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NEW SPECIES AND NEW RECORDS OF MILLIPEDES (DIPLOPODA) FROM THE ASIAN PART OF RUSSIA

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Pacifiosoma asperum Mikhaljova, **sp. n.** and *Diplomaragna konyukhovi* Mikhaljova, **sp. n.** are described from the Russian Far East (Khabarovskii krai and Primorskii krai). New faunistic records for the Asian part of Russia are given for other millipede species. The record of East Asian *Epanerchodus orientalis* Attems, 1901 in Kunashir Island (Gongalsky *et al.*, 2014) is based on misidentification and belongs to *Epanerchodus kunashiricus* Mikhaljova, 1988.

KEY WORDS: Diplopoda, taxonomy, fauna, new species, new records, Siberia, Russian Far East.

Е. В. Михалёва. Новые виды и новые фаунистические находки двухпарноногих многоножек (Diplopoda) азиатской части России // Дальневосточный энтомолог. 2016. N 316. С. 1-25.

Из Хабаровского и Приморского краев описаны *Pacifiosoma asperum* Mikhaljova, **sp. n.** и *Diplomaragna konyukhovi* Mikhaljova, **sp. n.** Приведены новые фаунистические находки других видов двухпарноногих многоножек. Указание восточноазиатского *Epanerchodus orientalis* Attems, 1901 для острова Кунашир (Гонгальский и др., 2014) ошибочно и относится к *Epanerchodus kunashiricus* Mikhaljova, 1988.

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INTRODUCTION

This contribution continues researches in the millipede fauna of the huge areas of the Asian part of Russia, this time being confined to the abundant material accumulated during the last decade. The paper is devoted to new records of the known, as well as to descriptions of two new species and to the correction of an error of species identification.

MATERIAL AND METHODS

Materials treated here are deposited in Russia in the collections of the Institute of Biology and Soil Science of the Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, Russia (IBSS) and the Zoological Museum of the State University of Moscow, Moscow, Russia (ZMUM) as indicated in the text.

Specimens were kept in 70–75% ethanol. In the process of studying the material, the gonopods and some other parts were dissected from a limited number of males and females and mounted in glycerin as temporary micropreparations. Specimens were studied and illustrated using standard stereomicroscopic and drawing equipment. Coloration of the specimens is described from alcohol material. SEM micrographs were prepared at the Centre of Collective Use “Biotechnology and Gene Engineering” of the Institute of Biology and Soil Science, Far Eastern Branch, Russian Academy of Sciences, Vladivostok, Russia (IBSS) using a Zeiss Evo 40 scanning electron microscope. Mounts for SEM were made through air-drying after transfer to acetone via 96% alcohol, mounting on stubs, and coating with chromium. After examination, SEM material was removed from stubs and returned to alcohol, all such samples being kept at IBSS.

LIST OF THE SPECIES WITH DESCRIPTIONS OF NEW TAXA

Order Polyzoniida

Family Polyzoniidae Newport, 1844

Angarozonium aduncum (Mikhaljova, 1996)

MATERIAL. Russia: Kurile Islands, *Kunashir Island*: environs of Andreevskii cordon, *Ulmus* forest, litter, 23.V 2011, 1 ♂ (ZMUM), leg. A. Matalin, I. Melnik; environs of Alekhino cordon, coniferous forest, litter, 6.VI 2011, 4 ♂, 1 ♀, 1 juv. (ZMUM), leg. A. Matalin, I. Melnik; cape, environs of Odinkii Stream mouth (ca. 1.5 km WSW of Alekhino), 43°54'42'' N, 145°30'33'' E, 5.VIII 2011, 1 ♀ (ZMUM), leg. K. Makarov.

DISTRIBUTION. Russia: Far East (southern part of Sakhalin Island, Kurile Islands: Kunashir and Shikotan).

Angarozonium amurense (Gerstfeldt, 1859)

MATERIAL. Russia: **Amurskaya oblast**: Selemdzhinskiy District, *Norskiy Nature Reserve*: Selemdzha River, Burundushka River mouth, mosses and leaf litter

under *Tilia amurensis*, *Alnus* sp., *Acer ukurunduense*, *Betula platyphylla* with *Rosa* sp., *Calamagrostis* sp., *Equisetum* sp., *Maianthemum bifolium*, *Thalictrum* sp., *Spiraea* sp., *Oxalis acetosella*, etc. on natural levee, 03.VIII 2004, 1 ♀ (IBSS), leg. A.B. Ryvkin; left bank of Selemdzha River near Dvadtsatikha cordon, mosses and leaf litter on high bank of the river: *Betula platyphylla*, *B. davurica*, *Larix gmelinii*, *Pinus sylvestris*, *Alnus* sp., *Ledum palustre*, *Rhododendron* sp., *Vaccinium vitisidaea*, *Pyrola* sp., *Maianthemum bifolium*, *Pleurozium schreberi*, *Ptilium cristacastrensis*, etc., 5.VIII 2004, 1 ♂, 1 juv. (IBSS), leg. A.B. Ryvkin; Selemdzha River basin near Dvadtsatikha cordon, plant debris on small swamp with *Carex* spp., *Poaceae*, *Salix* spp., *Geranium* sp., *Spiraea* spp., *Filipendula palmata*, etc., 08.VIII 2004, 2 ♀ (IBSS), leg. A.B. Ryvkin; Selemdzha River basin, 2 km NE of Dvadtsatikha cordon, open swamp near lakeside: plant debris and sparse mosses among tussocks with *Carex* spp., *Poaceae*, *Salix* spp., etc., 09.VIII 2004, 2 ♂ (IBSS), leg. A.B. Ryvkin; Nora River basin near Meunskiy cordon, mosses and plant debris among *Carex* spp. & *Poaceae* with *Comarum palustre*, *Sphagnum squarrosum*, *Sph.* spp., *Aulacomnium* sp. and other true mosses near side of floodplain lake and swampy road, 13.VIII 2004, 7 ♂, 2 ♀ (IBSS), leg. A.B. Ryvkin; Nora River basin near Meunskiy cordon, mosses and plant debris at floodplain of a rill: *Alnus* sp., *Carex* spp., *Poaceae*, *Trientalis europaea*, *Convallaria keiskei*, *Sphagnum squarrosum*, *Sph.* spp., *Hypnum* sp., etc. 15.VIII 2004, 1 ♂ (IBSS), leg. A.B. Ryvkin; Nora River basin near Maltsevskiy cordon, mosses and plant debris on swampy floodplain lakeside: *Carex* spp., *Calamagrostis* sp., *Filipendula palmata*, *Geranium* sp., *Comarum palustre*, *Spiraea* sp., *Salix* sp., *Sphagnum* ? *girgensohnii*, *Sph. squarrosum*, *Polytrichum commune*, *P.* sp., *Climacium* sp., *Iris* sp., etc., 28.VIII 2004, 2 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; Nora River near Maltsevskiy cordon, mosses and leaf litter under *Alnus* sp., *Padus* sp., *Betula platyphylla*, undergrowth of *Populus tremula* with *Spiraea* spp., *Filipendula palmata*, *Carex* spp., *Poaceae*, *Rosa* sp., *Convallaria keiskei*, ferns, etc. on natural levee, 29.VIII 2004, 3 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; Nora River basin near Maltsevskiy cordon, leaf litter under *Populus tremula*, *Betula platyphylla*, *Padus* sp. with *Poaceae*, *Equisetum sylvaticum*, *Spiraea* sp., *Maianthemum bifolium*, *Polygonatum* sp., ferns, etc. near floodplain lake, 30.VIII 2004, 5 ♂, 2 ♀ (IBSS), leg. A.B. Ryvkin; Nora River basin near Maltsevskiy cordon, mosses and plant debris on swamp near southern side of floodplain lake: *Carex* spp., *Poaceae*, *Salix* sp., *Filipendula palmata*, *Comarum palustre*, *Sphagnum squarrosum*, *Sph.* spp., *Polytrichum* sp., *Climacium* sp., etc., 30.VIII 2004, 3 ♂ (IBSS), leg. A.B. Ryvkin; Nora River near Maltsevskiy cordon, hill overgrown with *Poaceae*, *Carex* spp., motley grass, *Filipendula palmata*, *Salix* spp., *Spiraea* spp., *Rosa* sp., etc. between lake and river: near shore line of lake, 03.IX 2004, leg1 ♂, 1 ♀ (IBSS), A.B. Ryvkin; Selemdzha River basin, 3–4 km up-stream of Norsk, in leaf litter and in sweeping on motley grass in forest with *Betula davurica* and *B. platyphylla*, 07.IX 2004, 1 ♀, 1 juv. (IBSS), leg. A.B. Ryvkin; Burunda River basin, 0.5–1.5 km NW of Burunda cordon, sedge-gramineous swamp, 10.IX 2004, 4 ♂, 4 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 1 km NW of Burunda cordon, mosses and leaf litter in swampy forest with tussocks and old stumps ("graveyard forest") on very gentle slope near rill bank: *Larix gmelinii*, *Alnus* sp., *Betula platyphylla*,

Calamagrostis sp., *Carex* sp., *Rubus arcticus*, *Convallaria keiskei*, *Sphagnum squarrosum*, *Sph.* ? *girgensohnii*, *Sph.* sp., *Ptilium crista-castrensis*, *Hylocomium splendens*, *Dicranum* sp., etc., 12.IX 2004, 2 ♂ 4 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 1.5 km NW of Burunda cordon, plant debris among tussocks of *Carex* spp. under sparse *Alnus* sp. with young growth of *Larix gmelinii* along rill bank near road, 17.IX 2004, 2 ♂ 2 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 2 km SE of Burunda cordon, leaf litter in young dense larch forest with sparse *Alnus* sp., *Poaceae*, *Equisetum* sp. and under old larch tree on hill, 22.IX 2004, 1 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 2.5 km SE of Burunda cordon, leaf litter under *Larix gmelinii* and *Betula platyphylla* with *Ledum palustre*, *Rhododendron* sp., *Vaccinium vitisidaea*, *Equisetum sylvaticum*, etc. in burnt forest on gentle slope, 23.IX 2004, 1 ♂ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 2 km SE of Burunda cordon, mosses and leaf litter in slope (? unburnt) forest with *Betula platyphylla*, sparse *Poaceae*, *Carex* sp., *Rhododendron* sp., etc., 26.IX 2004, 2 ♂ 3 ♀ (IBSS), leg. A.B. Ryvkin; Nora River near Maltsevskiy cordon, leaf litter in birch forest (*Betula platyphylla*) with *Calamagrostis* sp., *Maianthemum bifolium*, *Convallaria keiskei*, *Cypripedium guttatum*, etc. and in debris of rotten stump on natural levee, 09.VI 2005, 4 ♂, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; Nora River near Maltsevskiy cordon, mosses and leaf litter under *Padus* sp. with *Poaceae*, *Carex* spp., *Equisetum sylvaticum*, undergrowth of *Populus tremula*, etc. in depression behind natural levee, 15.VI 2005, 2 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; Seledmdzha River basin, near Dvadsatikha cordon, swamped fire site: mosses and leaf litter under *Salix* spp., *Alnus* sp., *Betula platyphylla*, undergrowth of *Populus tremula* with tussocks of *Carex* spp., *Poaceae*, *Trollius* sp., *Filipendula palmata*, *Spiraea* spp., *Rosa* sp., etc., 25.VI 2005, 1 ♂, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; Seledmdzha River basin, 1.5 km NE of Dvadsatikha cordon, banks and floodplain of a rill inflowing to lake, mosses and leaf litter under *Salix* spp., *Alnus* sp., undergrowth of *Betula platyphylla* and *Populus tremula*, *Spiraea* spp. with *Poaceae*, *Carex* spp., *Trollius* sp., *Filipendula palmata*, ferns, *Sphagnum* spp., *Polytrichum* spp., *Hypnum* sp., *Plagiomnium* sp., etc., 26.VI 2005, 1 ♂ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; lower reaches of Chervinka River, mosses, ferns, leaf litter, plant debris on banks of river and intermittent rill with tussocks of *Carex* spp., *Poaceae*, *Spiraea* spp., *Salix* spp., *Betula ? fruticosa*, undergrowth of *Betula platyphylla*, etc., 30.VI 2005, 3 ♂, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; lower reaches of Chervinka River, mosses, plant debris, leaf litter on wide swamp with tussocks of *Carex* spp. and *Poaceae* gen. spp. with *Salix* spp., *Alnus* sp., *Betula fruticosa*, *Ledum palustre*, *Chamaedaphne calyculata*, *Vaccinium uliginosum*, undergrowth and young trees of *Betula platyphylla* and *Populus tremula*, individual trees of *Larix gmelinii*, *Sphagnum squarrosum*, *Sph.* spp., *Polytrichum* spp., etc., 2.VII 2005, 5 ♂, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; mouth of Meun River, leaf litter under *Betula platyphylla*, *Abies nephrolepis*, *Picea ajanensis*, *Populus tremula* with *Poaceae* gen. spp., *Carex* spp., *Fabaceae* gen. spp., *Filipendula palmata*, *Equisetum sylvaticum*, *Rosa* sp., etc. on natural levee, 9.VII 2005, 1 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; Nora River basin near Meunskiy cordon, mosses, leaf litter and plant debris on swampy floodplain of intermittent rill with *Alnus* sp., *Padus* sp., *Salix* spp., *Betula*

platyphylla, *B. ? fruticosa*, *Poaceae*, *Carex* spp., *Ledum palustre*, *Filipendula palmata*, *Vaccinium uliginosum*, *Convallaria keiskei*, *Trientalis europaea*, *Maianthemum bifolium*, *Sphagnum squarrosum*, *Sph. ? girgensohnii*, *Sph. ? centrale*, *Sph.* spp., *Hypnum* sp., etc., 10.VII 2005, 2 ♂ (IBSS), leg. A.B. Ryvkin; **Mazanovskiy District**: mouth of Nora River, slopes of bald mountain (220–320 m), mosses and leaf litter among stones and under *Betula* spp., *Acer ukurunduense*, *Alnus* sp., *Corylus mandshurica*, *Picea ajanensis*, etc., 29.VII 2005, leg. 2 ♂, 1 ♀ (IBSS), A.B. Ryvkin; **Selezdzhinskiy District**: 27.VIII 2006, 1 ♂ (IBSS), leg. A.B. Ryvkin; **Khabarovskii krai**: environs of Bychikha village, Bolshekhokhtsirskiy Nature Reserve, 48°17.5' N, 134°49.7' E, 11–13.IX 2005, 1 ♂ (IBSS), leg. Yu.M. Marusik; **Verkhnebureinskiy District**: 10.VIII 2008, 10 ♂, 6 ♀ (IBSS), leg. A.B. Ryvkin; Bureynskiy Nature Reserve, Niman River basin, near Niman cordon, left bank of Pavlovskogo Stream, 1280 m, mosses and leaf litter under *Picea ajanensis*, *Abies nephrolepis*, *Duschekia* sp., *Pinus pumila*, etc., 13.VIII 2008, 3 ♀ (IBSS), leg. A.B. Ryvkin; Dublikanskiy wildlife sanctuary, right side of valley of Dublican River, 5 km upstream of cordon, SE slope near road, 400 m, *Betula* forest with *Larix*, mosses and litter, 26.VIII 2008, 1 ♂ (IBSS), leg. A.B. Ryvkin; Dublikanskiy wildlife sanctuary, right bank of Dublican River, 1 km N of cordon, 350 m, dry swamp, litter and plant debris, 31.VIII 2008, 1 ♂ (IBSS), leg. A.B. Ryvkin; Dublikanskiy wildlife sanctuary, right bank of Dublican River, 1 km upstream of cordon, 360 m, burnt swamp, mosses and litter along stream, 31.VIII 2008, 1 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; Bureynskiy Nature Reserve, basin of Levaya Bureya River, left bank of Imganakh River, ca. 3.5 km upstream of mouth, 670 m, leaf litter and mosses under *Populus* sp. and *Picea ajanensis* in floodplain forest, 2.VII.2011, 1 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; Bureynskiy Nature Reserve, basin of Levaya Bureya River, upstream of Imganakh River mouth, 750–900 m, NNW slope: mosses and litter under *Picea ajanensis*, *Larix gmelinii*, *Pinus pumila*, 4.VII 2011, 3 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin.

DISTRIBUTION. Russia: central part of Krasnoyarskii krai, Irkutskaya oblast, Zabaykalskii krai, Buryatiya, Yakutia, southern half of Khabarovskii krai including Shantar Islands (Bolshoi Shantar and Feklistova), Amurskaya oblast (new record), Jewish Autonomous Region, Sakhalin Island, Kamchatka Peninsula; North-East China (Heilongjiang Province); North Mongolia.

Order Julida

Family Julidae Leach, 1814

Julus azarovae Mikhaljova, 2009

MATERIAL. Russia: **Republic of Altai**, Choya District, environs of Uskuch village, rocky scree, 10–27.VIII 2011, 1 ♀ (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Republic of Altai.

***Julus ghilarovi* Gulička, 1963**

MATERIAL. Russia: **Kemerovskaya oblast**: environs of Sheregesh village, Mustag Mt. Range, ski slope, 9–14.VI 2013, 1 ♂; **Shorskiy National Park**: environs of Mednaya shelter, *Pinus*, *Abies*, litter, 4.VI 2010, 1 ♀; Biyskaya Griva Mt. Range, environs of Mt. Pazyn, 752 m a.s.l., 52° 26' 309'' N; 88° 17' 695'' E, *Pinus* forest with bilberry and moss, 8.VI 2012, 1 ♂, 1 ♀; 5 km SSE of Taymet village, *Pinus* forest with bilberry and moss, 8–18.VI 2012, 3 ♂, 15 ♀, 6 juv.; 5 km SSE of Taymet village, *Pinus* forest, under stones, 9.VI 2012, 1 ♀; Biyskaya Griva Mt. Range, W slope of Mt. Kubez, 1300–1400 m a.s.l., *Pinus* needles, 10.VI 2012, 1 ♂, 2 ♀, 4 juv.; 5 km SSE of Taymet village, *Pinus* forest with bilberry, 7–15.VI 2013, 11 ♂, 13 ♀, 3 juv.; *Betula* forest near highway Chulesh-Taymet, 12.VI 2013, 1 ♀; 5 km SSW of Taymet village, *Pinus* forest with bilberry, 23.VIII–1.IX 2013, 2 ♂, 9 ♀, 2 juv.; environs of Taimet village, chern dark coniferous taiga, 20–26.VII 2014, 1 ♀; same locality, 26.VII–7.VIII 2014, 1 ♂, 1 juv.; 6 km S of Taymet village, *Pinus* forest with moss, 26.VII–7.VIII 2014, 1 ♂, 1 ♀; Biyskaya Griva Mt. Range, near Taymet village, *Pinus* forest with bilberry, 25.V–7.VI 2015, 6 ♂, 4 ♀, 4 juv.; 1 km N of Taymet village, chern dark coniferous taiga, 25.V–7.VI 2015, 8 ♂, 19 ♀; same locality, 7–22.VI 2015, 2 ♂, 16 ♀, 1 juv.; 5 km SE of Taymet village, Biyskaya Griva Mt. Range, *Pinus* forest, 7–22.VI 2015, 2 ♂, 18 ♀; valley of Azas Stream, *Abies* forest, fern, 8–18.VI 2015, 6 ♂, 6 ♀, 1 juv.; 5 km SE of Taymet village, Biyskaya Griva Mt. Range, *Pinus* forest with bilberry, 13–21.VII 2015, 1 ♂, 6 juv.; valley of Azas Stream, *Abies* forest, 30.VII–4.VIII 2015, 3 ♀; same locality, 2–3.VIII 2015, 1 ♀; same locality, 4–17.VIII 2015, 2 ♂, 9 ♀, 3 juv.; 5 km SE of Taymet village, *Pinus* forest with bilberry, 28.IX–9.X 2015, 2 ♀, 1 juv.; **Tashtagolskiy District**, environs of Mt. Bolshaya Kul-Taiga, *Pinus* forest, 19–20.VII 2013, 1 juv.; **Republic of Altai**: Altaiskiy State Nature Biosphere Reserve, valley of Chelyush River, ca. 4 km upstream of mouth, 1492 m, 51°31' N, 87°47' E, 22–27.VI 2013, 1 juv.; **Novosibirskaya oblast**: Bolotninskiy District, environs of Bolshaya Chernaya village, *Pinus* forest, 16–31.V 2015, 1 juv. All specimens in IBSS, leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Kemerovskaya oblast, Novosibirskaya oblast, southern part of Krasnoyarskiy krai, Republic of Khakassia, Altaiskii krai, Republic of Altai.

***Julus insolitus* Mikhailjova, 2009**

MATERIAL. Russia: **Kemerovskaya oblast**: Shorskiy National Park, valley of Mrassu River, downstream of Mazas River mouth, *Pinus* forest, 31.IX 2010, 1 ♂ (IBSS), leg. L.A. Trilikauskas; **Republic of Altai**: Altaiskiy State Nature Biosphere Reserve, head of Chiri River, 1800 m a.s.l., *Pinus* forest with moss, 27.VI–1.VII 2012, 1 ♂ (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Republic of Altai, Kemerovskaya oblast (new record).

***Sibiriulus altaicus* Gulička, 1972**

MATERIAL. Russia: **Kemerovskaya oblast**: Shorskiy National Park, 1 km N of Taymet village, chern dark coniferous taiga, 25.V–7.VI 2015, 1 ♂ (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Republic of Altai, Kemerovskaya oblast (new record).

***Megaphyllum sjaelandicum* (Meinert, 1868)**

MATERIAL. Russia: **Altayskii krai**: **Tigirekskiy Nature Reserve**: valley of Bolshoi Tigirek River, E slope of Mt. Mayak, *Larix* forest, data absent, 2 ♂, 2 ♀; Khankharinskiy sector, *Larix* forest, 21–31.VIII 2012, 2 ♂, 1 ♀; Mt. Mayak, *Larix* forest after fire, 22–30.VIII 2012, 1 ♀, 1 juv.; valley of Inya River, near Mt. Karypov Kamen, *Betula* forest, 5.IX 2012, 1 ♂. All specimens (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Republic of Altai, Altayskii krai, Novosibirskaya oblast, Urals; East Kazakhstan; Europe.

***Pacifiulus amurensis* (Gerstfeldt, 1859)**

MATERIAL. Russia: **Primorskii krai**: Dalnerechenskiy District, Martynova Polyana village, VII 2006, 4 ♀ (IBSS), leg. S.A. Shabalin; Pozharskiy District, Lastochka, 29.VI–2.VII 2009, 14 ♀, 1 juv. (IBSS), leg. S.A. Shabalin; Shkotovski District, near Anisimovka village, leaved forest, litter, 8.XI 2012, 1 ♀ (IBSS), leg. E.V. Mikhajlova and A.I. Konyukhov; environs of Nakhodka, *Quercus* forest, 30.VII 2015, 1 ♀, 5 juv. (IBSS), leg. S.A. Shabalin; same locality, 30.VII–1.VIII 2015, 1 ♀ (IBSS), leg. S.A. Shabalin; same locality, 1–3.VIII 2015, 2 ♀, 1 juv. (IBSS), leg. S.A. Shabalin; environs of Nakhodka, 42°53'22.0'' N, 132°49'37.2'' E, 9–12.IX 2015, 2 ♀ (IBSS), leg. S.A. Shabalin and S.Yu. Storozhenko; same locality, 11–15.IX 2015, 1 ♀ (IBSS), leg. S.A. Shabalin and S.Yu. Storozhenko; **Khabarovskii krai**: Imeni Poliny Osipenko District, confluence of rivers Svetlaya and Nilan, limestone rocks, 23.VII 2006, 4 ♀ (IBSS), leg. M.Yu. Proshchalykin; Sikhote-Alin, Mt. Ko, 1000 m, 6.VII 2007, 2 ♀ (IBSS), leg. P.V. Budilov; Nanayskiy District, basin of Lake Gassi, 49°2'58,4'' N, 137°24'29,9'' E, near Tukhala River, *Picea*, *Betula*, 332,7 m, 5–9.VIII 2011, 1 ♀, 1 juv. (IBSS), leg. P.V. Budilov.

DISTRIBUTION. Russia: Republic of Altai, southern part of Krasnoyarskii krai, Republic of Khakassia, Republic of Tyva, Zabaikalskii krai, Primorskii krai, southern part of Khabarovskii krai, Jewish Autonomous Region, Amurskaya oblast; North-East China.

Family Nemasomatidae Bollman, 1893

***Orinisobates microthylax* Enghoff, 1985**

MATERIAL. Russia: **Amurskaya oblast**: Selemdzhinskiy District, **Norskiy Nature Reserve**: Nora River basin near Maltsevskiy cordon, in rotten aspen stump

overgrown with horny fungi, 30.VIII 2004, 22 ♀, 4 juv. (IBSS), leg. A.B. Ryvkin; Nora River basin near Maltsevskiy cordon, in rotten wood and under bark of aspen and birch stumps, 1.IX 2004, 8 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 2 km SE of Burunda cordon, leaf litter in young dense larch forest with sparse *Alnus* sp., *Poaceae*, *Equisetum* sp. and under old larch tree on hill, 22.IX 2004, 2 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 2 km SE of Burunda cordon, mosses and leaf litter in slope (? unburnt) forest with *Betula platyphylla*, sparse *Poaceae*, *Carex* sp., *Rhododendron* sp., etc., 26.IX 2004, 2 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River basin, 4 km NW of Burunda cordon, mosses and leaf litter on very gentle slope with *Larix gmelinii*, *Alnus* sp., *Ledum palustre*, undergrowth of *Betula platyphylla*, *Hylocomium splendens*, *Dicranum* sp., etc., 8.X 2004, 1 ♀ (IBSS), leg. A.B. Ryvkin; Nora River near Maltsevskiy cordon, leaf litter in birch forest (*Betula platyphylla*) with *Calamagrostis* sp., *Maianthemum bifolium*, *Convallaria keiskei*, *Cypripedium guttatum*, etc. and in debris of rotten birch stump on natural levee, 09.VI 2005, 10 ♀, 2 juv. (IBSS), leg. E.M. Veselova & A.B. Ryvkin; Selemdzha River basin, 1.5 km NE of Dvadsatikha cordon, banks and floodplain of a rill inflowing to lake, mosses and leaf litter under *Salix* spp., *Alnus* sp., undergrowth of *Betula platyphylla* and *Populus tremula*, *Spiraea* spp. with *Poaceae*, *Carex* spp., *Trollius* sp., *Filipendula palmata*, ferns, *Sphagnum* spp., *Polytrichum* spp., *Hypnum* sp., *Plagiomnium* sp., etc., 26.VI 2005, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; Selemdzha River basin near Dvadsatikha cordon, leaf litter and mosses in sparse forest with *Betula davurica*, *Larix gmelinii*, undergrowth of *Corylus mandshurica* and *Tilia amurensis*, motley grass, *Polytrichum* sp., etc. (old fire site) and under bark of dead *Betula davurica*, 27.VI 2005, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; left side of Selemdzha River opposite Dvadsatikha cordon, fold of small rill, mosses and leaf litter near rill and on fallen trees and stones in rill channel, among *Alnus* sp., *Padus* sp., *Corylus mandshurica*, *Tilia amurensis*, *Acer ukurunduense*, *Betula platyphylla*, *B. davurica*, *Picea ajanensis*, *Abies nephrolepis*, etc., 28.VI 2005, 3 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; left side of Selemdzha River opposite Dvadsatikha cordon, tree mushrooms on rotten birch stump, 28.VI 2005, 1 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; lower reaches of Chervinka River, mosses, plant debris, leaf litter on wide swamp with tussocks of *Carex* spp. and *Poaceae* gen. spp. with *Salix* spp., *Alnus* sp., *Betula fruticosa*, *Ledum palustre*, *Chamaedaphne calyculata*, *Vaccinium uliginosum*, undergrowth and young trees of *Betula platyphylla* and *Populus tremula*, individual trees of *Larix gmelinii*, *Sphagnum squarrosum*, *Sph.* spp., *Polytrichum* spp., etc., 2.VII 2005, 8 ♀, 3 juv. (IBSS), leg. E.M. Veselova & A.B. Ryvkin; low reaches of Chervinka River, moist rot on birch trunk, 3.VII 2005, 2 ♀ (IBSS), leg. E.M. Veselova and A.B. Ryvkin; Nora River basin near Meunskiy cordon, mosses and plant debris on floodplain of intermittent rill with *Alnus* sp., *Carex* spp., *Poaceae*, *Trientalis europaea*, *Convallaria keiskei*, *Sphagnum squarrosum*, *Sph.* ? *girgensohnii*, *Sph.* spp., *Hypnum* sp., etc., 08.VII 2005, 1 ♀ (IBSS), leg. A.B. Ryvkin; mouth of Meun River, leaf litter under *Betula platyphylla*, *Abies nephrolepis*, *Picea ajanensis*, *Populus tremula* with *Poaceae* gen. spp., *Carex* spp., *Fabaceae* gen. spp., *Filipendula palmata*, *Equisetum sylvaticum*, *Rosa* sp., etc. on natural levee, 9.VII 2005, 5 ♀

(IBSS), leg. A.B. Ryvkin; Nora River basin near Meunskiy cordon, mosses, leaf litter and plant debris on swampy floodplain of intermittent rill with *Alnus* sp., *Padus* sp., *Salix* spp., *Betula platyphylla*, *B. ? fruticosa*, *Poaceae*, *Carex* spp., *Ledum palustre*, *Filipendula palmata*, *Vaccinium uliginosum*, *Convallaria keiskei*, *Trientalis europaea*, *Maianthemum bifolium*, *Sphagnum squarrosum*, *Sph. ? girgensohnii*, *Sph. ? centrale*, *Sph.* spp., *Hypnum* sp., etc., 10.VII 2005, 6 ♀, 2 juv. (IBSS), leg. A.B. Ryvkin; right side of Meun River near mouth, mosses and litter in *Picea ajanensis* forest with *Abies nephrolepis* and *Populus* spp., *Maianthemum bifolium*, *Trientalis europaea*, *Equisetum pratense*, *E. sylvaticum*, *Hylocomium splendens*, *Pleurozium schreberi*, etc., 11.VII 2005, 2 ♀ (IBSS), leg. A.B. Ryvkin; Meun River mouth, steep slope of Mt. Ust'-Meunskaya Mt., mosses and leaf litter on rocks and at their foot: ferns, *Acer ukurunduense*, *Padus* sp., etc., 14.VII 2005, 2 ♀, 1 juv. (IBSS), leg. A.B. Ryvkin; Nora River, Mt. Gryashchinskaya, mosses and leaf litter among rock debris near foot of slope: *Betula platyphylla*, *Alnus* sp., *Sorbus sibirica*, *Swida alba*, undergrowth of *Acer ukurunduense*, *Pleurozium schreberi*, *Hylocomium splendens*, *Dicranum* sp., *Ptilium crista-castrensis*, *Sphagnum ? girgensohnii*, *Dryopteris fragrans*, etc., 21.VII 2005, 1 ♀ (IBSS), leg. A.B. Ryvkin; near Meunskiy cordon, foot of W slope of hill Ust'-Meunskaya, tree mushroom on *Populus* stump, 18.IX 2008, 4 ♀, 1 juv. (IBSS), leg. E.M. Veselova and A.B. Ryvkin; **Khabarovskii krai**: upper reaches of Bureya River, confluence of Levaya Bureya and Pravaya Bureya rivers, *Picea* forest with *Populus*, litter, 24.VIII 2008, 2 ♀ (IBSS), leg. L.A. Trilikauskas; upper reaches of Bureya River, Ust-Niman hydropost, valley forest, 1.IX 2009, 1 ♀ (IBSS), leg. L.A. Trilikauskas; Verkhnebureinskiy District, **Bureyinskiy Nature Reserve**: right bank of Levaya Bureya River, upstream of Irganakh River mouth, 650 m, leaf litter under *Populus suaveolens* in floodplain forest, 27.VI 2011, 1 ♀ (IBSS), leg. A.B. Ryvkin; same reserve, Levaya Bureya River basin, upstream of Irganakh River mouth, 650 m, mosses and litter under *Populus suaveolens* in floodplain forest, 6.VII 2011, 3 ♀ (IBSS), leg. A.B. Ryvkin; same reserve, mouth of Kityma River, *Picea* forest with *Populus*, 23.VIII 2009, 1 ♀ (IBSS), leg. L.A. Trilikauskas; same reserve, mouth of Levaya Bureya River, *Populus* forest, date absent, 4 ♀ (IBSS), leg. L.A. Trilikauskas; **Primorskii krai**: environs of Nakhodka, *Ulmus*, *Fraxinus*, 12–15.IX 2015, 1 ♀ (IBSS), leg. S.A. Shabalin and S.Yu. Storozhenko; **Central Kamchatka**: Anavgai village, ca 450 m a.s.l., floodplain of Bystraya River, N 56°06'059'', E 158°93'608'', under bark of dead trees, 3.VII 2012, 2 ♀ (ZMUM), leg. M. Potapov.

DISTRIBUTION. Russia: Buryatia, Primorskii krai, Amurskaya oblast, Jewish Autonomous Region, southern half of Khabarovskii krai including Shantar Islands (Bolshoy Shantar and Feklistova), central and southern parts of Kamchatka Peninsula, Sakhalin Island, Kurile Islands (Kunashir, Shikotan and Iturup: under the bark of a big log introduced as firewood from both Southern Sakhalin Island and Primorskii krai).

***Orinisobates sibiricus* (Gulička, 1963)**

MATERIAL. Russia: **Republic of Tyva**: Todzhinskiy District, Azas Nature Reserve, mouth of Azas River, forest, *Larix*, *Betula*, litter, 24.VIII 2012, 1 ♂, 1 juv.

(IBSS), leg. V.P. Storozhev; same reserve, Krasnyi Kamen cordon, mixed forest, litter, 25.VIII 2012, 1 ♂, 1 ♀ (IBSS), leg. N.D. Kartashov; **Kemerovskaya oblast: Shorskiy National Park**: 5 km SSE of Taymet village, *Pinus* forest with bilberry, 7–15.VI 2013, 1 ♂ (IBSS), leg. L.A. Trilikauskas; 1 km N of Taymet village, chern dark coniferous taiga, 25.V–7.VI 2015, 2 ♂ (IBSS), leg. L.A. Trilikauskas; same locality, 7–22.VI 2015, 2 ♂, 1 ♀ (IBSS), leg. L.A. Trilikauskas; 5 km SE of Taymet village, *Pinus* forest with bilberry, 28.IX–9.X 2015, 1 ♂ (IBSS), leg. L.A. Trilikauskas; **Republic of Altai**: Altaiskiy State Nature Biosphere Reserve, valley of Chelyush River, ca. 4 km upstream of mouth, 1492 m, 51°31' N, 87°47' E, 22–27.VI 2013, 2 ♀ (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: southern part of Krasnoyarskii krai, Altaiskii krai, Republic of Altai, Kemerovskaya oblast, Republic of Tyva, Zabaikalskii krai; East Kazakhstan; Kirghizia (=Kyrgyzstan).

***Orinisobates soror* Enghoff, 1985**

MATERIAL. Russia: Kurile Islands, **Kunashir Island**: environs of Alekhino, *Quercus-Acer* forest, litter, 1.VI 2011, 1 ♀ (ZMUM), leg. A. Matalin, I. Melnik; foreland Ivanovskii, on the rocks, 11.VI 2011, 9 ♂, 8 ♀, 1 juv. (ZMUM), leg. A. Matalin; N of Dal'nii Stream, forest, 12.VIII 2011, 2 ♀ (ZMUM), leg. K. Makarov; ca. 2 km SW of Severyanka River, mouth of stream, 44°19'22'' N, 145°59'35'' E, 26.VII 2013, 3 ♂, 9 ♀, 1 juv. (ZMUM), leg. K. Makarov; **Shikotan Island**, southern part, Tserkovnaya Bay, 25–30.V 2012, 3 ♀, 2 juv. (ZMUM), leg. Yu.N. Sundukov.

DISTRIBUTION. Russia: southern part of Sakhalin Island, Moneron Island, Kurile Islands (Kunashir, Shikotan, Zelyonyi, Anuchina, Brat Chirpoev, Yankicha, Rasshua).

Family Mongoliulidae Pocock, 1903

***Kopidoiulus continentalis* Golovatch, 1979**

MATERIAL. Russia: **Primorskii krai**: Cave Letuchaya mysh, 50–60 m from exit, 3.VIII 1961, 1 ♂ (IBSS), leg. A.V. Kucheryavenko; **Khabarovskii krai**: Sikhote-Alin, Mt. Ko, 1000 m, 6.VII 2007, 1 ♂, 1 ♀ (IBSS), leg. P.V. Budilov.

DISTRIBUTION. Russia: Primorskii krai, southern part of Khabarovskii krai (new record); North-East China.

***Skleroprotopus coreanus* (Pocock, 1895)**

MATERIAL. Russia: **Khabarovskii krai**: basin of Anyui River, 16.VIII 1997, 1 ♂ (IBSS), leg. T.M. Tiunova; **Primorskii krai**: Olginskiy District, environs of Milogradovka River, 12 km above Listvennaya village, 13.VI 1998, 1 ♂ (IBSS), leg. T.M. Tiunova; Pogranichnyi District, 3 km E of Barabash-Levada village, valley of Komissarovka River, valley broadleaved forest, litter, 26.VI 2003, 11 ♂, 19 ♀, 8 juv. (IBSS), leg. E.V. Mikhailjova; Anuchinskiy District, near Smolnoe village, "Vinogradovskie scaly", rocky scree, under stones, 17.X 2012, 1 ♀ (IBSS), leg. D.A. Sidorov.

DISTRIBUTION. Russia: Primorskii krai, southern part of Khabarovskii krai, Amurskaya oblast, Jewish Autonomous Region; Korea.

Order Chordeumatida

Family Anthroleucosomatidae Verhoeff, 1899

Ghilarovia cylindrica (Stuxberg, 1876)

MATERIAL. Russia: **Kemerovskaya oblast: Shorskiy National Park**: 5 km SSW of Taymet village, *Pinus* forest with bilberry, 23.VIII–1.IX 2013, 14 ♀; valley of Azas Stream, *Abies* forest, 30.VII–4.VIII 2015, 5 ♀; same locality, 4–17.VIII 2015, 10 ♂, 58 ♀; 5 km SE of Taymet village, *Pinus* forest with bilberry, 28.IX–9.X 2015, 4 ♂, 5 ♀. All specimens (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Kemerovskaya oblast, Novosibirskaya oblast, Tomskaya oblast, southern half of Krasnoyarskii krai, Republic of Khakassia.

Family Golovatchiidae Shear, 1992

Golovatchia magda Shear, 1992

MATERIAL. Russia: **Khabarovskii krai: Bureynskiy Nature Reserve**, SE spurs of Ezop Mt. Range, 1962 m, mountain tundra, 17.VI 2009, 1 ♂ (IBSS); SE spurs of Ezop Mt. Range, *Picea* forest under goltsy (= stony field), VII 2009, 4 ♂ (IBSS); same locality, 24–29.VII 2009, 2 ♂ (IBSS). All leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: southern part of Khabarovskii krai.

Family Hoffmaneumatidae Golovatch, 1978

Hoffmaneuma exiguum Golovatch, 1978

MATERIAL. Russia: **Primorskii krai**: Khasan District, 29–30.X 2004, 1 ♂, 2 ♀ (IBSS), leg. M.G. Ponomarenko; Vladivostok, Malaya Sedanka River, bank, litter, 24.IV 2010, 1 ♂ (IBSS), leg. S.A. Shabalin; Vladivostok, Botanical Garden, mixed forest, litter, 24.IV 2010, 1 ♂, 7 ♀ (IBSS), leg. S.A. Shabalin; Vladivostok, Malaya Sedanka River, middle flow, bank, 9.V 2010, 4 ♂, 1 ♀ (IBSS), leg. S.A. Shabalin; Vladivostok, Botanical Garden, 1–7.VI 2010, 7 ♂, 2 ♀ (IBSS), leg. S.A. Shabalin; same locality, 20–27.VI 2010, 1 ♂ (IBSS), leg. V.M. Loktionov; Shkotovskiy District, near Anisimovka village, leaved forest, litter, 8.XI 2012, 2 ♀ (IBSS), leg. E.V. Mikhailjova and A.I. Konyukhov; same locality, 31.X 2013, 3 ♂, 2 ♀ (IBSS), leg. E.V. Mikhailjova and A.I. Konyukhov.

DISTRIBUTION. Russia: Primorskii krai; ?North Korea.

Family Conotylidae Cook, 1896

Crassotyla amurica Golovatch, 1980

MATERIAL. Russia: **Amurskaya oblast: Selemdzhinskiy District**, 26–27.VIII 2006, 3 ♂ (IBSS), leg. A.B. Ryvkin; right bank of Selemdzha River between mouth

of Ogodzha River and Ekimchan village, hill Sypuchaya, mosses, lichens and litter among stones, 9.VIII 2005, 1 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; **Khabarovskii krai: *Dublikanskiy wildlife sanctuary***: right side of Dublican River valley, 5 km upstream of cordon, SE slope near road, 400 m, *Betula* forest with *Larix*, mosses and litter, 26.VIII 2008, 3 ♀ (IBSS), leg. A.B. Ryvkin; right side of Dublican River valley, 1 km upstream of cordon, NNW slope of hill, 400 m, mosses and litter on stones (permafrost), 27.VIII 2008, 2 ♂, 2 ♀ (IBSS), leg. A.B. Ryvkin; **Bureyinskiy Nature Reserve**: 14.IX 2006, 1 ♀, 1 juv. (IBSS), leg. A.B. Ryvkin; mouth of Levaya Bureya River, *Populus* forest, date absent, 1 ♂, 1 ♀ (IBSS), leg. L.A. Trilikauskas; mouth of Kityma River, *Picea* forest with *Populus*, 23.VIII 2009, 1 ♂, 4 ♀ (IBSS), leg. L.A. Trilikauskas; valley of Pravaya Bureya River, mouth of Malaya Sibinde River, above-floodplain terrace, mixed forest, *Betula*, *Larix*, *Populus*, *Chosenia*, 24.VIII 2009, 2 ♂ (IBSS), leg. L.A. Trilikauskas; Levaya Bureya River basin, upstream of Irganakh River mouth, 650 m, mosses and litter under *Populus suaveolens* in floodplain forest, 6.VII 2011, 2 juv. (IBSS), leg. A.B. Ryvkin; **Verkhnebureinskiy District**, Bureya River basin, right bank of Seregekta River, near mouth, 528 m, litter under *Populus suaveolens* in floodplain forest, 11.VII 2011, 3 juv. (IBSS), leg. A.B. Ryvkin.

DISTRIBUTION. Russia: southern part of Khabarovskii krai, Amurskaya oblast (new record).

Family Diplomaragnidae Attems, 1907

Ancestreuma ryvkinii (Shear, 1990)

MATERIAL. Russia: **Republic of Sakha (Yakutia)**: Mirnyi, mixed forest, 26.VII 2001, 2 ♂ (IBSS), leg. Popova and Nogovitsina.

DISTRIBUTION. Russia: central and southern parts of Krasnoyarskii krai, Republic of Tyva, Irkutskaya oblast, Buryatia, Yakuitya); North Mongolia.

Altajosoma deplanatum (Stuxberg, 1876)

MATERIAL. Russia: **Kemerovskaya oblast: *Shorskiy National Park***, 5 km SSW of Taymet village, *Pinus* forest with bilberry, 23.VIII–1.IX 2013, 4 ♂, 23 ♀; environs of Taymet village, chern dark coniferous taiga, 20–26.VII 2014, 1 ♂, 5 ♀; 6 km S of Taymet village, *Pinus* forest with moss, 26.VII–7.VIII 2014, 4 ♂, 13 ♀; environs of Taymet village, chern dark coniferous taiga, 26.VII–7.VIII 2014, 14 ♀; 5 km SE of Taymet village, Biyskaya Griva Mt. Range, *Pinus* forest, 7–22.VI 2015, 4 ♀, 3 juv.; 5 km SE of Taymet village, Biyskaya Griva Mt. Range, *Pinus* forest with bilberry, 13–21.VII 2015, 4 ♂, 21 ♀, 3 juv.; valley of Azas Stream, *Abies* forest, 30.VII–4.VIII 2015, 3 ♂, 8 ♀; same locality, 4–17.VIII 2015, 21 ♂, 80 ♀; 5 km SE of Taymet village, *Pinus* forest with bilberry, 28.IX–9.X 2015, 5 ♂, 3 ♀. All specimens (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Kemerovskaya oblast, region between Mariinsk in Kemerovskaya oblast and Achinsk in Krasnoyarskii krai, Republic of Khakassia, Novosibirskaya oblast, Tomskaya oblast, Republic of Altai.

***Shearia khakassica* Mikhaljova, 2000**

MATERIAL. Russia: **Kemerovskaya oblast**: Tashtagolskiy District, environs of Mt. Kul-Taiga, valley of Kichi River, *Picea* forest with moss, 18–23.VII 2013, 2 ♂, 10 ♀, 10 juv. (IBSS), leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Republic of Khakassia, southern part of Krasnoyarskii krai, Kemerovskaya oblast (new record).

***Pacifiosoma asperum* Mikhaljova sp. n.**

Figs 1–4

MATERIAL. Holotype – ♂ (IBSS), Russia: **Khabarovskii krai**: Sikhote-Alin, Mt. Ko, 1000 m, 6.VII 2007, leg. P.V. Budilov.

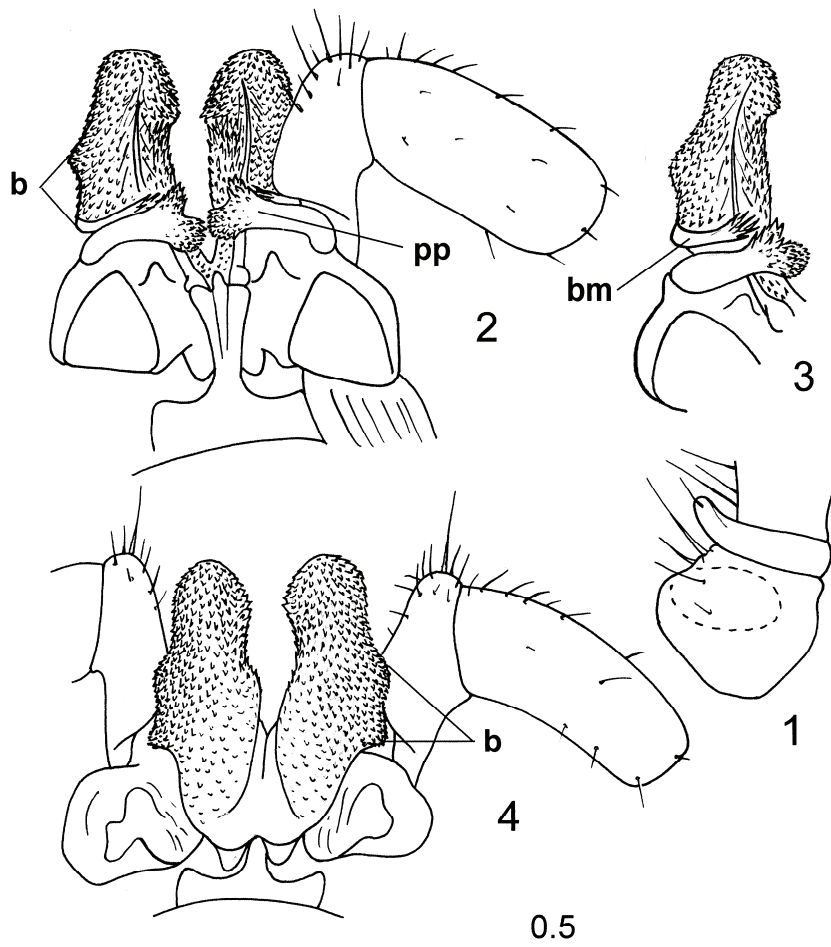
DESCRIPTION. MALE. Length 9–10 mm, width 0.9–1.0 mm with paraterga. Coloration in alcohol light brown. Legs marbled brownish, darker distad. Antennae brown. Eyes black.

Body with 32 segments. Eye patches subtriangular, with 21–22 ocelli. Collum semicircular, its macrochaetae broken. Both collum and somite 2 narrower than head with genae. Somite 2 wider than collum. Paraterga beginning on somite 4(5), well developed on somites 6–27, reduced on somite 28, onward missing. Metazonital macrochaetae in a transverse row on somites 29–31, like an extended triangle on preceding somites. Anterolateral macrochaetae shortest, faintly clavate. Caudolateral macrochaetae longest. Medial and caudolateral macrochaetae pointed, but not very sharply so. Axial suture poorly developed.

Legs long and slender. Leg pairs 1–2 typically reduced in size, with tarsal brushes as usual. Other pregonopodal legs somewhat enlarged, otherwise unmodified. Claw of leg pairs 1–2 at base with one small additional claw dorsally and relatively short setiform outgrowth ventrally. Leg pairs 3–7 with a group of funnel-shaped tarsal papillae apically near claw; size of papillar tarsal field gradually increasing toward gonopods. Claw of leg pairs 3–7 at base with a long setoid outgrowth ventrally but without additional claws dorsally. Postgonopodal legs (including leg pairs 10 and 11) without tarsal papillae. Claw of legs 10 and 11 at base only with a long setoid outgrowth ventrally. Claw of midbody legs at base with two small additional claws dorsally and a long setoid filament ventrally. Claw of hindmost legs at base with a long setoid filament ventrally, but without additional claws dorsally.

Legs 10 and 11 with coxal glands; coxal processes absent. Trochanter 10 with a tiny knob. Trochanter 11 with a caudoventral finger-shaped process rounded apically (Fig. 1).

Gonopods as in figs 2–4. Anterior gonopod coxosternum with a very long coxal part; telopodite flagelliform, its distal part with a pointed apex positioned inside sheath groove with elevated edges. Posterior gonopod colpocoxites fused basally, their distal parts curved caudally, apices widely rounded. Each colpocoxite entire. Lateral edge of colpocoxite drawn out into relatively narrow blade (**b**). Basal margin (**bm**) of the blade wrapped to posterior surface of colpocoxite, carried pointed



Figs 1–4. *Pacifiosoma asperum* sp. n., male holotype. 1 – coxa and trochanter 11; 2 – gonopods (caudal view); 3 – posterior gonopod colpocoxite and angiocoxite + anterior gonopod telopodite (caudal view, somewhat overturned caudad); 4 – gonopods (front view); **b** – lateral blade of colpocoxite; **bm** – wrapped basal margin of a lateral blade; **pp** – posterior angiocoaxal process of posterior gonopod. Scale in mm.

spinules. Colpocoxites densely covered with pointed spinules and papillae. Colpocoxite sheath groove without evident processes. Posterior gonopod angiocoxite with a globule in posterior view. Posterior gonopod angiocoaxal process (**pp**) large, with rounded papillate apex and subapical outgrowth covered with pointed spinules. Anterior angiocoaxal process absent. Posterior gonopod telopodite 2-segmented; distal segment large, basal segment with a thin stem and distal part resembling a rectangle.

FEMALE unknown.

DIAGNOSIS. Differs from congeners mainly by the shape of the posterior angiocoxal process with rounded papillate apex and subapical outgrowth covered with pointed spinules as well as in the shape of the posterior gonopod colpocoxite densely covered with pointed spinules/papillae and supplied with a lateral blade with wrapped basal margin.

ETYMOLOGY. The specific epithet refers to the rough surface of the posterior gonopod colpocoxites.

***Orientyla bureyinskaya* (Mikhaljova, 1997)**

MATERIAL. Russia: **Khabarovskii krai**: Verkhnebureinskiy District, **Bureyinskiy Nature Reserve**, upper reaches of Pravaya Bureya River, head of Lednikovyi Stream, *Picea* forest under goltsy (= stony field), 8–21.VII 20054 ♀ (IBSS); SE spurs of Ezop Mt. Range, *Picea* forest under goltsy (= stony field), VII 2009, 3 ♂, 6 ♀, 1 juv. (IBSS); same locality, 22.VII 2009, 1 ♀ (IBSS); same locality, 24–29.VII 2009, 2 ♀ (IBSS). All leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: southern part of Khabarovskii krai.

***Orientyla dahurica* (Gerstfeldt, 1859)**

MATERIAL. Russia, **Khabarovskii krai**: Verkhnebureinskiy District, Sofiyisk village, border of mixed forest, 24.VIII 2011, 2 ♂, 3 ♀ (IBSS), leg. P.V. Budilov; **Bureyinskiy Nature Reserve**, confluence of Levaya Bureya and Pravaya Bureya rivers, *Populus* forest, 23–28.VII 2002, 5 ♂, 7 ♀ (IBSS), leg. L.A. Trilikauskas; valley of Pravaya Bureya River, mouth of Malaya Sibinde River, above-floodplain terrace, mixed forest, *Betula*, *Larix*, *Populus*, *Chosenia*, 24.VIII 2009, 1 ♀ (IBSS), leg. L.A. Trilikauskas;

DISTRIBUTION. Russia: eastern part of Zabaikalskii krai, border between Zabaikalskii krai and Amurskaya oblast, Amurskaya oblast, Jewish Autonomous Region, southern part of Khabarovskii krai (new record), Primorskii krai; North Korea.

***Sakhalineuma curvatum* (Mikhaljova, 1996)**

MATERIAL. Russia: Kurile Islands, **Shikotan Island**, southern part, Tserkovnaya Bay, 1–3.X 2012, 3 ♂, 4 ♀ (ZMUM), leg. Yu.N. Sundukov.

DISTRIBUTION. Russia: southern part of Sakhalin Island, Kurile Islands (Kunashir, Shikotan and Iturup).

***Sakhalineuma* sp.**

MATERIAL. Russia: Kurile Islands, **Kunashir Island**, middle flow of Tret'yakova Stream, 43°58'30'' N, 145°39'19'' E, 13.VIII 2011, 1 juv. (ZMUM), leg. K. Makarov.

REMARKS. Based on the sole juvenile specimen, it appears impossible to attribute this material to a species. However it seems quite possible that the juvenile actually belongs to one of two species of the genus *Sakhalineuma* Golovatch, 1976 (*S. curvatum* and *S. tuberculatum* (Mikhaljova, 1996)) known from Kunashir Island.

***Diplomaragna anuchino* Shear, 1990**

MATERIAL. Russia: **Primorskii krai**: Anuchinskiy District, near Smolnoe village, "Vinogradovskie scaly", rocky scree, under stones, 17.X 2012, 1 ♂ (IBSS), leg. D.A. Sidorov.

DISTRIBUTION. Russia: Primorskii krai.

***Diplomaragna konyukhovi* Mikhailjova sp. n.**

Figs 5–16

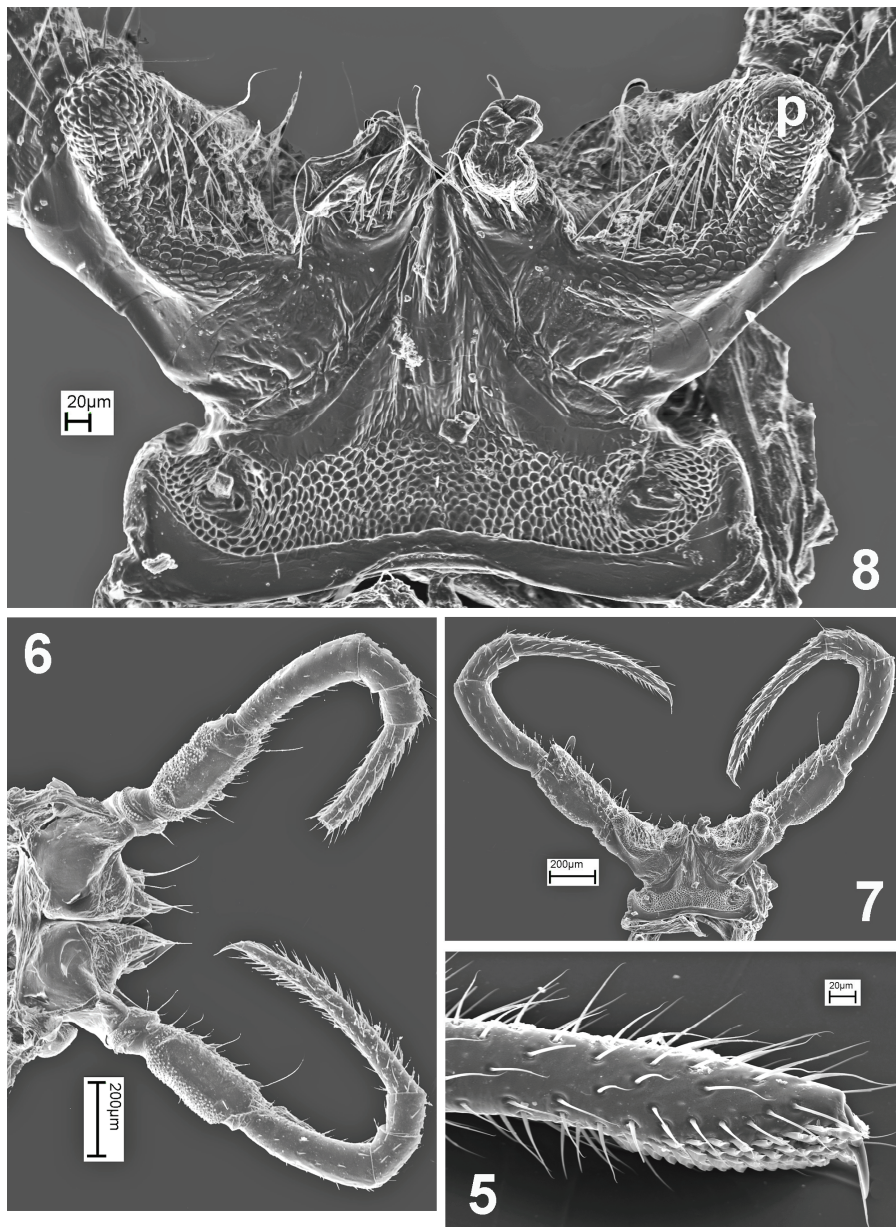
MATERIAL. Holotype – ♂ (IBSS), Russia: **Primorskii krai**, Shkotovskiy District, environs of Anisimovka village, mixed forest, litter, 5.X 2008, leg. A.I. Konyukhov and E.V. Mikhailjova. Paratypes: 1 ♂, 1 ♀ (ZMUM), 4 ♂, 2 ♀ (IBSS), same locality, together with holotype, 5.X 2008; 1 ♂ (IBSS), Russia: Primorskii krai, Shkotovskiy District, environs of Anisimovka village, mixed forest, litter, 8.XI 2012, all leg. A.I. Konyukhov and E.V. Mikhailjova.

DESCRIPTION. MALE. Length 15–16 mm, width, 1.9–2.0 mm with paraterga. Coloration in alcohol tan. Prozonites lighter. Paraterga with mottled spot dorsally. Head with two marbled tan spots between eyes. Legs beige, with marbled brown distal parts. Antennae brown. Eyes black.

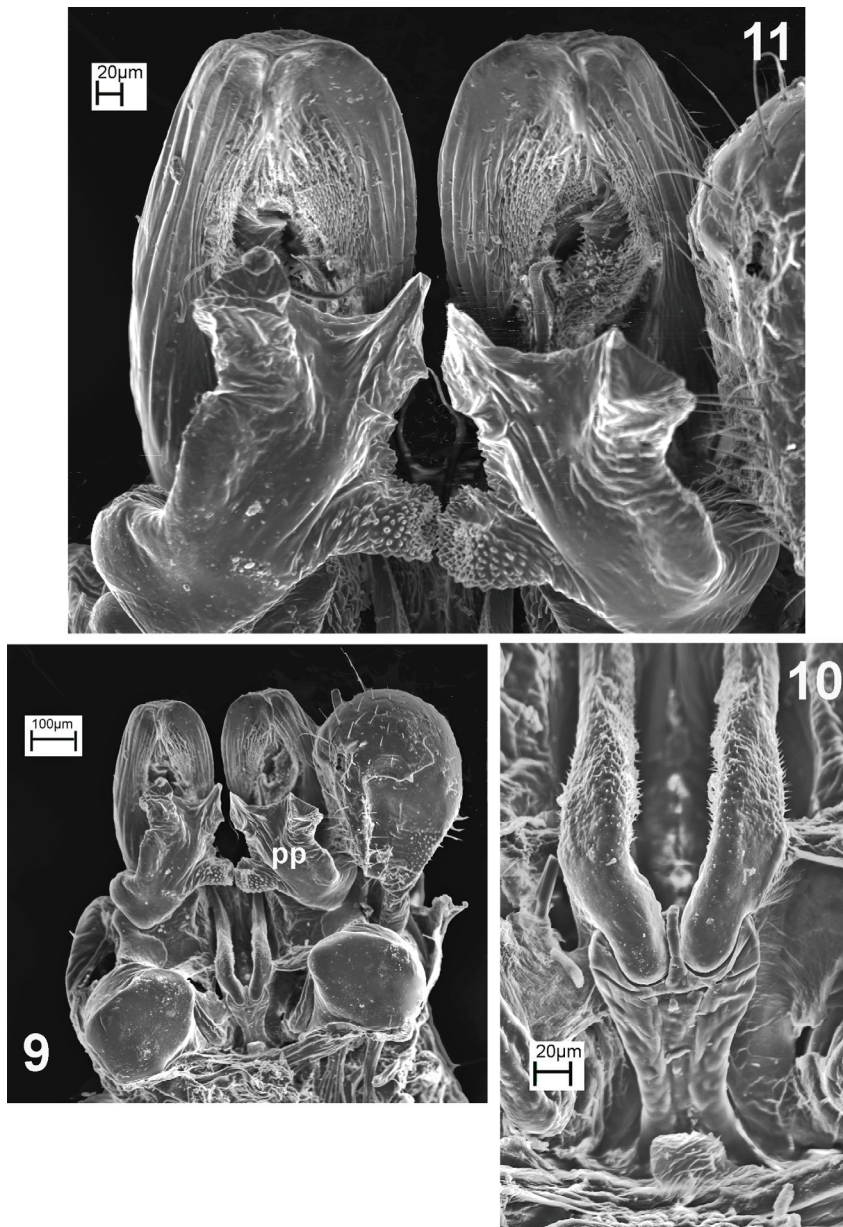
Body with 32 segments. Eye patches subtriangular, with 25–27 ocelli. Collum semicircular. Both collum and somite 2 narrower than head with genae. Axial suture well developed. Paraterga beginning on somite 2, well developed on somites 4(5)–26, reduced on somite 27, onward missing. Body width gradually increasing until somite 7, body parallel-sided on somites 8–24, thereafter gradually tapering. Somite 7 greatly enlarged, paraterga lower on sides, larger, more rounded. Metazonital macrochaetae in a transverse row on somites 30–31, like an elongate (to different degrees) triangle on preceding somites. Posterolateral macrochaetae longest and thickest, pointed apically, but not very sharply so. Anterolateral and medial ones subequal in length, pointed apically.

Legs long and slender. Leg pairs 3–7 not enlarged. Leg pairs 1 and 2 typically reduced in size, with tarsal brushes as usual; each claw at base with long setiform outgrowth ventrally and two small additional claws dorsally. Claws 3–7 at base with a long setiform outgrowth ventrally but without additional claws dorsally (Fig. 5). Pregonopodal legs with a group of funnel-shaped tarsal papillae apically near claw. Postgonopodal legs (including leg pairs 10 and 11) without tarsal papillae. Claw of postgonopodal legs (including claws of leg pairs 10 and 11) at base with a long setiform outgrowth ventrally; two small additional dorsal claws absent or very poorly developed (often inconspicuous) (but sometimes well developed), claws of ultimate legs at base without additional claws dorsally.

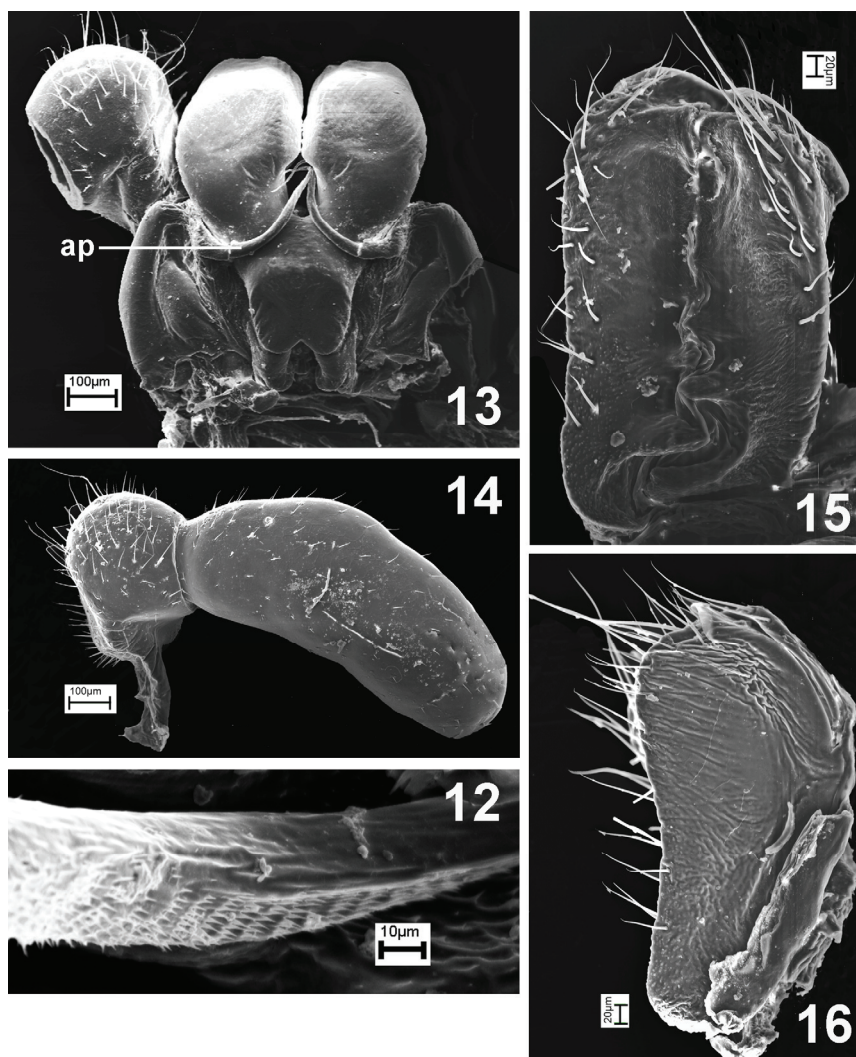
Legs 10 and 11 with coxal glands. Coxa 10 ventrally with a small conical setose process (Fig. 6). Coxa 11 ventrofrontally with papillate field (? wall of coxal gland) and rounded outgrowth (**p**) distally; coxal gland opening on a low tube-shaped outgrowth (Figs 7–8). Trochanter 11 with a tiny ventral outgrowth setose apically.



Figs 5–8. *Diplomaragna konyukhovi* sp. n., male paratype. 5 – distal part of leg 3; 6 – leg pair 10 (caudal view, distal part of left leg broken off); 7 – leg pair 11 (front view); 8 – coxae and sternite 11 (front view); p – outgrowth of coxa 11.



Figs 9–11. *Diplomaragna konyukhovi* sp. n., male paratype. 9 – gonopods (caudal view, left telopodite of posterior gonopod absent, distal segment of right telopodite of posterior gonopod broken off); 10 – coxosternum and basal parts of anterior gonopod telopodites; 11 – distal part of gonopods (caudal view, left telopodite of posterior gonopod absent); **pp** – posterior angiocoxal process of posterior gonopod.



Figs 12–16. *Diplomaragna konyukhovi* sp. n., male and female paratypes. 12 – middle part of anterior gonopod telopodite (caudal view); 13 – gonopods (front view, left telopodite of posterior gonopod absent, distal segment of right telopodite of posterior gonopod broken off); 14 posterior gonopod telopodite; 15 – vulva (ventral view); 16 – vulva (mesal view); **ap** – anterior angiocoxal process of posterior gonopod.

Anterior gonopod telopodite 1-segmented, flagelliform, beset with cuticular spinules mesally excluding base, its distal part positioned inside sheaths with elevated edges, its tip pointed (Figs 9–12). Colpocoxite sheath groove without processes, its edges covered with long cylindrical papillae. Telopodite base and distal part of coxo-

sternum tightly attached to adjacent mesal portion of posterior gonopod. Angiocoxite with a globule in posterior view. Posterior angiocoxal process (**pp**) with apical and subapical strong teeth and subbasal papillate rounded outgrowth, medially contiguous. Posterior gonopod colpocoxites fused medially in basal half, curved caudally, with a small median foramen and beak-shaped apices. Angiocoxite in anterior view depressed centrally (Fig. 13). An anterior angiocoxal process (**ap**) flagelliform, its distal part passing between colpocoxites into a median foramen formed by a median notch on each side. Posterior gonopod telopodites 2-segmented, setose; distal segments long; basal segments with thin stem (Fig. 14).

FEMALE. Length 15–16 mm, width 1.8–1.9 mm with paraterga. Body with 32 segments. Ocelli 23–24. Legs without tarsal papillae as usual. Leg claw at base with long setiform outgrowth ventrally and two small additional claws dorsally. Vulvae oblong, as in Figs 15–16.

DIAGNOSIS. The species differs from congeners mainly by the structure of the posterior gonopod posterior angiocoxal process with outgrowths of different shape.

ETYMOLOGY. The species is named in honour of the first collector, Alexander I. Konyukhov.

***Diplomaragna terricolor* (Attems, 1899)**

MATERIAL. Russia: **Khabarovskii krai:** Sikhote-Alin, Mt. Ko, 1000 m, 6.VII 2007, 1 ♂, 7 ♀ (IBSS), leg. P.V. Budilov.

DISTRIBUTION. Russia: Primorskii krai, southern part of Khabarovskii krai (new record).

***Maritimosoma antis* Mikhaljova, 2008**

MATERIAL. Russia: **Primorskii krai:** environs of Nakhodka, 42°53'22'' N, 132°49'37.2'' E, 9–12.IX 2015, 1 ♂ (IBSS); environs of Nakhodka, 42°53'07.6'' N, 132°48'46.3'' E, 12–15.IX 2015, 1 ♀ (IBSS). All leg. S.A. Shabalin and S.Yu. Storozhenko.

DISTRIBUTION. Russia: Primorskii krai.

Family Megalotylidae Golovatch, 1978

***Megalotyla brevichaeta* Golovatch et Mikhaljova, 1978**

MATERIAL. Russia: **Primorskii krai:** Shkotovskiy District, near Anisimovka village, mixed forest, litter, 5.X 2008, 2 ♂ (IBSS), leg. E.V. Mikhaljova and A.I. Konyukhov; Shkotovskiy District, Mt. Litovka, 700–900 m a.s.l., slope, 11.IX 2011, 1 ♀ (IBSS), leg. M.B. Potapov and V.V. Alpatov.

DISTRIBUTION. Russia: Primorskii krai.

Family Caseyidae Verhoeff, 1909

Underwoodia kurtschevae Golovatch, 1980

MATERIAL. Russia: **Amurskaya oblast**: Selemdzhinskiy District, **Norsky Nature Reserve**: Selemdzha River, Burundushka River mouth, mosses and leaf litter under *Tilia amurensis*, *Alnus* sp., *Acer ukurunduense*, *Betula platyphylla* with *Rosa* sp., *Calamagrostis* sp., *Equisetum* sp., *Maianthemum bifolium*, *Thalictrum* sp., *Spiraea* sp., *Oxalis acetosella*, etc. on natural levee, 3.VIII 2004, 2 ♀, 1 juv. (IBSS), leg. A.B. Ryvkin; left bank of Selemdzha River near Dvadsatikha cordon, mosses and leaf litter on high bank of the river: *Betula platyphylla*, *B. davurica*, *Larix gmelinii*, *Pinus sylvestris*, *Alnus* sp., *Ledum palustre*, *Rhododendron* sp., *Vaccinium vitisidaea*, *Pyrola* sp., *Maianthemum bifolium*, *Pleurozium schreberi*, *Ptilium crista-castrensis*, etc., 5.VIII 2004, 2 ♀ (IBSS), leg. A.B. Ryvkin; Burunda River near Ozyornyi Rill mouth, mosses and litter under large trees of *Picea ajanensis* with *Pyrola* sp., *Poaceae*, *Filipendula palmata*, *Pleurozium schreberi*, etc. near river bank, 30.IX 2004, 1 ♀ (IBSS), leg. A.B. Ryvkin; left side of Selemdzha River opposite Dvadsatikha cordon, fold of small rill, mosses and leaf litter near rill and on fallen trees and stones in rill channel, among *Alnus* sp., *Padus* sp., *Corylus mandshurica*, *Tilia amurensis*, *Acer ukurunduense*, *Betula platyphylla*, *B. davurica*, *Picea ajanensis*, *Abies nephrolepis*, etc., 28.VI 2005, 7 ♀ (IBSS), leg. E.M. Veselova & A.B. Ryvkin; mouth of Meun River, leaf litter under *Betula platyphylla*, *Abies nephrolepis*, *Picea ajanensis*, *Populus tremula* with *Poaceae* gen. spp., *Carex* spp., *Fabaceae* gen. spp., *Filipendula palmata*, *Equisetum sylvaticum*, *Rosa* sp., etc. on natural levee, 9.VII 2005, 4 ♀, 1 juv. (IBSS), leg. A.B. Ryvkin; Nora River, Mt. Gryashchinskaya, mosses and leaf litter among rock debris near foot of slope: *Betula platyphylla*, *Alnus* sp., *Sorbus sibirica*, *Swida alba*, undergrowth of *Acer ukurunduense*, *Pleurozium schreberi*, *Hylocomium splendens*, *Dicranum* sp., *Ptilium crista-castrensis*, *Sphagnum* ? *girgensohnii*, *Dryopteris fragrans*, etc., 21.VII 2005, 4 ♀ (IBSS), leg. A.B. Ryvkin; **Mazanovskii District**: right bank of Nora River, steep NE slopes of Mt. Ostraya, mosses and leaf litter among *Populus* spp., *Larix gmelinii*, *Betula platyphylla*, *Alnus* spp., *Padus* sp., *Rhododendron* sp., ? *Sedum* sp., *Saxifraga* sp., *Equisetum* sp., ferns, etc., 20.VII 2005, 5 ♀ (IBSS), leg. A.B. Ryvkin; right bank of Nora River near foot of Mt. Ostraya, on clay and stones, 23.VII 2005, 6 ♀ (IBSS), leg. A.B. Ryvkin; **Khabarovskii krai**: Verkhnebureinskiy District, upper reaches of Pravaya Bureya, near Medvezhiy cordon, floodplain of stream, meadow, 16–26.VI 2000, 1 ♀ (IBSS), leg. L.A. Trilikauskas; **Bureynskiy Nature Reserve**: 14.IX 2006, 1 ♂, 2 ♀, 1 juv. (IBSS), leg. A.B. Ryvkin; mouth of Levaya Bureya River, *Populus* forest, date absent, 1 ♀ (IBSS), leg. L.A. Trilikauskas; mouth of Kityma River, *Picea* forest with *Populus*, 23.VIII 2009, 1 ♀ (IBSS), leg. L.A. Trilikauskas; valley of Pravaya Bureya River, mouth of Malaya Sibinde River, above-floodplain terrace, mixed forest, *Betula*, *Larix*, *Populus*, *Chosenia*, 24.VIII 2009, 1 ♀ (IBSS), leg. L.A. Trilikauskas; basin of Levaya Bureya River, upstream of Imganakh River mouth, 750–900 m, NNW slope: mosses and litter under *Picea*

ajanensis, *Larix gmelinii*, *Pinus pumila*, 4.VII 2011, 1 ♂, 1 ♀ (IBSS), leg. A.B. Ryvkin; **Primorskii krai**: environs of Nakhodka, *Quercus* forest, 30.VII 2015, 4 ♀ (IBSS), leg. S.A. Shabalin; **Shkotovskiy District**: near Anisimovka village, mixed forest, litter, 5.X 2008, 3 ♀ (IBSS), leg. E.V. Mikhailjova and A.I. Konyukhov; Mt. Litovka, 700–900 m a.s.l., slope, 11.IX 2011, 2 ♀ (IBSS), leg. M.B. Potapov and V.V. Alpatov; near Anisimovka village, leaved forest, litter, 31.X 2013, 6 ♀ (IBSS), leg. E.V. Mikhailjova and A.I. Konyukhov; **Kurile Islands**: **Kunashir Island**, mouth of Ozernaya River, litter, 43°53'06'' N, 145°27'44'' E, 25.VII 2011, 1 ♀ (ZMUM), leg. K. Makarov; N of Dal'nii Stream, forest, 12.VIII 2011, 1 ♀ (ZMUM), leg. K. Makarov.

DISTRIBUTION. Russia: Amurskaya oblast, Jewish Autonomous Region, Primorskii krai, southern half of Khabarovskii krai including Bolshoy Shantar Island, central and southern parts of Kamchatka Peninsula, Sakhalin Island, Moneron Island, Kurile Islands (Kunashir, Shikotan, Zelyonyi, Iturup, Urup, Chirpoi, Ketoi); North Korea.

Order Polydesmida

Family Xystodesmidae Cook, 1895

Levizonus thaumasius Attems, 1898

MATERIAL. Russia: **Primorskii krai**: Chernigovskiy District, 3 km N of Gribnoe village, 27.VI 2004, 1 ♂ (IBSS), leg. V.N. Kuznetsov; Spasskiy District, environs of Tatyankovka village, forest glade, 4.VII 2007, 1 ♂ (IBSS), leg. S.A. Shabalin.

DISTRIBUTION. Russia: Primorskii krai.

Family Paradoxosomatidae Daday, 1889

Haplogonosoma implicatum Brölemann, 1916

MATERIAL. Russia: Kurile Islands, **Kunashir Island**: environs of Andreevskiy cordon, *Ulmus* forest, litter, 23.V 2011, 1 ♂ (ZMUM), leg. A. Matalin, I. Melnik; environs of Tret'yakovo, valley of Valentiny River, litter, 24.V 2011, 2 ♀ (ZMUM), leg. A. Matalin; environs of Alekhino, under the bark of *Phellodendron*, 2.VI 2011, 1 ♂, 1 ♀ (ZMUM), leg. A. Matalin; environs of Alekhino cordon, coniferous forest, litter, 6.VI 2011, 1 ♂ (ZMUM), leg. A. Matalin, I. Melnik; southern slope of Alekhina cape, 43°55'19'' N, 145°32'26'' E, 31.VII 2011, 1 ♂ (ZMUM), leg. K. Makarov; cape, environs of Odinkii Stream mouth (ca. 1.5 km WSW of Alekhino), 43°54'42'' N, 145°30'33'' E, 5.VIII 2011, 1 ♀ (ZMUM), leg. K. Makarov; Danilovo, ca. 6 km SW of Tret'yakovo, 43°57'09'' N, 145°35'40'' E, 6.VIII 2011, 2 ♂ (ZMUM), leg. K. Makarov; NW part, Rudnoe, 25–27.VII 2013, 3 ♂ (ZMUM), leg. Yu.N. Sundukov.

DISTRIBUTION. Russia: Kurile Islands (Kunashir); Japan (Honshu Island).

***Sichotanus eurygaster* (Attems, 1898)**

MATERIAL. Russia, **Primorskii krai**: Dalnerechenskiy District, Martynova Polyana village, VII 2006, 1 ♀ (IBSS); Spasskiy District, environs of Tatyankovka village, forest glade, 4.VII 2007, 1 ♂ (IBSS); Spasskiy District, environs of Tatyankovka village, forest, 4.VII 2007, 1 ♀ (IBSS); same locality, 7.VII 2007, 2 ♀ (IBSS). All leg. S.A. Shabalin.

DISTRIBUTION. Russia: Primorskii krai, southern part of Khabarovskii krai, Jewish Autonomous Region; North Korea; South Korea; North-East China.

***Cawjeekelia koreana* (Golovatch, 1980)**

MATERIAL. Russia: **Primorskii krai**: Shkotovski District, near Anisimovka village, mixed forest, litter, 5.X 2008, 3 ♂, 3 ♀ (IBSS), leg. E.V. Mikhailjova and A.I. Konyukhov; environs of Vladivostok, bank of Malaya Sedanka River, 15.V 2010, 1 ♂ (IBSS), leg. S.A. Shabalin; Furugelma Island, litter, 20.VII 2012, 1 ♂ (IBSS), leg. M.G. Ponomarenko and M.O. Zasykina.

DISTRIBUTION. Russia: Primorskii krai, Amurskaya oblast; North Korea.

Family Polydesmidae Leach, 1815

***Epanerchodus cuspidatus* Mikhailjova, 1996**

MATERIAL. Russia: Kurile Islands, **Kunashir Island**: environs of Alekhino, *Quercus-Acer* forest, litter, 1.VI 2011, 1 ♂ (ZMUM), leg. A. Matalin, I. Melnik; mouth of Ozernaya River, litter, 43°53'06'' N, 145°27'44'' E, 25.VII 2011, 2 ♂, 1 ♀ (ZMUM), leg. K. Makarov.

DISTRIBUTION. Russia: Kurile Islands (Kunashir).

***Epanerchodus kunashiricus* Mikhailjova, 1988**

MATERIAL. Russia: Kurile Islands, **Kunashir Island**: right bank of Ozernaya River, litter, 43°52'31'' N, 145°28'25'' E, 21.VII 2011, 1 ♂, 6 ♀ (ZMUM), leg. K. Makarov; N of Dal'nii Stream, forest, 12.VIII 2011, 1 ♂, 1 ♀ (ZMUM), leg. K. Makarov; broadleaved forest near Ivanovskiy cordon, 21.VIII 2012, 1 ♂, 2 juv. (ZMUM), leg. K. Gongalsky; oak forest near Ivanovskiy cordon, 23.VIII 2012, 1 juv. (ZMUM), leg. K. Gongalsky; meadow near Ivanovskiy cordon, 23.VIII 2012, 1 juv. (ZMUM), leg. K. Gongalsky; oak forest near Ivanovskiy cordon, 23.VIII 2012, 2 juv. (ZMUM), leg. K. Gongalsky; SW part, Ivanovskiy Cape, 26.V 2013, 4 juv. (ZMUM), leg. L. Sundukova; SW part, Grozovoe, 19–20.VI 2013, 4 ♂, 1 ♀ (ZMUM), leg. Yu.N. Sundukov; 6 ♀ (ZMUM), middle flow of Zolotaya River, 24.VII 2013, 6 ♀ (ZMUM), leg. K. Makarov; NW part, Rudnoe, 25–27.VII 2013, 1 ♂, 2 ♀ (ZMUM), leg. Yu.N. Sundukov; northern slope of Rurui Volcano, h ~ 300 m, 44°29'51'' N, 146°08'58'' E, 31.VII 2013, 1 ♂, 3 ♀ (ZMUM), leg. K. Makarov.

DISTRIBUTION. Russia: Kurile Islands (Kunashir).

REMARKS. The record of East Asian *Epanerchodus orientalis* Attems, 1901 in Kunashir Island (Gongalsky *et al.*, 2014) appear to be misidentification. My identification of the male and juveniles from this island, collected 21 and 23 August 2012 by Gongalsky, which were determined as *E. orientalis*, shows that these specimens belong to *Epanerchodus kunashiricus*. Thus *Epanerchodus* is currently represented in Kunashir Island by two species: *E. cuspidatus* and *E. kunashiricus*. In contrast highly variable and widespread *E. orientalis* currently known from Japan (except for Kyushu and the Ryukyus), Taiwan and southern China (Golovatch *et al.*, 2011, 2012; Golovatch, 2014), these two species are morphologically stable and local (reported from Kunashir Island only).

***Schizoturanus clavatipes* (Stuxberg, 1876)**

MATERIAL. Russia: **Kemerovskaya oblast: Shorskiy National Park:** environs of Mednaya shelter, *Betula* forest, litter, 9.IX 2010, 1 ♂ (IBSS); environs of Taymet village, chern dark coniferous taiga, 20–26.VII 2014, 3 ♀, 2 juv. (IBSS); valley of Azas Stream, *Abies* forest, 4–17.VIII 2015, 5 ♂, 3 ♀ (IBSS); **Novosibirskaya oblast:** Bolotninskiy District, environs of Bolshaya Chernaya village, *Pinus* forest, 16–31.V 2015, 1 ♂ (IBSS). All leg. L.A. Trilikauskas.

DISTRIBUTION. Russia: Kemerovskaya oblast, Novosibirskaya oblast, Tomskaya oblast, Krasnoyarskii krai, Republic of Khakassia, Altaiskii krai, Republic of Altai.

***Uniramidesmus aberrans* Mikhaljova, 1979**

MATERIAL. Russia: **Primorskii krai:** Vladivostok, Botanical Garden, mixed forest, litter, 24.IV 2010, 1 ♂ (IBSS), leg. S.A. Shabalin; Vladivostok, Malaya Sedanka River, bank, litter, 24.IV 2010, 5 ♂ (IBSS), leg. S.A. Shabalin; Vladivostok, Botanical Garden, mixed forest, litter, 6.X 2012, 1 ♂ (IBSS), leg. E.V. Mikhaljova.

DISTRIBUTION. Russia: Primorskii krai, southern part of Khabarovskii krai.

***Uniramidesmus septimus* Mikhaljova, 1990**

MATERIAL. Russia: **Khabarovskii krai:** environs of Bychikha village, Bolshshekhehtsirskiy Nature Reserve, 48°14.56' N, 134°47' E, Klyuch Sosninskiy cordon, 350 m, mixed forest, 14.IX 2005, 2 ♂ (IBSS), leg. Yu.M. Marusik; **Kurile Islands: Kunashir Island,** environs of Alekhino, *Quercus-Acer* forest, litter, 1.VI 2011, 1 ♀ (ZMUM), leg. A. Matalin, I. Melnik; **Shikotan Island,** southern part, Tserkovnaya Bay, 25–30.V 2012, 1 ♂ (ZMUM), leg. Yu.N. Sundukov.

DISTRIBUTION. Russia: southern part of Khabarovskii krai, Sakhalin Island, Moneron Island, Kurile Islands (Kunashir, Shikotan).

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REFERENCES

- Golovatch, S.I. 2014. Review of the millipede genus *Epanerchodus* Attems, 1901 in continental China, with descriptions of new species (Diplopoda: Polydesmidae). *Zootaxa*, 3760 (2): 275–288. DOI: 10.11646/zootaxa.3760.2.7
- Golovatch, S.I., Mikhaljova, E.V., Chang, H.-W. 2011. The millipede family Polydesmidae in Taiwan, with descriptions of five new species (Polydesmida, Diplopoda). *In*: Golovatch, S.I. & Mesibov, R. (Eds.), *Advances in the Systematics of Diplopoda III. ZooKeys*, 93: 9–42. DOI: 103897/zookeys.93.1167
- Golovatch, S.I., Liu, W., Li, Y., Geoffroy, J.-J. 2012. One new and two little-known species of the millipede family Polydesmidae from southern China (Diplopoda: Polydesmida). *Arthropoda Selecta*, 21(2): 131–136.
- Gongalsky, K.B., Kuznetsova, D.M., Elagin, A.D., Malyavin, S.A., Zaitsev, A.S. 2014. Soil mesofauna of the Kunashir Island southern part (Kurile Islands). *Doklady Akademii Nauk*, 457(3): 370–373. [In Russian].