

The fauna of non-biting midges subfamily Chironominae (Diptera, Chironomidae) of the Anyuiskii Nature Park and neighbouring areas in the Khabarovskii Krai, Russia

Фауна комаров-звонцов подсемейства Chironominae (Diptera, Chironomidae) национального парка «Анюйский» и сопредельных территорий Хабаровского края России

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Key words: Diptera, Chironomidae, fauna, Anyuiskii Nature Park, Khabarovskii Krai.

Ключевые слова: Diptera, Chironomidae, фауна, национальный парк Анюйский, Хабаровский край.

Abstract. Data on the chironomid fauna (subfamily Chironominae) of the Anyuiskii Nature Reserve and neighbouring areas, based on a study of imaginal material are presented. The rivers and reservoirs within the nature reserve support 70 species belonging to 29 genera and two tribes. Three species new to science were found in the reserve and bordering territories: *Polypedium* sp., *Tribelos* sp. and *Tanytarsus* sp. Their descriptions will be published in a separate article. *Microtendipes shoukomaki* Sasa, 1989 is recorded in the Russian fauna for the first time; it was previously known only from Japan. Fifty-four species were reported for the first time in Anyuiskii National Park. Of the 49 species that were identified, 34 (60 %) have a Palearctic distribution and 23 (40 %) have a Holarctic distribution. The greatest diversity of non-biting midges of the Chironominae subfamily was recorded in the Anyui River basin rivers — 34 species, and in an unnamed pond near the ANP office in Troitskoye Settlement — 33 species. Fewer species of chironomids were found in the Gassi Lake basin: Pihtsa, Mulchu and Khar rivers — 17 species. Eighteen species were found in the watercourses of the Hutu River basin in the adjacent territory.

Резюме. Приведены данные по фауне хирономид подсемейства Chironominae национального парка «Анюйский», основанные на изучении имагинального материала. Для водотоков и водоёмов заповедника зарегистрировано 70 видов из 29 родов, 2 триб. Обнаружено 3 новых для науки вида: *Polypedium* sp., *Tribelos* sp. и *Tanytarsus* sp., описание которых будет представлено в других работах. Впервые для национального парка «Анюйский» отмечено 39 видов. По типам распространения, из 54 достоверно определённых до вида хирономид, преобладают палеарктические виды, которых 34 вида или 60% от их общего числа. Голарктических видов зафиксировано 23 или 40 %. Наибольшее разнообразие комаров-звонцов подсемейства Chironominae зафиксировано в бассейне р. Анюй — 34 вида, и в пруде

без названия возле конторы национального парка «Анюйский» — 33 вида, на реках бассейна озера Гасси, таких как Пихца, Хар и Мульчи, найдено 14 видов. На реках бассейна р. Хуту, прилегающих к территории национального парка, зарегистрировано 18 видов.

Introduction

Anyuiskii National Park is the largest specially protected natural area in Russia in the Amur River basin. It was established in 2007 in the Nanai District of Khabarovskii Krai on the western macroslope of the Sikhote-Alin Mountains, covering an area of 429,370 hectares [Pomazkova, 2011]. Within the national park's territory, the largest bodies of water are the Anyui, Manoma, Tormasu, and Pikhtsa rivers and Lake Gassi. They are unique in their location and natural characteristics, as it is in these places that the boundary between different climatic zones passes, and therefore a diversity of landscapes and fauna is noted here [Tselenko, 2019].

The first data on the chironomid fauna of the reservoirs and streams of Anyuiskii National Park appeared in the middle of the last century. Members of the Amur Expedition (1945–1949) were the first to collect adult and benthic material from aquatic insects at Lake Gassi. According to A.S. Konstantinov [1950], the chironomid larvae in the lake were represented by the following forms: *Cryptochironomus* gr. *defectus*, *C.* gr. *viridulus*, *Glyptotendipes* gr. *gripekoveni*, *Polypedium* gr. *scalaenum*, *Stictochironomus* gr. *histrion*, *Tanytarsus* gr. *mancus*, *Cricotopus* gr. *silvestris*. The next study of the chironomine fauna of Lake Gassi was carried out only 68 years later by

N.M. Yavorskaya [2018], as a result of which 22 species from 16 genera of the subfamily Chironominae were registered (including Chironomini — 18 species, 12 genera, Tanytarsini — 4 species, 4 genera). In the work of Vorobyova and Chertoprud [2023], devoted to the analysis of the distribution patterns of macrozoobenthos in the watercourses of the Bakhla and Anyui river basins, only a few larval forms of chironomina are mentioned.

This paper presents the results of a study of the imaginal material of non-biting midges of the subfamily Chironominae of the Anyuiskii National Park with an analysis of their distribution types and remarks on the taxonomy of some species.

Material and methods

The material for this work originated from the entomological collections of chironomid adults made in the spring and summer of 2018–2020 by N.M. Yavorskaya (Institute of Water and Environmental Problems, Far Eastern Branch of the Russian Academy of Sciences, Khabarovsk) on watercourses and reservoirs of the Anyuiskii National Park and summer of 2011 by E.A. Makarchenko (Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences) of the bordering territories.

N.M. Yavorskaya carefully explored such rivers and channels of the Anyui River basin — Oba, Bira, Tomasu, Solomi, Gobilly, Moadi, Mukhe, Bohbasu, Adju, and Passy (Nanai district). N.M. Yavorskaya also collected imaginal material from the rivers Pihtsa, Mulchi and Khar, a tributary of Gassi Lake (Nanai district). The locations for collecting material are indicated in Figure 1 in the article by N.M. Yavorskaya [2021]. Evgeny Anatolyevich Makarchenko collected imaginal material on the rivers adjacent to the Anyuiskii National Park, namely, Chistovodnaya, Sakai-Balu, Mulchi, Buta, and Adjalami (Vaninsky district).

The capture of chironomid adults was carried out by «mowing» coastal vegetation with an entomological net and exposure to light, and fixed them in 96 % ethanol. Types of distribution are given according to K.B. Gorodkov [1984] with our additions. The taxonomic notes use the terminology and abbreviations of O.A. Sæther [1980].

The photographs were taken using an Axio Lab.A1 (Carl Zeiss) microscope with an AxioCam ERc5s digital camera and an Olympus SZX16 stereomicroscope with an Olympus DP74 digital camera, and then stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

The list of chironomid species (Diptera, Chironomidae) of the subfamily Chironominae collected from the Anyuiskii National Park and bordering territories in Khabarovskii Krai of Russia is presented in the Appendix (p. 3–6).

The present work is registered in ZooBank (www.zoobank.org) under urn:lsid:zoobank.org:pub:3707B104-57B5-46CD-8CDF-F3D00E055A0B

Results

Thus, the fauna of non-biting midges of the subfamily Chironominae from the Anyuiskii National Park and bordering territories is represented by 70 species from 29 genera, 2 tribes, namely: *Chironomus* sp., **Chironomus (Lobochironomus) storai* Goetghebuer, 1937, *Chironomus (Lobochironomus)* sp., **Cladopelma krusemani* (Goetghebuer, 1935), **Cladopelma viridula* (Linnaeus, 1767), **Cyphomella cana* (Strobl, 1910), **Demicryptochironomus (Demicryptochironomus) chuzequartus* Sasa, 1984 sensu Zorina, 2004, **Demicryptochironomus (Demicryptochironomus) evgenii* Zorina, 2004, *Demicryptochironomus (Demicryptochironomus)* sp., **Dicrotendipes lobiger* (Kieffer, 1921), *Dicrotendipes pulsus* (Walker, 1856), **Einfeldia pagana* (Meigen, 1838), **Endochironomus stackelbergi* Goetghebuer, 1935, *Glyptotendipes* sp., **Microtendipes famiefus* Sasa, 1996, **Microtendipes shoukomaki* Sasa, 1989, **Microtendipes umbrosus* Freeman, 1955, **Omissus caledonicus* (Edwards, 1932), **Parachironomus parilis* (Walker, 1856), *Paralauterborniella nigrohalteralis* (Malloch, 1915), **Phaenopsectra flavipes* (Meigen, 1818), *Polypedium (Pentapedilum) sordens* (v.d. Wulp, 1874), **Polypedium (Pentapedilum) tritum* (Walker, 1856), **Polypedium (Polypedium) albicorne* (Meigen, 1838), **Polypedium (Polypedium) kyotoense* (Tokunaga, 1938), **Polypedium (Polypedium) laetum* (Meigen, 1818), **Polypedium (Polypedium) pedestre* (Meigen, 1830), **Polypedium (Polypedium) tamanigrum* Sasa, 1983, *Polypedium (Polypedium)* sp., **Polypedium (Tripodura) acifer* Townes, 1945, **Polypedium (Tripodura) pullum* (Zetterstedt, 1838), **Polypedium (Uresipedilum) cultellatum* Goetghebuer, 1931, **Polypedium (Uresipedilum) hiroshimaense* Kawai et Sasa, 1985, **Saetheria reissi* Jackson, 1977, *Sergia* sp., **Stenochironomus gibbus* (Fabricius, 1794), **Stenochironomus pannus* Borkent, 1984, **Stictochironomus pictulus* (Meigen, 1830), *Stictochironomus* sp.1, *Stictochironomus* sp.2, **Synendotendipes lepidus* (Meigen, 1830), *Tribelos* sp., **Cladotanytarsus nigrovittatus* (Goetghebuer, 1922), **Cladotanytarsus saetheria* Gilka, 2001, *Cladotanytarsus* sp., **Constempellina brevicosta* (Edwards, 1937), **Constempellina tokunagai* Zorina, 2011, **Micropsectra chuzenotescens* Sasa, 1984, **Micropsectra koreana* Ree, 1992, **Micropsectra nana* (Meigen, 1818), **Micropsectra pharetrophora* Fittkau et Reiss, 1999, **Micropsectra recurvata* Goetghebuer, 1928, **Micropsectra schrankelae* Stur et Ekrem, 2006, **Micropsectra togacontralia* Sasa et Okazawa, 1991, **Neozavrelia nadezhdae* Orel, 2021, **Neozavrelia yakuefeae* (Sasa et Suzuki, 2000), **Paratanytarsus austriacus* (Kieffer, 1924), **Paratanytarsus tenuis* (Meigen, 1830), **Rheotanytarsus okisimplex* Sasa, 1993, **Rheotanytarsus pentapoda* (Kieffer, 1909), **Stempellinella chirka* Orel, 2023, **Tanytarsus heusdensis* Goetghebuer, 1923, **Tanytarsus agg. lestagei*, **Tanytarsus volgensis* Miseiko in Konstantinov, 1967, *Tanytarsus* sp., **Zavrelia elenae* Zorina, 2008, **Zavrelia pentatoma* Kieffer, 1913 and **Zavrelia pseudopentatoma* Zorina, 2008.

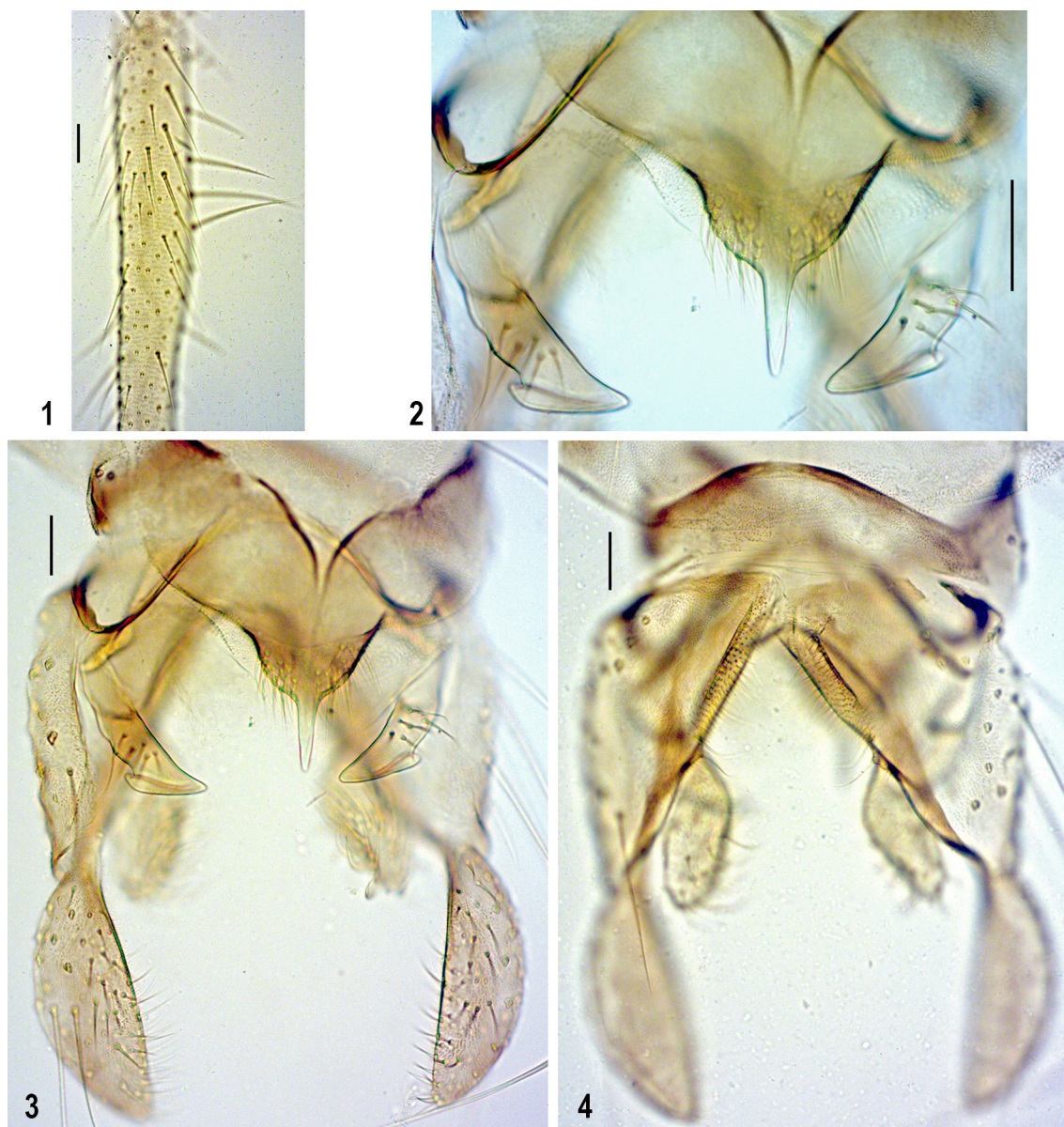
On the territory of the reserve and bordering territories 3 species new to science from the genera *Polypedilum*, *Tribelos* and *Tanytarsus* are revealed, their descriptions will be published in a separate article. *Microtendipes shoukomaki* Sasa, 1989 is indicated for the fauna of Russia for the first time, previously it was known only from Japan. Details of the male structures of *Microtendipes shoukomaki* Sasa, 1989 are given in Figs 1–4.

Fifty-four species turned out to be new to the Anyuiskii National Park and bordering territories (marked with an asterisk in the list of species above). A number of unidentified adult male species from the genera *Chironomus*, *Glyptotendipes*, *Polypedilum*, *Sergentia*

and *Tribelos* listed above will be identified in the future using DNA analysis.

According to the types of distribution, out of 57 reliably determined to the species of chironomids, Palearctic species predominate, of which 34 or 60 %. Of these, 15 species belong to the eastern Palearctic continental-island, 14 to the Palearctic trans-Eurasian polydisjunctive, 4 to the eastern Palearctic continental, and 1 to the Palearctic amphi-Eurasian type of distribution. Holarctic species accounted for 23 or 40 % of all species.

The greatest diversity of non-biting midges of the subfamily Chironominae was recorded in the rivers of the Anyui River basin (34 species), namely, Oba canal — 21 species, a significantly smaller number of



Figs 1–4. Details of the male structure of *Microtendipes shoukomaki* Sasa, 1989. 1 — fore tibia; 2–3 — hypopygium, dorsal view; 4 — hypopygium, ventral view. Scale bar 50 μ m.

Рис. 1–4. Детали строения самца *Microtendipes shoukomaki* Sasa, 1989. 1 — бедро передней ноги; 2–3 — гипопигий, дорсально; 4 — гипопигий, вентрально. Масштабная линейка 50 мкм.

species were noted on the rivers: Tormasu (7), Solomi (6), Gobilli (6), Moadi (6), Anyui (4), Mukhe (4), and Bohbasu (3). Thirty-three species have been recorded on an unnamed pond near the ANP office (Troitskoye Village). Fewer species of chironomids were found in the Gassi Lake basin — Pihtsa, Mulchu and Khar rivers (17). We found 18 species in the watercourses of the adjacent territory in the Hutu river basin.

Acknowledgements

The author is deeply grateful to N.M. Yavorskaya (Institute of Water and Environmental Problems, Far Eastern Branch of the Russian Academy of Sciences, Khabarovsk) for the opportunity to study the material she collected. The research was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. 124012400285-7).

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Поступила в редакцию 2.10.2025

Appendix to the article: O.V. Orel. The fauna of non-biting midges subfamily Chironominae (Diptera, Chironomidae) of the Anyuiskii Nature Park and neighbouring areas in the Khabarovskii Krai, Russia (Euroasian Entomological Journal. 2025. Vol.24. No.5. P.272–275).

Приложение к статье: О.В. Орел. Фауна комаров-звонцов подсемейства Chironominae (Diptera, Chironomidae) национального парка «Анюйский» и сопредельных территорий Хабаровского края России. (Евразийский энтомологический журнал. 2025. Т.24. Вып.5. С.272–275).

Chironomid species (Diptera, Chironomidae: Chironominae) from the Anyuiskii National Park and bordering territories

Chironominae
Chironomini
Chironomus sp.

Material. *Anyui River basin:* 6♂♂, Oba channel, 19.VI.2018; 6♂♂, same data, 04.VI.2019; 1♂, Tormasu River, 21.VI.2018; 1♂, Mukhe River, 04.VI.2019; 4♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019; 1♂, Moadi River, unnamed stream, 29.V.2019.

**Chironomus (Lobochironomus) storai*
Goetghebuer, 1937

Material. *Amur River basin:* 3♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

Chironomus (Lobochironomus) sp.

Material. *Amur River basin:* 1♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

**Cladopelma krusemani* (Goetghebuer, 1935)

Material. *Amur River basin:* 1♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Palaearctic amphi-Eurasian.

**Cladopelma viridula* (Linnaeus, 1767)

Material. *Anyui River basin:* 2♂♂, Oba channel, 19.VI.2018; 4♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Distribution. Widespread Holarctic.

**Cyphomella cana* (Strobl, 1910)

Material. *Amur River basin:* 5♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Distribution. Widespread Holarctic.

**Demicryptochironomus (Demicryptochironomus) chuzequartus* Sasa, 1984 sensu Zorina, 2004

Material. *Amur River basin:* 2♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Eastern Palaearctic continental-island.

**Demicryptochironomus (Demicryptochironomus) evgenii* Zorina, 2004

Material. Anyui River basin: 1♂, Solomi River near cordon «Solomi», 20.VI.2018.

Distribution. Eastern Palaearctic continental-island.

Demicryptochironomus (Demicryptochironomus) sp.

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018.

**Dicrotendipes lobiger* (Kieffer, 1921)

Material. *Kbtu River basin:* 1♂, Adjalami River, 23.VII.2011.

Distribution. Holarctic.

Dicrotendipes pulsus (Walker, 1856)

Material. *Amur River basin:* 3♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Holarctic.

**Einfeldia pagana* (Meigen, 1838)

Material. *Amur River basin:* 46♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019.

Distribution. Holarctic.

**Endochironomus stackelbergi* Goetghebuer, 1935

Material. *Amur River basin:* 1♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019; *Gassi Lake basin:* 5♂♂, Pihtsa River, 27.V.2020.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

Glyptotendipes sp.

Material. *Amur River basin:* 30♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019; *Gassi Lake basin:* 1♂, Pihtsa River, 27.V.2020.

**Microtendipes famiefus* Sasa, 1996

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018.

Distribution. Eastern Palaearctic continental-island.

**Microtendipes shoukomaki* Sasa, 1989

Material. Anyui River basin: 1♂, Mukhe River, 04.VI.2019.

Distribution. Eastern Palaearctic continental-island.

Remarks. The species is recorded for the first time in the fauna of Russia. Total length 5.2 mm. Frontal tubercle absent. AR 1.88. Clypeus with 12 setae. Aps 2, Ac 0, Dc 10, Pa 3, Scts 21. Squama with 21 setae. Mid tal with 4 sensilla chaetica. Tergite IX with V-shaped bands (Figs 1–4). Laterosternite IX with 2 setae. Anal point 45 µm long apically narrowed; the base of anal point 45 µm long with 20 dorso-ventral setae on each side. Gonocoxite 195 µm long, with 5–6 inner setae. Total length of superior volsella 81 µm, with 6–7 dorsal setae and 1 basal seta 60 µm long. Median volsella absent. Inferior volsella 105 µm long. Gonostylus 165 µm long. HR 1.18.

**Microtendipes umbrosus* Freeman, 1955

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Omisus caledonicus* (Edwards, 1932)

Material. *Amur River basin:* 2♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Parachironomus parilis* (Walker, 1856)

Material. *Amur River basin:* 16♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019.

Distribution. Holarctic.

Paralauterborniella nigrohalteralis (Malloch, 1915)

Material. *Amur River basin:* 15♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Holarctic.

**Phaenopsectra flavipes* (Meigen, 1818)

Material. *Amur River basin:* 17♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019.

Distribution. Holarctic.

Polypedilum (Pentapedilum) sordens
(v.d. Wulp, 1874)

Material. *Amur River basin:* 1♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Distribution. Holarctic.

**Polypedilum (Pentapedilum) tritum* (Walker, 1856)

Material. *Amur River basin:* 8♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019; *Gassi Lake basin:* 1♂, Pihtsa River, 27.V.2020.

Distribution. Holarctic.

**Polypedilum (Polypedilum) albicorne*
(Meigen, 1838)

Material. *Kbuhu River basin:* 1♂, Adjalami River, 23.VII.2011; *Amur River basin:* 3♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Holarctic.

**Polypedilum (Polypedilum) kyotoense*
(Tokunaga, 1938)

Material. *Amur River basin:* 1♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Eastern Palaearctic continental-island.

**Polypedilum (Polypedilum) laetum* (Meigen, 1818)

Material. *Anyui River basin:* 2♂♂, Anyui River near cordon «Nilo», 18.VI.2018; 1♂, Oba channel, 19.VI.2018; *Amur River basin:* 2♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Distribution. Holarctic.

**Polypedilum (Polypedilum) pedestre*
(Meigen, 1830)

Material. *Anyui River basin:* 6♂♂, Gobilly River, 24.VII.2011; 1♂, Bohbasu River, 18.VII.2011; *Kbuhu River basin:* 1♂, Chistovodnaya River, 23.VII.2011; 4♂♂, Adjalami River, 23.VII.2011; 5♂♂, Sakai-Balu River, 24.VII.2011.

Distribution. Holarctic.

**Polypedilum (Polypedilum) tamanigrum*
Sasa, 1983

Material. *Kbuhu River basin:* 4♂♂, Adjalami River, 23.VII.2011; *Anyui River basin:* 25♂♂, Bohbasu River, 18.VII.2011; 5♂♂, Anyui River near cordon «Nilo», 18.VI.2018; 4♂♂, Oba channel, 19.VI.2018; 17♂♂, Solomi River near cordon «Solomi», 20.VI.2018; 3♂♂, Tormasu River, 21.VI.2018.

Distribution. Eastern Palaearctic continental-island.

Polypedilum (Polypedilum) sp.

Material. *Anyui River basin:* 1♂, Solomi River near cordon «Solomi», 20.VI.2018.

Remarks. The species is apparently new to science and its illustrated description will be published in a separate article. The male is most closely related to the *fallax* group of species in terms of the structure of the hypopygium [Maschwitz, Cook, 2000], but differs from the latter in the following combination of features: antenna and palps brown; scutal vittae and post-notum dark brown, ground colour of thorax brown, scutellum and haltere, legs, abdomen: I–V segments yellow brown, the remaining segments dark brown; total length 5.0 mm; frontal tubercle absent; AR 1.06; Aps 0, H 3/3, Ac 24, Dc 20/22, Pa 7,

Sets 28; wing length 3.0 mm; squama with 40 setae; LR_{p1} 1.33, the scale of ti_{p1} is apically pointed; tergite IX with 16 median setae; laterosternite IX with 6/6 setae; anal point 42 µm long apically narrowed, medially slightly widened; gonocoxite 78 µm long, with 5–6 inner setae; total length of superior volsella 48 µm, with 2–3 basal setae and 1 lateral seta located medially; inferior volsella 90 µm long, with 25 setae approximately; gonostylus 102 µm long, with 1 apical seta and 6 lateral setae.

**Polypedilum (Tripodura) acifer* Townes, 1945

Material. *Amur River basin:* 95♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019.

Distribution. Holarctic.

**Polypedilum (Tripodura) pullum*
(Zetterstedt, 1838)

Material. *Anyui River basin:* 9♂♂, Solomi River near cordon «Solomi», 20.VI.2018; *Gassi Lake basin:* 1♂, Pihtsa River, 23.V.2019; 3♂♂, same data, 27.V.2020.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Polypedilum (Uresipedilum) cultellatum*
Goetghebuer, 1931

Material. *Amur River basin:* 2♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019; 1♂, same data, 02.VI.2019.

Distribution. Holarctic.

**Polypedilum (Uresipedilum) hiroshimaense*
Kawai et Sasa, 1985

Material. *Anyui River basin:* 2♂♂, Oba channel, 19.VI.2018.

Distribution. Eastern Palaearctic continental-island.

**Sætheria reissi* Jackson, 1977

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018; *Amur River basin:* 2♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

Sergentia sp.

Material. *Gassi Lake basin:* 2♂♂, Khar River, 25.V.2019; 1♂, Mulchi River, 25.V.2019.

**Stenochironomus gibbus*
(Fabricius, 1794)

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Stenochironomus pannus* Borkent, 1984

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018.

Distribution. Eastern Palaearctic continental-island.

**Stictochironomus pictulus* (Meigen, 1830)

Material. *Amur River basin:* 2♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

Distribution. Holarctic.

Stictochironomus sp.1

Material. *Anyui River basin:* 5♂♂, Anyui River near cordon «Nilo», 18.VI.2018; 6♂♂, Oba channel, 19.VI.2018.

Stictochironomus sp.2

Material. *Anyui River basin:* 5♂♂, Gobilly River, 24.VII.2011; 5♂♂, Moadi River, unnamed stream, 28, 29.V.2019; *Gassi Lake basin:* 1♂, Mulchi River, 25.V.2019; *Amur River basin:* 1♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019.

The fauna of non-biting midges subfamily Chironominae of the Anyuiskii Nature Park

**Synendotendipes lepidus* (Meigen, 1830)

Material. *Amur River basin:* 4♂♂, Troitskoye Village, unnamed pond near the ANP office, 27.V.2019; 1♂, same data, 2.VI.2019.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

Tribelos sp.

Material. *Amur River basin:* 7♂♂, Troitskoye Village, unnamed pond near the ANP office, 26.V.2019.

Remarks. The species is apparently new to science and its illustrated description will be published in a separate article. The male is most closely related to the *T. atrum* (Townes, 1945) and *T. subatrum* Grodhaus, 1987 in terms of the structure of the hypopygium (Grodhaus, 1987), but differs from the latter in the following combination of features: wing length 1.68–1.80 mm; AR 1.27–1.50; Pa 4–5, Scts 9–10; LR_{p1} 1.33, the scale of ti_{p1} is apically rounded; tp₁ with 1 spine, tp₃ with 2 spines, ta₁P₁ and ta₁P₂ without sensilla chaetica; tergite IX with 7–9 median setae; laterosternite IX with 2–5 setae; anal point 45–54 µm long medially slightly widened; total length of superior volsella 54 µm, with 4–7 basal setae; inferior volsella 90 µm long, with 8–15 setae; gonostylus massive, 135 µm long and 54 µm wide.

Tanytarsini

**Cladotanytarsus nigrovittatus* (Goetghebuer, 1922)

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018; *Amur River basin:* 44♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019; *Gassi Lake basin:* 1♂, Pihtsa River, 27.V.2020.

Distribution. Holarctic.

**Cladotanytarsus saetheria* Gilka, 2001

Material. *Khutu River basin:* 1♂, Adjalami River, 23.VII.2011; *Anyui River basin:* 1♂, Oba channel, 19.VI.2018; 2♂♂, Tormasu River, 21.VI.2018; *Amur River basin:* 36♂♂, Troitskoye Village, unnamed pond near the ANP office, 26, 27.V.2019.

Distribution. Eastern Palaearctic continental.

Cladotanytarsus sp.

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018.

**Constempellina brevicosta* (Edwards, 1937)

Material. *Anyui River basin:* 4♂♂, Oba channel, 19.VI.2018; 16♂♂, same data, 04.VI.2019; 2♂♂, Tormasu River, 21.VI.2018; 2♂♂, Moadi River, unnamed stream, 28.V.2019; *Gassi Lake basin:* 3♂♂, Pihtsa River, 27.V.2020.

Distribution. Holarctic.

**Constempellina tokunagai* Zorina, 2011

Material. *Anyui River basin:* 3♂♂, Tormasu River, 21.VI.2018; 3♂♂, Moadi River, unnamed stream, 31.V.2019; 1♂, Mukhe River, 4.06.2019; 1♂, Oba channel, 4.VI.2019; *Gassi Lake basin:* 1♂, Pihtsa River, 24.V.2019.

Distribution. Eastern Palaearctic continental.

**Micropsectra chuzenotescens* Sasa, 1984

Material. *Anyui River basin:* 1♂, Gobilly River, 24.VII.2011; *Gassi Lake basin:* 11♂♂, Khar River, 25.V.2019; 1♂, Mulchi River, 25.V.2019; 1♂, Pihtsa River, 24.V.2019; 1♂, same data, 27.V.2020.

Distribution. Eastern Palaearctic continental-island.

**Micropsectra koreana* Ree, 1992

Material. *Khutu River basin:* 1♂, Chistovodnaya River, 23.VII.2011; 1♂, Sakai-Balu River, 24.VII.2011; *Anyui River basin:* 2♂♂, Gobilly River, 24.VII.2011; 5♂♂, Moadi River, unnamed stream, 31.V.2019; 1♂, Oba channel, 4.VI.2019; 2♂♂, Mukhe River, 04.06.2019; *Gassi Lake basin:* 1♂, Pihtsa River, 24.V.2019.

Distribution. Eastern Palaearctic continental-island.

**Micropsectra nana* (Meigen, 1818)

Material. *Anyui River basin:* 1♂, Moadi River, unnamed stream, 28.V.2019; *Gassi Lake basin:* 1♂, Pihtsa River, 27.V.2020.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Micropsectra pharetophora* Fittkau et Reiss, 1999

Material. *Khutu River basin:* 2♂♂, Buta River, 19.VII.2011.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Micropsectra reculvata* Goetghebuer, 1928

Material. *Gassi Lake basin:* 6♂♂, Pihtsa River, 23.V.2019.

Distribution. Holarctic.

**Micropsectra schrankelae* Stur et Ekrem, 2006

Material. *Khutu River basin:* 1♂, Adjalami River, 23.VII.2011.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Micropsectra togacontralia* Sasa et Okazawa, 1991

Material. *Khutu River basin:* 1♂, Adjalami River, 23.VII.2011; 3♂♂, Sakai-Balu River, 24.VII.2011; *Anyui River basin:* 5♂♂, Gobilly River, 24.VII.2011.

Distribution. Eastern Palaearctic continental-island.

**Neozavrelia nadezhdae* Orel, 2021

Material. *Khutu River basin:* 1♂, Buta River, 19.VII.2011.

Distribution. Eastern Palaearctic continental.

**Neozavrelia yakuefea* (Sasa et Suzuki, 2000)

Material. *Khutu River basin:* 1♂, Adjalami river, 23.VII.2011; *Gassi Lake basin:* 1♂, Pihtsa River, 27.V.2020.

Distribution. Eastern Palaearctic continental-island species.

**Paratanytarsus austriacus* (Kieffer, 1924)

Material. *Khutu River basin:* 1♂, Chistovodnaya River, 23.VII.2011.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Paratanytarsus tenuis* (Meigen, 1830)

Material. *Anyui River basin:* 1♂, Oba channel, 19.VI.2018; 1♂, Solomi River near cordon «Solomi», 20.VI.2018.

Distribution. Holarctic.

**Rheotanytarsus okisimplex* Sasa, 1993

Material. *Khutu River basin:* 1♂, Chistovodnaya River, 23.VII.2011; *Gassi Lake basin:* 1♂, Pihtsa River, 23.V.2019.

Distribution. Eastern Palaearctic continental-island species.

**Rheotanytarsus pentapoda* (Kieffer, 1909)

Material. *Anyui River basin:* 20♂♂, Bohbasu River, 18.VII.2011; 1♂, Gobilly River, 24.VII.2011; 15♂♂, Anyui River near cordon «Nilo», 18.VI.2018; 15♂♂, Solomi River near cordon «Solomi», 20.VI.2018; 2♂♂, Adju River, 04.VI.2019; 5♂♂, Passy River, 04.VI.2019.

Distribution. Holarctic.

**Stempellinella chirka* Orel, 2023

Material. *Anyui River basin:* 9♂♂, Oba channel, 19.VI.2018; 2♂♂, Tormasu River, 21.VI.2018.

Distribution. Eastern Palaearctic continental-island.

**Tanytarsus heusdensis* Goetghebuer, 1923

Material. *Khutu River basin:* 1♂, Adjalami River, 23.VII.2011; *Anyui River basin:* 2♂♂, Tormasu River, 21.VI.2018.

Distribution. Palaearctic trans-Eurasian polydisjunctive.

**Tanytarsus agg. lestagei*

Material. *Anyui River basin:* 11♂♂, Oba channel, 19.VI.2018;
Amur River basin: 3♂♂, Troitskoye Village, unnamed pond near the
ANP office, 27.V.2019.

**Tanytarsus volgensis* Miseiko in Konstantinov, 1967

Material. *Kbtu River basin:* 1♂, Adjalami River, 23.VII.2011;
Amur River basin: 19♂♂, Troitskoye Village, unnamed pond near the
ANP office, 26.V.2019; 40♂♂, same data, 02.VI.2019.

Distribution. Holarctic.

Tanytarsus sp.

Material. *Anyui River basin:* 1♂, Bira channel, 04.VI.2019.

Remarks. The species belongs to the *norvegicus* group
and is apparently new to science and its description will be
published in a separate article.

**Zavrelia elenae* Zorina, 2008

Material. *Kbtu River basin:* 1♂, Chistovodnaya River,
23.VII.2011; 1♂, Sakai-Balu River, 24.VII.2011; 1♂, Mulchi River,
25.V.2019.

Distribution. Eastern Palaearctic continental.

**Zavrelia pentatoma* Kieffer, 1913

Material. *Amur River basin:* 5♂♂, Troitskoye Village, unnamed
pond near the ANP office, 26.V.2019.

Distribution. Holarctic.

**Zavrelia pseudopentatoma* Zorina, 2008

Material. *Gassi Lake basin:* 13♂♂, Pihtsa River, 26.V.2020; 2♂♂,
same data, 27.V.2020.

Distribution. Eastern Palaearctic continental-island.