybowskii dybowskii* Stebbing, 1899 B
462. *Pallasea* (*Pentagonurus*) *dybowskii fluminalis* Tachteew, 2000 BE
463. *Pallasea* (*Pentagonurus*) *viridis* (Garjajew, 1901) B

84. ***Parapallasea*** Stebbing, 1899
464. *Parapallasea borowskii borowskii* (Dybowsky, 1874) B
465. *Parapallasea borowskii sitnikovae* Tachteew, 2000 B
466. *Parapallasea borowskii wosnessenskii* Dorogostaisky, 1922 B
467. *Parapallasea lagowskii* (Dybowsky, 1874) B
•*Gammarus lagowskii* Dybowsky, 1874 (original combination) [designated by Dybowski, 1924]

Table 2 (contituing)
Таблица 2 (продолжение)

468. *Parapallasea puzyllii nigra* (Garjajew, 1901) B
syn.: *Palicarinus puzyllii carinulata* (Dorogostajsky, 1922)
469. *Parapallasea puzyllii puzyllii* (Dybowsky, 1874) B
syn.: *Palicarinus puzyllii* (Dybowsky, 1874)

85. ***Poekilogammarus*** Stebbing, 1899
470. *Poekilogammarus* (*Bathygammarus*) *lydiae* (Bazikalova, 1935) B
471. *Poekilogammarus* (*Bathygammarus*) *semenkewitschi okunewae* Tachteew, 1995 B
472. *Poekilogammarus* (*Bathygammarus*) *semenkewitschi semenkewitschi* (Sowinsky, 1915) B
473. *Poekilogammarus* (*Bathygammarus*) *unguisetosus* (Sowinsky, 1915) B
474. *Poekilogammarus* (*Inobsequentus*) *galini* Tachteew, 2000 B
475. *Poekilogammarus* (*Onychogammarus*) *araneolus* (Dybowsky, 1874) B
476. *Poekilogammarus* (*Onychogammarus*) *crassimanus* Sowinsky, 1915 B
477. *Poekilogammarus* (*Onychogammarus*) *dorogostajskii dorogostajskii* Tachteew, 1995 B
478. *Poekilogammarus* (*Onychogammarus*) *dorogostajskii pygoacanthus* Tachteew, 1995 B
479. *Poekilogammarus* (*Onychogammarus*) *ephippiatus* (Dybowsky, 1874) B
480. *Poekilogammarus* (*Onychogammarus*) *erinaceus* Tachteew, 1992 B
481. *Poekilogammarus* (*Onychogammarus*) *longipes* Bazikalova, 1945 B
482. *Poekilogammarus* (*Onychogammarus*) *megonychoides* Bazikalova, 1945 B
483. *Poekilogammarus* (*Onychogammarus*) *megonychus megonychus* Sowinsky, 1915 B
484. *Poekilogammarus* (*Onychogammarus*) *megonychus perpolitus* Tachteew, 2000 B
485. *Poekilogammarus* (*Onychogammarus*) *pictoides* Sowinsky, 1915 B
486. *Poekilogammarus* (*Poekilogammarus*) *pictus* (Dybowsky, 1874) B
•*Gammarus pictus* Dybowsky, 1874 (original combination) [designated by Bousfield, 1977]
487. *Poekilogammarus* (*Poekilogammarus*) *sukaczewi* Sowinsky, 1915 B
488. *Poekilogammarus* (*Rostrogammarus*) *rostratus amblyops* Bazikalova, 1945 B
489. *Poekilogammarus* (*Rostrogammarus*) *rostratus brevirostris* Bazikalova, 1945 B
490. *Poekilogammarus* (*Rostrogammarus*) *rostratus longirostris* Bazikalova, 1945 B
491. *Poekilogammarus* (*Rostrogammarus*) *rostratus rostratus* Sowinsky, 1915 B
492. *Poekilogammarus* (*Rostrogammarus*) *talitrus orchestes* (Dybowsky, 1874) B
493. *Poekilogammarus* (*Rostrogammarus*) *talitrus talitrus* (Dybowsky, 1874) B
494. *Poekilogammarus* (*Variogammarus*) *curvirostris* Bazikalova, 1945 B
495. *Poekilogammarus* (*Variogammarus*) *rectirostris* Bazikalova, 1945 B

20. FAMILY PONTOGAMMARIDAE Bousfield, 1977 [10 G 41 S]

86. ***Compactogammarus*** Stock, 1974
496. *Compactogammarus compactus* (G.O. Sars, 1895) PCE
•*Niphargoides compactus* G.O. Sars, 1895 (original combination) [primary monotypy]

87. ***Dikerogammarus*** Stebbing, 1899
497. *Dikerogammarus aralychensis* (Birstein, 1932) PCE (?)
498. *Dikerogammarus bispinosus* Martynov, 1925 PCE
499. *Dikerogammarus caspius* (Pallas, 1771) PCE
500. *Dikerogammarus fluviatilis* Martynov, 1919 PCE
501. *Dikerogammarus gruberi* Mateus et Mateus, 1990 PCE
502. *Dikerogammarus haemobaphes* (Eichwald, 1841) PCE
•*Gammarus haemobaphes* Eichwald, 1841 (original combination) [designated by Stock, 1974]
503. *Dikerogammarus oskari* Birstein, 1945 PCE
504. *Dikerogammarus palmatus* Martynov, 1925 PCE
505. *Dikerogammarus villosus* (Sowinsky, 1894) PCE

88. ***Niphargogammarus*** Birstein, 1945
506. *Niphargogammarus aequimanus* (G.O. Sars, 1895) PCE
507. *Niphargogammarus borodini* (G.O. Sars, 1897) PCE
508. *Niphargogammarus intermedius* (Carausu, 1943) PCE
509. *Niphargogammarus quadrimanus* (G.O. Sars, 1895) PCE

Table 2 (contituing)
Таблица 2 (продолжение)

•*Gammarus quadrimanus* G.O. Sars, 1895 (original combination) [designated by Barnard, Barnard, 1983]

89. ***Niphargoides*** G.O. Sars, 1894
510. *Niphargoides boltovskoi* Derzhavin et Pjatakova, 1968 PCE
511. *Niphargoides caspius* (Grimm in G.O. Sars, 1894) PCE
•*Niphargus caspius* Grimm in G.O. Sars, 1894 (original combination) [primary monotypy]
512. *Niphargoides corpulentus* G.O. Sars, 1894 PCE

90. ***Obesogammarus*** Stock, 1974
513. *Obesogammarus acuminatus* Stock, Mirzajani, Vonk, Naderi, Kiabi, 1998 PCE
514. *Obesogammarus crassus* (Grimm in G.O. Sars, 1894) PCE
515. *Obesogammarus obesus* (G.O. Sars, 1894) PCE
•*Gammarus obesus* G.O. Sars, 1894 (original combination) [designated by Stock, 1974]
516. *Obesogammarus olvianus* (Sowinsky, 1904) PCE
517. *Obesogammarus platycheir* (G.O. Sars, 1896) PCE

91. ***Pandorites*** G.O. Sars, 1895
518. •*Pandorites podoceroides* G.O. Sars, 1895 [primary monotypy] PCE

92. ***Paraniphargoides*** Stock, 1974
519. *Paraniphargoides derzhavini* (Pjatakova, 1962) PCE
520. *Paraniphargoides grimmi* (G.O. Sars, 1896) PCE
521. *Paraniphargoides motasi* (Carausu, 1943) PCE
•*Niphargoides motasi* Carausu, 1943 (original combination) [designated by Stock, 1974]

93. ***Pontogammarus*** Sowinsky, 1904
522. *Pontogammarus abbreviatus* (G.O. Sars, 1894) PCE
523. *Pontogammarus aestuarius* Derzhavin, 1924 PCE
524. *Pontogammarus borceae* Carausu, 1943 PCE
525. *Pontogammarus maeoticus* (Sowinsky, 1894) PCE
526. *Pontogammarus robustoides* (Grimm in G.O. Sars, 1894) PCE
•*Gammarus robustoides* (Grimm in G.O. Sars, 1894 (original combination) [designated by Stock, 1974]
syn.: *Gammarus aralensis caspius* Sars, 1896
527. *Pontogammarus sarsi* (Sowinsky, 1898) PCE
528. **Pontogammarus setosus* (Schaferna, 1914)[13] PCE (?)
529. *Pontogammarus weidemanni* (G.O. Sars, 1896) PCE

94. ***Stenogammarus*** Martynov, 1924
530. *Stenogammarus* (*Stenogammarus*) *carausui* Derzhavin et Pjatakova, 1962 PCE
531. *Stenogammarus* (*Stenogammarus*) *compressus* (G.O. Sars, 1894) PCE
532. *Stenogammarus* (*Stenogammarus*) *deminutus* (Stebbing, 1906) PCE
533. *Stenogammarus* (*Stenogammarus*) *macrurus* (G.O. Sars, 1894) PCE
•*Gammarus macrurus* G.O. Sars, 1894 (original combination) [designated by Stock, 1974]
534. *Stenogammarus* (*Stenogammarus*) *micrurus* Derzhavin et Pjatakova, 1996 PCE
535. *Stenogammarus* (*Stenogammarus*) *similis* (G.O. Sars, 1894) PCE
536. *Stenogammarus* (*Wolgagammarus*) *dzjubani* Mordukhai-Boltovskoi et Ljakhov, 1972 PCE

95. ***Turcogammarus*** Karaman et Barnard, 1979
Type species: *Obesogammarus turcarum* Stock, 1974 [designated by Karaman, Barnard, 1979]

537. **Turcogammarus aralensis* (Uljanin, 1875)[14] PCE
Gammarus aralensis Uljanin, 1875 (original combination)

96. ***Uroniphargoides*** Stock, 1974
538. *Uroniphargoides spinicaudatus* (Carausu, 1943) PCE
•*Niphargoides spinicaudatus* Carausu, 1943 (original combination) [primary monotypy]

Table 2 (contituing)
Таблица 2 (продолжение)

21. FAMILY PONTOPOREIIDAE Dana, 1853 [2 G 2 S]

97. ***Pontoporeia*** Krøyer, 1842
539. •*Pontoporeia femorata* Krøyer, 1842 [primary monotypy] SPC
syn.: *Pontoporeia furcigera* Bruzelius, 1859
syn.: *Pontoporeia sinuata* Ekman, 1913
syn.: *Pontoporeia ekmani* Bulycheva, 1936

98. ***Monoporeia*** Bousfield, 1989
540. *Monoporeia affinis* (Lindström, 1855) AOE
•*Pontoporeia affinis* Lindström, 1855 (original combination)
syn.: *Monoporeia microphthalma* (G.O. Sars, 1896)

FAMILY PSEUDOCRANGONYCTIDAE Holsinger, 1989 [2 G 10 S]

99. ***Procrangonyx*** Schellenberg, 1934
Type species: *Eocrangonyx japonicus* Ueno, 1930, primary monotypy.

541. *Procrangonyx primoryensis* (Stock et Jo, 1990) SPC
syn.: *Procrangonyx stygoedincus* Sidorov et Holsinger, 2007

100. ***Pseudocrangonyx*** Akatsuka et Komai, 1922
Type species: *Pseudocrangonyx shikokunis* Akatsuka et Komai, 1922, designated by Barnard, Barnard [1983]

542. *Pseudocrangonyx birsteini* Labay, 2001 SPC
543. **Pseudocrangonyx bohaensis* (Derzhavin, 1927) SPC
544. *Pseudocrangonyx camtschaticus* Birstein, 1955 SPC
545. *Pseudocrangonyx elenae* Sidorov, 2011 SPC
546. *Pseudocrangonyx febras* Sidorov, 2009 SPC
547. *Pseudocrangonyx holsingeri* Sidorov et Gontcharov, 2013 SPC
548. *Pseudocrangonyx korkishkoorum* Sidorov, 2006 SPC
549. *Pseudocrangonyx kseniae* Sidorov, 2012 SPC
550. *Pseudocrangonyx levanidovi* Birstein, 1955 SPC
551. *Pseudocrangonyx relictus* Labay, 2001 SPC
552. *Pseudocrangonyx susunaensis* Labay, 2001 SPC
553. *Pseudocrangonyx sympatrycus* Sidorov et Gontcharov, 2013 SPC
554. *Pseudocrangonyx tiunovi* Sidorov et Gontcharov, 2013 SPC

FAMILY TALITRIDAE Rafinesque, 1815 [5 G 9 S]

101. ***Deshayesorchestia*** Ruffo in Tafani et al., 2004
555. *Deshayesorchestia deshayesii* (Audouin, 1826) BSE
•*Orchestia deshayesii* Audouin, 1826 (original combination) [designated by Tafani *et al*., 2004]
syn.: *Orchestoidea deshayesi* (Audouin, 1826)
syn.: *Talorchestia deshayesii* (Audouin, 1826)
syn.: *Orchestia deshayesi* Heller, 1866

102. ***Orchestia*** Leach, 1814
Type species: *Cancer* (*Gammarus*) *littoreus* Montagu, 1808, primary monotypy.

556. *Orchestia bottae* Milne-Edwards, 1840 SPC
557. *Orchestia cavimana* Heller, 1865 BSE
558. *Orchestia gammarellus* (Pallas, 1766) WP, BSE
559. *Orchestia solifuga* Iwasa, 1939 SPC

Table 2 (contituing)
Таблица 2 (продолжение)

103. ***Paciforchestia*** Bousfield, 1982
Type species: *Parorchestia klawei* Bousfield, 1961, designated by Bousfield, 1982.

560. *Paciforchestia pyatakovi* (Derzhavin 1937) SPC

104. ***Platorchestia*** Bousfield, 1982
561. *Platorchestia platensis* (Krøyer, 1845) WP, BSE
•*Orchestia platensis* Krøyer, 1845 (original combination) [designated by Bousfield, 1982]
562. *Platorchestia monodi* Mateus, Mateus et Afonso, 1986 WP, BSE
563. *Platorchestia joi* Stock et Biernbaum, 1994 SPC
syn.: *Talorchestia crassicornis* Derzhavin, 1937
564. *Platorchestia pachypus* (Derzhavin, 1937) SPC
565. **Platorchestia zachsi* (Derzhavin, 1937) SPC

105. ***Talitrus*** Latreille, 1802
566. *Talitrus saltator* (Montagu, 1808) H, BSE
•*Gammarus saltator* Montagu, 1808 (original combination) [primary monotypy]
syn.: *Oniscus locusta* Pallas, 1766
syn.: *Talitrus locusta* Latreille, 1802
syn.: *Talitrus littoralis* Leach, 1814
syn.: *Talitrus locustra* Sars, 1890

106. ***Traskorchestia*** Bousfield, 1982
Type species: *Orchestia traskiana* Stimpson, 1857, designated by Bousfield [1982].

567. **Traskorchestia ditmari* (Derzhavin, 1923) SPC
568. *Traskorchestia ochotensis* (Brandt, 1851) AP

107. ***Trinorchestia*** Bousfield, 1982
569. *Trinorchestia trinitatis* (Derzhavin, 1937) SPC
•*Orchestoidea trinitatis* Derzhavin, 1937 (original combination) [designated by Bousfield, 1982]

FAMILY URISTIDAE Hurley, 1963 [1 G 5 S]

108. ***Onisimus*** Boeck, 1871
Type species: *Anonyx litoralis* Krøyer, 1845, designated by Boeck [1876].

570. *Onisimus birulai* (Gurjanova, 1929) AOE
571. *Onisimus botkini* Birula, 1897 AOE
572. *Onisimus caspius* (Grimm in G.O. Sars, 1896) PCE
573. *Onisimus litoralis* (Krøyer, 1845) AOE
574. *Onisimus platyceras* (Grimm in G.O. Sars, 1896) PCE

Incertae sedis: [2 G 7 S]

Presumably belongs to the genus *Eulimnogammarus*:
575. *Eulimnogammarus* (?) *abyssalis* Sowinsky, 1915 B
576. *Eulimnogammarus* (?) *curvimanus* Sowinsky, 1915 B

Presumably belongs to the genus *Heterogammarus*:
577. *Heterogammarus* (?) *bifasciatus* (Dybowsky, 1874) B
578. *Heterogammarus* (?) *ignotus* (Dybowsky, 1874) B
579. *Heterogammarus* (?) *incertus* Sowinsky, 1915 B

Presumably belongs to the family Micruropodidae:
109. Genus ***Profundalia*** Kamaltynov, 2001
580. *Profundalia tenuis* (Bazikalova, 1945) B
•*Eulimnogammarus tenuis* Bazikalova, 1945 [primary monotypy]

Table 2 (contituing)
Таблица 2 (продолжение)

Presumably belongs to the family Pallaseidae:
110. Genus ***Polyacanthisca*** Bazikalova, 1937
581. •*Polyacanthisca calceolata* Bazikalova, 1937 [primary monotypy] B

[1] Data on the number of species in the families registered in Lake Baikal are evaluated and do not correspond to those in Kamaltynov [2001], from which, in turn, they are taken to summarizing report of Väinölä *et al*. [2008].

[2] Kamaltynov [2001] gives a diagnosis of the family "modified after Bousfield [1977], Barnard & Barnard [1983]", but later authors had named this group "Cardiophilids". The only Baikalian *Pachyschesis* is withdrawn as it is unrelated to the Ponto-Caspian fauna and placed in the separate Pachyschesidae. Barnard & Barnard [1983] designated this group, but not officially giving it a family status.

[3] Apparently one of the numerous morphs of *Gmelinoides fasciatus*.

[4] According to Martynov [1924] this species was mistakenly identified by the author with *Ch. curvispinum* or *Ch. maeoticum*; status should be verified.

[5] Morphologically almost coincides with the marine *Gammaracanthus loricatus* s. str.; the distribution was noted in Baikal [Sowinsky, 1915]; however the description of subspecies is obviously erroneously and caused by a confusion of labels [Takhteev, 1999b]. *Gammaracanthus* henceforth was never found in Baikal, including in our studies.

[6] The division of the genus *Eulimnogammarus* into subgenera is artificial and needs revision.

[7] Endemic to the upper Angara River; probably disappeared (extinct) after the building of Irkutsk and Bratsk hydroelectric power stations.

[8] Locus typicus is unknown. Schellenberg [1937] wrote: Barnaul (Tomsk), Burgusutai (W. Siberia), which is an obvious confusion.

[9] The species within Russia is recorded only for Caucasus, apparently earlier records, in most cases, incorrectly confused with *G. lacustris* Sars, 1863.

[10] Karaman [1980] considers this species representative of a separate genus *Abludogammarus*. According to Takhteev [2000b], the division of the genus *Ommatogammarus* is unwarranted. Furthermore, *O. flavus* can not be separated from the genus *Ommatogammarus*, as Dybowski [1924] designated it as the type species of the same genus.

[11] Grouping following Straškraba [1972].

[12] Status needs to be checked; it is possible species resurrection from synonyms.

[13] Birstein [1945] included this species in the genus *Dikerogammarus*, but Martynov considered this taxon belonging to a subspecies of *Pontogammarus robustoides*.

[14] Needs redescription, with doubt was related to the genus by Barnard & Barnard [1983]. Birstein [1945] considered in the genus *Dikerogammarus*, as opposed to Martynov [1924] and Derzhavin [1937], who considered that it belonged to *Pontogammarus*.

The species composition of the amphipod fauna was studied to a different degree in various Russian regions, often irregularly. Historically, the northwestern region, the Volga Basin, the Russian part of the Altai Mountain Ridge, Lake Baikal, and the southern part of the Russian Far East were relatively better studied.

Seven genera out of the 110 identified (or 6.4%) belong to the paleolimnic complex (the genus *Pseudocrangonyx* presumably attributed to this group). It is the underground amphipods from the families Crangonyctidae and Pseudocrangonyctidae which are the most ancient freshwater inhabitants [Sidorov, Gontcharov, 2015].

The mesolimnic complex includes 44 genera (or 40.0%). Its almost all families and genera are from Lake Baikal, with one possible exception (the genus *Gmelinoides*). It is not inconceivable that the mesolimnic age is typical for all Baikalian families, and to the family Gammaridae and the genus *Gammarus* in particular. Genetic data suggest the speciation of freshwater representatives of the genus *Gammarus* in the Eocene [Hou *et al.*, 2011].

The main ecological feature of amphipods from the paleolimnic and, mostly, the mesolimnic complex is adaptation to stable environments. They are present in groundwater, at large depths of Lake Baikal, and in the cold mountain streams. Of course, there are exceptions, such as ubiquistic *Gammarus lacustris* that is adapted to a broad temperature and salinity range.

The freshwater Lake Baikal is, in fact, an oceanic water-body based on a variety of characteristics: geological, geomorphological, hydrophysical, and by the taxonomic and functional ecological composition and structure of its biota. Baikal can be regarded as a miniature ocean model. The abiotic and biotic factors of endemic Baikal Lake fauna evolution were discussed by many authors [Takhteev, 2000b, c; Takhteev *et al*., 2003; Baikalogy, 2012].

The Baikal amphipod fauna belonging to the mesolimnic complex is unique (Table 4) across the entire biosphere. Lake Baikal has the water surface area of 31 500 km² (slightly more than 0.000006% of the area of the Earth's surface, 510200 million km²), and its maximum depth is about 1640 m, averaging about 700 m. According to our estimates, 276 species and 78 subspecies of amphipods (totaling 354), distributed among 41 genera and 7 families, are known. Only one species in the lake does not have a Baikalian origin: *Gammarus lacustris* (is an accidental species in the lake from other water-bodies, and does not survive). There is evidence that another species, *Gammarus dabanus*, inhabitant of the mountain watercourses of Khamar-Daban Ridge [Takhteev, Mekhanikova, 2000;

Table 3. Alien amphipods in continental waters of Russia.
Таблица 3. Чуждые виды амфипод в континентальных водах России.

Species	Historical range	Distribution in Russia outside the historic range	First and recent published records
Amathillina cristata	PC	South European Russia, R. Volga, Don	Ioffe & Maximova [1968], Jażdżewski [1980], Zinchenko *et al*. [2008]
Chelicorophium curvispinum	PC	South European Russia, R. Volga, Neva, Narva, Lake Ladoga, Baltic Sea in Kaliningrad and Leningrad reg.	Nikolaev [1963], Jażdżewski [1980], Ezhova *et al*. [2005], Zinchenko *et al*. [2008], Malyavin *et al*. [2008], Kurashov *et al*. [2010], Berezina *et al*. [2011], Zinchenko & Kurina [2011]
Chelicorophium maeoticum	PC	South European Russia, R. Volga, Don	Filinova *et al*. [2008], Zinchenko *et al*. [2008], Zinchenko & Kurina [2011]
Chelicorophium sowinskyi	PC	South European Russia, R. Don	Ioffe [1968], Mordukhai-Boltovskoi *et al*. [1969]
Chelicorophium mucronatum	PC	South European Russia, R. Don	Mordukhai-Boltovskoi *et al*. [1969]
Chelicorophium robustum	PC	South European Russia, R. Don	Mordukhai-Boltovskoi *et al*. [1969]
Pontogammarus robustoides	PC	South European Russia, R. Don, Volga, Baltic Sea in Kaliningrad and Leningrad reg., Lake Ladoga	Ioffe & Maximova [1968], Berezina & Panov [2003], Zinchenko *et al*. [2008], Kurashov & Barbashova [2010], Zinchenko & Kurina [2011], own data
Pontogammarus abbreviatus	PC	South European Russia, R. Volga	Zinchenko *et al*. [2008]
Pontogammarus sarsi	PC	South European Russia, R. Volga	Borodich [1976], Zinchenko *et al*. [2008], Filinova *et al*. [2008]
Turcogammarus aralensis	PC + Aral	South European Russia, R. Don	Pjatakova & Tarasov [1996]
Dikerogammarus caspius	PC	South European Russia, R. Don, Volga	Filinova *et al.* [2008]; Zinchenko *et al*. [2008], Zinchenko & Kurina [2011], own data
Dikerogammarus haemobaphes	PC	South European Russia, R. Don, Volga	Mordukhai-Boltovskoi [1960], Borodich & Lyakhov [1983], L'vova *et al*. [1996], Bakanov [2003], Berezina [2007a], Zinchenko & Kurina [2011]
Dikerogammarus villosus	PC	South European Russia, R. Volga	Mordukhai-Boltovskoi [1960], Zinchenko *et al*. [2008]
Dikerogammarus fluviatilis	PC	South European Russia, R. Don, Volga	Filinova *et al*. [2008], Zinchenko *et al*. [2008]
Iphigenella acanthopoda	PC	South European Russia	Zinchenko *et al*. [2008]
Obesogammarus obesus	PC	R Volga (incl. upper reservoirs), South European Russia	Mordukhai-Boltovskoi & Dzyuban [1976], Zinchenko *et al*. [2008], Zinchenko & Kurina [2011]
Obesogammarus crassus	PC	South European Russia, R. Don, Volga, Baltic Sea in Kaliningrad reg.	Mordukhai-Boltovskoi [1979], Ezhova *et al*. [2005], Zinchenko *et al*. [2008], own data
Echinogammarus warpachowskyi	PC	South European Russia, R, Volga; Baltic Sea in Kaliningrad and Leningrad reg.	Voronin & Yermokhin [2004], Orlova *et al*. [2006], Filinova *et al*. [2008], Berezina *et al*. [2011], Zinchenko & Kurina [2011], own data
Echinogammarus ischnus	PC	South European Russia, R. Volga; Baltic Sea in Kaliningrad reg.	Mordukhai-Boltovskoi [1960], Ezhova *et al*. [2005], Berezina *et al*. [2011], Zinchenko & Kurina [2011], own data
Stenogammarus (*W*.) *dzjubani*	PC	South European Russia, R. Volga	Voronin & Yermokhin [2004], Zinchenko *et al*. [2008], Zinchenko & Kurina [2011]
Stenogammarus (*S*.) *macrurus*	PC	South European Russia, R. Volga	Zinchenko *et al*. [2008]
Stenogammarus (*S*.) *similis*	PC	South European Russia, R. Volga	Zinchenko *et al*. [2008]
Shablogammarus chablensis	PC	South European Russia	Voronin & Yermokhin [2004], Zinchenko & Kurina [2011]
Orchestia cavimana	PC + Med.	Basin of R .Narva,Baltic Sea in Leningrad and Kaliningrad reg.	Kotta [2000], Berezina *et al*. [2011], own data

Table 3 (contituing)
Таблица 3 (продолжение)

Platorchestia platensis	CT	Basins of R .Narva, Baltic Sea in Leningrad reg, NW Russia	Spicer & Janas [2006], own data
Gmelinoides fasciatus	B	Basins of R. Narva, Neva, Volga, Ural including small and large lakes; Reservoirs in Siberia	Borodich [1979], Zadoenko *et al*. [1985], Tarasov [1995], Berezina [2007c], own data
Micruropus wohlii	B	Reservoirs, R. Volga, Siberia	Voronin & Yermokhin [2004], Filinova *et al*. [2008]
Micruropus possolskii	B	Basins of R. Narva, Neva, Volga, Ural, Ob; Lake Ladoga; large and small lakes, reservoirs	Zadoenko *et al*. [1985], Tarasov [1995], Viser [1981], Barbashova *et al.* [2013], own data
Gammarus tigrinus	NA	Basins of R. Narva, Neva, Baltic Sea in Leningrad and Kaliningrad reg.	Nikolaev [1963], Berezina [2007b], Berezina *et al*. [2011], own data
Gammarus lacustris	Loc., E, S	lakes of European Russia, Siberia and Kamtchatka	Deksbakh [1952], Bekman [1954], Kurenkov [1967], Timm & Timm [1993], Kozlov [2013]
Monoporeia affinis	Loc., E	lakes of European Russia, Siberia	Greze [1958]
Pallasea quadrispinosa	Loc., E	lakes of north European Russia	Gordeev [1954]

Notes: PC — Ponto-Caspian, B — Baikalian, NA — North-American, CT — Circumtropical, Med. — Mediterranean, Aral — Aral Sea, S — Siberia, E — European, Loc. — Local.

Table 4. Correlation of amphipod life-forms with zoogeographic groups for native continental amphipods.
Таблица 4. Корреляция жизненных форм амфипод с зоогеографическими группами для нативных континененентальных амфипод.

Class		Group	Taxa	Geographic attribution[1]								
				H	WP	C	SPC	CA	B	BE	BSE	AOE
1	Terrestrial	amphibionts	Talitridae				+					
2	Pelagic	mysidiformes	*Macrohectopus*						+			
3	Benthic	true benthics	*Eulimnogammarus* (part.)						+			
			†*Fluviogammarus*							+		
		nectobenthic	*Acanthogammarus*						+			
			Gammaracanthidae									+
			Parapallaseinae						+			
		phytophilic	*Pallasea* (part.)						+	+?		
			Micruropus vortex						+			
		variable modes	Anisogammaridae				+					
			Gammarus	+	+	+	+	+			+	
			Gmelinoides						+	+		
			Baikalogammarus									
4	Benthopelagic	scavengers	*Ommatogammarus*						+			
			Polyacanthisca						+			
5	Symbiont	sponge symbiotic	*Brandtia parasitica*						+			
			Eulimnogammarus violaceus						+			
		amphipod parasites	Pachyschesidae						+			
6	Subterranean	stout body	Niphargidae			+						
			Amurocrangonyx				+					
			Crangonyx		+							
			Ganigamoera				+					
		slender body	Pseudocrangonyctidae				+					
			Stygobromus					+				
7	Semi-subterranean	stout body	*Synurella*		+	+	+					
			Lyurella			+						

[1]Designation of groups see in section “Material and methods”. Data about the lifestyle of amphipods in Baikal Lake according Takhteev [1996, 2000b, c], Baikalogy [2012].

Mekhanikova, 2009], can reach the mouths of rivers and the water edge of Lake Baikal [Kamaltynov, 2009]. Even excluding the subspecies in Lake Baikal, about 4.3% of the world's amphipod fauna and 45.3% of the inland amphipods are present there [Takhteev, 2000b]. However, taking into consideration the stygobionts (as can be calculated from the data given by Väinölä *et al*. [2008]), the share of the Baikalian fauna species accounts for 28.5% of all known freshwater amphipods.

The neolimnic complex includes 59 genera (or 53.6%). It consists of the superfamilies Hadzioidea, Eusiroidea, Oedicerotoidea, Lysianassoidea, Phoxocephaloidea, Talitroidea and Corophiidea. Members of this complex are found in relative proximity to the sea coasts, in the riverine estuaries as well as in different relict lakes that had a connection with the Ocean or formed directly during marine transgression (in particular, *Monoporeia* and *Gammaracanthus*).

The diversity of life forms of the amphipods is more abundant in ancient Lake Baikal (see Table 4). In particular, only in this lake that the life forms are native to freshwater basins as mysidiformic pelagobionts (*Macrohectopus branickii*), benthopelagic scavengers (six species and subspecies of the genus *Ommatogammarus* and *Polyacanthisca calceolata*), symbionts of sponges (*Brandtia* spp., and *Eulimnogammarus violaceus*) and large amphipod parasites (fam. Pachyschesidae, no less than 16 species). However, their ecological analogs exist in the oceans, which once again confirms the oceanic ecosystem type characteristic of Lake Baikal.

As in the other regions of the planet, the class of terrestrial life forms icludes amphipods of the family Talitridae that are the amphibiotic inhabitants of the sea coastal regions.

The subterranean aquatic amphipod fauna of Russia is not rich in species (totaling 35 species). However, their zoogeographical heterogeneity is of interest; the underground representatives belong to four biogeographic groups (see Table 4). Four groups could be identified, which differ markedly in their origin and evolution: 1) Holarctic group of the paleolimnic complex *Crangonyx*-*Synurella*; 2) a group of the Western Palearctic Niphargidae, related to the mesolimnic complex; 3) a group of the Far Eastern Pseudocrangonyctydae of unknown origin [Sidorov, Gontcharov, 2015], and 4) a group of the neolimnic Far Eastern *Ganigamoera* [Sidorov, 2010].

The amphipod biodiversity of Russian continental waters is quite impressive when compared with the rest of the planet. However unique it may be is still rather understudied and underappreciated. Only in Lake Baikal, according to forecasts, at least one-third of the species is undescribed. The underground fauna is poorly understood or even unknown in some regions to date. A good proof of this is the recent discovery in Siberia of two new species of the genus *Stygobromus*, whose main centre of diversity is located in North America [Sidorov *et al.*, 2010]. In conclusion, some of the species (possibly remains) as yet unknown may inhabit the mountainous regions of the Central Asian Foldbelt.

First Russian record:

Eogammarus itotomikoae Tomikawa et al., 2006 [this publication] SPC

List of the extinct species:

It should be noted that the group of species, emigrants from Lake Baikal (Baikalian escapee), has greatly suffered owing to the hydropower construction on the Angara river, and due to switchover of the reservoirs from the river regime to the lake regime. The four rheophilous *Fluviogammarus* species mentioned below have disappeared from the hydrobiological samples in recent years.

Fluviogammarus angarensis Bazikalova, 1945
Fluviogammarus brachyurus (Dorogostaisky, 1916)
Fluviogammarus intermedius Bazikalova, 1945
Fluviogammarus larviformis Dorogostaisky, 1916

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