



Revision of the Palaearctic genus *Skorikovia* Ovtchinnikov, 2002 (Hymenoptera: Mutillidae)

ARKADY S. LELEJ

Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok-22, 690022, Russia.

✉ lelej@biosoil.ru; <https://orcid.org/0000-0001-7501-0981>

Abstract

Ten Palaearctic species of *Skorikovia* Ovtchinnikov, 2002 are reviewed. The new species *S. bactriana* **sp. nov.**, male (Afghanistan, Tajikistan) and *S. maxim* **sp. nov.**, male, female (Russia: Astrakhan Region, Kalmykia; Azerbaijan, North Iran, South-West Pakistan) are described and illustrated. A new synonymy is proposed for *S. trinotata* (Costa, 1858), **comb. nov.** (= *Mutilla triangularis* Radoszkowski, 1865, female, **syn. nov.**, = *Smicromyrme pliginskiji* Lelej, 1984, male, **syn. nov.**). A lectotype of *Mutilla sarta* Radoszkowski, 1885, female and *M. triangularis* Radoszkowski, 1865, female are designated. A new combination is proposed for *Skorikovia sarta* (Radoszkowski, 1885), **comb. nov.** (from the genus *Smicromyrme* Thomson, 1870). The genus *Skorikovia* and *S. trinotata* are newly recorded from Slovakia and Austria. A key to the species of males and females and the behavior of the female of *S. elongata* in south-eastern Kazakhstan are provided.

Key words: velvet ants, Smicromyrmini, new species, new synonymy, new combination, Palaearctic Region

Introduction

The species of the genus *Skorikovia* were previously included in the subgenus *Nemka* Lelej, 1985, which was later elevated to a separate genus (Lelej 1995). It was suggested that the species *Smicromyrme elongatus* (Radoszkowski, 1885), *S. radoszkovskii* Skorikov, 1935, *S. pliginskiji* Lelej, 1984, *S. transcaucasicus* Lelej, 1985, *S. pallipes* Lelej, 1985, and *S. turanicus* (Morawitz, 1893) should be excluded from the genus *Nemka* and most probably be considered as a separate genus (Lelej 1995). The genus *Skorikovia* was then proposed later (Ovtchinnikov 2002). *Smicromyrme kurdus* Skorikov, 1935 and *S. turanicus* (Morawitz, 1893) were also considered members of *Skorikovia* (Ovtchinnikov 2002). Recently, *S. kurdus* was synonymised with *Smicromyrme atrithorax* (André, 1902) (Lelej *et al.* 2022) and *S. turanicus* was transferred to *Smicromyrme incertae sedis* (Pagliano *et al.* 2020). The aim of this work is to revise the Palaearctic representatives of the genus, to describe new species, and to provide information on the behavior of the female of *S. elongata*.

Material and methods

More than 750 specimens (99 ♀ and 689 ♂) have been examined for this work, including seven holotypes, six lectotypes and many paratypes and paralectotypes of the nominal species. Most of the material is deposited in the collection of the Federal Scientific Center of the East Asia Terrestrial Biodiversity, Vladivostok. The types and comparative material from different museums were also examined. The following abbreviations are used to denote the institutions housing the species and specimens studied here:

EMET—Entomology museum, Erzurum, Turkey;

IBSS—Federal Scientific Center of the East Asia Terrestrial Biodiversity (formerly Institute of Biology and Soil Science), Vladivostok, Russia;

IRIPP—Iranian Research Institute of Plant Protection, Tehran, Iran;

ISEA-PAN—Institute of Systematics and Evolution of Animals' collection at the Polish Academy of Sciences, Kraków, Poland;

MNHU—Museum für Naturkunde der Humboldt-Universität, Berlin, Germany;

OLML—Oberösterreichisches Landesmuseum Linz, Austria;

SMNS—Staatliches Museum für Naturkunde in Stuttgart, Germany;

ZIN—Zoological Institute, St. Petersburg, Russia;

ZMMU—Zoological Museum of Moscow University, Moscow, Russia.

Terminology mostly follows the Hymenoptera Anatomy Ontology (2013). The following abbreviations are used in the text: T1, T2, T3, etc., to denote the first, second, third, etc., metasomal terga, while S2, S3, etc., denote the second, third, etc., metasomal sterna, and F1, F2, F3, etc., denote the antennal flagellomeres; OOD is an abbreviation for ocellocular distance, the minimal distance between a lateral ocellus and the inner eye margin; POD is an abbreviation for inter-ocellar distance, the minimal distance between the lateral ocelli.

The photographs were taken with an Olympus SZX16 stereomicroscope and an Olympus DP74 digital camera, and then stacked using Helicon Focus software. The photographs of the type specimens in the MNHU (Figs 26, 27, 43, 51–55) were taken in 2011 with the Canon PowerShot SX100 digital camera. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

Results

Tribe *Smicromyrmini* Bischoff, 1920

Genus *Skorikovia* Ovtchinnikov, 2002

Skorikovia Ovtchinnikov, 2002: 94, ♂, ♀; Lelej 2002: 63; Lelej & Osten 2004: 257; Pagliano & Strumia 2007: 83; Lelej & Brothers 2008: 56, ♂, ♀; Lelej & Yildirim 2009: 17; Muskovits & György 2011: 37, 106; Pagliano *et al.* 2020: 187; Lelej & Williams 2023: 127, ♂, ♀.

Smicromyrme (*Nemka*): Lelej 1985: 240, ♂, part.

Smicromyrme (*Eremotilla*): Lelej 1985: 223, ♀, part.

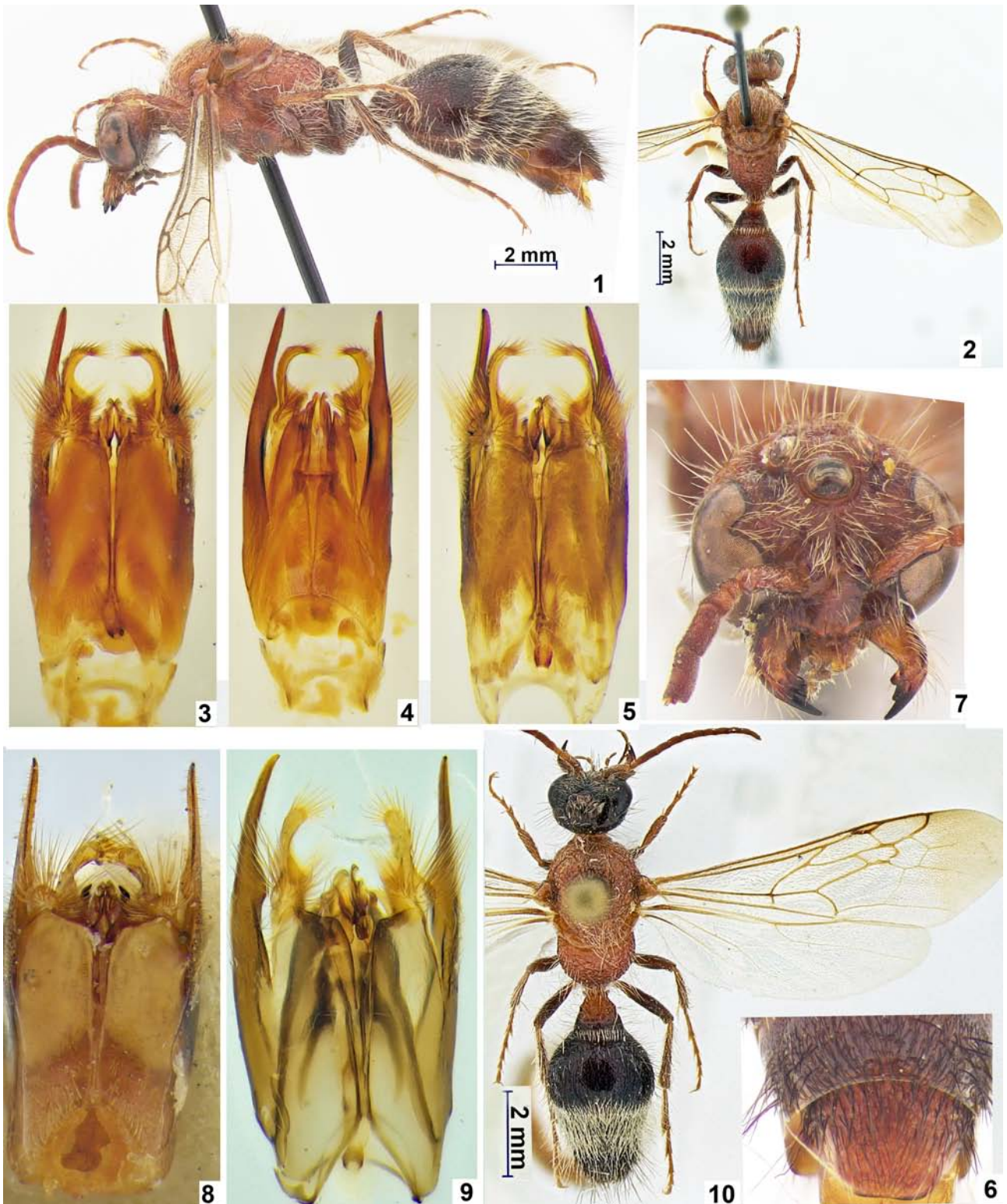
Type species. *Mutilla elongata* Radoszkowski, 1885, ♂, by original designation.

Diagnosis. MALE. Mandible usually tridentate with large subventral tooth. Volsella with long, often curved inside cuspis, basivolsella with large, upwardly curved outside lobe. Volsella apically and basivolsella with long suberect setae. Clypeus basally with longitudinal median carina-like elevation, flattened anterad and widened triangularly forming a plate with indistinct margin. Mesopleuron ventrally without precoxal tooth (well developed in *Nemka*). Metasomal pale bands weaker than in *Nemka*. FEMALE. Pygidial plate triangularly elongated, basally weakly curved and widened, lateral carina weakly widened apically; densely striate longitudinally, striae slightly divergent from median line. Clypeus basally with median broad tubercle, dorsoventrally compressed and curved upward. Scutellar scale broad with prescutellar transverse carina. T1 with apical fringe of black setae. T2 basally with large medial spot of pale setae, with or without lateral spot of pale setae and apically with band of such setae medially widened triangularly or simply rounded. T3 with band of pale setae, T4 with lateral spot.

Sex association. The female of the type species was associated and identified (as *Smicromyrme ambiguus* Skorikov, 1935) by Ovtchinnikov 2002: 95.

Species included. The genus currently includes ten valid species: *Skorikovia anatolica* Lelej in Lelej & Yildirim, 2009, ♂ (Turkey); *S. elongata* (Radoszkowski, 1885), ♂, ♀ (Russia: Stavropol Krai; Azerbaijan, Armenia, Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan, and Iran); *S. maxim* **sp. nov.**, ♂, ♀ (Russia: Astrakhan Region, Kalmykia; Azerbaijan, North Iran, South-West Pakistan); *S. bactriana* **sp. nov.**, ♂ (Afghanistan, Tajikistan), *S. pallipes* (Lelej, 1985), ♂ (Iran); *S. radoszkovskii* (Skorikov, 1935), ♂, ♀ (Russia: Dagestan; Azerbaijan, Georgia, Turkey); *S. sanguinicollis* (Klug, 1829), ♂ (Egypt, Libya), *S.serta* (Radoszkowski, 1885), **comb. nov.**, ♀ (Russia: South Ural); *S. transcaucasica* (Lelej, 1985), ♂ (Armenia, Azerbaijan, Turkey); *S. trinotata* (Costa, 1858), **comb. nov.**, ♂, ♀ (= *Mutilla triangularis* Radoszkowski, 1865, ♀, **syn. nov.**, = *Smicromyrme pliginskiji* Lelej, 1984, ♂, **syn. nov.**) (Russia: Crimea, Dagestan, South and East of European part, South Ural; Austria, Bulgaria, Croatia, Czech Republic, Greece, Hungary, Italy, Montenegro, Slovakia).

Distribution. All species are distributed in the Palearctic Region.



FIGURES 1–10. *Skorikovia* males. 1–7. *S. maxim* sp. nov. 1, 2, 7. Holotype; 3–6. Paratypes (5—from Iran, Baluchestan). 8. *S. bactriana* sp. nov., holotype. 9–10. *S. elongata* (9. Kazakhstan, Kzyl-Orda Region; 10. Kyrgyzstan). 1. Habitus, lateral view; 2, 10. Habitus, dorsal view; 3, 5, 8, 9. Genitalia, ventral view; 4. Genitalia, dorsal view; 6. T6–7; 7. Head, face view.

Key to the Palaearctic species of *Skorikovia*

Males

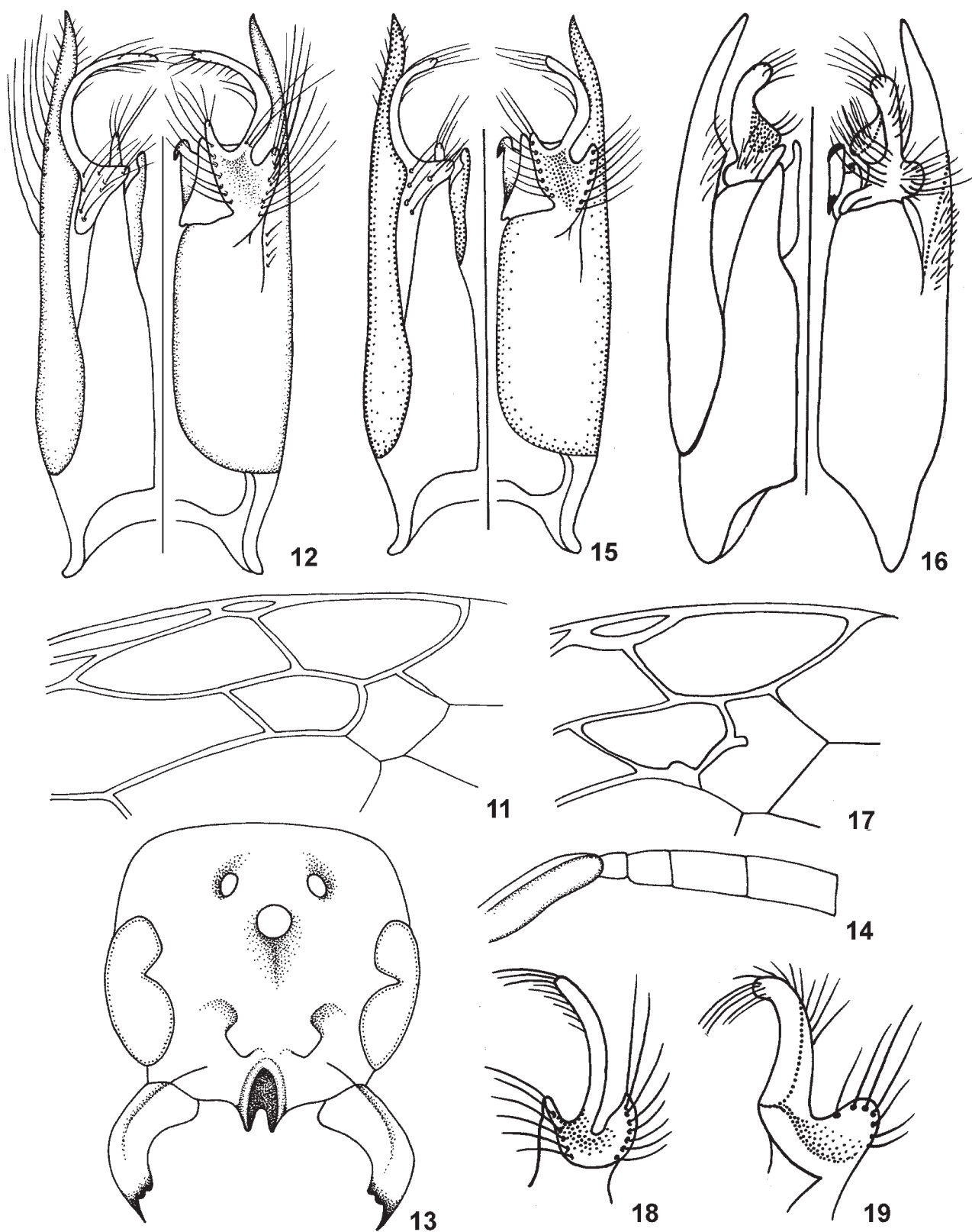
(unknown in *serta*)

1. Antenna and legs pale yellow. 6.5 mm. (Iran) *S. pallipes* (Lelej, 1985)
 - Antenna and legs black or brown, at most brownish-red 2
2. Inner metacoxal carina with apical tooth (Fig. 31) 3
 - Inner metacoxal carina without apical tooth (Fig. 34) 4
3. Ocelli small, diameter of anterior ocellus $1.1 \times$ distance between anterior and lateral ocellus (Fig. 33). Vein *2r-m* of forewing not angulate, without medial outer process (Fig. 28). 9.0–10.0 mm. Austria, Bulgaria, Croatia, Czech Republic, Greece, Hungary, Italy, Montenegro, Russia: Crimea, Dagestan, Volgograd Region, South Ural; Slovakia
..... *S. trinotata* (Costa, 1858), **comb. nov.** (= *triangularis* Radoszkowski, = *pliginskiji* Lelej)
 - Ocelli large, diameter of anterior ocellus $3.0 \times$ distance between anterior and lateral ocellus (Fig. 22). Vein *2r-m* of forewing angulate, with medial outer process (Fig. 26). 8.0–12.0 mm. Russia: Dagestan; Azerbaijan, Georgia, Turkey
..... *S. radoszkovskii* (Skorikov, 1935)
4. Ocelli small or medial, diameter of anterior ocellus equals or less than distance between anterior and lateral ocellus (Fig. 13). Posterior side of *2r-m* cell not thickened (Fig. 11). Volsella with deep basal emargination (Figs 12, 18) 5
 - Ocelli large, diameter of anterior ocellus almost $2.0 \times$ distance between anterior and lateral ocellus (Fig. 7). Posterior side of *2r-m* cell thickened (Fig. 17). Volsella with shallow basal emargination (Figs 3, 9) 6
5. Clypeus with two strong, longitudinal, slightly curved carinae that border median part and each of them ending in a strong denticle anteriorly (Fig. 13). Antennae ferruginous-red. 8.8–10.4 mm. Turkey ... *S. anatolica* Lelej in Lelej & Yildirim, 2009
 - Clypeus without two strong, longitudinal carinae medially. Antennae black.—Apical half of S8 (hypopygium) glabrous, shiny, sparsely punctate throughout. 8.0–10.0 mm. Armenia, Azerbaijan, Turkey *S. transcaucasica* (Lelej, 1985)
6. Volsellar cuspis wide (ventral view), apically weakly curved inside (Fig. 9) 7
 - Volsellar cuspis narrow (ventral view), apically strongly curved inside (Figs 3, 4).—T7 totally sculptured with black setae. T1 length less than its maximal width. 7.2–12.8 mm. Russia: Astrakhan Region, Kalmykia; Azerbaijan, North Iran, South-West Pakistan *S. maxim* sp. nov.
7. Mesosoma totally ferruginous-red (Fig. 10). T1 lateral length $0.7 \times$ T2 lateral length; T1 basally reddish. T2 above felt line with dense punctures, interspaces less diameter of punctures 8
 - Mesosoma ferruginous-red with brownish-red propodeum and pleurae beneath (Fig. 53). T1 lateral length $0.5 \times$ T2 lateral length; T1 totally reddish. T2 above felt line with sparse punctures, interspaces equal or more than diameter of punctures.—Head reddish-brown with darker vertex. 10.0–12.0 (Egypt, Libya) *S. sanguinicollis* (Klug, 1829)
8. Basivolsella weakly widened, without lobe, cuspis more or less parallel to gonostyle (Fig. 9). POD:OOD 1.3–1.4. T2 disc with dense punctures. 8.0–16.5 mm. Russia: Stavropol Krai; Azerbaijan, Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, and North Iran *S. elongata* (Radoszkowski, 1885)
 - Basivolsella with distinct external lobe, cuspis curved inwards (Fig. 8). POD:OOD 1.0–1.1. T2 disc with sparse punctures. 7.2–12.0 mm. Afghanistan, Tajikistan *S. bactriana* sp. nov.

Females

(unknown in *anatolica*, *bactriana*, *pallipes*, *transcaucasica*, and *sanguinicollis*)

1. T2 with one medial subbasal spot of pale setae, without lateral subbasal spot of pale setae visible above 4
 - T2 with one medial and two lateral subbasal spot of pale setae, lateral ones visible above 2
2. Basomedial spot of white setae on T2 larger, more or less quadrangulate, distance between it and apical band of white setae less than its diameter; apical band of T2 sharply narrowed laterad and medially wider than band of T3 3
 - Basomedial spot of white setae on T2 smaller, more or less rounded, distance between it and apical band of white setae more than its diameter; apical band of T2 shallowly narrowed laterad and medially narrower than band of T3. 5.0–8.0 mm
..... *S. trinotata* (Costa, 1858)
3. T2 basally with distinct lateral spots of pale setae. Pronotum medially black. T4–5 with black setae. 6.8–7.2 mm
..... *S. radoszkovskii* (Skorikov, 1935)
 - T2 basally with scarcely visible lateral spots of pale setae. Pronotum medially red. T4–5 with ferruginous-golden setae, laterally with spot of white setae. Russia: South Ural. 6.0 mm *S. sarta* (Radoszkowski, 1885)
4. Scutellar scale wide, half of propodeal width. Lateral and posterior propodeal faces separated by wavy carina without teeth. 5.5–8.5 mm. *S. elongata* (Radoszkowski, 1885)
 - Scutellar scale narrow, one third of propodeal width. Lateral and posterior propodeal faces separated by wavy carina with few tubercles. 5.6 mm *S. maxim* sp. nov.



FIGURES 11–19. *Skorikovia*, males. 11–14. *S. anatolica*, holotype; 15. *S. trinotata* (paratype of *pliginskiji*), Crimea; 16, 17. *S. elongata*, Betpakdala, Central Kazakhstan; 18. *S. transcaucasica*, holotype; 19. *S. radoszkovskii*, Dagestan, Makhachkala. 11, 17. Forewing; 12, 15, 16. Genitalia (right part ventral view, left part dorsal view). 13. Head; 14. Scape, pedicel and F1–3. 18, 19. Volsella, dorsal view. (11–14 from Lelej & Yildirim 2009; 15–19 from Lelej 1985).

1. *Skorikovia anatolica* Lelej in Lelej & Yildirim, 2009

(Figs 11–14)

Skorikovia anatolica Lelej in Lelej & Yildirim, 2009: 17, 20, ♂, holotype, ♂, Turkey: Ankara: Şereflikoçhisar, 8.VII.1998 [EMET], examined; Pagliano *et al.* 2020: 187.

Diagnosis. MALE. Inner metacoxal carina without apical tooth. Ocelli small or medial, diameter of anterior ocellus equals or less than distance between anterior and lateral ocellus. Posterior side of *2r-m* cell not thickened. Volsella with deep basal emargination. Clypeus with two strong, longitudinal, slightly curved carinae that border median part and each of them ending in a strong denticle anteriorly. Antennae ferruginous-red. Body length 8.8–10.4 mm. FEMALE. Unknown.

Material examined. Holotype of *S. anatolica* and paratype of *S. anatolica*, 1 ♂, Turkey: Erzincan: 1250 m, 18.VII.1997 (identified by G. Pagliano as *Skorikovia pliginskiji*) [IBSS].

Distribution. Turkey (Ankara, Erzincan).

2. *Skorikovia bactriana* Lelej, sp. nov.

(Fig. 8)

Smicromyrme (s. str.) *elongata*: Lelej & Kabakov 1980: 194, ♂, part. (Afghanistan).

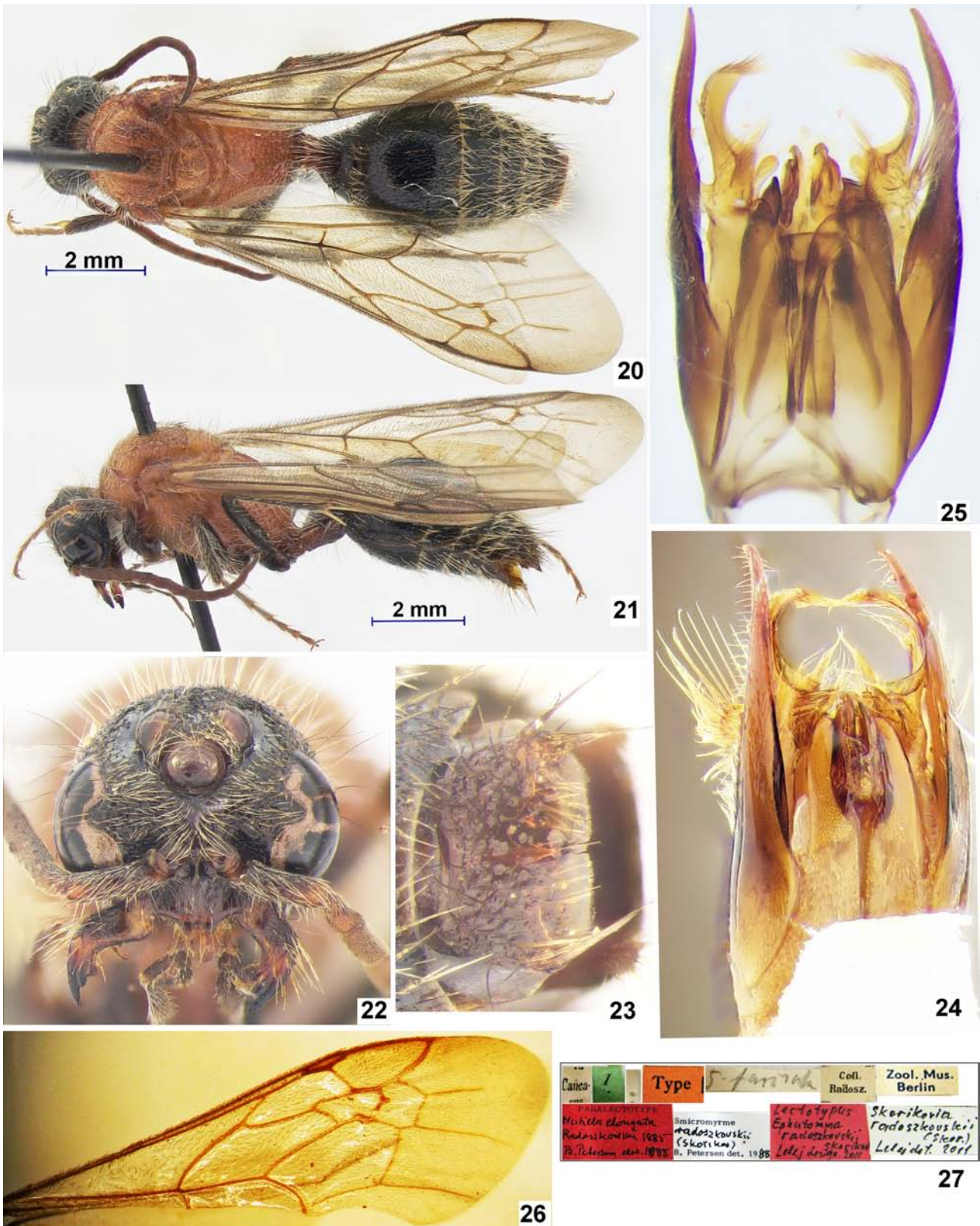
Diagnosis. MALE. Inner metacoxal carina without apical tooth. Ocelli large, diameter of anterior ocellus 1.5–2.0 × distance between anterior and lateral ocellus. Volsellar cuspis wide, apically curved inside. Basivolsella with distinct external lobe. Body length 7.2–12.0 mm. FEMALE. Unknown.

Description. MALE. Body length 7.2–12.0 mm. *Head.* Head width 0.8 × mesosoma width (including tegulae), converging behind eyes (in dorsal view). Occipital carina visible above. Clypeus more or less smooth with few setae, median triangular part bordered by weak carinae, each ending in tubercle. Scape clearly bicarinate below. Ocelli large, POD:OOD 1.2 ×; diameter of anterior ocellus 1.5–2.0 × distance between anterior and lateral ocellus. Length of F1 equal to its width. Ratio of pedicel and F1–3 1.0:1.3:2.8:2.5. Antennal-ocular carina well developed, curved, with distinct tubercle. Mandible tridentate with curved upper carina, subbasal ventral tooth dilated. Frons dense, vertex sparsely punctate. *Mesosoma.* Mesosomal humeral angles rounded. Mesoscutum with complete notauli and short parapsids. Posterolateral scutal carina well developed. Posterior coxae carinate medially, carina not denticulate apically. Tegulae not protruding beyond scuto-scutellar suture, shiny, glabrous, with few punctures medially and anterad. Propodeum gently sloping, with dorsal basomedial elongate cell limited posterad by transverse carina. Forewing venation as in Fig. 10. *Metasoma.* S1 carinate inferiorly. T2 with long whitish lateral felt line, such line twice shorter on S2. T2 disk sparsely punctate. T7 without median emargination apically, densely punctate, sparser apically. S8 (hypopygium) not concave, punctate throughout. Basivolsella with distinct outer lobe, cuspis curved inwards (Fig. 8). *Coloration.* Head black with reddish brown clypeus. Antennae brownish. Mandibles brownish red with black tip. Mesosoma ferruginous. Legs ferruginous-red with darker coxae and femora. Metasoma black with brownish S1 and S8. Wings hyaline with brown and pale brown veins, forewing (distal to cells) slightly infuscate. Body and legs covered with subpressed short and scattered long erect pale setae, black on disc of T2 and T5–7. T1 and S2–4 with apical sparse whitish fringe. Posterior margin of T2 and T3–4 with band of whitish setae.

Material examined. (16♂). Holotype, ♂, **Afghanistan**, Central Afghanistan, Hazarajat, Pass Kunak, 3200 m, mountain forest-steppe, 29.VII.1970, O. Kabakov [IBSS]. Paratypes: Afghanistan, Nuristan, Kamdesh, 1400–2200 m, 15–20.IX.1971, 1♂, O. Kabakov [IBSS]; Afghanistan, Mayden Wardak Prov., SW of Kabul, Chak-i-Vardak, 10–12.VII.1971, 1♂, O. Kabakov [IBSS]; Tajikistan, Hissar Range, Varsob valley, on light, 29.VII.1978, 1♂, A. Zykov [IBSS]; Tajikistan, north end of Vakhsh Range, 3 km south of Nurung, on light, 10.VIII.2006, 2♂, S. Ovtchinnikov [ZIN]; Tajikistan, Tigrovaya Balka reserve, Korolevskaja Dacha, on light, 1–3.VIII, 1.IX.2006, 10♂, S. Ovtchinnikov [ZIN].

Distribution. Afghanistan, Tajikistan.

Etymology. The specific name originates from the Bactria or Bactriana, an ancient Iranian civilization in Central Asia based in the area south of the Oxus River (modern Amu Darya) and north of the mountains of the Hindu Kush, an area in the north of modern Afghanistan, referring to the area where this species is found. Treat as a noun in apposition.



FIGURES 20–27. *Skorikovia radoszkovskii*, ♂. 20–24. Dagestan; 25. Georgia; 26, 27. Lectotype, Caucasus. 20. Habitus, dorsal view; 21. Habitus, lateral view; 22. Head, face view; 23. S8, ventral view; 24. Genitalia, dorsal view; 25. Genitalia, ventral view; 26. Forewing; 27. Labels.

3. *Skorikovia elongata* (Radoszkowski, 1885)

(Figs 9, 10, 16, 17, 35, 36, 44, 47)

- Mutilla quinquefasciata* (nec Olivier 1811): Radoszkowski 1877: 29, tab. 3, fig. 4, ♂ nec ♀ (Samarkand, 31.I.1869—Uzbekistan, vicinities of Samarkand, 655 m).
- Mutilla elongata* Radoszkowski, 1885: 17, fig. 13, ♂, lectotype (designated by Lelej *et al.* 2022: 73), ♂, “Caucasus / MLOCK[osewitz] / 2 / *elongata* [handwritten] / Type / Coll. Radosz[owski] / Zool. Muz. Berlin / Paralectotype *Mutilla elongata* Radoszkowski 1885, B. Petersen des. 1988 / *Smicromyrme elongata* (Rad.), B. Petersen det. 1988 / *elongata* [handwritten] / Lectotypus *Mutilla elongata* Rad. Lelej design. 2011 / *Skorikovia elongata* (Rad.) Lelej det. 2011” [MNHU], examined; Radoszkowski 1893: 74, ♂ (Transcaspia); Dalla Torre 1897: 34, ♂; André 1899a: 19, ♂.
- Mutilla turanica* Morawitz, 1893: 392, ♂ nec ♀ (Turkestan [Tajikistan]).
- Mutilla (Ephutomma) elongata*: André 1899: 19, ♂ (Caucasus, Iran); 1901: 155, ♂ (Turkestan, Caucasus, Iran).
- Mutilla (Ephutomma) elongata* var. *pura* André, 1901: 155, ♂, syntypes: Turkestan. Junior subjective synonym of *Skorikovia elongata* according to Lelej 2002: 64.
- Ephutomma elongata*: André 1902c: 20, ♂; Bischoff 1920: 155, ♂.
- Ephutomma elongata* var. *pura*: André 1902c: 20, ♂;
- Smicromyrme elongata*(!): Lelej 1978: 81, ♂.
- Smicromyrme ambiguus* Skorikov, 1935: 315, ♀, lectotype (designated by Lelej 1985: 230): Tashkent [Uzbekistan], 10.V.1930, [V.V.] Gussakovskij [ZIN], examined. Junior subjective synonym of *Skorikovia elongata* according to Ovtchinnikov 2002: 95.
- Smicromyrme (Eremotilla) ambiguus*: Lelej 1985: 230, ♀
- Smicromyrme (Eremotilla) baigacumus* Skorikov, 1935: 314, ♀, holotype, Baigakum bei Dzhulek [Kazakhstan, Kyzylorda Region], 14.VI.1912, L. Wolmann [ZIN], examined. Junior subjective synonym of *Smicromyrme ambiguus* according to Lelej 1985: 230.
- Smicromyrme (Eremotilla) gracilis* Skorikov, 1935: 315, ♀, lectotype (designated by Lelej 1985: 230): Dzhulek, Syr-Darjinskaya oblast [Kazakhstan, Kyzylorda Region], 1.VII.1913, A. Gutbir [ZIN]. Junior subjective synonym of *Smicromyrme ambiguus* according to Lelej 1985: 230.
- Smicromyrme (Eremotilla) kuznetzovi* Skorikov, 1935: 315, ♀, lectotype (designated by Lelej 1985: 230): Khumsan [Uzbekistan, Tashkent Region], 6.VII.1922, N. Kuznetsov [Kuznetsov-Ugamskij] [ZIN], examined. Junior subjective synonym of *Smicromyrme ambiguus* according to Lelej 1985: 230.
- Smicromyrme persus* Skorikov, 1935: 316, ♀, part.
- Smicromyrme tekensis* Skorikov, 1935: 317, ♀, part.
- Smicromyrme (Nemka) elongatus*: Lelej 1985: 243, ♂.
- Skorikovia elongata*: Ovtchinnikov 2002: 95, ♂, ♀; Lelej 2002: 64; Lelej & Yildirim 2009: 20; Lelej 2017: 155; Pagliano *et al.* 2020: 187.

Diagnosis. MALE. Ocelli large, diameter of anterior ocellus almost $2.0 \times$ distance between anterior and lateral ocellus, POD:OOD 1.3–1.4. Mandible tridentate with large subventral tooth. Inner metacoxal carina without apical tooth. Posterior side of *2r-m* cell thickened T2 disc with dense punctures. Volsellar cuspis wide, apically weakly curved inside. Basivolsella weakly widened, without lobe, cuspis more or less parallel to gonostyle. Body length 8.0–16.5 mm. FEMALE. T2 with one medial subbasal spot of pale setae, without lateral subbasal spot of pale setae visible above. Scutellar scale wide, half of propodeal width. Lateral and posterior propodeal faces separated by wavy carina without teeth. Pygidial area triangular-elongated, basally weakly curved and widened, lateral carina weakly widened apically; densely longitudinally striate, striae slightly divergent from median line. Body length 5.5–8.5 mm.

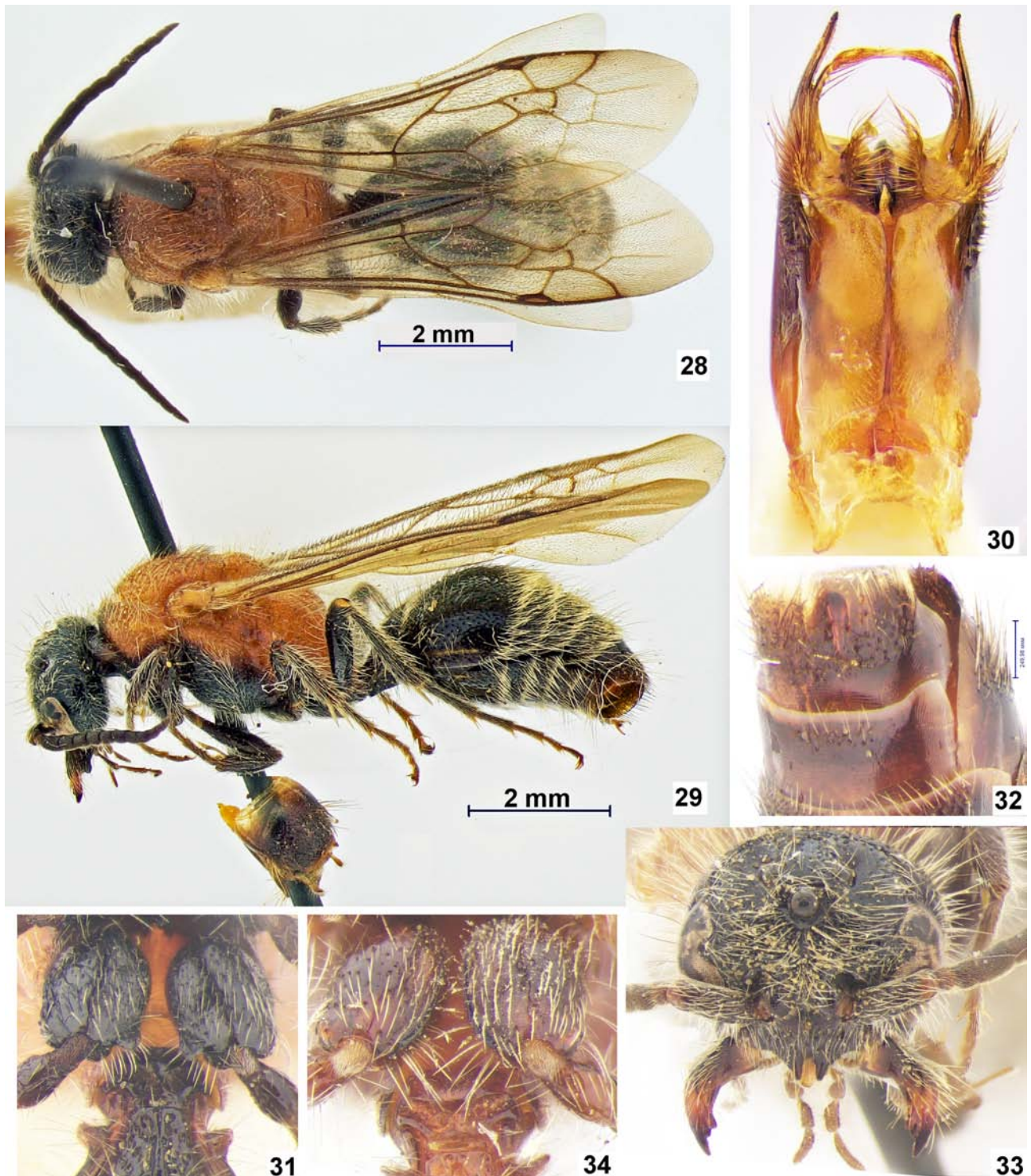
Material examined. (107 ♂, 71 ♀). **Type material.** Lectotype of *Mutilla elongata* Radoszkowski, ♂ [MNHU]. **Paralectotype** of *Mutilla turanica* Morawitz, 1♂, Turkestan [Tajikistan, Sughd Prov.], Seravschan River, Darch [Darg, 39°34'54"N, 68°98'14"E], 1892, [D.K.] Glasunov [ZIN]. **Lectotype** of *Smicromyrme ambiguus* Skorikov [ZIN]. **Paralectotypes** of *S. ambiguus* Skorikov: 1♀ with the same data as lectotype; 1♀, Turkestan, Sirdaryo Region, Khumsan [Uzbekistan, Tashkent Region], 16.VII.1922, [N.N.] Kuznetsov-[Ugamskij]; 2♀, Ketmen-Tebe [Kyrgyzstan, Jalal-Abad Region], Chychkan River, 6.VIII.1930, [L.V.] Bianchi; 2♀, Kumak, NW Bukhara [Uzbekistan, Bukhara Region, Quyi Qumoq], 11.VI.1929, [L.S.] Zimin; 1♀, Kuropatkino, Samarkandskaya Oblast [Uzbekistan, Jizakh Region, Lalmikor, 39°56'30"N 67°27'30"E], 20.VIII.1930, [V.V.] Gussakovskij; 1♀, “Zivar, Bukhara”, 2200 m [?Tajikistan], 3.VII.1929, [E.A.] Kuznetsova; 1♀, Vostochnaya Fergana, Kugartskaya dolina [Kyrgyzstan, Jalal-Abad Region, Kugart Valley], 5.IX.1921, [N.N.] Kuznetsov-[Ugamskij] [ZIN]. **Holotype** of *S. baigacumus* Skorikov [ZIN]. **Lectotype** of *S. gracilis* Skorikov [ZIN]. **Paralectotypes** of *S. gracilis* Skorikov: 1♀, Changir, NW Bukhara [Uzbekistan, Navoiy Region, 9 km SW Khatirchi [Yangirabod]], 6.V.1930, [L.S.] Zimin;

1♀, NW Bukhara, Yargak near Khatirchi [Uzbekistan, Navoiy Region, Yangirabod], 18.VI.1928, [L.S.] Zimin; 3♀, same place, 26.V.1928, 13.VIII.1928, and 23.VIII.1928, [L.S.] Zimin; 1♀, NW Bukhara, Saraj-Ljalin near Khatirchi [Uzbekistan, Navoiy Region, Yangirabod], 7.VIII.1928, [L.S.] Zimin [ZIN]. **Lectotype** of *S. kusnetsovi* Skorikov [ZIN]. **Paralectotypes** of *S. kusnetsovi* Skorikov: 1♀, Aktash [Uzbekistan, Samarkand Region], 2.VII.1922, [N.N.] Kuznetsov-[Ugamskij]; 1♀, Changir, Saravshan River [Uzbekistan], 20.VI.1930, [L.S.] Zimin [ZIN]. **Paralectotype** of *S. persus* Skorikov, 1♀, Katta-Kurgan [Uzbekistan, Samarqand Region], 14.VII.1931, [V.V.] Gussakovskij [ZIN]. **Paralectotypes** of *S. tekensis* Skorikov: 1♀, Kumak, NW Bukhara [Uzbekistan, Bukhara Region, Quyi Qumoq], 11.VI.1929, [L.S.] Zimin; 1♀, same place, 15.VII.1929, [L.S.] Zimin [ZIN]. **Additional material. Kazakhstan:** Almaty Region: 1907, 2♂, [V.N.] Shnitnikov [ZIN]; Charyn River, 12–16.VII.1965, 2♀, Litvinova [IBSS]; same place, 15.VII.1965, 1♀, Beklemishev [IBSS]; same place, 10–11.VII.1968, 2♀, A. Lelej [IBSS]; same place, on light, 11.VII.1968, 2♂, A. Lelej [IBSS]; Ketmen Ridge, Podgornoye, 1000 m, 4–7.VII.1968, 8♀, A. Lelej [IBSS]; vicinity of Almaty, 17.VIII.1956, 1♀, P. Lehr [IBSS]; same place, 30.VI, 2.VII.1968, 2♀, A. Lelej [IBSS]; same place, 29.VI.1969, 3♀, A. Lelej [IBSS]; same place, 16, 24.V, 14.VI.1970, 5♀, A. Lelej [IBSS]; same place, 13.VII.1972, 5♀, A. Lelej [IBSS]; 2 km SE Almaty, Alatau, 1300 m, 12.VIII.1972, 2♀, A. Lelej [IBSS]; Almaty, NE of Dzanashar, 9.IX.1972, 2♀, P. Lehr [IBSS]; Ili River, 80 km NW Kapchagai, 13–14.VI.1980, 6♀, P. Lehr [IBSS]; North of Shonzhy, 20.VII.1968, 1♀, P. Lehr [IBSS]; Ili River, near Malaisary, 18.V.1982, 1♀, G. Nikolaev [IBSS]. Kyzylorda Region: Central Betpakdala, 10.VII.1960, 4♂, M. Malkovsky [IBSS]; Terekhtykumy, 15.VII.1980, 8♂, G. Nikolaev [IBSS]; Karaganda Region: 20 km W Balkhash city, 23.VII.1973, 1♂, V. Kazenas [IBSS]; Jambyl Region: Antonovka, 22.VIII.1972, 1♂, V. Kazenas [IBSS]; Muyunkum desert, 31.V.1969, 1♀, A. Lelej [IBSS]; Turkistan Region: Parkhara [Dzetysai], 16.IX.1957, 4♂, E. Luppova [IBSS]; Zhetysu, 1924, 1♂ [ZIN]. Aktobe Region: North of Lesser Barsuki desert, 13–20.VIII.1931, 2♂, E. Luppova [ZIN]; Atyrau Region: Lake Inder, 6–8.VII.1909, 8♂, B.P. Uvarov [ZIN]. **Kyrgyzstan:** Fergana valley, near Suzak, 13.VII.2000, 2♀, S. Ovtchinnikov [ZIN]; Issyk-Kul Valley, Karakol Lake, 23.VII.2000, 1♀, S. Ovtchinnikov [ZIN]; east end of Kyrgyz Range, Orto-Tokai water reserve, 21.VII.1997, 1♀, S. Ovtchinnikov [ZIN]; same place, 15.VIII.1998, 2♂, S. Ovtchinnikov [ZIN]; Fergana Range, East of Urumbash, 14.VII.2000, 1♀, S. Ovtchinnikov [ZIN]; Urumbash, 20 km W Kazaman, on light, 42°22'N 73°49'E, 14.VII.1999, 4♂, S. Ovtchinnikov [ZIN]; same place, 1600 m, 5.VIII.2004, 2♂, D. Milko [ZIN]; Susamyr Mts., Kokomeren River, Kyzyluy, on light, 31.VII.2000, 2♂, E. Rutian [ZIN]; same place, 41°43'N 74°08'E, on light, 16.VII.1994, 1♂, D. Milko [ZIN]; Alai Mts., Ok-Suu Ravine, on light, 39°31'N 71°40'E, 2500 m, 19.VIII.2006, 2♂, D. Milko [ZIN]; Alai, Zarkar Ravine, 9 km NW Aidarken, on light, 39°58'N 71°18'E, 1872 m, 12.VIII.2006, 1♂, D. Milko [ZIN]; Issyk-Kul valley, Terskei, Kadzhisai, 1650 m, on light, 5.VIII.2000, 2♂, E. Rutian [ZIN]; same place, on light, 1.VIII.2003, 2♂, D. Milko & V. Dubatolov [ZIN]; Issyk-Kul, Ak-Ulen, on light, 1700 m, 42°20'N 76°08'E, 12.VIII.2003, 1♂, D. Milko [ZIN]; Toguz-Toroo, Kendyk Ravine, on light, 18.VII.1997, 12♂, S. Ovtchinnikov [ZIN]. Talas River valley, 8 km NW Klyuchevka, 1.VIII.1983, 1♀, V. Kazenas [IBSS]. **Uzbekistan:** Chumgan, on light, 27.VIII.2007, 4♂, S. Ovtchinnikov [IBSS]. **Iran:** Semnan Prov., Elburs Mts., Sefi Kuh Mts., 50 km SWW Damghan, ca. 6 km NW Tuyh, 1900–2300 m, 36°04'N 53°49'E, 3.VII.2010, 1♂, A. Timokhov [IBSS]; Semnan Prov., Elburs Mts., ca. 60 km W Damghan, vic. Foulad Mahalleh, 2000–2300 m, 36°06'N 53°43'E, 4.VII.2010, 18♂, A. Timokhov [IBSS]; Semnan Prov., Elburs Mts., 8 km NW Shahmirzad, ca. 10 km SSW Chashm, 2230–2700 m, on light, 35°49'N 53°15'E, 6.VII.2010, 2♂, A. Timokhov [IBSS]; Golestan Prov., Gorgan, Almeh valley, 1600m, 19–20.VII.1985, 1♂ [IRIPP]. **Azerbaijan:** Elisavetpol [Ganja], without additional data, 2♂ [ZIN]; Azerbaijan: Disar [Bashkend] near Ordubad, 19–23.VII.1933, D. Znoiko, 4♂ [ZIN]. **Armenia:** Inaklyu, Alagez, 25.VII.1934, 2♂, M. Ryabov [ZIN]. **Russia:** Ставропольская губерния, мечеть Нур-Магомед, 10.VII.1911, 5♂, B.P. Uvarov [ZIN].

Distribution. Russia: Stavropol Krai; Azerbaijan, Armenia, Kazakhstan (except Northern), Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan, and Iran.

Natural history. Observations of females were made at the foot of the northern slope of the Ketmen Ridge (Tien Shan Mts., Kazakhstan, Almaty region, Kyrgyzsai (Podgornoye), 43°19'44"N 79°28'42"E, 1000 m), 4–7 July 1968. Females of *Skorikovia elongata* were found in plain areas with rare plants of *Sophora* sp. and *Artemisia* sp. In the first half of the day the females moved to the east, in the afternoon—to the west. The average speed of the female during the movement was about 2 m/min. During the observation (1 hour), the position of the female changed by 22 m. During movement, vibration of the female's antennae was fast. Sometimes the female visited the top of *Sophora* plants. The entrance of the ground-nesting host or the ground near the entrance was examined particularly carefully by the female, who returned to the host nest several times. During this process, the vibration

of the female's antennae became slower. In case of danger, a wasp would crawl into a crack in the soil, under pieces of dry stems, and remain immobile for one to two minutes. During the night, the wasps climbed under pieces of old dry stems, lumps of soil.



FIGURES 28–34. *Skorikovia*, males. 28–33. *S. trinotata* (*pliginskiji*, paratype, Crimea); 34. *S. maxim* **sp. nov.**, paratype. 28. Habitus, dorsal view; 29. Habitus, lateral view; 30. Genitalia, ventral view; 31, 34. Metacoxae, ventral view; 32. S7–8, ventral view; 34. Head, face view.

Like many mutillids, the females of *Skorikovia elongata* are thermophilic and stenothermic. As a result, their activity is periodic: in the first and second halves of the day. According to my observations in the south of

Kazakhstan, on sunny days females of the mutillid are usually more active in the second half of the day, as a result of the rapid heating of the soil in the morning and its slow cooling in the evening. On cloudy days the activity of mutillid females changes. According to Nonveiller (1960, 1963), mutillid females on the Balkan Peninsula were active from seven to nine hours in the morning and from 16 to 18 hours in the evening at soil temperatures ranging from 28–30° to 40–42°C.



FIGURES 35–43. *Skorikovia*, females. 35, 36, *S. elongata*, South-East Kazakhstan; 37, 38, *S. maxim* sp. nov., paratype; 39, 40, *S. radoszkovskii*, Dagestan; 41, 42, *S. trinotata*, Volgograd, Russia; 43, *S. sarta*, lectotype, montage. 35, 37, 39, 41, 43, dorsal view; 36, 38, 40, 42, lateral view.

Remarks. Of two specimens identified by Radoszkowski as *Mutilla quinquefasciata* in the collection of A.P. Fedtschenko [ZMMU] (Radoszkowski 1877), the female belongs to *Myrmilla (Eurygnathilla) ephutommatina* Skorikov, 1927, and the male to *Skorikovia elongata* (Radoszkowski, 1885).

Mlokosievich (Ludwik Aleksander Młokosiewicz, Mlokosevitz, Mlokosewicz) collected the specimens in Georgia, Dagestan, Azerbaijan, North Persia (Elburz Mountains), Greater Ararat (1889, currently in Turkey). Many new taxa were described by O.I. Radoszkowski based on his material but only in few cases definite points were recorded: *Anthophora mlokosewiczii* Radoszkowski, 1884 (Dzurmut-czaj [Dzhurmut River, Dagestan]); *Anthophora rugosa* Radoszkowski, 1884 (Demavend [North Iran, Elburz Mountains]); *Bombus wolkonskii* Radoszkowski, 1888 (Dagestan, Salty [Salta, Dagestan]); “grand Ararat, between Sardar-Abadu [Sardarapat, Armavir] and Sarabandy, 13000', 20–21.VIII.1889” [Turkey, Greater Ararat, almost 4000 m] (Radoszkowski 1890). The specimens collected in North Persia (Elburz Mountains, 1878–1879) have the printed label “Persia” and handwritten label “Demavend”; specimens collected in Greater Ararat (1889) have the printed label “Ararat”, while most of the specimens collected in 1867–1889 in Georgia, Dagestan, and Azerbaijan were labelled by printed label “Caucasus”.

A long series of males of *Skorikovia elongata* has been collected from Kyrgyzstan (Ovtchinnikov 2002) and south-eastern Kazakhstan. In these areas the genus *Skorikovia* is represented by only one species. The female of *S. ambigua* may eventually be recognized as the opposite sex of this species, based on their co-occurrence in these areas. There is no direct evidence (pair collected *in copula*) to support this relationship.

4. *Skorikovia maxim* Lelej, sp. nov.

(Figs 1–7, 34, 37, 38, 45, 48)

Mutilla lezginica Radoszkowski, 1885: 16, ♂ nec ♀, fig.12.

Diagnosis. MALE. Inner metacoxal carina without apical tooth. Ocelli large, diameter of anterior ocellus $2.0 \times$ distance between anterior and lateral ocellus. T1 length less than its maximal width. Posterior side of *2r-m* cell thickened. Volsella with shallow basal emargination. Volsellar cuspis narrow (ventral view), apically strongly curved inside. Body length 7.2–12.8 mm. FEMALE. T2 with one medial subbasal spot of pale setae, without lateral subbasal spot of pale setae visible above. Scutellar scale narrow, one third of propodeal width. Lateral and posterior propodeal faces separated by wavy carina with few tubercles. Body length 5.6 mm.

Description. MALE. Body length 7.2–12.8 mm. *Head.* Head width $0.85 \times$ mesosoma width (including tegulae), converging behind eyes (in dorsal view). Occipital carina visible above. Clypeus slightly convex, shiny with few setae, median part anterad with two denticles. Scape clearly bicarinate beneath. Ocelli large, POD:OOD $1.5 \times$; diameter of anterior ocellus more than $2.0 \times$ distance between anterior and lateral ocellus. Length of F1 equal to its width. Ratio of pedicel and F1–3 1.0:1.8:5.0:4.5. Antennal-ocular carina well developed with distinct tubercle. Mandible tridentate with curved upper carina, excised beneath, subbasal ventral tooth dilated. Frons dense, vertex sparsely punctate. *Mesosoma.* Mesosomal humeral angles rounded. Mesoscutum with complete notauli and short parapsids. Posterolateral scutal carina well developed. Posterior coxae carinate medially, carina not denticulate apically. Tegulae not protruding beyond scuto-scutellar suture, shiny, glabrous, with few punctures inside and anterad. Propodeum gently sloping, with dorsal basomedial elongate cell limited posterad by transverse carina. Forewing venation as in Fig. 2. *Metasoma.* S1 carinate below. T2 with long whitish lateral felt line. S2 with much shorter lateral felt line. Metasomal segment 2 densely punctate. T7 without median emargination apically, punctate throughout. S8 (hypopygium) not concave, punctate throughout, with longer brownish setae laterally. Volsellar cuspis narrow (ventral view), apically strongly curved inwards (Figs 3, 4). *Coloration.* Head brownish-red. Mesosoma ferruginous with slightly darker tegula. Antennae brownish. Mandibles brownish-red with black apex. Legs brownish red with darker coxae and femora. Metasoma black with brownish S1 and S8. Wings hyaline with brown and pale brown veins, forewing (distal to cells) slightly infuscate. Body and legs covered with subpressed short and scattered long erect pale setae, black on disc of T2 and T5–7. T1 and S2–5 with apical sparse whitish fringe. Posterior margin of T2 and T3–4 with band of whitish setae.

FEMALE. Body length 5.6 mm. *Head.* Ratio of distance between eyes / long eye diameter $1.5 \times$. Eyes elongated, slightly convex, not prominent in head profile. Clypeus basomedially with developed process. F1 equal to F2. Frons and vertex with yellowish setae not forming a distinct spot. Head behind eyes (dorsal view) rounded. Head

brownish red. *Mesosoma*. Mesosoma length $1.35 \times$ mesonotum width; scutellar scale narrow, nail-like with weak prescutellar carina. Mesosoma ferruginous, pleurae and legs brownish. Mesosoma dorsally with subappressed and erect yellowish setae, black on anterior margin of pronotum. *Metasoma*. Metasomal segment 1 brown, posterior margin of T1 with fringe of sparse pale setae. T2 basally with large medial spots of pale setae, apically with band of pale setae widened medially. T3 with band of pale setae, T4–5 with black setae. T6 with lateral tuft of brown setae. Pygidial area widened basally, coarsely sculptured with striae reaching posterior margin. Metasoma ventrally with sparse pale setae, S2–5 with fringe of pale setae.

Material examined. (492 ♂, 1 ♀). Holotype, ♂, **Russia**: Astrakhan Region, 13 km S Liman, on light, 24.VII.2015, M. Proshchalykin, M. Mokrousov [IBSS]. Paratypes. **Russia**: same place, on light, 24.VII.2015, 259♂, M. Proshchalykin, M. Mokrousov [IBSS, ZIN]; same place, on light, 25.VII.2015, 188♂, M. Proshchalykin, M. Mokrousov [IBSS, ZIN]; same place, 25.VII.2015, 1♀, V. Loktionov, M. Proshchalykin, M. Mokrousov [IBSS]; Kalmykia, 17 km SSW Artezian, Kuma River, 20.VII.2015, 3♂, V. Loktionov, M. Proshchalykin, M. Mokrousov [IBSS]. **Azerbaijan**: Gobustan, 5 km ZW Jangi, 21.VII.2006, 1♂, H. Aliev [IBSS]. **Iran**: Semnan Prov., Shahkum Mts., ca. 22 km NW Shahrud [Imamshehr], ca. 4 km E Tahat, 2100–2500 m, 36°31'N 54°45'E, 27.VI.2010, 2♂, A. Timokhov [IBSS]; Elburs Mts., ca. 60 km W Damghan, vic. Foulad Mahalleh, 2000–2300 m, 36°06'N 53°43'E, 4.VII.2010, 1♂, A. Timokhov [IBSS]; Elburs Mts., 8 km NW Shahmirzad, ca. 10 km SSW Chashm, 2230–2700 m, on light, 35°49'N 53°15'E, 6.VII.2010, 9♂, A. Timokhov [IBSS]; Hamadan Prov., Bartar, 2350 m, 8.VIII.1997, 2♂ [IRIPP]; Mahnian, 2100m, 3.III.1987, 1♂ [IRIPP]; Azerbaijan Sharghi Prov., Tabriz, Miavchal, 9.III.1966, 1♂ [IRIPP]; West Azerbaijan, 30 km SEE Maku, near Sufi, 39°10'N 44°50'E, 18.VII.2005, 11♂, S. Ovtchinnikov [ZIN]; Yazd Province, Plateau of Iran, 12 km SE Ardakan, 32°17'N 54°03'E, 20.VII.2005, 10♂, S. Ovtchinnikov [ZIN]; Sistan and Baluchestan, 20 km NW Mirjaveh, 29°07'N 61°19'E, 24.VII.2005, 1♂, S. Ovtchinnikov [ZIN]. **Pakistan**: Balochistan Province, 10 km W Juzzak, 29°01'N 61°33'E, 24.VII.2005, 2♂, S. Ovtchinnikov [ZIN].

Distribution. Russia (Astrakhan Region, Kalmykia), Azerbaijan, North Iran, South-West Pakistan.

Etymology. I am happy to name this species for my colleague, Maxim Yu. Proshchalykin, a bee taxonomist, who collected the large series of this species. Treat as noun in apposition.

Remarks. The female of *Skorikovia maxim* might eventually be recognized to be opposite sex of this species, based on their co-occurrence in the same site of Astrakhan Region.

5. *Skorikovia pallipes* (Lelej, 1985)

Smicromyrme (*Nemka*) *pallipes* Lelej, 1985: 216, 243, ♂, holotype, Iran, Khorasan, 16.VI.1901, H. Zarudny [at this day the specimens were collected in the Iran, Prov. Sistan and Baluchestan, mouth of the River Helmand, village Margu on left side of New Helmand River (Zarudny 1916)] [ZIN], examined.

Skorikovia pallipes: Ovtchinnikov 2002: 95, ♂; Lelej 2002: 64, ♂; Lelej & Osten 2004: 257, ♂; Pagliano *et al.* 2020: 187, ♂.

Diagnosis. MALE. Antenna and legs pale yellow. Ocelli medial size, POD:OOD $1.4 \times$. Clypeus medially weakly elevated, anterior border without denticles. F2 $2.0 \times$ F1 and somewhat longer than F3. Mesopleuron without precoxal denticle. T7 smooth apically. Cuspis of volsella thin, long. Body length 6.5 mm. FEMALE. Unknown.

Material examined. (2♂). **Type material.** Holotype of *Smicromomyrme pallipes* Lelej. **Additional material.** **Iran**: Hormozgan, 10 km W Gawbandi, 27°16'N 55°56'E, 250 m, 28.VI.2001, 1♂, T. Osten [SMNS].

Distribution. Iran (Sistan and Baluchestan, Hormozgan).

Remarks. This species occupies an isolated position in the genus *Skorikovia* due to the very light color of the body and the presence of genitalia with a long, narrow cuspis, making the volsella similar to the males of the genus *Rasnitsynitilla* Lelej in Lelej & van Harten, 2006, from which it differs by the non-shortened wings with a well-developed pterostigma and veins.

6. *Skorikovia radoszkovskii* (Skorikov, 1935)

(Figs 19–27, 39, 40, 49)

Mutilla quinquefasciata (non Olivier, 1811): Radoszkowski 1885: 15, fig. 11, ♂.

Ephutomma radoszkovskii Skorikov, 1935: 325, ♂ (Turkmenistan: Ashkhabad [Ashgabat], Repetek), lectotype, (designated Lelej

et al. 2022: 73), ♂, “Caucasus [probably collected in Georgia] / Z / Type / 5-fasciata [handwritten] / Coll. Radosz[owski] / Zool. Muz. Berlin / Paralectotype *Mutilla elongata* Radoszkowski 1885, B. Petersen des. 1988 / *Smicromyrme radoszkovskii* (Skorikov), B. Petersen det. 1988 / Lectotypus *Ephutomma radoszkovskii* Skorikov Lelej design. 2011 / *Skorikovia radoszkovskii* (Skor.) Lelej det. 2011” [MNHU], examined.

Smicromyrme radoszkovskii: Lelej 1978: 81, ♂ [Russia, North Caucasus: Stavropol Terr., Dagestan; Transcaucasus, North Iran].
Smicromyrme (Nemka) radoszkovskii: Lelej 1985: 244, ♂
Skorikovia radoszkovskii: Ovtchinnikov 2002: 95, ♂; Lelej 2002: 64, ♂; Ljubomirov 2006: 88, ♂ (Turkey); Lelej & Yildirim 2009: 19, ♂ (Turkey); Lelej 2017: 155; Pagliano *et al.* 2020: 187, ♂.
Skorikovia pliginskiji: Yildirim 2006: 280, ♂ (Erzincan, Erzurum).

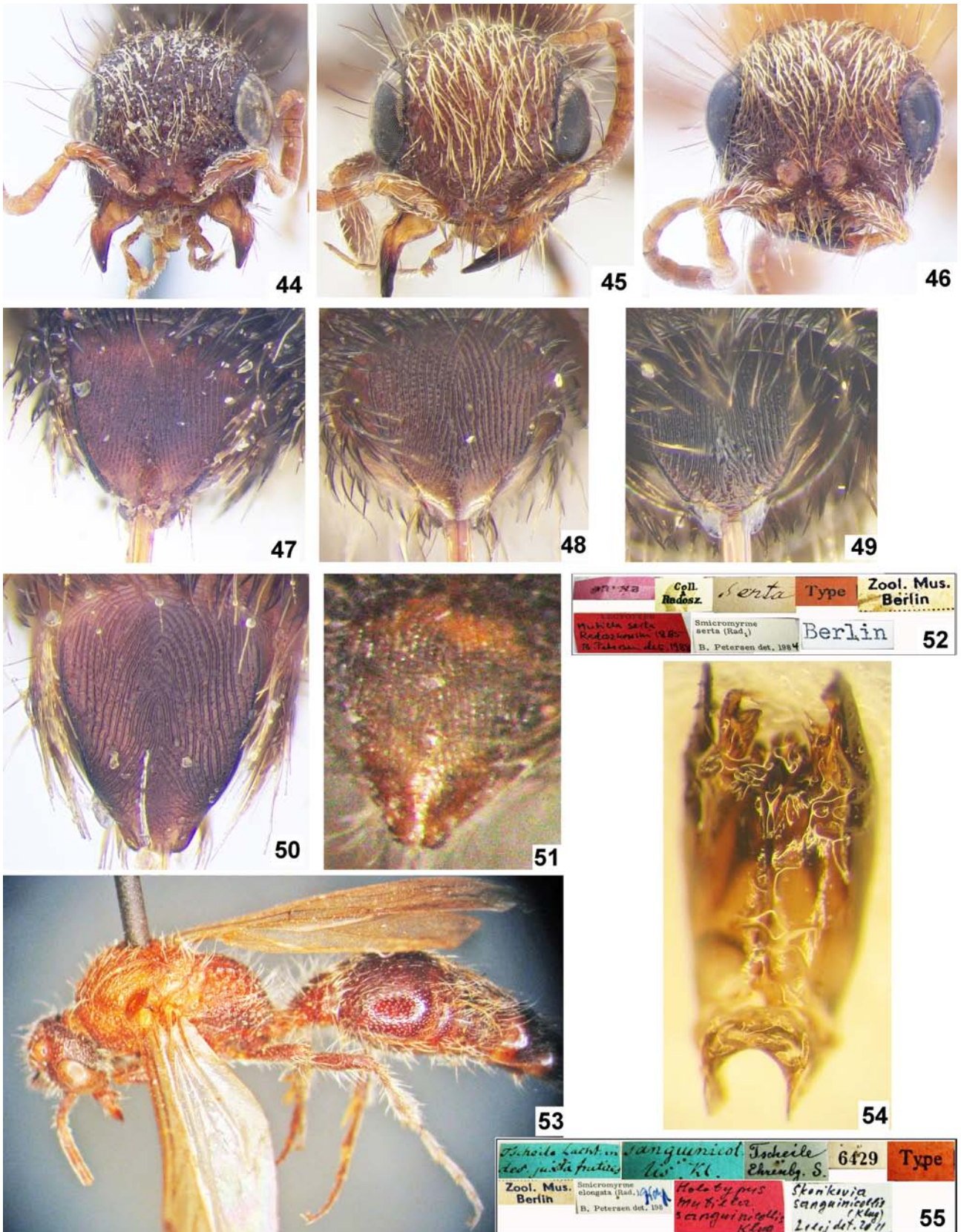
Diagnosis. MALE. Ocelli large, diameter of anterior ocellus almost $2.0 \times$ distance between anterior and lateral ocellus. Posterior side of *2r-m* cell thickened (Fig. 26). Volsella with shallow basal emargination (Figs 19, 25). Apical third of hypopygium with median shallow emargination and lateral tuft of long setae. T1 length equal or less than its maximal width; dorso-basally without visible spiracle tubercles. Body length 8.0–12.0 mm. FEMALE. Pronotum medially black. Scutellar scale narrow, nail-like with prescutellar carina. T2 laterally with distinct pale setae. T4–5 with black setae. Pygidial area widened basally, coarsely sculptured with striae reaching posterior margin, apical part not glabrous. Body length 6.8–7.2 mm.

FEMALE (hitherto unknown). Body length 6.8–7.2 mm. *Head*. Ratio distance between eyes / long eye diameter $1.35 \times$. Eyes elongated, slightly convex, not prominent in head profile. Clypeus basomedially with developed process. F1 equal to F2. Frons and vertex with yellowish setae not forming a distinct spot. Head behind eyes (dorsal view) slightly elongated. Head brownish red. *Mesosoma*. Mesosoma length $1.35 \times$ mesonotum width; scutellar scale narrow, nail-like with prescutellar carina. Mesosoma and legs ferruginous, femora and tibiae brownish. Pronotum medially black. Mesosoma dorsally with sparse yellowish setae, black on anterior margin of pronotum. *Metasoma*. Metasomal segment 1 brown, posterior margin of T1 with fringe of pale setae. T2 basally with medial and distinct lateral spots of pale setae. apically with band of pale setae strongly widened medially. T3 with band of pale setae, T4–5 with black setae, T4 with lateral tuft of whitish setae. T6 with lateral tuft of brown setae. Pygidial area widened basally, rounded apically, coarsely sculptured with striae reaching posterior margin. Metasoma ventrally with sparse pale setae, S2–5 with fringe of pale setae.

Material examined. (45♂, 2♀). **Type material.** Lectotype of *Ephutomma radoszkovskii* Skorikov. **Additional material.** **Turkey:** Erzurum: 1850 m, 22.VII.1995, 1♂, E. Yildirim leg. [EMET]; Dereboğazi, 2070 m, 11.VIII.1994, 1♂, E. Yildirim leg. [IBSS]; Konaklı, 2000–2400 m, 22.VII.2000, 3♂, E. Yildirim leg. [EMET]; Oltu, Vocational Training School, 1345 m, 20.VIII.2006, 1♂, E. Yildirim leg. [IBSS]; Şenkaya, Turnalı, 1400 m, 8.VIII.1997, 2♂, E. Yildirim leg. [EMET]. Nevşehir: Uçhisar, Kapadokia, 1450 m, 23–24.VII.1995, 2♂, J. Gelbrecht & E. Schwabe leg. [IBSS]. **Georgia:** Vardzia, 1.IX.1976, 1♂, E. Narchuk leg. [IBSS]; **Azerbaijan:** Adzhikend, 12.VII.1909, 1♂, Babadzhani [ZIN]. **Russia:** Dagestan, Petrovsk-port [Makhachkala], 27.VII–1.VIII.1926, 4♂, M. Ryabov [ZIN]; same place, 10, 17, 25.VII, 13.VIII.1926, 4♂, M. Ryabov [ZIN]; Kizlyar, Yaman-aul, sandy area, 18.VII.1927, 1♂, A. Kirichenko [ZIN]; Kumtorkale [near Makhachkala], 6.VII.1927, 1♂, M. Ryabov [ZIN]; Aleksandrdo-Nevskoe, 21.VI.1927, 1♂, G. Olsoufieff [ZIN]; Belidzhi Station, 15.IX.1926, 23.VII.1933, 4♂, M. Ryabov [ZIN]; 27 km SSE Kochubei, on light, 21–22.VII.2015, 4♂, V. Loktionov, M. Proshchalykin, M. Mokrousov [IBSS]; 4 km N Almalo, 43°08'19"N 47°12'42"E, 25.VI.2018, 14♂, Yu. Astafurova, *et al.* [IBSS]; 10 km W Aglobi, Kamyshchai River valley, 41°54'29"N 48°13'59"E, 29.VI.2018, 1♀, Astafurova *et al.* [IBSS]; Kamyshchai River valley, 41°54'29"N 48°13'59"E, 10.VI.2017, 1♀, M. Mokrousov [IBSS].

Distribution. Russia (Dagestan), Azerbaijan, Georgia, Turkey (Asian territory).

Remarks. For *Mutilla quinquefasciata* sensu Radoszkowski 1885 the new name *Ephutomma radoszkovskii* was proposed by A. Skorikov (1935) on the basis of the Radoszkowski genitalia figure (Radoszkowski 1885: Fig. 11) with distribution in Turkmenistan (Ashgabat and Repetek) (Skorikov 1935). In the Mutillidae collection of ZIN, studied by A. Skorikov, I could not find the specimens of *Skorikovia* with such genitalia from Ashgabat, where it can be mixed with *S. elongata*, and from Repetek, where *Skorikovia* species are not distributed. The specimens from the North Caucasus (Lelej 1978) have the genitalia shown by Radoszkowski (1885) and I considered them to be true *E. radoszkovskii*. Furthermore, the lectotype [MNHU] has the handwritten label O. Radoszkowski “5-fasciata”. With this lectotype designation I validated the use of *Skorikovia radoszkovskii* (Skorikov, 1935). The paralectotype label “*Mutilla elongata* Radoszkowski 1885, B. Petersen des. 1988” is not valid because O. Radoszkowski described and illustrated *Mutilla quinquefasciata* and *M. elongata* in one paper (Radoszkowski 1885) and he could not use the same specimen for two species.



FIGURES 44–55. 44, 47. *Skorikovia elongata*, female, South-East Kazakhstan; 45, 48. *S. maxim* sp. nov., female, paratype; 46, 50. *S. trinotata*, female, Volgograd; 49. *S. radoszkovskii*, female, Dagestan; 51, 52. *S. sarta*, female, lectotype. 53–55. *S. sanguinicollis*, male, holotype. 44–46. Head, face view; 47–51. T6, dorsal view; 52, 55. Labels. 53. Habitus, lateral view; 54. Genitalia, ventral view.

A long series of males of *Skorikovia radoszkovskii* has been collected from southern Dagestan. In this area the genus *Skorikovia* is represented by only one species. The female of *S. radoszkovskii* may eventually be recognized as the opposite sex of this species, based on their co-occurrence in southern Dagestan. There is no direct evidence (pair collected *in copula*) to support this relationship.

7. *Skorikovia sanguinicollis* (Klug, 1829)

(Figs 53–55)

Mutilla sanguinicollis Klug, 1829: n. 8; ♂, tab. 4, fig. 8, holotype, ♂, “Tscheile Lachterie in des[erto] juxta frutices [Egypt, Alexandria - Baker 1997] / *sanguinicollis* Kl. [handwritten] / Tscheile Ehrenberg. S. / 6429 / Type / Zool. Muz, Berlin / *Smicromyrme elongata* (Rad.) B. Petersen det. 198_ / Holotypus *Mutilla sanguinicollis* Klug / *Skorikovia sanguinicollis* (Klug) Lelej det. 2011” [MNHU], examined; Sichel & Radoszkowski 1870: 297, ♂; Dalla Torre 1897: 83, ♂.

Ephutomma sanguinicollis: André 1902c: 20, ♂; André 1910: 27, ♂; Bischoff 1920: 154, ♂; Lelej 2002: 53; Pagliano *et al.* 2020: 173.

Smicromyrme sanguinicollis: Invrea 1932: 74, ♂ (Libya).

Skorikovia sanguinicollis: Lelej & Williams 2023: 128, ♂.

Diagnosis. MALE. Inner metacoxal carina without apical tooth. Ocelli large, diameter of anterior ocellus almost $2.0 \times$ distance between anterior and lateral ocellus. Volsellar cuspis wide, apically weakly curved inside. Mesosoma ferruginous-red with brownish-red propodeum, pleurae beneath and legs. T1 lateral length $0.5 \times$ T2 lateral length; T1 totally reddish. T2 above felt line with sparse punctures, interspaces equal or more than diameter of punctures. T5–7 with black setae. Body length 10.0 mm. FEMALE. Unknown.

Material examined. (1♂). Holotype only.

Distribution. Egypt, Libya.

Remarks. This is the only African species in the genus. It does carry all the features, including of genitalia prepared by B. Petersen, of true *Skorikovia* and there are some color features that fit north African species of *Dentilla* Lelej in Lelej & Kabakov, 1980.

8. *Skorikovia sarta* (Radoszkowski, 1885), comb. nov.

(Figs 43, 51, 52)

Mutilla sarta Radoszkowski, 1885: 46, ♀, lectotype (**designated here**), “Orenb[urg] / Coll. Radozs. / *sarta* [handwritten] / Type / Zool. Mus. Berlin / Lectotype *Mutilla sarta* Radoszkowski, 1885 B. Petersen des. 1988 / *Smicromyrme sarta* (Rad.) B. Petersen det. 1984 / Berlin” [MNHU], examined in 1988 and 2011; Dalla Torre 1897: 85, ♀; André 1899a: 7, ♀. Junior subjective synonym of *Physetopoda halensis* (Fabricius, 1787) according to Lelej 1985: 203 and resurrected as *Smicromyrme sertus* according to Lelej 2002: 72.

Smicromyrme (*Smicromyrme*) *sertus*: Pagliano *et al.* 2020: 192.

Diagnosis. FEMALE. Scutellar scale narrow nail-like with prescutellar carina. T2 laterally with obscure pale setae, felt line with pale setae. T4–5 with ferruginous-golden setae. Pygidial area widened basally, coarsely sculptured with striae reaching posterior margin, apical part not glabrous. Body length 6.0 mm. MALE. Unknown

Redescription of lectotype. Body length 6.0 mm. *Head.* Head length $0.97 \times$ its width. Ratio distance between eyes / long eye diameter $1.5 \times$. Eyes elongated, weakly convex, not protruding to head profile. Clypeus basomedially with developed process. F1 slightly longer than F2. Frons, vertex and occiput with yellowish setae not forming distinct spot. Head behind eyes (dorsal view) weakly elongated. Head brown, ventrally brownish red. *Mesosoma.* Mesosoma length $1.24 \times$ mesonotum width; scutellar scale narrow nail-like with prescutellar carina. Mesosoma ferruginous-red with brown legs. Mesosoma dorsally with sparse yellowish setae, darker on pronotal anterior border. *Metasoma.* Metasomal segment 1 brown, posterior border of T1 with fringe of sparse pale setae. T2 basally with large rectangular medial spot of pale setae, apically with band of pale setae strongly widened medially and obscure lateral widening. T2 laterally with obscure pale setae, but felt line with pale setae. T3 with pale band, T4–5 with ferruginous-golden setae (instead of usual black setae), laterally with spot of white setae. T6 laterally with tuft of white setae. Pygidial area widened basally, coarsely sculptured with striae reaching posterior margin, apical part not glabrous. Metasoma ventrally with sparse pale setae.

Material examined. (1♀). Lectotype only.

Distribution. Russia (South Ural).

Remarks. The type series of *Mutilla sarta* probably includes several specimens. After Radoszkowsky's death (1895) his personal collection were given by his widow, in 1898, to the Poznan Society of Friends of the Sciences, and that in the following year a selection of some hundreds of "duplicate types" went in exchange to the MNHU. The rest of the collection, which probably numbered originally in excess of 40,000 specimens, went in exchange in 1902 to the ISEA-PAN (Baker 2004). André (1899a) was able to study the Mutillidae in the Radoszkowski collection in Poznan in 1898. He wrote about *M. sarta* in Radoszkowski's collection: "L'individu typique, provenant d'Orenbourg, me paraît simplement être une *M. pusilla* Kl., à taches latérales effacées, et présentant un cas d'albinisme consistant en ce que les poils noirs, qui recouvrent ordinairement les quatrième et cinquième segments, sont devenus d'un jaune rougeâtre" (André 1899a: 7). Børge Petersen (unpublished) labelled the specimen of *Mutilla sarta* Radoszkowski, 1885 in MNHU with Radoszkowski's handwritten label "sarta" as the lectotype, because Petersen saw additional specimen of *M. sarta* in ISEA-PAN. Since no validly published lectotype designation has yet been made, I hereby designate the specimen so labelled by Petersen as the lectotype. The lectotype has been collected by Captain V.A. Balassoglo and I.Ya. Akinin in 1879 in Orenburg in one of three localities (Ozerny, Kurala River, and Grigoryevskoye northward of Ugol'naya) (Jacobson 1902).

9. *Skorikovia transcaucasica* (Lelej, 1985)

(Fig. 18)

Smicromyrme (Nemka) transcausicus Lelej, 1985: 245, ♂, holotype, ♂, Environs of Erevan [Armenia], Berdadzor River, 28.VII.1969, V. Richter [ZIN], examined.

Skorikovia transcaucasica: Ovtchinnikov 2002: 95, ♂; Lelej 2002: 64, ♂; Lelej & Yildirim 2009: 19, 20, ♂ (Turkey); Pagliano *et al.* 2020: 187, ♂.

Diagnosis. MALE. Clypeus without two strong, longitudinal carinae medially. Ocelli small, diameter of anterior ocellus less than distance between anterior and lateral ocellus. Inner metacoxal carina without apical tooth. Posterior side of *2r-m* cell not thickened. Volsella with deep basal emargination. Apical half of S8 (hypopygium) concave, glabrous, shiny, sparsely punctate throughout. Antennae black. Body length 8.0–10.0 mm. FEMALE. Unknown.

Material examined. (7♂). **Type material.** **Holotype** of *Smicromyrme transcausicus* Lelej. Paratypes of *S. transcausicus*: A.S.S.R. [Azerbaijan], Tash-Bulag, Nukh[in]sky. u[ezd] [North Azerbaijan, Shekinsky region] 28.VI.1928, 1 ♂, O. Botsharnikov [ZIN]; Ordubad [Azerbaijan, Nakhchivan], 1892, 1 ♂, E. Reitter [ZIN]. **Additional material.** Turkey: Erzurum: 1850 m, 22.VII.1995, 1 ♂; Dereboğazi, 2070 m, 11.VIII.1994, 2 ♂ (identified by G. Pagliano as *S. pliginskiji*) [EMET]. Azerbaijan, Lerik Gilidara, 26.VII.1976, 1 ♂, Kh. Aliev [IBSS].

Distribution. Armenia, Azerbaijan, Turkey (Erzurum).

10. *Skorikovia trinotata* (Costa, 1858), **comb. nov.**

(Figs 15, 28–33, 41, 42, 46, 50)

Mutilla trinotata Costa, 1858: 22, tab. 22, fig. 5, ♀; type locality "Trovata da noi nelle adiacenze di Napoli, e dal sig G. Costa nella Terra d'Otranto" [Italy: Naples, Puglia]. Junior subjective synonym of *Mutilla quadripunctata* Olivier, 1811 according to Sichel & Radoszkowski 1870: 234. Junior subjective synonym of *Mutilla pusilla* Klug, 1835 according to André 1902b: 451. Resurrected as *Smicromyrme trinotatus* according to Pagliano & Strumia 2007: 97.

Mutilla triangularis Radoszkowski, 1865: 448, tab. 7, fig. 16, ♀, lectotype (**designated here**) [Russia], golden round label / [red label] Lectotype *Mutilla triangularis* Radoszkowski, 1865, B. Petersen des., 1987, [ISEA-PAN], examined photos of lectotype. Junior subjective synonym of *Mutilla quadripunctata* Olivier, 1811 according to Sichel & Radoszkowski 1870: 234. Resurrected as *Smicromyrme triangularis* according to Lelej 1978: 82. **Syn. nov.**

Mutilla quadripunctata (non Olivier, 1811, nec Lepeletier, 1845): Sichel & Radoszkowski 1869:157, ♀ 1870: 234, ♀, part.

Mutilla pusilla: André 1902a: 307, ♀ non ♂, part.

Smicromyrme pouzdranensis Hoffer, 1936: 157, ♀, holotype, ♀, "Stepni stran zv. Kolby u Pouzdran, okres Mikulov (v kvetnu [May] 1934), leg. A. Hoffer)" [Czech Republic: Moravia merid., Mikulov]. Junior subjective synonym of *Smicromyrme triangularis* according to Lelej & Schmid-Egger 2005: 1532.

Smicromyrme quadripunctata (non Lepeletier, 1845); Invrea 1964: 210, ♀, part.

Smicromyrme triangularis: Lelej 1978: 82, ♀, fig. 28, 12.

Smicromyrme trinotatus: Lelej 2002: 79, ♀; Pagliano & Strumia 2007: 97, ♀ nec ♂, part.; Pagliano *et al.* 2020: 203, ♀ nec ♂.

Smicromyrme (Eremotilla) triangularis: Lelej 1985: 229, ♀; Lelej 2002: 67, ♀; Lelej & Schmid-Egger 2005: 1532, ♀; Lelej 2017: 156, ♀; Muskovits & György 2011: 38, 108, ♀ (Hungary); Pagliano *et al.* 2020: 189, ♀.

Smicromyrme pliginskiji Lelej, 1984: 81, fig. 1, 1–3, ♂ [holotype, ♂, Crimea, Sevastopol, 27.VII.1909, V.G. Pliginskij], [ZIN], examined. **Syn. nov.**

Smicromyrme (Nemka) pliginskiji: Lelej 1985: 244, ♂.

Nemka pliginskii (!): Nonveiller *et al.* 1998: 18, ♂ (Croatia, Montenegro).

Skorikovia pliginskiji: Ovtchinnikov 2002: 95, ♂; Lelej 2002: 65, ♂; Ljubomirov 2006: 88, ♂ (Bulgaria); Pagliano & Strumia 2007: 83, fig. 46, ♂ (Italy); Lelej & Yildirim 2009: 20; Muskovits & György 2011: 37, 106, fig. 183, ♂ (Hungary); Lelej *et al.* 2016: 15, ♂; Lelej 2017: 155; Pagliano *et al.* 2020: 187, ♂, ♀.

Diagnosis. MALE. Inner metacoxal carina with apical tooth. Ocelli small, POD:OOD less than 1 (~0.8 ×). Vein *2r-m* of forewing not angulate, without medial outer process; pterostigma posterad thicker than anterad. Length of T1 less than apical width of T1. Posterior margin of T2 and T3–5 with more or less dense yellowish setae forming a band. Mesosoma ferruginous with black sterna and lower part of mesopleuron. Body length 9.0–10.0 mm. FEMALE. T2 with one medial and two lateral subbasal spots of pale setae, lateral spots visible above. Mesosoma dorsally with sparse, subappressed yellowish setae, black on pronotum. T1 with apical fringe of black setae. Basomedial spot of white setae on T2 small, more or less rounded, distance between it and apical band of white setae more than its diameter; apical band of T2 shallowly constricted laterad and medially narrower than band of T3. Body length 5.0–8.0 mm

Material examined. (17♂, 24♀). **Type material.** **Holotype** of *Smicromyrme pliginskiji*. **Paratypes** of *S. pliginskiji*: **Russia**: Crimea: Kazantip Cape, 25 km N Lenino, 2.VII.1979, 1♂, A.A. Petrenko [IBSS]; Sevastopol, khutor Delagarda, 21.VII.1907, 1♂, V.G. Pliginskij; Sevastopol, 26.VII.1909, 1♂, V.G. Pliginskij [ZIN]; Volgograd Region, Sarepta, [Volgograd, Krashoarmeysk], 1872, 1♂, A.K. Becker [ZIN]; Orenburg Region, Spassk, 1♂, coll. E. Eversmann [ZIN]; left bank of Ural River near Orenburg, 10.VIII.1934, 2♂, L.S. Zimin [ZIN]. **Additional material.** **Russia**: Crimea: Sary Krym, Mt. Agarmysh, 722 m, 4.VII.1979, 1♀, P.V. Puchkov; Kikineiz (currently Opolznevoye), 3.IX.1928, 2♀, E. Kiritshenko [ZIN]; Otuzy (currently Shchebetovka) valley, 30.IV–13.V.1920, 1♀, V.N. Vutshetish [ZIN]; Feodosiya, Lis'ya Bay, 12.VI.2010, 1♀, A.V. Fateryga [IBSS]; Tarkhankut, Olenevka, 6.VIII.1983, 1♀, V.V. Gorbатовskij [IBSS]. Donetsk: 25 km N Novoazovsk, Khomutovskaya steppe, 25.VI.1979, 1♀, A. Lelej [IBSS]. Volgograd Region: Filonovskaya, 31.VII.1910, 1♀ [ZIN]; Sarepta, [Volgograd, Krashoarmeysk], 1865, 3♀, A. Becker [ZIN]; Volgograd, Gornaya Polyana, 25.VIII.2013, 1♀, M. Mokrousov [IBSS]; steppe near river Pionerka, 26.VIII.1984, 1♀, D.G. Matveev [IBSS]. Orenburg Region: Orenburg, meadow, 26.VII.1924, 1♀, P. Vorontsovskij [ZIN]; Ponomarevski region, near Semenovka, 28.VIII.2012, 1♀, M. Mokrousov [IBSS]. Dagestan: 22 km SW Terekli-Mekteb, 44°02'35"N, 45°38'55"E, 21–23.VI.2018, 1♂, Astafurova *et al.* [IBSS]; Saratov Region: near Sinenkie, 12.VI.2010, 1♂, D.V. Potanin [IBSS]. **Austria**: Burgenland, Neusiedlersee, Umg. 17.VII.1962, 1♀, K. Kusdas [OLML]. **Czech Republic**: Moravia merid., Němčičky, 30.V.1944, 1♂, A. Hoffer [OLML]. **Slovakia**: Kováčov, 17.VII.1962, 2♀, Z. Padr [IBSS]; same place, 7–14.VI.1973, 1♀, Z. Padr [IBSS]. **Hungary**: Pilisborosjenő, 10.X.2005, 1♀, J. Muskovits [IBSS], same place, 4, 23.VI.2007, 2♀, J. Muskovits [IBSS], same place, 9.X.2008, 1♀, J. Muskovits [IBSS]. **Bulgaria**: Slnčev Brjag, 28.VI–14.VII.1971, 5♂, Z. Padr [OLML]; Banya, 41°52'29"N 23°31'41"E, 835 m, traps, 12–22.VIII.2005, 1♀, A. Gromov [IBSS]. **Greece**: Platania, Volos, 17.X.2000, 1♀, K. Standfuss [IBSS]. **Italy**: Toscana, Uccellina-Paduletto, 42°38,44'N 11°04,42'E, 30.VI–17.VII.2003, Malaise trap, 1♂, L. Strumia [IBSS].

Distribution. Russia (Crimea, Dagestan, South and East of European part; South Ural), Bulgaria, Croatia, Czech Republic, Greece, Hungary (Muskovits & György 2011), Italy (Toscana, Campania, Puglia), Montenegro, Slovakia (new record), Austria (new record).

Remark. The female of *Skorikovia pliginskiji* may eventually be recognized as *Smicromyrme triangularis* due to its co-occurrence in Russia (Volgograd: Sarepta; Orenburg Region; Crimea), Czech Republic, Hungary and Italy: Toscana (pers. comm. G. Pagliano). The female of *Smicromyrme pouzdranensis* was collected by A. Hoffer in South Moravia [Kolby u Pouzdran, relict steppe of the Pannonian biogeographical region] 20 km from the place where the male of *Smicromyrme pliginskiji* was later found. The Pannonian steppe in the Czech Republic is the northern limit of the distribution of both species. In Hungary I. Muskovits collected the male of *Skorikovia pliginskiji* and the female of *Smicromyrme triangularis* in two localities: Pilisborosjenő and Sósokút. Both species are rare in the Hungarian fauna (Muskovits & György 2011). On the other hand, *Mutilla triangularis* Radoszkowski, 1865 is a

junior subjective synonym of *Mutilla trinotata* Costa, 1858, the status of which was recently resurrected (Pagliano & Strumia 2007). Børge Petersen (unpublished) labelled the specimen of *M. triangularis* in ISEA-PAN with Radoszkowski's "type" label as lectotype. As no validly published lectotype designation exists, I hereby designate the specimen so labelled by Petersen as lectotype.

Discussion

The main method for combining the sexes in the genus *Skorikovia* is co-occurrence in certain regions: *S. elongata*, *S. maxim* **sp. nov.**, *S. radoszkovskii*, and *S. trinotata*. There is no direct evidence (pair collected *in copula*) to support this relationship. The process of combining the sexes in the genus *Skorikovia* is complicated by the activity of males and females at different times of the day. The males (with large eyes) are nocturnal, sometimes flying en masse to the light, while the females of these species are diurnal (*S. elongata*) and collect in single specimens. Males and females of *S. trinotata* are diurnal and inhabit the steppe regions of the Palaearctic.

Skorikovia sanguinicollis is the only African species of the genus. It does have all the features, including genitalia, of true *Skorikovia* and there are some color features that fit North African species of *Dentilla*. Other *Skorikovia* species are likely to be found in the Middle East and North Africa.

Acknowledgements

I thank Mikhail Mokrousov (Lobachevsky State University of Nizhny Novgorod, Russia), Maxim Proshchalykin, Valery Loktionov (IBSS), Alexander Timokhov (Moscow State University, Russia), Dmitry Milko (Institute for Biology and Pedology, Bishkek, Kyrgyzstan), and late Sergey Ovtchinnikov for the collecting of the material. The late B. Petersen provided me with important comparative material. I am deeply grateful to the curator of Hymenoptera collection S.A. Belokobylskij (Zoological Institute, Sankt Petersburg, Russia) and collection managers who helped me to study the material during a scientific trips in 2010–2011, especially Sándor Csósz (HNHM), Dominique Zimmermann (NHMW), Frank Koch (ZMHB), and Fritz Gusenleitner (OLML). I thank Kevin Williams (California Department of Food & Agriculture, Sacramento, USA), anonymous reviewer and Subject Editor Valery Loktionov, who help me to improve this MS. 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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