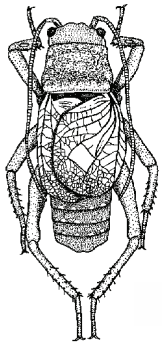

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NEW RECORDS OF PINCER WASPS (HYMENOPTERA: DRYINIDAE) FROM RUSSIA, WITH DESCRIPTION OF A NEW SPECIES OF *BOCCHUS* ASHMEAD, 1893

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Summary. Fifteen species in five genera of dryinid are listed. A new species *Bocchus beketovi* **sp. n.** from Zabaikalskii Krai is described and illustrated. The genus *Bocchus* Ashmead, 1893 and three species: *Anteon munitum* Olmi, 1984, *A. thai* Olmi, 1984, and *Gonatopus pulicarius* Klug, 1810 are newly recorded from Russia. Eleven new regional records are reported. Dark color morph *G. helleni* (Raatikainen, 1961) is described. A key to three Eastern Palaearctic species of the genus *Bocchus* Ashmead, 1893 is given.

Key words: Dryinidae, pincer wasps, taxonomy, new species, new records, key, Zabaikalskii Krai, Amur Province.

Д. Н. Кочетков. Новые находки ос-дриинид (Hymenoptera: Dryinidae) из России, с описанием нового вида из рода *Bocchus* Ashmead, 1893 // Дальневосточный энтомолог. 2024. N 498. С. 1-12.

Резюме. Дан список 15 видов дриинид из пяти родов. Описывается новый вид *Bocchus beketovi* **sp. n.** из Забайкальского края. Род *Bocchus* Ashmead, 1893 и три вида: *Anteon munitum* Olmi, 1984, *A. thai* Olmi, 1984, а также *Gonatopus pulicarius* Klug, 1810 впервые указываются для России. Приведено 11 новых

региональных указаний. Описана темная форма *G. helleni* (Raatikainen, 1961). Дается определительная таблица трех восточнопалеарктических видов рода *Bocchus* Ashmead, 1893.

INTRODUCTION

In the last decade the data about the wasps of Khinganskii Reserve was much improved. In 2012 113 species in 48 genera in five families were known, but in 2023 the number of taxa increased up to 421 species in 125 genera of 12 families: Dryinidae – 13 species in 3 genera, Embolemidae – 1/1, Bethylidae – 18/10, Chrysididae – 40/13, Sapygidae 2/1, Scoliidae – 5/2, Tiphiidae – 10/2, Mutillidae – 6/6, Pompilidae – 94/22, Vespidae – 61/15, Sphecidae – 10/6, Crabronidae –161/45 (Kochetkov & Lelej, 2015; Kochetkov, 2019, 2020, 2022, 2023a,b; Kochetkov & Loktionov, 2019; Lotionov & Kochetkov, 2022).

The Dryinidae comprises 16 subfamilies, 50 genera and almost 1900 species worldwide (Olmi *et al.,* 2020, 2021). Fifty species in eight genera of this family are known from Russia (Lelej & Loktionov, 2017). Later (Kochetkov *et al.*, 2019) the number of known species in Russia was increased to 52. This paper is based on a new material collected in 2020–2023 in Amur Province and Zabaikalskii Krai of Russia. It provides new information on the dryinid wasps in Russia, including the description of a new species and several new regional records. Currently the Russian fauna of Dryinidae accounts 56 species in nine genera.

MATERIAL AND METHODS

The material is deposited in the Federal Scientific Center of the East Asia Terrestrial Biodiversity (Vladivostok, Russia), including the holotype of *Bocchus beketovi* **sp. n.**, and the private collection of D.N. Kochetkov (Arkhara, Russia). The distribution data of the species follows Ponomarenko (1992, 1995), Olmi (2004), Olmi & Xu (2015) and Lelej & Loktionov (2017) taking into account some additions (Kochetkov *et al*., 2019). The new records are asterisked (*).

Photographs were taken using an Olympus SZX16 stereomicroscope and an Olympus DP74 digital camera, and stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software. The chela drawings were made by outlining photographs using CorelDRAW® software. The new species was described and diagnosed based on the publication of Olmi & Xu (2015).

The morphological terminology in the descriptions follows Olmi *et al*. (2019), and the hypognathous head of Dryinidae is described in terms adopted for the prognathous head following Olmi & Xu (2015). All measurements are reported as relative, except for the total length (head to metasomal tip, without antennae and sting). Antennal proportions refer to the lengths of the relevant segments as proportions of each other. The following abbreviations are used: POL, distance between the

inner edges of the two lateral ocelli; OL, shortest distance between the edge of a lateral ocellus and the median ocellus; OOL, distance from the outer edge of a lateral ocellus to the compound eye; OPL, distance from the posterior edge of a lateral ocellus to the occipital carina; TL, distance from the posterior edge of the eye to the occipital carina; DK, D. Kochetkov.

LIST OF THE SPECIES

Subfamily Aphelopinae

***Aphelopus maetoi* Olmi, 1995**

MATERIAL EXAMINED. **Russia**: Zabaikalskii Krai, 70 km SE of Nizhnii Tsasuchei, Zun-Torei Lake, Daurskii Nature Reserve, 50°00'15"N 115°43'13"E, 14.VII 2023, 1 ♀ (DK).

DISTRIBUTION. Russia: *Eastern Siberia (Zabaikalskii Krai), Far East (Primorskii Krai, Sakhalin). – China (Jilin), Japan (Hokkaido, Honshu).

Subfamily Anteoninae

***Anteon ephippiger* (Dalman, 1818)**

MATERIAL EXAMINED. **Russia**: Zabaikalskii Krai, 35 km WNW Borzya, Adon-Chelon mountains, Daurskii Nature Reserve, 50°28'01"N 116°04'07"E, 16, 20.VII 2023, 2 ♂ (DK); Amur Prov., Arkhara, 49°25′34″N 130°05′42″E, 15.VII 2022, 1 ♀ (DK); ibid., 04.VII 20223, 1 ♂ (DK); 27 km W of Arkhara, Dolgoe Lake, 49°23′34″N, 129°40′04″E, 27-28.VI 2023, 1 ♂ (DK); 18 km SW of Arkhara, Volnoe, Arkhara Riv. vall., 49°16'58"N 129°56'30"E, 16-17.VIII 2023, 1 ♂ (DK);

DISTRIBUTION. Russia: European part (North-West, East, Crimea), Urals, Eastern Siberia (*Zabaikalskii Krai, Yakutia), Far East (*Amur Prov., Primorskii Krai, Sakhalin, Kuril Islands: Kunashir). – Europe, Morocco, Turkey, Lebanon, Ukraine, Kyrgyzstan, Kazakhstan, Mongolia, China (Heilongjiang, Jilin, Liaoning, Ningxia), Korean Peninsula, Japan (Hokkaido, Honshu, Kyushu).

***Anteon exiguum* (Haupt, 1941)**

MATERIAL EXAMINED. **Russia**: Zabaikalskii Krai, 35 km WNW of Borzya, Adon-Chelon mountains, Daurskii Nature Reserve, 50°28'01"N 116°04'07"E, 16.VII 2023, 1 ♂ (DK).

DISTRIBUTION. Russia: Eastern Siberia (Buryatiya, *Zabaikalskii Krai), Far East (Amur Prov., Primorskii Krai). – Europe (from France to Finland and Poland), Korean Peninsula.

***Anteon gaullei* Kieffer, 1905**

MATERIAL EXAMINED. **Russia**: Amur Prov., 10 km E of Arkhara, Arkhara Riv. vall., 49°16'59"N 129°56'30"E, 27.VII 2022, 1 ♂ (DK); Arkhara, 49°25′34″N 130°05′42″E, 02.VII 2023, 1 ♂ (DK); ibid., 04.VII 2023, 2 ♂ (DK).

DISTRIBUTION. Russia: European part (Central), Eastern Siberia (Irkutsk Prov.), Far East (*Amur Prov., Jewish Autonomous Region). – Europe (from Spain to Finland), Kyrgyzstan, Kazakhstan, Korean Peninsula.

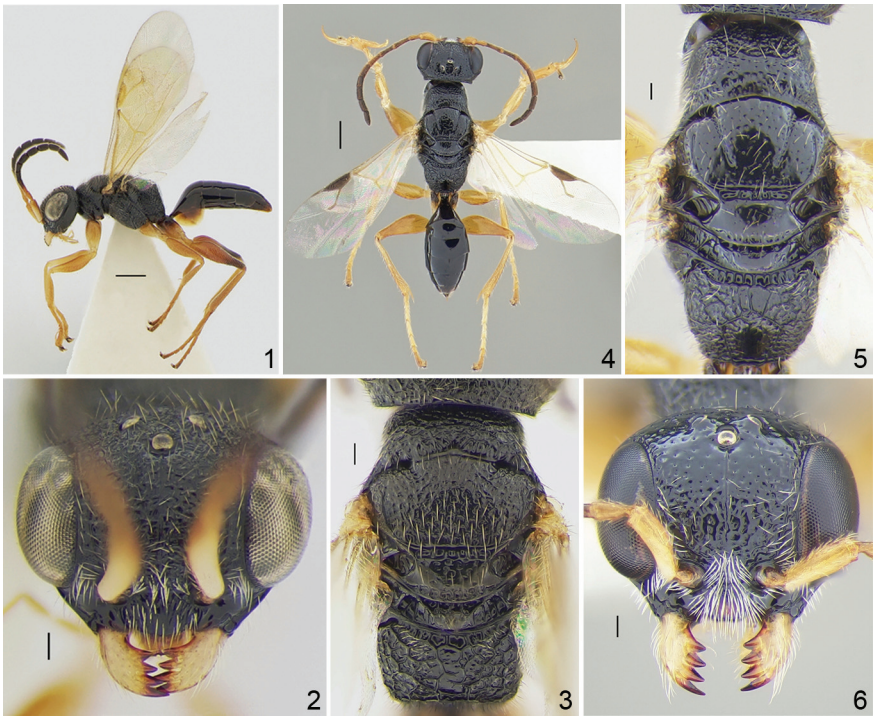
***Anteon munitum* Olmi, 1984**
Figs 4–6, 17

MATERIAL EXAMINED. **Russia**: Amur Prov., 10 km NNW of Kundur, Tarmanchukan Riv. vall., 09.VII 2020, 1 ♀ (DK); Arkhara, 49°25′34″N 130°05′42″E, 04.VII 2023, 1 ♀ (DK).

DISTRIBUTION. *Russia: Far East (Amur Prov.). – China (Guangdong, Guizhou, Hainan, Hubei, Fujian, Hunan, Sichuan, Taiwan, Yunnan, Zhejiang), Japan (Hokkaido), Korean Peninsula, Laos, Malaysia, Myanmar, Nepal, the Philippines, Sri Lanka, Thailand.

***Anteon thai* Olmi, 1984**
Figs 1–3, 16

MATERIAL EXAMINED. **Russia**: Amur Prov., 26 km SW of Kundur, Boguchan Mount, 48°57'39"N 130°27'49"E, 06.VI 2020, 1 ♀ (DK).



Figs 1–6. *Anteon* spp., female: 1–3 *A. thai*; 4–6 *A. munitum*; 1 – habitus, lateral view; 4 – habitus, dorsal view; 2, 6 – head, frontal view; 3, 5 – mesosoma, dorsal view. Scale bar: 0.5 mm for 1, 4; 0.1 mm for 2–3, 5–6.

DISTRIBUTION. *Russia: Far East (Amur Prov.). – China (Guangdong, Hong Kong, Hainan, Shandong, Taiwan, Tibet, Yunnan, Zhejiang), India, Sri Lanka, Thailand, Laos, Malaysia, Vietnam, Brunei, Indonesia, the Philippines.

Subfamily Bocchinae

***Bocchus beketovi* Kochetkov, sp. n.**

https://zoobank.org/NomenclaturalActs/12441796-FDA1-4BFF-99B6-C936E4A173A2

Figs 7–13, 18

TYPE MATERIAL. Holotype – ♀, **Russia**: Zabaikalskii Krai, 35 km WNW of Borzya, Adon-Chelon mountains, Daurskii Nature Reserve, 50°28'01"N 116°04'07"E, 07.VII 2022 (DK). Paratype: same place, 16.VII 2023, 1 ♀ (DK).

DIAGNOSIS. FEMALE. Head reddish, dull, completely granular; mesosoma black; scutum and scutellum mostly dull and granulate; notauli complete, clearly visible; metanotum shiny, noticeably shorter than scutellum; claw enlarged with one row of seven teeth. Segment 5 of protarsus with inner membranous band. MALE. Unknown.

Only two species of the *Bocchus* Ashmead, described from females are known from the Eastern Palaearctic. Female *B. szelenyii* differs from the new species in the following: head black, shiny, unsculpted, except for a few short carinae on face; mesosoma testaceous-reddish, except for scutellum and propodeum black; scutum and scutellum shiny, smooth, finely punctured; notauli almost complete, hardly visible, obsolete near posterior margin of scutum; metanotum dull, slightly shorter than scutellum; fore wing with one dark transverse band; enlarged claw with 1 row of five teeth; segment 5 of protarsus without inner membranous band. Female *B. parthicus* distinguishes from the new species by the combination of the following characters: fore wing with two dark transverse stripes; mesosoma reddish (only posterior margin of scutellum brown, and propodeum darkened); head smooth, shiny, punctate; face with lateral carinae surrounding orbits and directed towards antennal torules; scutum, scutellum and metanotum shiny, smooth, finely punctured; enlarged claw with 1 row of six teeth; segment 5 of protarsus without inner membranous band.

DESCRIPTION FEMALE. Fully winged; body length 3.7 mm. Head reddish, except ocellar triangle black, mandible yellow; antenna testaceous; mesosoma black, pronotum with reddish-brown spots on the lateral sides; tegulae and petiole testaceous; metasoma dark brown; legs testaceous. Antenna clavate; antennomeres in following proportions: 12:6:9:7.5:7:7:6.5:6.5:6:8.5. Head dull hairy, completely granulate, with short keels near inner margin of compound eye; frontal line complete; occipital carina complete; POL = 4; OL = 3; OOL = 7; OPL = 6,5; TL = 8; mandible quadridentate, with rudimentary tooth between two upper teeth. Pronotum slightly shine, hairy, rugose, crossed by transverse impression, with longitudinal keels laterally; pronotal tubercle reaching tegula. Scutum dull, hairy, granulate. Notauli complete, clearly visible. Scutellum dull, granulate. Metanotum shiny, reticulate

rugose, distinctly shorter than scutellum. Propodeum reticulate rugose; posterior surface with two longitudinal carinae. Fore wing with one dark transverse band (Fig. 7), with pterostigma short and narrow. Segment 3 of protarsus with distal apophysis which longer than segment 3. Protarsal segments 1–4 in following proportions: 13:2:2:9. Enlarged claw with 1 row of seven teeth and one long bristle. Segment 5 of protarsus with one preapical lamella, inner membranous band and two long bristles. Tibial spurs 1/1/1.

MALE. Unknown.

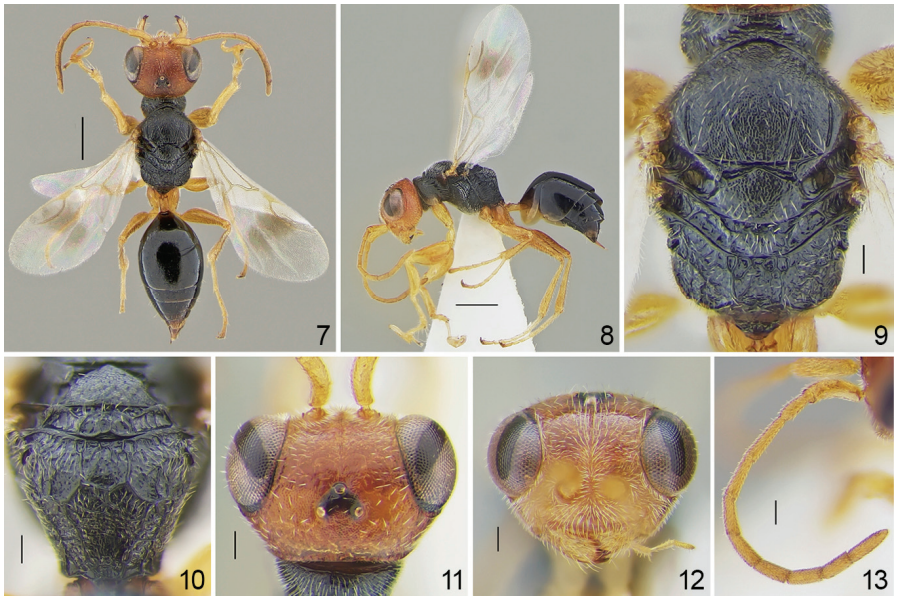
HOSTS. Unknown.

ETYMOLOGY. The species is named after the Pyotr Ivanovich Beketov (1600–1671), a Russian pioneer, who founded of Siberian cities: Yakutsk (1632), Olyokminsk (1635), Chita (1653), and Nerchinsk (1653).

DISTRIBUTION. Russia: Eastern Siberia (Zabaikalskii Krai). The new species is known only from the type locality.

ECOLOGY. The new species was collected in a mountain meadow steppe.

REMARKS. Quite possible that described female may be the opposite sex of *B. sinensis* Xu et He, 1997, known from northeastern China by male.



Figs 7–13. *Bocchus beketovi* Kochetkov, **sp. n.**, female. 7, 9, 10 – holotype, 8, 11–13 – paratype; 7 – habitus, dorsal view; 8 – habitus, lateral view; 9 – mesosoma, dorsal view; 10 – propodeum, posterodorsal view; 11 – head, dorsal view; 12 – head, frontal view; 13 – antenna. Scale bar: 0.5 mm for 7, 8; 0.1 mm for 9–13.

Key to the Eastern Palaearctic species of *Bocchus* Ashmead
(Females)

1. Fore wing with one dark transverse band 2
– Fore wing with two dark transverse bands. Turkmenistan .... ***B. parthicus*** Ponomarenko, 1979
2. Head black, shiny, mainly smooth; mesosoma testaceous-reddish, except scutellum and propodeum black; scutum and scutellum shiny, finely punctate; notauli almost complete, hardly visible, obsolete near posterior margin of scutum; enlarged claw with 1 row of five teeth and one long bristle; segment 5 of protarsus with one preapical lamella and two long bristles. Mongolia ..... ***B. szelenyii*** Móczár, 1974
– Head reddish, dull, completely granulate; mesosoma black; scutum and scutellum dull, granulate; notauli complete, clearly visible; enlarged claw with 1 row of seven teeth and one long bristle; segment 5 of protarsus with one preapical lamella, inner membranous band and two long bristles. Russia: Zabaikalskii Krai ..... ***B. beketovi*** **sp. n.**

Subfamily Gonatopodinae

Gonatopus clavipes (Thunberg, 1827)

MATERIAL EXAMINED. **Russia**: Zabaikalskii Krai, 70 km SE of Nizhnii Tsasuchei, Zun-Torei Lake, Daurskii Nature Reserve, 50°00'15"N 115°43'13"E, 29-30.VI 2022, 1 ♀ (DK); 35 km WNW of Borzya, Adon-Chelon mountains, Daurskii Nature Reserve, 50°28'01"N 116°04'07"E, 20.VII 2023, 1 ♀ (DK); ibid., 16.VII 2023, 1 ♂ (DK).

DISTRIBUTION. Russia: European part, Western Siberia (Kemerovo Prov.), Eastern Siberia (Krasnoyarskii Krai, *Zabaikalskii Krai), Far East (Amur prov., Primorskii Krai, Sakhalin, Kuril Islands: Kunashir). – Europe, Azores Islands, Canary Islands, Tunisia, Turkey, Azerbaijan, Ukraine, Iran, Uzbekistan, Kazakhstan, Mongolia, Korean Peninsula, Japan (Hokkaido, Honshu).

Gonatopus distinguendus Kieffer, 1905

MATERIAL EXAMINED. **Russia**: Amur Prov., 27 km W of Arkhara, Dolgoe Lake, 49°23′34″N, 129°40′04″E, 11.VIII 2022, 1 ♀ (DK); ibid., 27-28.VI 2023, 1 ♀ (DK); ibid., 02-03.VIII 2023, 2 ♀ (DK).

DISTRIBUTION. Russia: European part, Ural, Eastern Siberia: (Irkutsk Prov.), Far East (*Amur Prov., Primorskii Krai). – Europe (from Spain to Finland), Morocco, Tunisia, Turkey, Iran, Kyrgyzstan, Kazakhstan, Mongolia, China (Heilongjiang).

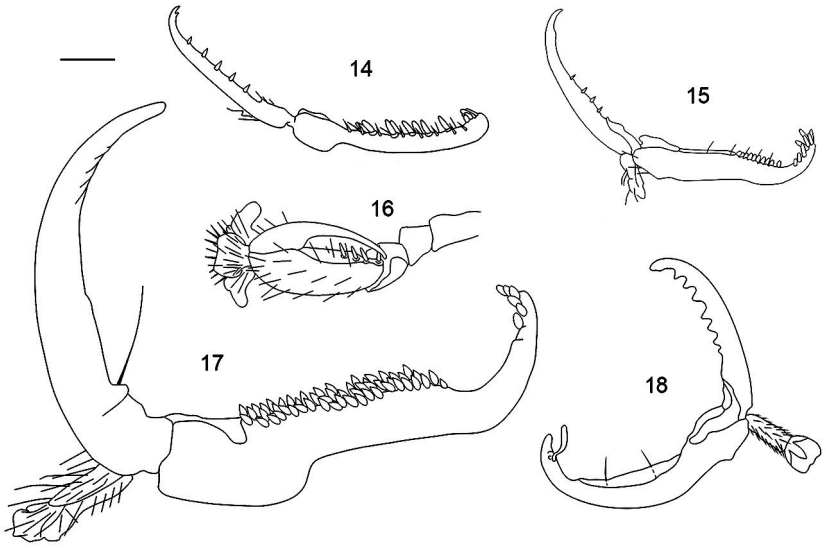
Gonatopus helleni (Raatikainen, 1961)

Figs 14, 19–22

MATERIAL EXAMINED. **Russia**: Zabaikalskii Krai, 70 km SE of Nizhnii Tsasuchei, Zun-Torei Lake, Daurskii Nature Reserve, 50°00'15"N 115°43'13"E, 29-30.VI 2022, 2 ♀ (DK).

DESCRIPTION. Female of the dark morph. Apterous; length 3.3–3.5 mm. Head black, except mandible, clypeus and anterior region of face yellow; head below and occiput brown; antenna brown, except segments 1 and 10 totally or partly yellow; mesosoma and metasoma black; legs brown or partly yellow, except club of profemur black or dark brown, protarsomeres yellow. Antenna clavate; antennomeres in following proportions: 8:5:9:5:4,5:5:5:5:5:8. Head excavated, shiny, granulated, frons posteriorly and anterior part of vertex smooth; frontal line complete; occipital carina lacking; POL = 2; OL = 2,5; OOL = 7; TL = 2; OPL = 5. Palpal formula 3/2. Pronotum slightly shiny, granulated, crossed by slightly transverse impression. Scutum dull, granulated. Scutellum shiny. Metanotum transversely striate, not hollow behind scutellum, about as long as scutellum, with sides rounded. Metathorax + propodeum dull, with anterior surface and disc granulated; posterior surface of propodeum, mesopleuron and metapleuron transversely striate. Mesometapleural suture obsolete. Protarsal segments in following proportions: 10:1,5:3:6:11, or 11:2:3:6:12, segment 1 approximately twice as long as segment 4. Enlarged claw with one large subdistal tooth and 1 row of 4–5 lamellae. Segment 5 of protarsus with 2 rows of 6–8 lamellae; distal apex with 3–6 lamellae. Tibial spurs 1/0/1.

DISTRIBUTION. Russia: European part (South), Eastern Siberia (Buryatia, *Zabaikalskii Krai). – Europe (from Spain to Finland), Mongolia.



Figs 14–18. Female chelae: 14 – *Gonatopus helleni*; 15 – *G. pulicarius*; 16 – *Anteon thai*; 17 – *A. munitum*; 18 – *Bocchus beketovi* **sp. n.**; Scale bar: 0.1 mm.

***Gonatopus horvathi* Kieffer, 1906**

MATERIAL EXAMINED. **Russia**: Amur Prov., 10 km E of Arkhara, Arkhara Riv. vall., 49°16'59"N 129°56'30"E, 27.VII 2022, 1 ♀ (DK); 16 km E of Arkhara, Chernoberyozovka, Arkhara Riv. vall., 49°26'16"N 130°18'08"E, 26.VII 2022, 1 ♀, (DK); Arkhara, 49°25'41"N 130°05'54"E, 24.VII 2022, 1 ♀, (DK); ibid., 02.VII 2023, 1 ♀, (DK); 57 km SE of Arkhara, Isthmus lake, 48°57'05"N 130°23'32"E, 13.VII 2022, 2 ♀, (DK); 37 км km SSE of Arkhara, Zhuravlyovka, 49°05'40"N 129°59'35"E, 14.VII 2022, 4 ♀ (DK).

DISTRIBUTION. Russia: Ural, Western Siberia (Kemerovo Prov.), Eastern Siberia (Yakutia), Far East (*Amur Prov., Khabarovskii Krai, Sakhalin). – Europe (from Spain to Finland), Kazakhstan, Mongolia, China (Heilongjiang), Japan (Hokkaido, Honshu).

***Gonatopus lunatus* Klug, 1810**

MATERIAL EXAMINED. **Russia**: Amur Prov., 27 km W of Arkhara, Dolgoe Lake, 49°23′34″N, 129°40′04″E, 14-15.VIII 2021, 1♀ (DK).

DISTRIBUTION. Russia: European part (Central, East, South, North Caucasus), Ural, Western Siberia (Kemerovo Prov., Altai), Eastern Siberia (Irkutsk Prov., Zabaikalskii Krai), *Far East (Amur Prov.). – Europe, Azores Islands, Madeira, Morocco, Israel, Jordan, Lebanon, Turkey, Ukraine, Iran, Turkmenistan, Uzbekistan, Kyrgyzstan, Kazakhstan, Mongolia, Korean Peninsula.

***Gonatopus pallidus* (Ceballos, 1927)**

MATERIAL EXAMINED. **Russia**: Amur Prov., Arkhara, 49°25'59"N 130°05'15"E, 17.VIII 2021, 1 ♀ (DK).

DISTRIBUTION. Russia: Far East: (*Amur Prov., Primorskii Krai), Algeria, Spain, Sweden.

***Gonatopus pulicarius* Klug, 1810**
Figs 15, 23–25

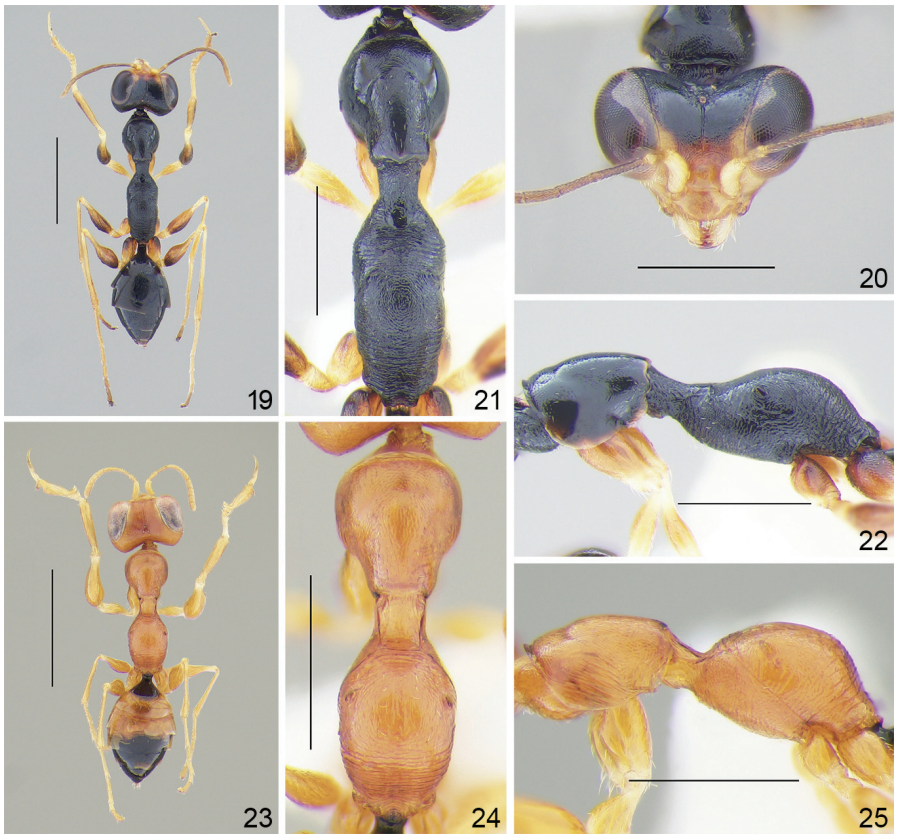
MATERIAL EXAMINED. **Russia**: Zabaikalskii Krai, 70 km SE of Nizhnii Tsasuchei, Zun-Torei Lake, Daurskii Nature Reserve, 50°00'15"N 115°43'13"E, 29-30.VI 2022, 2 ♀ (DK); ibid., 02.VII 2022, 1 ♀ (DK).

DISTRIBUTION. *Russia: Eastern Siberia (Zabaikalskii Krai). – Europe (from Spain to Bulgaria), Canary Islands, Egypt, United Arab Emirates, Turkey, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, Mongolia, China (Heilongjiang).

***Haplogonatopus oratorius* (Westwood, 1833)**

MATERIAL EXAMINED. **Russia**: Amur Prov., 27 km W of Arkhara, Dolgoe Lake, 49°23′34″N, 129°40′04″E, 14-15.VIII 2021, 4 ♀ (DK); 24 km W of Arkhara, Khinganskii Nature Reserve, Klyoshenskoe Lake, 49°24'03"N 129°43'29"E 24.VIII 2021, 5 ♀ (DK); ibid., 09-10.VIII 2022, 2 ♀ (DK).

DISTRIBUTION. Russia: European part (Eastern), Western Siberia (Omsk Prov.), Eastern Siberia (Krasnoyarskii Krai), *Far East (Amur Prov.). – Europe (from Spain to Sweden), Lebanon, Turkey, Iran, China (Fujian, Guangdong, Guizhou, Inner Mongolia, Liaoning, Shaanxi, Shandong, Xinjiang, Zhejiang), Korean Peninsula, Japan (Honshu, Kyushu, Shikoku, Ryukyu, Ogasawara), USA: Guam.



Figs 19–25. *Gonatopus* spp., female: 19–22 *G. helleni*; 23–25 *G. pulicarius*; 19, 23 – habitus, dorsal view; 20 – head, frontal view; 21, 24 – mesosoma, dorsal view; 22, 25 – mesosoma, lateral view. Scale bar: 1 mm for 19, 23; 0.5 mm for 20–22, 24-25.

CONCLUSION

Bocchus beketovi Kochetkov, **sp. n.** is a single species of the genus known from Russia. Possibly this described female can be the opposite sex of *B. sinensis* Xu et He, 1997, known from northeastern China by male only. Currently the Russian fauna of Dryinidae accounts 56 species in nine genera.

ACKNOWLEDGEMENTS

The author thanks the administration of the Daursky Nature Reserve for the opportunity to collect material, Arkady S. Lelej (FSC Biodiversity FEB RAS, Vladivostok) for necessary advice and assistance in preparing the manuscript, Vasilisa G. Chemyreva (Zoological Institute, St. Petersburg) for valuable comments on the article and for editing the English text, and Yulia A. Melnikova (Khingansky Nature Reserve) for her assistance with chelae drawings.

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