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**REVIEW OF THE PALAEARCTIC SPECIES OF *LESTIPHORUS*  
LEPELETIER DE SAINT FARGEAU (HYMENOPTERA: CRABRONIDAE:  
BEMBICINAE)**

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**Summary.** Eight Palaearctic species of the digger wasps genus *Lestiphorus* are reviewed. A key to both sexes and an updated checklist of these species are given. *Lestiphorus nemkovi* Mokrousov et Proshchalykin, **sp. n.** is described and illustrated from Tyva Republic (Russia). New synonymy is proposed: *Lestiphorus bilunulatus* A. Costa, 1867 = *Lestiphorus bilunulatus yamatonis* Tsuneki, 1963, **syn. n.**

**Key words:** Bembicini, Gorytina, taxonomy, new species, synonymy, key, fauna, Europe, Asia.

**М. В. Мокроусов, М. Ю. Прощалькин, У. Айбек. Обзор палеарктических видов *Lestiphorus* Lepeletier de Saint Fargeau (Hymenoptera: Crabronidae: Bembicinae) // Дальневосточный энтомолог. 2020. N 416. С. 18-28.**

**Резюме.** Дан обзор 8 палеарктических видов роющих ос рода *Lestiphorus*. Приведены определительная таблица и аннотированный список этих видов. Из Республики Тыва (Россия) описан новый для науки вид *Lestiphorus nemkovi* Mokrousov et Proshchalykin, **sp. n.** Предложена новая синонимия: *Lestiphorus bilunulatus* A. Costa, 1867 = *Lestiphorus bilunulatus yamatonis* Tsuneki, 1963, **syn. n.**

**INTRODUCTION**

*Lestiphorus* Lepeletier de Saint Fargeau, 1832 is a digger wasps genus with a world wide distribution (except Australia and Neotropic). It includes 19 species: eight (including current data) – Palaearctic, seven – Oriental, one – Ethiopian, and three – Nearctic. Almost two centuries ago genus *Lestiphorus* was proposed by Lepeletier de Saint Fargeau (1832) for the Rossi's distinctive European species *Crabro bicinctus*. However, very few subsequent authors

have recognized it as a discrete generic entity. It has generally been regarded as merely a species group or occasionally treated as a subgenus of *Gorytes*. The generic status of *Lestiphorus* commonly accepted after revision by Bohart and Menke (1976).

Biology almost unstudied, an overview of biology was summarized by Kazenas (2001) and Nemkov (2012). *Lestiphorus* species, like most other Bembicinae, nest in the ground, generally in bare, sandy soil and dig relatively shallow, normally multicellular nests. The prey of *Lestiphorus* are species of Homoptera (adults and nymphs of all stages) from families Cicadellidae and Acanaloniidae.

Based on a comprehensive study of specimens in various collections we list here eight Palaearctic species *Lestiphorus*, with one species described as new. In addition, we propose new synonymy for *L. bilunulatus* A. Costa, 1867 = *L. bilunulatus yamatonis* Tsuneki, 1963, **syn. n.** Illustrated keys to the species of *Lestiphorus* known from the Palaearctic region are presented to facilitate further research on this wasp genus.

## MATERIAL AND METHODS

This paper is based on the materials, preserved on the collection of the Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia) [ZISP], Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far East Branch of the Russian Academy of Sciences (Russia, Vladivostok) [FSCV] and M.V. Mokrousov personal collection (Nizhny Novgorod, Russia) [MMPC].

Photographs taken with a combination of digital camera Canon EOS M200 and Olympus SZX16 stereomicroscopes (Figs 3, 6, 10–15) and Carl Zeiss Stemi 508 (Figs 1, 2, 4, 5, 7–9, 16–18), then stacked using Helicon Focus software. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

Morphological terminology generally follows Bohart and Menke (1976): e.g., we have used the abbreviations F – flagellomere; S – metasomal sternum; T – metasomal tergum; POL – distance between posterior ocelli; OOL – ocellocular distance; L – length; H – height; W – width. Body length measurements are rounded to 0.1 mm, the measurement ratios are rounded to 0.01.

Key to the species is based on examined collection materials (see below), as well as data from Yasumatsu (1943) and Nemkov (1992). The classification and distribution generally follows Pulawski (2020). New records are asterisked (\*).

## TAXONOMY

### Genus *Lestiphorus* Lepeletier de Saint Fargeau, 1832

*Lestiphorus* Lepeletier de Saint Fargeau, 1832: 70. Type species: *Crabro bicinctus* Rossi, 1794, by monotypy.

*Lestiphorus* Agassiz, 1847: 208. Unjustified emendation of *Lestiphorus* Lepeletier de Saint Fargeau, 1832.

*Hypomellinus* Ashmead, 1899: 299. Type species: *Gorytes rufocinctus* W. Fox, 1892 [= *Gorytes piceus* Handlirsch, 1888], by original designation. Synonymized with *Lestiphorus* by Pate, 1936: 50.

*Mellinogastra* Ashmead, 1899: 300. Type species: *Gorytes mellinoides* W. Fox, 1895, by original designation. Synonymized with *Lestiphorus* by Krombein, 1939: 143.

DIAGNOSIS. Genus *Lestiphorus*, according to Bohart and Menke (1976) with clarifications, characterized by: moderate-sized wasps; inner eye margins essentially parallel, least interocular distance two to three times median clypeal length; mandible with an inner subtooth;

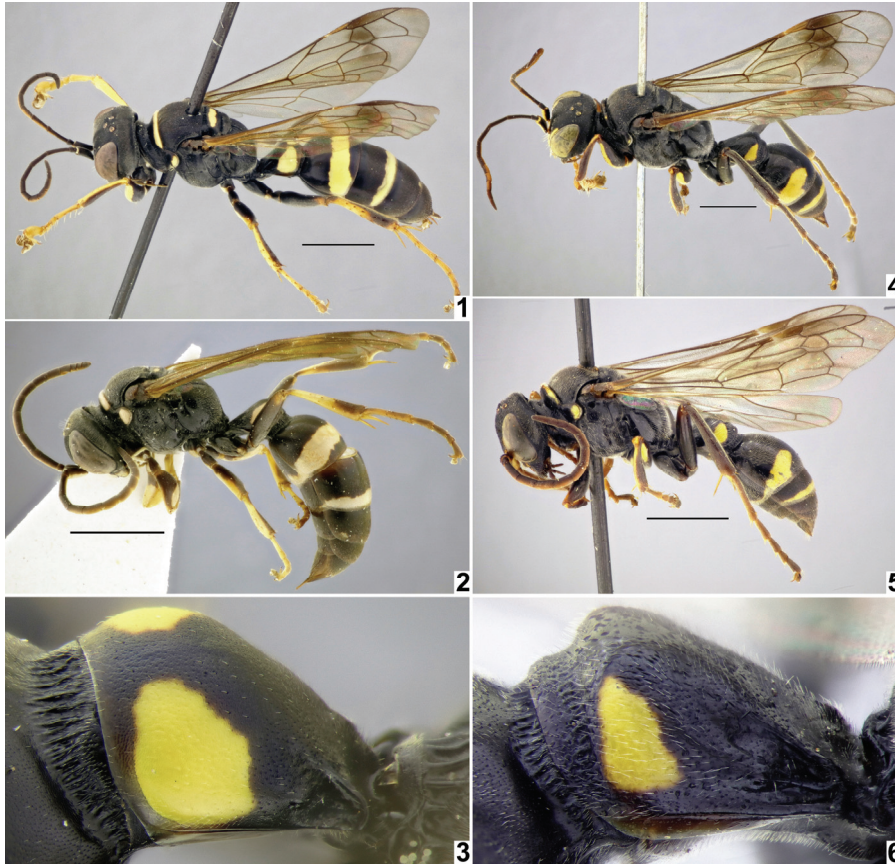
labrum inconspicuous, flagellum long and slender, FI longer than scape, last four flagellomeres in male distinctively flattened or concave beneath; pronotal collar thin and rather closely appressed to scutum, female foretarsal rake well developed, fore basitarsus with three long setae before apex; female foreleg arolium much larger than other arolia, male arolia about equal on all legs; posterolateral oblique scutal carina present; anterior scutellar sulcus foveolate; episternal and scrobal sulci faint or absent, scrobal sulcus not continued forward to omaulus. omaulus and sternaulus present, sometimes discontinuous; no acetabular carina; forewing usually spotted, media diverging before cu-a, stigma moderate, veinlet of submarginal cell II between recurrens about one-fourth posterior length of submarginal cell I; jugal lobe considerably larger than tegula, hindwing media diverging at or very near cu-a which is nearly straight; midtibia with two apical spurs; metapostnotum usually longitudinally striate, unusually large and occupying more than half of horizontal surface of propodeum; spiracular groove lacking or visible near spiracle; T1 nodose apically; male with seven terga normally visible, sterna without fimbriae; sternum VIII deeply emarginate apically and bispinose; female pygidial plate variable, punctate to striate, sometimes short.

**Key to the Palaearctic species of the genus *Lestiphorus***

(males are unknown in *L. nemkovi*, *L. pacificus* and female is unknown in *L. pictus*)

1. T1 without apical constriction, convex to apex (Fig. 3) ..... 2
  - T1 with apical constriction, weak at some species, apical edge flattened (Figs 6, 15) ..... 3
2. T1 slightly elongate, ratio L/W 1.1–1.3×. Mesonotum and mesopleuron with dense fine punctures, without micropunctuation. Meso- and metanotum, mesopleuron and propodeum completely black; only T2, T3 and S2 (often S1 too) with yellow band; T1 with lateral spot (Figs 1–3) ..... 1. *L. bicinctus* (Rossi)
  - T1 distinctly elongate, ratio L/W 1.6–1.8×. Mesonotum and mesopleuron with large scattered punctures, with micropunctuation. Yellow pattern very reach: metanotum, mesopleuron, lateral parts of mesonotum and propodeum with large spots, metasomal terga and sterna with apical band or predominantly yellow (Figs 7–8) ..... 3. *L. egregius* (Handlirsch)
3. Metanotum and posterior part of scutellum with longitudinal regular rugae. T3 completely black ..... 7. *L. peregrinus* (Yasumatsu)
  - Metanotum and scutellum without rugae. T3 with ferruginous coloration or yellow pattern ..... 4
4. Apical constriction of T1 very deep, T1 in lateral view gibbous (Fig. 6). Metasoma without ferruginous coloration ..... 5
  - Apical constriction of T1 weak, T1 in lateral view more or less uniformly convex (Fig. 15). Metasoma with ferruginous coloration ..... 6
5. Propodeal spiracular groove lacking. Punctuation on S2 dense and clear. T1 and T2 with lateral spot, T3 with apical band (Figs 4–6) ..... 2. *L. bilunulatus* A. Costa
  - Propodeal spiracular groove at upper is distinct. Punctuation on S2 sparse and not clear. T1 completely black, T2 and T3 with band (Fig. 18) ..... 6. *L. pacificus* Gussakovskij
6. Propodeal spiracular groove at upper is distinct. Mesosoma and metasoma without yellow pattern (Figs 16–17) ..... 5. *L. oreophilus* (Kuznetsov-Ugamskij)
  - Propodeal spiracular groove lacking. Mesosoma and metasoma with yellow pattern ..... 7
7. Propodeum (except metapostnotum and posterolateral small area) smooth and shiny, with sparse irregular punctuation (Fig. 14). Yellow are: ventral spot on scape (Fig. 10), very reduced maculation on pronotal collar, transverse spot on posterior part of scutellum (Fig. 14), large lateral spots on T2, small lateral spots on S2 and S3, transverse apical band on T3. T1 ferruginous (except base) ..... 4. *L. nemkovi* Mokrousov et Proshchalykin, **sp. n.**

- Propodeum (except small area ventrally in anterolateral part) with distinct longitudinal or oblique rugae. Head and metasoma with reach yellow pattern, all terga and S2 with transverse yellow band, S3 with large posterolateral spot. Base of T1 and T2 ferruginous (Fig. 19) ..... 8. *L. pictus* Nemkov



Figs 1–6. *Lestiphorus bicinctus* (Rossi) (1–3) and *L. bilunulatus* A. Costa (4–6). 1, 3, 4, 6 – females; 2, 5 – males; 1, 2, 4, 5 – habitus, dorsolateral view (1, 4); lateral view (2, 5); 3, 6 – T1, dorsolateral view (1–2 – from Bulgaria; 3 – from Russia, Nizhni Novgorod Reg.; 4–6 – from Russia, Primorsky Terr.). Scale bars: 2.0 mm.

**Annotated checklist of the Palearctic species of the genus *Lestiphorus***

**1. *Lestiphorus bicinctus* (Rossi, 1794)**

Figs 1–3

*Crabro bicinctus* Rossi, 1794: 123, sex not indicated (holotype or syntypes: Italy, Etruria, now Toscana [lost]). Junior primary homonym of *Crabro bicinctus* Fabricius, 1793 (a name suppressed by International Commission on Zoological Nomenclature, Opinion 675, 1963: 331), validated in the same Opinion.

MATERIAL EXAMINED. **Bulgaria:** Belassitsa Mtn., S Belassitsa Hut, 740 m, 1–10.VIII 2002, 1 ♀ (O. Todorov); Shiptchenska Planina Mtn., N Enina vill., 600 m, 23–29.VII 2000, 1 ♂ (M. Languorov) [FSCV]. **Ukraine:** Kiev Reg., Irpen, 6.VIII 1922, 1 ♂ (S. Ivanov); Poltava Reg., Dikanka Distr., Mikhailovka vill. (former Brusya), 28.VII 1923, 1 ♀ (V. Gussakovskij coll.) [ZISP]. **Russia:** Nizhny Novgorod Reg., Vyksa city, 55.319945°N 42.213395°E, 01.VI 2015, 1 ♀ (M. Mokrousov) [MMPC].

DISTRIBUTION. Portugal, Spain, France, Luxembourg, Belgium, Netherlands, United Kingdom, Switzerland, Italy, Germany, Austria, Czech Republic, Slovenia, Croatia, Poland, Lithuania, Slovakia, Hungary, Romania, Bulgaria, Belarus, Ukraine, Russia (Crimea, \*Nizhny Novgorod Reg., Altai Rep.), Turkey, Iran.

## 2. *Lestiphorus bilunulatus* A. Costa, 1867

Figs 4–6

*Lestiphorus bilunulatus* A. Costa, 1867: 59, ♂ (holotype: ♂, Italy, Piemonte, Canavese [Museo zoologico, Napoli, Italy]).

*Gorytes semistriatus* Schmiedeknecht, 1881: 286, ♂ (holotype: ♂, Germany, Thüringen, Gumperda [depository unknown]). Synonymized with *Gorytes bilunulatus* by Kohl, 1883: 667 and Handlirsch, 1888: 451.

*Lestiphorus bilunulatus yamatonis* Tsuneki, 1963: 9, ♀ (holotype: ♀, Japan, Nikko [Tochigi Pref., Honshu]. [originally K. Tsuneki coll., now in Museum of Nature and Human Activities, Hyogo, Japan]), **syn. n.**

MATERIAL EXAMINED. **Ukraine:** Kharkov, 1 ♂ (Morawitz coll.); 10.VII 1925, 1 ♀ (V. Gussakovskij coll.) [ZISP]. **Russia:** Altai Rep., Artybash, 17.VII 1980, 1 ♀ (P. Lehr) [FSCV]; Krasnoyarsk Terr., Sayanogorsk (“Osnatjenn”), 1 ♀ (K. Ehnberg) [ZISP]; Zabaikalsky Terr., Nerchinsky Zavod, 23.VII 1975, 1 ♀ (D. Kasparyan) [ZISP]; Amur Reg.: Khingansky Nature Reserve, Kundur, 23.VII 1988, 1 ♀ (A. Lelej), 26.VII 1988, 1 ♂ (A. Lelej); 12.VIII 1988, 1 ♀ (Yu. Chistyakov); 5 km N Saskal', 13.VIII 1982, 2 ♀ (A. Lelej); 25 km SW Shimanovsk, 12.VIII 1982, 2 ♀ (A. Lelej) [FSCV]; Khabarovsk Terr., Bichi, Gorin River, 17.IX 1985, 1 ♀ (V. Mutin) [FSCV]; Primorsky Terr., Suifun River, 8.VII 1914, 2 ♀ (Rimsky-Korsakov); 6 km S Tikhookeansky, Domashlino, 26.VII 1978, 1 ♀ (A. Lelej); Kamenushka, 27.VIII 1981, 1 ♀ (V. Mutin); Terekhovka, 10 km N Razdolnoe, 4.IX 1981, 1 ♀ (A. Lelej); Oktyabrsky distr., 6 km W Chernyatino, 13.VIII 1982, 1 ♀ (Shalygina); Ussuriysky Nature Reserve, 29.VIII 1982, 1 ♀ (A. Lelej); 25 km W Nakhodka, Yuzhno-Morskoy, 10.VIII 1988, 1 ♀ (A. Lelej) [FSCV]; Sakhalin Reg., Moneron Is., SE seashore, 24.VIII 2001, 1 ♀ (A. Lelej) [FSCV]. **Japan:** Fukui-ken, Aburasaka Pass, Izumi-mura, 4.VIII 1993, 1 ♀ (A. Lelej) [FSCV].

DISTRIBUTION. France, Belgium, Netherlands, Switzerland, Italy, Germany, Austria, Czech Republic, Lithuania, Slovakia, Hungary, Romania, Ukraine, Russia (Kemerovo Reg., Altai Rep., Krasnoyarsk Terr., Zabaikalsky Terr., Amur Reg., Khabarovsk Terr., Primorsky Terr., Sakhalin Reg.), Kazakhstan, Korea, Japan (Hokkaido, Honshu).

REMARKS. K. Tsuneki (1963: 9) in the description of a new subspecies *Lestiphorus bilunulatus yamatonis* indicates: “subspecies differs from nominate race in the sculpture of the area cordata on the propodeum and somewhat in coloration”. The study of material (see above) showed a great variability of the sculpture of the metapostnotum – from short ribs, occupying about half of the metapostnotum (as in “nominate race” in the understanding of Tsuneki), to almost reaching its apex, at the same time, there is no geographical pattern. Thus, due to the inability to reliably identify the subspecies *Lestiphorus bilunulatus yamatonis* Tsuneki, 1963 as well as the absence of geographical boundaries, we are considering it a junior synonym of *Lestiphorus bilunulatus* A. Costa, 1867.

### 3. *Lestiphorus egregius* (Handlirsch, 1893)

Figs 7–8

*Gorytes egregius* Handlirsch, 1893: 278, ♂ (holotype: ♂, Armenia, Arax valley [Naturhistorisches Museum, Wien, Austria]).

MATERIAL EXAMINED. **Turkmenistan:** 5 km N Kushka, 22.V 1990, 1 ♀ (A. Lelej) [FSCV]. **Uzbekistan:** Fergana (former Skobelev), 17.VII 1925, 1 ♂ (Ushinsky coll.); 14.VI 1963, 1 ♂ (V. Tobias); Yargak, Zeravshan, 1 ♂, 9.VI 1928 (L. Zimin); 30 km E Tashkent, Changir, 8.VII 1930, 1 ♀ (L. Zimin) [ZISP].

DISTRIBUTION. Armenia, Turkey, \*Turkmenistan, Uzbekistan, Tajikistan.



Figs 7–8. *Lestiphorus egregius* (Handlirsch), habitus. 7 – female, dorsolateral view; 8 – male, lateral view (7 – from Turkmenistan; 8 – from Uzbekistan). Scale bars: 2.0 mm.

### 4. *Lestiphorus nemkovi* Mokrousov et Proshchalykin, sp. n.

<http://zoobank.org/NomenclaturalActs/B56231D7-1EFF-4882-8010-8B1993618C3D>

Figs 9–15

TYPE MATERIAL. Holotype – ♀, **Russia:** Tyva Republic, 31 km NEE Erzin vil., Erzin River, 50°21'N 95°33'E, 18.VII 2014, leg. A. Lelej, M. Proshchalykin, V. Loktionov [ZISP].

DESCRIPTION. Female. Total body length 11.2 mm; fore wing length 8.1 mm. Head completely black. Scape ventrally with yellow spot, flagellum light brown, darkened dorsally and basally; mandible in the middle and labrum brown. Mesosoma black with transverse yellow spot on posterior part of scutellum and with very reduced maculation on pronotal collar. Legs light brown or yellowish with dark coxae and trochanters; fore- and midfemora and apical hind tarsomere with darkening. Wings slightly darkened, forewing not clear spotted, veins brown, costal cell and stigma yellowish. Metasoma with ferruginous first segment (except base); rest segments black with large lateral yellow spots on T2, small lateral spots on S2 and S3 and transverse apical band on T3.

Head (Figs 10–12). Head ratio H:W = 0.87; POL:OOL = 1.06; inner eye margins essentially parallel. Frons above antennal sockets without longitudinal elevation or furrow. Occipital carina well developed. Antenna elongate, length ratio – scape: F1: F2 = 1:1.22:1.04; F1 ratio L:W = 4.7. Mandibles with internal blunt tooth in apical third. Frons shagreened, without clear punctation, vertex and temples with dense fine punctation and sparse coarser punctures; clypeus at base with small punctation, in central part with several large punctures.

Mesosoma. Omaulus and sternaulus narrowly discontinuous. Metapostnotum well separated, with shallow medial furrow and lateral folds slightly diverging to posteriorly, folds

slightly not reaching the apex. Propodeal slope with median furrow. Pronotal collar with dense micropunctuation and scattered small punctures; mesonotum and scutellum with dense micropunctuation and scattered irregular large punctures; metapostnotum with space micropunctuation and punctures; mesopleuron with not dense micropunctuation and scattered irregular large punctures, ventrally shagreened and poorly visible punctures; metapleuron



Figs 9–15. *Lestiphorus nemkovi* sp. n., holotype, female. 9 – habitus, dorsolateral view and labels; 10–12 – head, frontal view (10); lateral view (11); dorsal view (12); 13 – pygidium; 14 – scutellum, metanotum and propodeum, dorsal view; 15 – T1, dorsolateral view. Scale bar: 2.0 mm.

with indistinct sculpture, with several folds dorsoposteriorly; propodeum (except metapostnotum and posterolateral small area) smooth and shiny, with sparse irregular punctation, punctures of different size.

Wings. Venation typical for genus; hindwing media diverging slightly beyond cu-a.

Legs. Foretarsal rake well developed, basitarsus with three rake setae before apex; rake setae long, not spatulate, apical seta on basitarsus and second tarsomere in length are almost equal to two subsequent tarsomeres.

Metasoma. T1 slightly elongate (dorsal view), ratio L/W 1.12×, with weak apical constriction (Fig. 15). Pygidial plate (Fig. 13) broad, edged only at apical half, with sparse punctures. T1 slightly shiny with scattered punctures and poorly distinguishable micropunctation; T2–T5 and S2–S6 with micropunctation (poorly distinguishable on T2 and S2) and scattered punctures.

Setation ill developed, white; stout setae on clypeus, labrum and mandibles.

Male. Unknown.

DIAGNOSIS. Differs from all known Palaearctic species of this genus by coloration and combination of the following features: metanotum and posterior part of scutellum without longitudinal rugae; propodeum (except metapostnotum and posterolateral small area) smooth and shiny, with small sparse punctures; propodeal spiracular groove lacking; T1 slightly elongate (dorsal view), with weak apical constriction.

ETYMOLOGY. Named in remembrance of the Russian expert in Spheciformes, Pavel G. Nemkov (1962–2017).

DISTRIBUTION. The new species is known only from the type locality in Tyva Republic (Russia).

##### 5. *Lestiphorus oreophilus* (Kuznetsov-Ugamskij, 1927)

Figs 16–17

*Gorytes oreophilus* Kuznetsov-Ugamskij, 1927: 246, ♂ (lectotype: ♂, Uzbekistan, Min-Bulak [ZISP], designated by Nemkov, 1992: 938), examined.

MATERIAL EXAMINED. **Uzbekistan:** Min-Bulak, 7.VII 1922, 1 ♂ (lectotype) (Kuznetsov) [ZISP]. **Tajikistan:** Andyr, Zeravshanskiy Ridge, 40 km SE Pyandzhikent, 2700 m, 17.VIII 1942, 1 ♀ (I. Rubtsov) [ZISP]. **Kyrgyzstan:** 20 km E Talas, 05.VII 1982, 1 ♀, 1 ♂ (S. Belokobylskij) [ZISP]. **Kazakhstan:** Alma-Ata (now Almaty), 13.VI 1977, 1 ♂ (M. Kozlov) [ZISP].

DISTRIBUTION. Mountain regions of Uzbekistan, Tajikistan, Kyrgyzstan and south-eastern Kazakhstan.

##### 6. *Lestiphorus pacificus* (Gussakovskij, 1932)

Fig. 18

*Gorytes pacificus* Gussakovskij, 1932: 29, ♀ (lectotype: ♀, Russia; Primorskiy Terr., «Maykhinskoe forestry» in Shkotovsky Distr., Shtykovo [ZISP], designated by Nemkov, 1992: 937), examined.

MATERIAL EXAMINED. **Russia:** Primorskiy Terr.: Maykhinskoe forestry, Vladivostok, 3.IX 1929, 3 ♀ (lectotype and paralectotypes) (V. Shabliovskij); Iman Riv., near Vladivostok, 5.IX 1931, 1 ♀ (V. Shabliovskij) [ZISP]; Khasan Distr., Andreevka, 6.VIII 1978, 1 ♀ (D. Kasparyan) [ZISP]; Ussuriyskiy Nature Reserve, 9.IX 1992, 1 ♀ (A. Lelej) [FSCV].

DISTRIBUTION. Russia (Primorskiy Terr.).



**7. *Lestiphorus peregrinus* (Yasumatsu, 1943)**

*Gorytes peregrinus* Yasumatsu, 1943: 10, ♀, ♂ (holotype: ♂, China, Beijing [Heude Museum, Shanghai, China]).

DISTRIBUTION. China (Beijing).



Figs 16–19. *Lestiphorus oreophilus* (Kuznetsov-Ugamskij) (16, 17), *L. pacificus* Guss. (18) and *L. pictus* Nemkov (19), habitus, lateral view. 16, 18 – females; 17, 19 – males (16 – from Kazakhstan; 17, 19 – from Kyrgyzstan; 18 – from Russia, Primorsky Terr.). Scale bars: 2.0 mm. (Fig. 19 – photo by Yu.V. Astafurova).

**8. *Lestiphorus pictus* Nemkov, 1992**

Fig. 19

*Lestiphorus pictus* Nemkov, 1992: 940, ♂ (holotype: ♂, Kyrgyzstan, southern shore of Issyk-Kul Lake [ZISP]), examined.

MATERIAL EXAMINED. **Kyrgyzstan:** southern shore of Issyk-Kul Lake, 12 km E Kadzhi-Say, 13.VII 1987, 1 ♂ (holotype) (M. Volkovitsh) [ZISP].

DISTRIBUTION. Kyrgyzstan.

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## REFERENCES

- Agassiz, L. 1847. *Nomenclator zoologicus continens nomina systematica generum animalium tam viventium quam fossilium, secundum ordinem alphabeticum disposita, adjectis auctoribus, libris, in quibus reperiuntur, anno editionis, etymologia et familiis, ad quas pertinent, in singulis classibus. Index Universalis*. Jent et Gassmann, Soloduri. 393 pp.
- Ashmead, W.H. 1899. Classification of the entomophilous wasps, or the superfamily Sphegoidea. *The Canadian Entomologist*, 31(10): 291–300. DOI: <https://doi.org/10.4039/Ent31291-10>
- Bohart, R.M. & Menke, A.S. 1976. *Sphecid Wasps of the World. A generic revision*. University of California Press, Berkeley, Los Angeles and London. ix + 695 pp.
- Costa, A. 1867. *Prospetto degli Imenotteri Italiani da servire di Prodomo della Imenotterologia Italiana*. Tipografia di Antonio Cons, Napoli. 154 pp.
- Gussakovskij, V.V. 1932. Verzeichnis der von Herrn Dr R. Malaise im Ussuri und Kamtschatka gesammelten aculeaten Hymenopteren. *Arkiv för Zoologi*, 24A(10): 1–66.
- Handlirsch, A. 1888. Monographie der mit *Nysson* und *Bembex* verwandten Grabwespen. III. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe. Abtheilung I*, 97: 316–565, pls. I–III.
- Handlirsch, A. 1893. Neue Arten der Gattung *Gorytes* Latr. (Hymenopteren). *Annalen des k.k. Naturhistorischen Hofmuseums*, 8: 276–282.
- International Commission on Zoological Nomenclature, 1963. Opinion 675. *Crabro bicinctus* Rossi, 1794 (Insecta, Hymenoptera): validated under the plenary powers. *The Bulletin of Zoological Nomenclature*, 20: 331–332.
- Kazenas, V.L. 2001. *Fauna and biology of sphecid wasps (Hymenoptera, Sphecidae) of Kazakhstan and Central Asia*. KazgosINTI, Almaty. 333 pp. [In Russian]
- Kohl, F.F. 1883. Die Fossorien der Schweiz. *Mittheilungen der Schweizerischen Entomologischen Gesellschaft*, 6: 647–684.
- Krombein, K.V. 1939. Descriptions and records of new wasps from New York State (Hym.: Sphecidae). *Bulletin of the Brooklyn Entomological Society*, 34: 135–144.
- Kuznetsov-Ugamskij, N.N. 1927. Zur Kenntnis der mittelasiatischen Sphecodea. I. *Zoologischer Anzeiger*, 71: 244–249.
- Lepelletier de Saint Fargeau, A.L.M. 1832. Mémoire sur le *G. Gorytes* Latr. *Arpactus*. Jur. *Annales de la Société Entomologique de France*, 1: 52–79.
- Nemkov, P.G. 1992. Digger wasps of the tribe Gorytini (Hymenoptera, Sphecidae) of the fauna of Russia and neighbouring countries. The genera *Lestiphorus* Lepelletier, *Oryttus* Spinola and *Olgia* Radoszkowski. *Entomologicheskoe Obozrenie*, 71: 935–949. [In Russian]
- Nemkov, P.G. 2012. Biological features of the digger wasps of the subfamily Bembicinae (Hymenoptera, Crabronidae). *A.I. Kurentsov's Annual Memorial Meetings*, 23: 114–132. [In Russian]
- Pate, V.S.L. 1936. Studies in the Nyssoninae wasps (Gorytini: Sphecidae: Hymenoptera). I. The species of *Psammaletes*, a new subgenus of *Hoplisoides*. *Transactions of the American Entomological Society*, 62(1): 49–56.
- Pulawski, W.J. 2020. *Catalog of Sphecidae sensu lato*. Available from: <https://www.calacademy.org/scientists/projects/catalog-of-sphecidae> (Accessed 18 August 2020).
- Rossi, P. 1794. *Mantissa Insectorum exhibens species nuper in Etruria collectas a Petro Rossio adiectis faunae Etruscae illustrationibus et emendationibus. Tomus secundus*. Typographia Prosperi. 154 pp., 8 pls.

- Schmiedeknecht, O. 1881. Eine neue Grabwespe. *Entomologische Nachrichten*, 7: 285–287.
- Tsuneki, K. 1963. The tribe Gorytini of Japan and Korea (Hymenoptera, Sphecidae). *Etizenia*, 1: 1–20.
- Yasumatsu, K. 1943. Notes on some East-Asiatic Sphecoidea in the collection of the Musée Heude. *Notes d'Entomologie Chinoise*, 10: 1–32.

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