



## A new genus and species of the subfamily Laphyragoginae (Hymenoptera, Apoidea, Crabronidae) with analysis of the relationship of Eremiasphecinae and Laphyragoginae, stat. resurr.

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### Abstract

Based on remarkable morphological differences between the two species groups of *Laphyragogus* Kohl, 1889, the genus is split into *Laphyragogus* and a new genus, *Asphaleia* Mokrousov, **gen. nov.** (type species *A. gussakovskii* Mokrousov, **sp. nov.**). Three species are transferred from *Laphyragogus* to the new genus: *Asphaleia ajjer* (de Beaumont, 1958), **comb. nov.**, *A. gessae* (Schmid-Egger, 2022), **comb. nov.** and *A. orientalis* (de Beaumont, 1970), **comb. nov.** Based on morphological analysis, it is shown that Eremiasphecini and Laphyragogini are not closely related and the status of Laphyragoginae as its own subfamily is resurrected.

**Key words:** taxonomy, Spheciformes, *Laphyragogus*, *Eremiasphecium*, *Odontospheg*, digger wasps

### Introduction

The genus *Laphyragogus* Kohl, 1889 is a rarely collected genus of Spheciformes with eight species described. It occurs in the arid zones of North Africa, the Arabian Peninsula to Central Asia and India (Schmid-Egger 2022). *Laphyragogus* was originally described as a taxon of uncertain taxonomic position, related to *Astata* Latreille, 1796, *Philanthus* Fabricius, 1790, *Tachyspheg* Kohl, 1883, *Tachytes* Panzer, 1806, *Larropsis* Patton, 1892 and *Dinetus* Panzer, 1806. Later, R. Bohart and A. Menke (1976: 217) placed the genus in the subfamily Laphyragoginae. Prentice 1998, Roche 2007, and Pulawski 2025, however combined *Laphyragogus* and *Eremiasphecium* Kohl, 1897 into a subfamily Eremiasphecinae consisting of the monogeneric tribes Laphyragogini and Eremiasphecini, respectively.

The subfamily Laphyragoginae (or tribe Laphyragogini) until now was considered as monogeneric with two species groups and eight species (Schmid-Egger 2022).

On the basis of remarkable morphological differences between the two species groups of *Laphyragogus* Kohl, 1889, the genus is here split into *Laphyragogus* and a new genus, *Asphaleia* Mokrousov, **gen. nov.** with type species *A. gussakovskii* Mokrousov, **sp. nov.** Three species are transferred from *Laphyragogus* to the new genus: *Asphaleia ajjer* (de Beaumont, 1958), **comb. nov.**, *A. gessae* (Schmid-Egger, 2022), **comb. nov.** and *A. orientalis* (de Beaumont, 1970), **comb. nov.**

### Material and methods

This paper is based on the materials, preserved in the Zoological Institute, Russian Academy of Sciences (St. Petersburg, Russia) [ZISP] and M.V. Mokrousov personal collection (Nizhny Novgorod, Russia) [MMPC].

Photographs were taken with a combination of digital camera Canon EOS M200 and Carl Zeiss Stemi 508 stereomicroscope (Fig. 9), Olympus CX33RTFS2 (Figs 17, 31) and Olympus SZX16 stereomicroscope (other figures). Final images represent a composite of several photographs taken at different focal planes and combined using Helicon Focus 7.6.1. All images were post-processed for contrast and brightness using Adobe® Photoshop® v. CC 2017 (×64).

Morphological terminology generally follows Hymenoptera Anatomy Ontology Portal (2025) and Bohart and Menke (1976): e.g., we have used the abbreviations F—flagellomere; S—metasomal sternum; T—metasomal tergum; OOL—ocellocular distance; H—height; W—width. Body length measurements are rounded to 0.1 mm, the measurement ratios are rounded to 0.01. The distribution of the species follows Schmid-Egger (2022).

## Discussion

Wojciech Pulawski (2025), based on M. Prentice’s unpublished Ph.D. thesis (1998), combined Laphyragogini with Eremiasphecini as tribes in the subfamily Eremiasphecinae. This view has been accepted by Hanson & Menke 2006, Roche 2007, and Gadallah 2020. We have a different opinion on this. Below is an overview of the synapomorphies mentioned by Prentice with comments (Table 1). These two groups show different states of the number of important features (see Table 2).

**TABLE 1.** The synapomorphies of Laphyragogoni and Eremiasphecini according to Prentice (1998).

Shared features according to Prentice	Comments
Head strongly prognathous	Prognathous head only in some <i>Eremiasphecium</i>
Dorsal lobe of clypeus only slightly produced dorsally	This is typical of most Crabronidae. The shape of the clypeus, however, is sharply different in <i>Laphyragogus</i> and <i>Eremiasphecium</i>
Clypeal free margin simple ( <i>Eremiasphecium</i> bears a sharp angulation just laterally of labrum)	Clypeal free margin convex in <i>Laphyragogus</i> , in <i>Eremiasphecium</i> concave and delimited laterally by acute corners
Eye inner margin distinctly concave	This is only true for <i>Laphyragogus</i> , in <i>Eremiasphecium</i> concavity minimal
Occiput well excavated as seen in dorsal view	This is typical of most Crabronidae
Hypostomal carina poorly developed or absent	Well-developed in <i>Laphyragogus</i> and some <i>Eremiasphecium</i>
Hypostomal pocket open posteriorly	In <i>Eremiasphecium</i> clearly delimited
Vertexal apodeme absent	This is typical of many Crabronidae
Scape short	In most <i>Eremiasphecium</i> clearly elongate
Preapical mandibular tooth absent	Preapical mandibular tooth really absent, but shape of mandibles differs—more robust, curved, with angular tooth on exteroventral margin, with one or two subbasal teeth on inner margin in <i>Laphyragogus</i> and simple, thin and very long in <i>Eremiasphecium</i>
Mandibles long and narrow	
Proboscis moderately lengthened	This condition is not fully defined
Pronotal ridge well developed	Pronotal ridge in <i>Eremiasphecium</i> widely varying
Prosternal pit present	Absent in both taxa
Notaulus present, corresponding internal notaular ridge present	Lacking in some <i>Eremiasphecium</i>
Posterior portion of mesopleural area gently concave	This is typical of many Crabronidae
Mesepisternal sulcus fully developed, other primary mesopleural sulci lacking	Scrobal sulcus often well developed
Mesopleural flange poorly developed or absent	This is not correct, mesopleural flange well defined
Omaulus absent	This is typical of many Crabronidae

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**TABLE 1.** (Continued)

Shared features according to Prentice	Comments
Lower metapleural-propodeal suture indicated by a discrete change in sculpture	No in both taxa
Intercoxal carina absent	Absent in both taxa
Metasternal area very narrow anteriorly, forming a discrete median longitudinal metasternal carina, or metasternal area well removed from mesosternal plane	Metasternal area large in <i>Laphyragogus</i> , very narrow in <i>Eremiasphecium</i>
Midcoxal cavities closely set	Not closely set in <i>Laphyragogus</i>
Propodeum moderately long	This is typical of many Crabronidae
Metapostnotum broad, roughly U-shaped	Metapostnotum of <i>Laphyragogus</i> and <i>Eremiasphecium</i> are different, not or slightly separated in <i>Eremiasphecium</i>
Midtibia with single apical spur	This is typical of most Crabronidae
Posteroapical angle of forebasitarsus expanded	Indeed expanded in <i>Laphyragogus</i> and elongate in <i>Eremiasphecium</i> . The similar shape of the forebasitarsus has an independent origin (homoplasy), because the conspicuous process of the forebasitarsus is developed only in the females of <i>Laphyragogus</i> (it is absent in the males), whereas in <i>Eremiasphecium</i> the process is developed in both sexes, i.e. the formation of the process has a different genetic origin. The forebasitarsal lobe is formed in <i>Laphyragogus</i> by displacement of the articulation with tarsomere 2 towards the base (Figs 1–2), and in <i>Eremiasphecium</i> by elongation of the outer forebasitarsal apex (Figs 3–4). This can be seen when comparing the length of the male and female basitarsus. In addition, the <i>Eremiasphecium</i> process has a distinct constriction at the base. Apparently, the process evolved independently in these two taxa as an adaptation for digging in the soft soil of the desert environment. The shape and position of the digging spines on forebasitarsus are remarkably different in these two genera, supporting the hypothesis of homoplasy: in <i>Eremiasphecium</i> the spines are relatively sparse and do not occur on the inner margin of the process, whereas in <i>Laphyragogus</i> they are numerous and extend to the inner margin of the process. Moreover, the displacement of the articulation with tarsomere 2 towards the base with formed lobe is not unique to <i>Laphyragogus</i> and is found in some other desert wasps—a similar expansion is found, for example, in <i>Parapsammophila</i> Taschenberg (Sphecidae) (Fig. 7) and some <i>Stizoides</i> Guérin-Méneville (Crabronidae) (Figs 5–6). It is therefore incorrect to accept the external similarity in the structure of the foretarsus of Eremiasphecinae and Laphyragoginae as a unique apomorphy.
Fore tarsal rake composed of long spines	This is typical of desert wasps from different groups
Pretarsal claws simple	In <i>Eremiasphecium</i> claws in many species with tooth
Wings quite clear with light veins	This is typical of wasps of arid areas from different groups
Marginal cell truncate or narrowly truncate on apex	Shape of marginal cell in <i>Eremiasphecium</i> varying, but not as in <i>Laphyragogus</i>
Three submarginal cells present	In <i>Eremiasphecium</i> venation modified, second submarginal cell usually subtriangular or petiolate, in some species number of submarginal cells reduced to two. In <i>Laphyragogus</i> venation complete and generalized.

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**TABLE 1.** (Continued)

Shared features according to Prentice	Comments
Forewing cu-a prefurcal	This is typical of many Crabronidae but in some <i>Eremiasphecium</i> nearly interstitial
Hindwing R1 extending the entire length of the hamuli	This is typical of many Crabronidae from different groups
Metasoma sessile	This is typical of most Crabronidae, but metasomal base in <i>Laphyragogus</i> wide, and in <i>Eremiasphecium</i> narrow
Internal first tergal ridge present	Absent in both taxa
Female pygidial plate present	This is typical of many Crabronidae from different groups
Lateral gradulus of S1 lacking	This is typical of many Crabronidae from different groups
Volsella differentiated into digitus and cuspis	This is typical of many Crabronidae, genitals conspicuously different in <i>Laphyragogus</i> and <i>Eremiasphecium</i>

**TABLE 2.** Comparison of morphological features of Laphyragogini and Eremiasphecini.

Future	States of the features	
	<i>Asphaleia</i> and <i>Laphyragogus</i>	<i>Eremiasphecium</i> s. l.
Antennal sockets	About the level of the lower third of the eyes, not contiguous with frontoclypeal suture	At the level of the lower edge of the eyes, essentially contiguous with frontoclypeal suture, or nearly so
Inner orbits of eyes	Markedly converging above	Subparallel or slightly converging above
Ocelli position	Displaced to frons	On vertex
Occipital carina	Clear and complete, reaching hypostomal carina	Lacking or lacking ventrally, not reaching hypostomal carina
Clypeus	Transverse but not narrowly so	From very to extremely narrow
Mandible socket	Open	Close
Sulcus, connecting posterointernal parts of eye with occipital carina	Present	Absent
Psammophore	Present	Absent
Pronotal lobe	Separated from tegula	Touching tegula
Upper metapleural area	Conspicuously convex, overhanging, broadly ridge-shaped	Flattened
Metapostnotum	Well separated by sulcus	Not or slightly separated by sulcus behind propodeal spiracles
Forewing venation	Generalized—complete and not modified	Mildly to highly modified
Forewing recurrent veins received by	Second submarginal cell	First and second submarginal cells or interstitial
Hindwing M position	Diverging before cu-a	Diverging at cu-a
Hindwing jugal lobe	Large, broad, nearly equal to length of anal area	Not broad, much shorter than anal area
Midcoxae	Contiguous, rounded and with a diagonal carina	Contiguous, simple
Hindcoxae	Distinctly separated	Nearly contiguous
Plantulae	Lacking	Well developed
Cerci	Absent	Present
Size	Medium	Small to extremely small

Thus, Laphyragoginae and Eremiasphecinae should be considered as two distinct subfamilies.

Moreover, among the digger wasps, Laphyragoginae demonstrate the greatest similarity to Odontosphecini: inner orbits converging above; subantennal sclerite not delimited; antennae rather low on face but sockets not contiguous with frontoclypeal suture; clypeus transverse but not narrowly so; mouthparts short, but cardo elongate and broad, the stipes short, broad, triangular (except *Asphaleia*); mandibular socket open; pronotum with a low collar; pronotal lobe separated from tegula; no oblique scutal carina; mesopleuron with episternal sulcus (except most *Odontosphex*); omaulus absent; definitive metapleuron consisting of upper metapleural area only, upper metapleural area conspicuously convex, overhanging, broadly ridge-shaped; midtibia with one apical spur; midcoxae contiguous and with dorsolateral carina; hindcoxae separated and metasternum elevated, not in same plane as mesosternal area, precoxal lobes present but very short; claw simple; plantulae absent; propodeum long; metapostnotum broad, roughly U-shaped, apex extending into vertical posterior face; no propodeal sternum; forewing with three submarginal cells and two recurrent veins which end at second cell; marginal cell obliquely truncate, appendiculate; hindwing with large, broad jugal lobe (nearly equal to length of anal area), base of lobe with remnant of anal vein; hindwing media diverging before *cu-a*; metasoma sessile, with broad base, propodeal foramen very large, delimited laterally by more or less triangular lobe; tergum I with lateral carina; sternum VII present, longer than preceding sterna; pygidial plate present; male genitalia with volsella differentiated into digitus and cuspis.

Perhaps the genus *Odontosphex* Arnold, 1951 should be moved to Laphyragoginae as the tribe Odontosphecini Menke, 1967. This view has been expressed previously (Mokrousov & Proshchalykin 2021), but additional molecular data are needed to make a final decision.



**FIGURES 1–7.** Foretarsus, anterior view; 1, 2—*Laphyragogus kohlii* Bingham, ♂ (1) and ♀ (2); 3, 4—*Eremiasphecium digitatum* Gussakovskij, ♂ (3) and ♀ (4); 5, 6—*Stizoides crassicornis* Fabricius, ♂ (5) and ♀ (6); 7—*Parapsammophila turanica* F. Morawitz, ♀.

### Subfamily Laphyragoginae Bohart & Menke, 1976, stat. resurr.

Laphyragoginae Bohart & Menke, 1976: 217. Based on *Laphyragogus* Kohl, 1889.  
Laphyragogini: Prentice 1998; Roche 2007: 61; Pulawski 2025.

**Diagnosis.** Ocelli normal, displaced to frons in an obtuse triangle; vertex separated from gena by short sulcus, connecting posterointernal parts of eye with occipital carina; clypeal free margin without teeth, rounded or with transverse lamella in some males; mandible with angular tooth on externoventral margin (Fig. 19), often with one or two subbasal teeth on inner margin; pronotum below angulate; tarsal rake well developed in both sexes; psammophore on forefemur, foretrochanter, apical process of forecoxa, mandibula and gena well developed in females; female forebasitarsus with large apical lobe, male foretarsus simple, tarsomeres elongate; forecoxa with apical internal spine; pulvilli present in males, lacking on mid- and hind legs in females; forewing with three submarginal cells and two recurrent veins which end at second cell; marginal cell obliquely truncate, appendiculate; hindwing with large, broad jugal lobe (nearly equal to length of anal area), base of lobe with remnant of an anal vein; hindwing media diverging before cu-a; hindfemur simple apically; male apical metasomal sterna modified; cerci absent.

**Genus *Asphaleia* Mokrousov, gen. nov.**

<http://zoobank.org/urn:lsid:zoobank.org:act:A967374C-1480-4A5C-9015-80E687B05CE3>

**Diagnosis.** Distance between antennal socket and clypeus approximately equal to diameter of antennal socket or slightly longer; occipital carina dorsally more or less evenly rounded (Fig. 11); mouthparts not large, prementum shorter than stipes, stipes near parallel sided (Fig. 32); foreleg pulvillus in female present; T6 (in females) and T7 (in males) bear a large basal triangular platform with rectangular or somewhat pointed tip in lateral view; mid- and hind tibiae and tarsi with outer row of long dense setae (Fig. 21); setation on face, clypeus, and lateral parts of mesonotum very dense. Male: F2–F3 without incision (Fig. 13), antenna not clavate; S6 with lateral spine (Figs 14–16); S6–S8 without dense long setae; genitalia conspicuously modified (Fig. 17), parameres widening basally, forming capsule, penial valves asymmetrical, one being shorter than other, valves longitudinally expanded and slightly twisted spirally, forming tubular structure; parameral apex sclerotized, coloured (Fig. 16). Genital capsule very large, clamped by apical metasomal sclerites, and apparently only the highly modified penis participates in copulation.

**Type species.** *Asphaleia gussakovskii* Mokrousov, **sp. nov.**

**Etymology.** The generic epithet derives from the Greek word Ασφάλεια—security from enemies and dangers, safety, as opposed to the Greek name of *Laphyragogus* (Λαφυραγωγός)—marauder. Gender feminine.

**Note.** Vsevolod V. Gussakovskij designated a new genus “*Eremastata*” with a new species “*sulphurea*” but never published it (Fig. 23). The species is here described as *Asphaleia gussakovskii*.

***Asphaleia ajjer* (de Beaumont, 1958), comb. nov.**

*Laphyragogus ajjer* de Beaumont, 1958: 63, ♂. Holotype, ♂: Algeria, Tassili des Ajjer, reg between oueds Sersouf and Issandilène [Muséum National d’Histoire Naturelle, Paris, France].

**Distribution.** Morocco, Algeria.

***Asphaleia gessae* (Schmid-Egger, 2022), comb. nov.**

*Laphyragogus gessi* [sic!] Schmid-Egger, 2022: 308, ♀, ♂. Holotype, ♂: Oman, 20 km west of Barka, Wadi Far at 57.7119°N 23.760°E [Ch. Schmid-Egger personal collection, Berlin, Germany].

**Distribution.** United Arab Emirates, Oman.

***Asphaleia orientalis* (de Beaumont, 1970), comb. nov.**

*Laphyragogus ajjer orientalis* de Beaumont, 1970: 17, ♀, ♂. Holotype, ♂: Iran, Baluchistan, southwest of Iranshar [Ludwigsburg].

**Distribution.** Iran, United Arab Emirates.

***Asphaleia gussakovskii* Mokrousov, sp. nov.**

<http://zoobank.org/urn:lsid:zoobank.org:act:3EC9B84D-B17A-447C-A980-617273DD1C4C>

(Figs 8–23, 32)

**Type material** (4 ♀, 21 ♂). Holotype—♂, «Узбекистан: Бухар., / Бага-Абзаль / 19.vii.1930 ?В. Гуссаковский» [Uzbekistan, 50 km N of Buchara, Baga-Abzal', 19.VII.1930, leg. ?V. Gussakovskij] // Holotype ♂ / *Asphaleia gussakovskii* / Mokrousov [ZISP]. Paratypes: 1 ♂, Turkmenistan, Repetek, 30.VII.1925, V. Gussakovskij [ZISP]; 1 ♂, Turkmenistan, Askhabad, 20.VII.1926 [ZISP]; 5 ♂, 2 ♀, Turkmenistan, Askhabad, 10.VI.1928, V. Gussakovskij [ZISP]; 1 ♂, Turkmenistan, Askhabad, 26.VI.1928, V. Gussakovskij [ZISP]; 9 ♂, 1 ♀, Turkmenistan, Askhabad, 10.VII.1928, V. Gussakovskij [ZISP]; 1 ♂, Turkmenistan, Dzhebel, 12.VI.1934, V. Popov [ZISP]; 1 ♂, Turkmenistan, Ahcha-Kuima station [39.35°N, 55.162°E], 03.VII.1934, V. Popov [MMPC]; 1 ♀, Uzbekistan, Baga-Abzal', 11.VIII.1928, Gerasimov [ZISP]; 1 ♂, Uzbekistan, Khiva, Ravat [41.38°N, 60.25°E], 4.VIII.1927, L. Zimin [ZISP].

**Diagnosis.** Males of *Asphaleia gussakovskii* sp. nov. clearly differ from all other species of the genus by non-modified midtarsus (in the other species the second midtarsomere is asymmetrical, enlarged apically, see Schmid-Egger 2022, fig. 8) and short interocular distance at vertex (interocular distance shorter than vertex length in *Asphaleia gussakovskii* sp. nov. and markedly longer in the other species). The female differs from *A. ajjer* and *A. gessae* by the large extension of the yellow on the head and mesosoma while predominantly black in *A. ajjer* and *A. gessae*. From more closely related *A. orientalis* it differs by a large extension of yellow, S6 rounded apically (S6 apically with triangular emargination in *A. orientalis*), and rounded apex of platform of T6 (pointed in *A. orientalis*).

**Description.** Head conspicuously transverse, eyes nearly parallel on lower part, convergent above on upper part (Figs 10, 18). Ocelli displaced to frons in an obtuse triangle. Distance between antennal socket and clypeus approximately equal to antennal socket diameter. Clypeal free margin evenly rounded. Occipital carina well developed, joining hypostomal carina, not fully dividing hypostomal and occipital cavities. Frons and clypeus with dense silver setation concealing integument; vertex with long erect setae, shiny, with large punctures.

Mesosoma. Pronotal collar narrower than mesoscutum; pronotal lobe conspicuously separated from tegula; pronotal collar narrow. Metanotal admedian line complete, reaching posterior margin; notauli present, but masked by punctures; parapsidal line unusually developed, in form of sulcus near reaching anterior margin; punctation irregular, with shiny interspaces; punctures large. Mesopleuron densely punctured dorsally, ventrally shiny, with single not large punctures. Mesopostnotum and metanotum with large sparse punctures. Metapostnotum coarsely punctato-rugose. Metapleuron and propodeum shagreened. Setation silver, long, semierect, denser on lateral and posterior parts of mesoscutum, upper mesopleura, on lateral surface of propodeum, partially concealing sculpture.

Wings. Form and venation typical of Laphyragoginae.

Metasoma. Anterior surface of T1 largely concave.

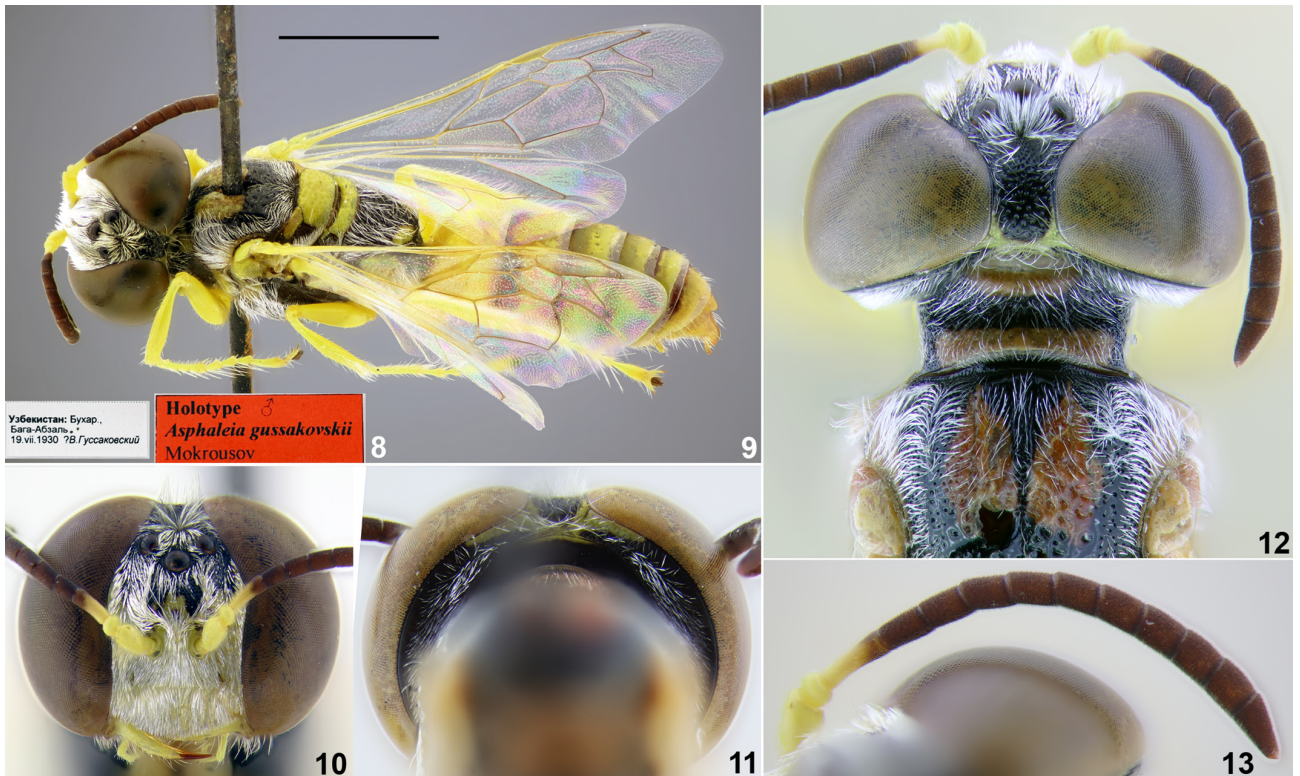
Coloration (Fig. 9). Black, with rich yellow pattern. Yellow are: clypeus, lower frons, upper occipital area, mouthparts (often except prementum), mandible (apex amber), scape, pedicel, F1 (except apex), pronotal lower apex, pronotal collar, pronotal lobe, lateral part and two large median stripes anteriorly on mesonotum, mesopleural spot behind pronotal lobe, posterior ventral medial arrow-like spot on mesopleuron, mesopostnotum, metanotum, lateral apical spot on metapostnotum, tegula, axilla, wing venation, legs (including coxae and trochanters), lateral propodeal surface and metasoma (except base of T2–T6).

**Male** (Figs 8–17). Body length 8.5–10.5 mm (holotype: 8.5 mm); fore wing length 5.7 mm (holotype).

Head (Figs 10–12) ratio H:W = 0.73; vertex narrow, interocular distance shorter than vertex length (Fig. 12). OOL very short, approximately equal to one third of anterior ocellus. Antenna not clavate, flagellomeres without swellings or excisions (Figs 12–13).

Legs. Midtarsus not modified, tarsomeres without basal widening.

Metasoma (Figs 14–16). Base platform of T7 with pointed overhanging apex; S6 with lateral stout spine; S7 with median longitudinal tubercle; S8 slightly rooflike.



FIGURES 8–13. *Aspheleia gussakovskii* Mokrousov, **sp. nov.**, ♂, holotype (8, 9) and paratype (10–13); 8—labels; 9—habitus, dorsolateral view; 10, 11—head, frontal (10) and posterior (11) views; 12—head, pro- and mesonotum, dorsal view; 13—antenna, ventral view. Scale bar: 2.0 mm.



FIGURES 14–17. *Aspheleia gussakovskii* Mokrousov, **sp. nov.**, ♂, holotype (14–16) and paratype (17); 14–16—apical segments of metasoma, dorso-lateral (14), ventrolateral (15) and ventral (16) views (last sternum removed, red arrows indicate parameral apex); 17—male genitalia, ventrolateral view.

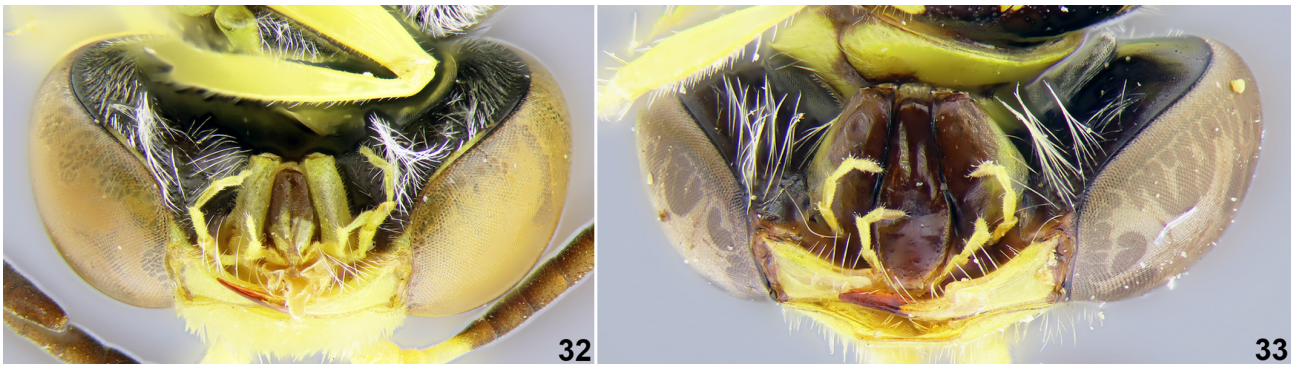
Genitalia (Fig. 17). Paramerae widened basally, forming capsule, sclerotized and coloured apically (Fig. 16); volsella wide; penial valves asymmetrical, one being shorter than other, valves longitudinally expanded and slightly twisted spirally, forming tubular structure, longer than paramera.



FIGURES 18–23. *Asphaleia gussakovskii* Mokrousov, *sp. nov.*, paratype, ♀; 18—head, frontal view; 19—mandible, frontal view; 20—foretarsus, anterior view; 21—midtibia and midtarsus, anterior view; 22—metasomal apex, posterolateral view; 23—original labels by V.V. Gussakovskij.



FIGURES 24–31. *Laphyragogus kohlii* Bingham, ♀ (24, 26, 27, 29) and ♂ (25, 28, 30, 31); 24–26—head, frontal (24, 25) and posterior (26) views; 27, 28—apical segments of metasoma, dorsolateral (27) and ventrolateral (28) views; 29—midtibia and midtarsus, anterior view; 30—antenna, anterior view; 31—genitalia, ventral view.



**FIGURES 32–33.** Head, ventral view, ♂; 32—*Asphaleia gussakovskii* Mokrousov, **sp. nov.**, holotype; 33—*Laphyragogus kohlii* Bingham.

**Female** (Figs 18–22). Body length 9.3–9.7 mm.

Head (Fig. 18) ratio H:W = 0.65. OOL approximately equal to posterior ocellus diameter.

Legs (Figs 20–21). Forebasitarsus with large apical lobe (Fig. 20); foreleg pulvillus present, on mid and hind legs lacking.

Metasoma. Dorsal platform on T6 with no overhanging and rounded apex.

**Etymology.** Species named in honor of the well-known researcher of Central Asian Hymenoptera Vsevolod Vladimirovich Gussakovskij, who first named this genus and species, but never published it.

**Distribution.** Turkmenistan, Uzbekistan.

### Genus *Laphyragogus* Kohl, 1889

*Laphyragogus* Kohl, 1889: 190. Type species: *Laphyragogus pictus* Kohl, by monotypy.

*Leianthrena* Bingham in Kohl 1897: 381. Type species: *Leianthrena kohlii* Bingham, 1897, by original designation. Synonymized with *Laphyragogus* Kohl, 1889 by Gussakovskij 1952: 227.

*Lianthrena* Bingham, 1897: 212. Type species: *Lianthrena kohlii* Bingham, by original designation [= *Leianthrena kohlii* Bingham in Kohl 1897]. Objective synonym of *Leianthrena* Bingham in Kohl 1897.

**Diagnosis.** Distance between antennal socket and clypeus near 0.4× diameter of antennal socket (Figs 24–25); occipital carina dorsally trapeziform (Fig. 26); mouthparts large, prementum longer than stipes, stipes widening laterally, not parallel sided (Fig. 33); foreleg pulvillus in female lacking; T6 (in females) (Fig. 27) and T7 (in males) simple, without basal triangular platform; mid and hind tibia and tarsi with sparse long spines (Fig. 29); setation on face, clypeus, and lateral parts of mesonotum usually sparse. Male: F2–F3 with swellings or excisions (Fig. 30), antenna slightly clavate; S6 without lateral spine; S7 in most species deeply triangularly incised; S6–S8 with dense long setae (Fig. 28); genitalia normal, symmetrical, paramera and penial valves elongate (Fig. 31).

### *Laphyragogus kohlii* (Bingham, 1897)

*Leianthrena kohlii* Bingham in Kohl, 1897: 381, ♀, ♂. Lectotype, ♀: India, Deesa xi.1901, coll Nurse, designated by Schmid-Egger 2022: 310 [The Natural History Museum, London, Great Britain].

*Lianthrena kohlii* Bingham, 1897: 213, ♀, ♂. Syntypes: India or Pakistan: Punjab: no specific locality [The Natural History Museum, London, Great Britain]. Objective synonym of *Leianthrena kohlii* Bingham, 1897.

*Laphyragogus turanicus* Gussakovskij, 1952: 227, ♀, ♂. Lectotype, ♀: Tajikistan, Ayvaj at Kafirnigan River [ZISP], designated by Kazenas 2000: 50. Synonymized with *Laphyragogus kohlii* by Kazenas 2000: 50.

**Distribution.** Turkmenistan, Uzbekistan, Tajikistan, Iran, Oman, Pakistan, Northern India.

### ***Laphyragogus pectinatus* de Beaumont, 1959**

*Laphyragogus pectinatus* de Beaumont, 1959: 728, ♀, ♂. Holotype, ♂: Israel, Revivim [Lausanne].

**Distribution.** Algeria, Israel, Egypt, Libya.

### ***Laphyragogus pictus* Kohl, 1889**

*Laphyragogus pictus* Kohl, 1889: 190, ♀. Holotype, ♀: Egypt, no specific locality [Zoologisches Museum der Humboldt Universität, currently Museum für Naturkunde der Humboldt Universität zu Berlin, Berlin, Germany].

**Distribution.** Morocco, Egypt, Israel.

### ***Laphyragogus strakai* Schmid-Egger, 2011**

*Laphyragogus strakai* Schmid-Egger, 2011: 543, ♂. Holotype, ♂: United Arab Emirates, Um al-Quwain at 25°32'N 55°32'E [Ch. Schmid-Egger personal collection, Berlin, Germany].

**Distribution.** United Arab Emirates, Iran.

### ***Laphyragogus visnagae* de Beaumont, 1959**

*Laphyragogus visnagae* de Beaumont, 1959: 730, ♀, ♂. Holotype, ♂: Algeria, Biskra [Lausanne].

**Distribution.** Morocco, Algeria.

### **Acknowledgements**

We are grateful to Sergey Belokobylskij and Yulia Astafurova (ZISP) for assisting us during our work in the ZISP, as well as to the subject editor (Yuriy Danilov, Novosibirsk, Russia) and two reviewers (Wojciech Pulawski, San Francisco, USA and Arkadiy Lelej, Vladivostok, Russia) for their valuable comments, which helped improve the quality of this paper. Special thanks to Wojciech Pulawski for providing the M. Prentice's Ph.D. thesis (1998).

The research was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. 124012400285-7).

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