The bees of the family Halictidae (Hymenoptera) described by Ferdinand Morawitz from the collection of Aleksey Fedtschenko

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Abstract

The type specimens of the family Halictidae, described by Ferdinand Morawitz from the collection of Aleksey Fedtschenko deposited in the Zoological Museum of the Moscow State University and in the Zoological Institute, Russian Academy of Sciences, St. Petersburg (Russia), are critically reviewed. Precise information with illustrations of types for 43 taxa is provided. Lectotypes are here designated for the following seven nominal taxa:

- Halictus aprilinus Morawitz, 1876
- H. cingulatus Morawitz, 1876
- H. laevinodis Morawitz, 1876
- H. limbellus Morawitz, 1876
- H. nasica Morawitz, 1876
- H. rynchites Morawitz, 1876
- H. vulgaris Morawitz, 1876

Keywords

Anthophila, Apiformes, lectotypes, Palaearctic Region, taxonomy

Introduction

More than 140 years ago (1876), the second part of Ferdinand Morawitz’s critical study on the bees collected by the Aleksey Fedtschenko 1869–1871 Expeditions in “Turkestan” was published. In the prior volume, “Apidae genuinae” (1875), Morawitz treated
a total of 255 species of numerous genera, of which many species were described as new. In this second part, “Andrenidae” (1876), the remaining bees were dealt with, including the species of the difficult genera *Andrena*, *Halictus* and *Hylaeus*, totalling 183 species (Pesenko and Astafurova 2003). The species treatments are of a high professional standard, the localities are precisely documented (A. Fedtschenko 1871, O. Fedtschenko 1874, Baker 2004, Kuhlmann 2005, Dathe and Proshchalykin 2017) and the type series have been carefully conserved over a long period, generally in the collections of the Zoological Museum of the Moscow State University, Moscow, Russia (ZMMU) and in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia (ZISP). To this day, these remain some of the most important manuscripts on bees of this region.

The entomological literature uses various, often obscure, terms and names for Central Asian regions and countries. The term “Turkestan” has a particularly special use in entomology, widely adopted by Morawitz (1875, 1876), Dalla Torre (1896), Meade-Waldo (1923) and in other fundamental papers, regardless of its imprecise assignment to countries (Proshchalykin and Dathe 2018).

The territory of Central Asia, described as the “Western Regions” (Xi Yui) in Chinese sources, was referred to in the Russian and European historiography of the 18th and early 19th Centuries as Lesser Bukharia, as opposed to Greater Bukharia, where the Bukhara Khanate was situated. In Europe, these lands came to be referred to in the 18th and 19th Centuries as Turkestan, i.e. “the Land of Turks,” which was the original Iranian name for the territory east of Fergana and Bukhara where nomadic Turkic tribes roamed. Subsequently, when the Turkic tribes occupied the enormous territory from the Caspian Sea to Lop Nor, the name Turkestan acquired a new meaning, so broad that it was deemed necessary to distinguish such areas as Western—Bukhara, or Russian Turkestan – and Eastern or Chinese Turkestan (Murzayev 1957). According to current views, Fedtschenko’s “Turkestan” comprises the countries Uzbekistan, Tajikistan, Kyrgyzstan and southern parts of Kazakhstan.

The family Halictidae is represented in Morawitz’s 1876 publication by four genera (*Nomioides* Schenck, 1866, *Halictus* Latreille, 1804, *Sphecodes* Latreille, 1804 and *Nomia* Latreille, 1804), comprising 73 species (Nos. 327–399). Only 30 species were previously known, while the remaining 43 were newly described (*Nomioides* – 2 species; *Halictus* – 36, *Sphecodes* – 2, *Nomia* – 2) (Table 1). Few of these taxa were mentioned in subsequent publications, remaining enigmatic for decades. Since the 1930s, V. Popov [ZISP] based his studies on the taxonomy and ecology of the Central Asian bee fauna using these collections. Popov involved other mellitologists in his research, so that specimens also reached specialists in other European museums. For example, P. Blüthgen took part in such work on *Halictus* and published several taxonomic papers, based on the Fedtschenko collection (Blüthgen 1931a, 1934a, 1955, Popov 1935).

The second attempt to recognise the true type material of Fedtschenko’s Halictidae was made by K. Warncke, a teacher in Dachau (Germany), who visited ZMMU from 26.03.1975 to 01.04.1975 (Dathe and Proshchalykin 2017). He worked his way
### Table 1. The nominal taxa of Fedtschenko’s Halictidae, described by F. Morawitz, and their current status.

| #  | Species name            | Sex | Current status | Depositaries of types                  |
|----|-------------------------|-----|----------------|----------------------------------------|
| 1. | Halictus albitarsis     | ♂   | Homonym        | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 2. | Halictus annulipes      | ♂   | Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 3. | Halictus aprilinus      | ♂   | Valid          | LT, PLT (ZMMU)                         |
| 4. | Halictus atomarius      | ♂   | Valid          | LT, PLT (ZISP)                         |
| 5. | Halictus cariniventris  | ♂   | Valid          | LT, PLT (ZISP)                         |
| 6. | Halictus cingulatus     | ♂   | Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 7. | Halictus croceipes      | ♂, ♂| Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 8. | Halictus desertorum     | ♂   | Valid          | LT (ZMMU)                              |
| 9. | Halictus determinatus   | ♂   | Homonym        | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 10. | Halictus equestris      | ♂   | Valid          | LT (ZMMU)                              |
| 11. | Halictus ferghanicus    | ♂   | Synonym        | LT (ZMMU); PLT (ZISP)                  |
| 12. | Halictus fuscusos       | ♂   | Synonym        | HT (ZMMU)                              |
| 13. | Halictus fulvitarsis    | ♂   | Valid          | HT (ZMMU)                              |
| 14. | Halictus funerarius     | ♂   | Valid          | LT (ZISP); PLT (ZISP/ZMMU)             |
| 15. | Halictus fuscollis      | ♂   | Valid          | LT (ZISP); PLT (ZISP/ZMMU)             |
| 16. | Halictus hyalinipennis  | ♂, ♂| Valid          | LT (ZISP); PLT (ZISP/ZMMU)             |
| 17. | Halictus lavenoidis     | ♂   | Valid          | LT (ZISP); PLT (ZMMU)                  |
| 18. | Halictus limbellus      | ♂   | Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 19. | Halictus longirostris   | ♂, ♂| Valid          | LT (ZISP); PLT (ZISP/ZMMU)             |
| 20. | Halictus maculipes      | ♂   | Valid          | LT (ZMMU)                              |
| 21. | Halictus melanarius     | ♂   | Valid          | HT (ZMMU)                              |
| 22. | Halictus minor          | ♂   | Valid          | LT (ZISP); PLT (ZISP/ZMMU)             |
| 23. | Halictus modernus       | ♂   | Valid          | HT (ZMMU)                              |
| 24. | Halictus nasica         | ♂, ♂| Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 25. | Halictus nigerlabris    | ♂   | Valid          | LT (ZMMU); PLT (ZISP)                  |
| 26. | Halictus nigripennis    | ♂   | Homonym        | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 27. | Halictus obscuratus     | ♂   | Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 28. | Halictus palustris      | ♂   | Valid          | LT (ZMMU); PLT (ZISP)                  |
| 29. | Halictus pectoralis     | ♂   | Homonym        | HT (ZMMU)                              |
| 30. | Halictus picipes        | ♂   | Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 31. | Halictus rhynechites    | ♂, ♂| Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 32. | Halictus scutellaris    | ♂   | Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 33. | Halictus sogdianus      | ♂   | Synonym        | LT, PLT (ZMMU)                         |
| 34. | Halictus trifasciatus   | ♂   | Homonym        | LT (ZMMU)                              |
| 35. | Halictus varipes        | ♂, ♂| Synonym        | LT, PLT (ZMMU)                         |
| 36. | Halictus vulgaris       | ♂   | Synonym        | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 37. | Sphceodes nigripennis   | ♂   | Synonym        | LT, PLT (ZMMU)                         |
| 38. | Sphceodes pectoralis    | ♂   | Valid          | LT, PLT (ZMMU)                         |
| 39. | Sphceodes rufithorax    | ♂, ♂| Synonym        | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 40. | Nomia edentata          | ♂, ♂| Valid          | LT (ZMMU); PLT (ZISP/ZMMU)             |
| 41. | Nomia rufescens         | ♂   | Valid          | LT (ZMMU)                              |
| 42. | Nomioides parviceps     | ♂   | Valid          | NT (ZISP)                              |
| 43. | Nomioides taurica       | ♂, ♂| Valid          | LT, PLT (ZISP/ZMMU)                    |

Comment. LT – lectotype, PLT – paralectotype/s, NT – neotype.

through the drawers containing the Fedtschenko material and labelled specimens of all nominal taxa found there as “Lectotypen.” Thereby, certain specimens from some groups of bees (Hylaeus, Andrena, Anthidium etc.) received a red label with the inscription “Lectotypus Warncke 1975.” However, of all Fedtschenko’s Halictidae described
by Morawitz, only five specimens received such labels: *Sphecodes nigripennis* Morawitz, 1876, *S. pectoralis* Morawitz, 1876, *S. rufithorax* Morawitz, 1876, *Nomia edentata* Morawitz, 1876 and *N. rufescens* Morawitz, 1876 (Figs 32A, 33B, 34E, 35F, 36A). All other type specimens were left without nomenclatural status labels.

In his publication on the genus *Halictus*, which appeared seven years later (Warncke 1982), only the sex and locality for each lectotype is cited, for example: “*Halictus limbellus* Mor. / ♀ Lectotypus / Samarkand.” The selected specimen is not further individually identified and data on syntypes and paralectotypes are completely missing from the text. Thus, of the twenty seven designated lectotypes, fifteen are either invalid or unnecessary (when the type series includes only the holotype) and require corrections by subsequent authors (Pesenko 1986a, Ebmer 1997, current publication).

In the 1980’s, Yu. Pesenko continued the study of Halictidae in the Fedtschenko’s collection of the ZISP and ZMMU, designating lectotypes for seven of Morawitz’s nominal taxa in the genera *Halictus*, *Nomia* and *Nomioides* (Pesenko 1983, 1984, 1986a).

As a part of a detailed types inventory of the ZISP collection, all primary types of Halictidae, including seven species described by F. Morawitz from the collection of A. Fedtschenko, are being progressively photographed and catalogued (Astafurova and Proshchalykin 2018, 2019, 2020). The present paper is the first complete, illustrated summary of all species of the family Halictidae, described by F. Morawitz from the collection of A. Fedtschenko, an invaluable reference for researchers across this region who otherwise could not easily assign names to these difficult bees.

**Materials and methods**

All of the material listed below was examined for this study. In the following list, the taxa are treated in alphabetical order of the names used in the original descriptions. Each entry includes the name of the taxon in its original combination, the complete reference to the original description of the species (including the original combination and spelling of the name and the author, year and page of the description) and a list of type specimens present in the collections of the ZMMU and ZISP. The data from each label are separated by two slashes ( // ). Square brackets are used for English translations and when information is added to specimen label information (e.g. geographical coordinates) or published data (e.g. current name of an old place name; affiliation to a present-day country). Photographs were made using a combination of a stereomicroscope Olympus SZX10 and a digital camera (Olympus OM-D and Canon EOS70D).

Illustrations were obtained by montaging from an image series that covers different focal planes into a single in-focus image with the Helicon Focus 6. The final illustrations were post-processed for contrast and brightness using Adobe® Photoshop® software.

The classification and current species status for *Halictus* and *Lasioglossum* follow Michener (2007) and Ascher and Pickering (2020), for *Sphecodes* follow Astafurova et al. (2018a, b, 2019), for Nomiinae follow Astafurova (2014) and for Nomioidinae follow Pesenko (1983).
Taxonomy

List of species

Subfamily Halictinae
Genus *Halictus* Latreille, 1804

1. *Halictus albitarsis* Morawitz, 1876

*Halictus albitarsis* Morawitz, 1876: 217 (key to females), 246, ♀.

**Type locality.** Samarkand (Uzbekistan).

**Published (original) locality.** Uzbekistan: Samarkand, Tashkent.

**Lectotype.** ♀, designated by Warncke 1982: 117, <golden circle> // 21. [III.1869] // САМАРКАНД [Uzbekistan, Samarkand, 39°39'N, 66°57'E] // *Halictus albitarsis* Mor., [N]372 [handwritten by F. Morawitz] // *Lasioglossum Evylaeus albitarsis* Mor., ♀ = lectotype, det A.W. Ebmer 1993 // Syntypus Lectotypus <red label> [ZMMU].

**Paralectotypes** (12 ♀). 6 ♀, 11. [III.1871], 24., 25. [V.1871] // ТАШКЕНТ [Tashkent] // [N]372; 1 ♀, 23. [III.1871] // ТАШКЕНТ [Tashkent] // [N]372 // *Halictus albitarsis* Mor., F. Morawitz det. [handwritten by F. Morawitz] [ZMMU]; 1 ♀, <golden circle>, 11. [III.1871] // ТАШКЕНТ [Tashkent] // *albitarsis* Mor., Typ. [handwritten by F. Morawitz]; 3 ♀, 11. [III.1871] // ТАШКЕНТ [Tashkent] // К.ОЛАСКИЯ Ф. МОРАВИЦА [Collection of F. Morawitz] // *Halictus albitarsis* Mor. [handwritten by F. Morawitz]; 1 ♀, 11. [III.1871] // ТАШКЕНТ [Tashkent] // Paralectotypus *Halictus albitarsis* Mor., design. Warncke, 1982 <identical red label on each paralectotype specimens, labelled by Yu. Astafurova> [ZISP].

**Current status.** *Lasioglossum (Sphecodogastra) leucopymatum* (Dalla Torre, 1896), replacement name for *Halictus albitarsis* Morawitz, 1876 (nec *Hylaeus albitarsis* Schenck, 1853, nec *Halictus albitarsis* Cresson, 1872).

**Remarks.** The secondary designation of the lectotype by Ebmer 1995: 585 is unnecessary.

**Description of male.** Ebmer 1995: 585.

**Distribution.** Kazakhstan, Turkmenistan, Uzbekistan, Afghanistan (Ebmer 1995).

2. *Halictus annulipes* Morawitz, 1876

*Halictus annulipes* Morawitz, 1876: 217 (key), 221, ♀.

**Type locality.** Karatyube Mt., 15 km S Samarkand (Uzbekistan).

**Published (original) locality.** Uzbekistan: Samarkand, Karatyube Mt. (= 15 km S Samarkand).
Figure 1. *Halictus albitarsis* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A, D), 0.5 mm (B, C).
Figure 2. *Halictus annulipes* Morawitz, 1876, lectotype, female A habitus, lateral view B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view E labels. Scale bars: 1.0 mm (A), 0.5 mm (B–E).
Lectotype. designated by Warncke 1982: 81, ♀, 20.[V.1869] // Зеравшан.[ская]
Дол.[ина] [Uzbekistan, Zeravshan River valley, Karatyube Mt., 39°30’N, 66°52’E] //
Halictus annulipes Mor., [N]332 [handwritten by F. Morawitz] // F. Morawitz det.
18.7.5. // Lectotypus Halictus annulipes Mor. 1876, design. Warncke, 1982 <red label,
labelled by Yu. Astafurova> [ZMMU].

Paralectotypes (2 ♀). 1 ♀, 17. [V.1869] // Саамарканъ [Uzbekistan, Samarkand] // [N]332 // H. annulipes F. Morawitz det. 1875 [ZMMU]; 1 ♀, 20.[V.1869] //
Зеравшан.[ская] Дол.[ина] [Zeravshan River valley] // annulipes Mor. Typ. [hand-
written by F. Morawitz] // Paralectotypus Halictus annulipes Mor., 1876, design. 
Warncke, 1982 <identical red label on each paralectotype specimen, labelled by Yu. 
Astafurova> [ZISP].

Current status. Lasioglossum (Dialictus) annulipes (Morawitz, 1876).

Remarks. Kohl 1905: 238, as Halictus metopias Vachal (syn-
onymised by Warncke 1975: 89).

Distribution. Bulgaria, Armenia, Turkey, Russia (North Caucasus), Afghanistan, 
Iran, Tajikistan, Uzbekistan, Kazakhstan, Pakistan (Astafurova and Proshchalykin 
2017, Ascher and Pickering 2020).

3. Halictus aprilinus Morawitz, 1876

Figure 3

Halictus aprilinus Morawitz, 1876: 216 (key), 228, ♀.

Type locality. Kattakurgan (Uzbekistan).

Published (original) locality. Uzbekistan: Katty-Kurgan.

Lectotype (designated here). ♀, <golden circle>, 28. [IV.1869] [Uzbekistan, Kat-
takurgan, 39°53’N, 66°15’E] // ♀ // H. aprilinus n. sp., ♀, F. Morawitz det., typus 
[handwritten by F. Morawitz] // Lectotypus Halictus aprilinus Mor., design. Astafurova 
et Proshchalykin, 2020 <red label> [ZMMU].

Paralectotypes. 3 ♀, 28. [IV.1869] // Каттыкурганъ [Kattakurgan] // [N]343 //
Paralectotypus Halictus aprilinus Mor., design. Astafurova et Proshchalykin, 2020 <red 
label> [ZMMU].

Current status. Lasioglossum (Sphecodogastra) aprilinus (Morawitz, 1876).

Remarks. Warncke (1982: 76) did not designate the lectotype, but only wrote 
“Typus Mus. Moskau”.

Description of male. Blüthgen 1925a: 119, as Halictus inespectatus (synonymised 
by Blüthgen 1931a: 212).

Distribution. Southern Kazakhstan, Turkmenistan, Uzbekistan, Mongolia, China 
(Xinjiang) (Pesenko 2007, Murao et al. 2017).
4. *Halictus atomarius* Morawitz, 1876

Figure (see Astafurova and Proshchalykin 2018: 11, figs 7a–e).

*Halictus atomarius* Morawitz, 1876: 218 (key), 254, ♀.

**Type locality.** Tashkent (Uzbekistan).

**Published (original) locality.** Uzbekistan: Tashkent.

**Lectotype.** ♀, designated by Ebmer 1985: 290, 8.[VIII.1870] // Ташкентъ [Uzbekistan, Tashkent, 41°18’N, 69°16’E] // *Halictus atomarius* Mor. [handwritten by F. Morawitz] // к.[ОЛ]ЕКЦИЯ Ф. Моравица [Collection of F. Morawitz] // Syntypus <red label> // *Lasiglossum Evylaeus atomarium* (Mor.), ♀, Lectotypus, det. A.W. Ebmer 1985 // Lectotypus <red label> [ZISP].

**Paralectotype.** 1 ♀, 8.[VIII.1870] // Ташкентъ [Tashkent] // *Halictus atomarius* Mor. [handwritten by F. Morawitz] // к.[ОЛ]ЕКЦИЯ Ф. Моравица [Collection of F. Morawitz] // ZISP.

**Current status.** *Lasiglossum (Evylaeus s.l.) politum atomarium* (Morawitz, 1876) (subspecies status according to Ebmer 1988b: 667).

**Remarks.** Description of male. Bytinski-Salz and Ebmer 1974: 211, as *Lasiglossum politum ssp. aramaeum* Ebmer 1974 (synonymised by Ebmer 1985: 290).

**Distribution.** Egypt, Palestine, Syria, Jordan, Israel, Turkey, Iran, Central Asia (Bytinski-Salz and Ebmer 1974, Warncke 1982, Pesenko 2007).

5. *Halictus cariniventris* Morawitz, 1876

Figure 4

*Halictus cariniventris* Morawitz, 1876: 220 (key), 226, ♂.

**Type locality.** Osh (Kyrgyzstan).

**Published (original) locality.** Uzbekistan: Samarkand, Dzhyuzak [=Jizzakh], Sokh; Kyrgyzstan: Osh.

**Lectotype.** ♂, designated by Blüthgen 1955: 19, 1.[VIII.1871] // Ошъ [Kyrgyzstan, Osh, 40°32’N, 72°47’E] // *Halictus cariniventris* Mor., [N]341 [handwritten by F. Morawitz] // Lectotypus *Halictus cariniventris* Mor., design. Blüthgen <red label, labelled by Yu. Astafurova> [ZMMU].

**Paralectotypes (4 ♂).** 2 ♂, 4., 7.[VII.1869] // САМАРКАНД [Samarkand] // [N]341; 2 ♂, 18., 22.[VII.1870] // ДЖЮЗАКЪ [Dzhyuzak] // [N]341 // Paralectotypus *Halictus cariniventris*, design. Blüthgen <identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> [ZMMU].

**Current status.** *Halictus (Mucoreochalictus) pollinosa cariniventris* Morawitz, 1876 (subspecies status according to Ebmer 1988b: 578).

**Remarks.** The lectotype designation by Warncke (1982: 138) is unnecessary.
Figure 3. Halictus aprilinus Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A), 0.5 mm (B–D).
Figure 4. *Halictus cariniventris* Morawitz, 1876, lectotype, male A habitus, lateral view B metasoma, dorsal view C head, frontal view D mesosoma, dorsal view E labels. Scale bars: 1.0 mm.
Description of female: Strand 1921: 314, as *Halictus cariniventris* var. *creticola* (synonymised by Ebmer 1988b: 578).

**Distribution.** Europe (except north), Russia (European part, except north), Turkey, Israel, Iran, Afghanistan, Pakistan, Central Asia, Mongolia, North China (Pesenko 2006a, Astafurova and Proshchalykin 2017).

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**6. Halictus cingulatus** Morawitz, 1876

Figure 5

*Halictus cingulatus* Morawitz, 1876: 218 (key), ♀.

**Type locality.** Samarkand (Uzbekistan).

**Published (original) locality.** Uzbekistan: Samarkand, Dzham [near Samarkand], Aksay [near Samarkand].

**Lectotype (designated here).** ♀, 18.[III.1869] // Самарканд [Uzbekistan, Samarkand, 39°39’N, 66°57’E] // *Halictus cingulatus* Mor., [N]371 [handwritten by F. Morawitz] // Lectotypus *Halictus cingulatus* Mor., design. Astafurova et Proshchalykin, 2020 <red label> [ZMMU].

**Paralectotypes** (22 ♀), 11 ♀, 27., 28. [II. 1869], 18., 21. [V. 1869] // Самарканд [Samarkand] // [N]371; 1 ♀, 12.[V.1969] // Заравшан, ская дол. [ina] [Zeravshan River valley, Dzham] // [N]370; 1 ♀, 16.[V.1969] // Заравшан, ская дол. [ina] [Zeravshan River valley, Aksay] // [N]370 [ZMMU]; 1 ♀, the same labels, but 21.[V.1869] [ZMMU]; 1 ♀, <golden circle> // 18.[V.1869] // Самарканд [Samarkand] // *cingulatus* Mor. Typ. [handwritten by F. Morawitz]; 1 ♀, 18.[III.1869] // Самарканд [Samarkand] // к. [олекция] Ф. Моравица [Collection of F. Morawitz]; 1 ♀, 20.[III.1869] // Самарканд [Samarkand] // к. [олекция] Ф. Моравица [Collection of F. Morawitz] // *Halictus cingulatus* Mor., ♀, CoType, F. Morawitz det. [handwritten by F. Morawitz]; 1 ♀, 27.[III.1869] // Самарканд [Samarkand] // к. [олекция] Ф. Моравица [Collection of F. Morawitz]; 1 ♀, 16.[III.1869] // Самарканд [Samarkand] // к. [олекция] Ф. Моравица [Collection of F. Morawitz] // *Halictus cingulatus* Mor., ♀, F. Morawitz det. [handwritten by F. Morawitz]; 1 ♀, 30.[III.1869] // Заравшан, ская дол. [ina] [Zeravshan River valley, Samarkand] // *Halictus cingulatus* Mor. [handwritten by F. Morawitz]; 2 ♀, 12.[III.1869] // Заравшан, ская дол. [ina] [Zeravshan River valley, Samarkand] // к. [олекция] Ф. Моравица [Collection of F. Morawitz] // Paralectotypus *Halictus cingulatus* Mor., design. Astafurova et Proshchalykin, 2020 <identical red labels on each paralectotype specimen> [ZISP].

**Current status.** *Lasioglossum (Sphecodogastra) cingulatum* (Morawitz, 1876).

**Remarks.** Male unknown.

The lectotype designation by Warncke (1982: 116) is invalid because he labelled none of the eleven females from Samarkand deposited in ZMMU.

**Distribution.** South Kazakhstan, Central Asia, Pakistan (Ebmer 1995, Murao et al. 2017).
7. *Halictus croceipes* Morawitz, 1876

*Halictus croceipes* Morawitz, 1876: 217 (key to ♂), 220 (key to ♀), 224, ♀, ♂.

**Type locality.** Yeri, Sughd Province (Tajikistan).

**Published (original) locality.** Kyrgyzstan: Taka; Uzbekistan: Karatyube [Mt., 15 km S Samarkand], Dzham Gorge, Urgut; Tajikistan: Iori.

**Lectotype.** ♀, designated by Ebmer 1997: 956, <golden circle> // 1.[VI.1869] // Заравш.[анская] дол.[ина] [Tajikistan, Zeravshan River valley, Iori (= Yeri), 39°30′N, 67°52′E] // croceipes Mor. Typ [handwritten by F. Morawitz] // croceipes Mor. Blüthgen det. 1935 // Lectotype <red label> // *Lasio glossum (Evylaeus) croceipes* (Mor.), ♀, Lectotypus, det. A.W. Ebmer 1974 [ZMMU].

**Paralectotypes** (6 ♀). 1 ♀, 20.[V.1869] // Заравшан.[ская] дол.[ина] [Zeravshan River valley, Karatyube] // croceipes Mor., [N]338 [handwritten by F. Morawitz] // croceipes Mor. Blüthgen det. 1935; 3 ♀, 8.[VIII.1871] // Taka [Taka] // [N]338; 1 ♀, 13.[V.1869] // Джалмоуз[ее] ущ.[ь]. [Dzham Gorge] // [N]338 [ZMMU]; 1 ♀, 1.[V.1869] // Заравшан.[ская] дол.[ина] [Zeravshan River valley, Iori] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz] // croceipes Mor., Blüthgen det. 1935 // Paralectotypus *Halictus croceipes* Mor., design. Ebmer 1997 <identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> [ZISP].

**Current status.** *Lasio glossum (Hemihalictus) croceipes* (Morawitz, 1876).

**Remarks.** The lectotype designation by Warncke (1982: 106) is invalid because there are two females in ZMMU from the Zeravshan River valley, neither with Warncke’s lectotype label.

**Distribution.** Turkey, Iran, Afghanistan, Central Asia, Kazakhstan (Ebmer 1997, Murao et al. 2017).

8. *Halictus desertorum* Morawitz, 1876

*Halictus desertorum* Morawitz, 1876: 217 (key), 228, ♀.

**Type locality.** Kattakurgan (Uzbekistan).

**Published (original) locality.** Uzbekistan: Katty-Kurgan.

**Lectotype.** ♀, designated by Warncke 1982: 107, 28.[IV.1869] // Катты-Курганъ [Uzbekistan, Katty-Kurgan (=Kattakurgan), 39°53′N, 66°15′E] // Halictus desertorum Mor., [N]344 [handwritten by F. Morawitz] // Lectotypus *Halictus desertorum* Mor., design. Warncke <red label, labelled by Yu. Astafurova> [ZMMU].

**Current status.** *Halictus (Placidochalictus) desertorum* Morawitz, 1876.

**Remarks.** Description of male. Blüthgen 1929: 84, figs 9a, b.

**Distribution.** Turkey, southern Kazakhstan, Turkmenistan, Uzbekistan, Pakistan (Blüthgen 1929, Ebmer 1988a).
Figure 5. *Halictus cingulatus* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm.
Figure 6. *Halictus croceipes* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A, D), 0.5 mm (B, C).
Figure 7. *Halictus desertorum* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A), 0.5 mm (B–D).
9. *Halictus determinatus* Morawitz, 1876

Figure 8

*Halictus determinatus* Morawitz, 1876: 217 (key), 233, ♀.

**Type locality.** 30 km SSE Samarkand, Sangu-dzhuman Pass (Uzbekistan).

**Published (original) locality.** Uzbekistan: “On the road to Sanga-Dzuman [pass] and the Kulbasy Mountain”.

**Lectotype.** ♀, designated by Pesenko 1984: 20, 25.[V.1869] // Санъа-Джуманъ [Uzbekistan, Sangu-dzhuman Pass, Zeravshan Ridge, 30 km SSE Samarkand, 39°27’N, 67°14’E] // *Halictus determinatus* Mor., [N]351 [handwritten by F. Morawitz] // Lectotypus *H. determinatus* Mor., ♀, design. Pesenko [1984]: 20, 25.

**Paralectotypes (6 ♀).** 3 ♀, the same label as in the lectotype; 1 ♀, 25.[V.1869] // Заравшан.[ская] дол.[ина] [Zeravshan River valley] // [N]351 [ZMMU]; 2 ♀, Санъа-Джуманъ [Sangu-Dzhuman] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz] // *H. determinatus* F. Mor., ♀ [handwritten by F. Morawitz] // Paralectotypus *H. determinatus* Mor., ♀, design. Pesenko [1984]: 20, 25.

**Current status.** Halictus (*Platyhalictus*) *determinandus* Dalla Torre, 1896, replacement name for *H. determinatus* Morawitz, 1876 (nec *H. determinatus* Walker, 1871).

**Remarks.** Description of male. Ebmer 1980: 471, Fig. 1.

**Distribution.** A rare montane Central Asian species. Northern Afghanistan, eastern Uzbekistan, Tajikistan and Kyrgyzstan (Pesenko 2005a).

10. *Halictus equestris* Morawitz, 1876

Figure 9

*Halictus equestris* Morawitz, 1876: 217 (key), 242, ♀.

**Type locality.** Khozyay-Dun (Uzbekistan).

**Published (original) locality.** Uzbekistan: Khodzhaduk [= Khozyay-Dun].

**Lectotype.** ♀, designated by Warncke 1982: 105, 21.[V.1869] // Заравшан.[ская] дол.[ина] [Zeravshan River valley, Khozyay-Dun, 39°24’N, 67°01’E] // *Halictus equestris* Mor., [N]366 [handwritten by F. Morawitz] // Lectotypus *Halictus equestris* Mor., ♀, design. Warncke [1982]: 105, 21.

**Current status.** Lasioglossum (*Lasioglossum*) *equestre* (Morawitz, 1876).

**Remarks.** Description of male. Morawitz 1876: 217 (key), 242, as *Halictus ferghanicus* (synonymised by Blüthgen 1926: 391).

According to the Fedchenko list (Baker 2004: 243), the locality given in Warncke’s lectotype designation is in Uzbekistan, not Tajikistan.

**Distribution.** Turkey, Uzbekistan, Tajikistan, Kyrgyzstan, south-eastern Kazakhstan (Pesenko 1986a, Ascher and Pickering 2020).
Figure 8. *Halictus determinatus* Morawitz, 1876, lectotype, female A habitus, lateral view B metasoma, dorsal view C mesosoma, dorsal view D head, frontal view E labels. Scale bars: 1.0 mm.
Figure 9. *Halictus equestris* Morawitz, 1876, lectotype, female **A** habitus, lateral view and labels **B** head, frontal view **C** mesosoma, dorsal view **D** metasoma, dorsal view. Scale bars: 1.0 mm.
11. *Halictus ferghanicus* Morawitz, 1876

Figure 10

*Halictus ferghanicus* Morawitz, 1876: 219 (key), 243, ♂.

**Type locality.** Shakhimardan (Uzbekistan).

**Published (original) locality.** Uzbekistan: near Shakhimardan.

**Lectotype.** ♂, designated by Warncke 1982: 105, <golden circle> // 6.[VII.1871] // ШАХИМАРДАНЬ [Shakhimardan in the Uzbek enclave in the territory of Kyrgyzstan, Alai Ridge; 39°58’N, 71°47’E] // *Halictus ferghanicus* Mor., [N]367 [handwritten by F. Morawitz] // Lectotypus *Halictus ferghanicus* Mor., ♂, design. Warncke [19]82 <red label, labelled by Yu. Pesenko > [ZMMU].

**Paralectotypes** (2 ♂). 1 ♂, <golden circle> // 2.[VII.1871] // ШАГИМАРДАНЬ [Shagimardan] // *ferghanicus* Mor., Typ. [handwritten by F. Morawitz]; 1 ♂, 2.[VII.1871] // ШАГИМАРДАНЬ [Shagimardan] // к.о.л.екция Ф. Моравица [Collection of F. Morawitz] // *Halictus ferghanicus* M. [handwritten by F. Morawitz] // *Lasioglossum equestre* Mor., Pesenko det., 1985 // Paralecotypus, *Halictus ferghanicus* Mor., design. Warncke, [19]82 <identical red labels on each paralecotype specimen, labelled by Yu. Pesenko> [ZISP].

**Current status.** *Lasioglossum* (*Lasioglossum*) *equestre* (Morawitz, 1876) (synonymised by Blüthgen 1926: 391).

**Distribution.** See *Halictus equestris* Morawitz, 1876.

12. *Halictus fucosus* Morawitz, 1876

Figure 11

*Halictus fucosus* Morawitz, 1876: 219 (key), 230, ♂.

**Type locality.** 30 km SE Kozhatogai, Turkistan Province (Kazakhstan).

**Published (original) locality.** Uzbekistan: steppe between Tashkent and Syrdarya River.

**Holotype.** ♂, 18.[V.1871] // СТЕПЬ м.е.к.у С.[ыр] А.[рыей] и Т.[ашкентом] [Kazakhstan, Turkistan Province, steppe between Syrdarya River and Tashkent, 30 km SE Kozhatogai, 41°47’N, 68°23’E] // *Halictus fucosus* Mor., [N]345 [handwritten by F. Morawitz] // *Halictus senilis* Evers. v. *fucosus* Mor., ♂, P. Blüthgen det. // Holotypus <red label> [ZMMU].

**Current status.** *Halictus* (*Argalictus*) *senilis* (Eversmann, 1852) (synonymised by Blüthgen 1922: 47).

**Remarks.** The lectotype designation of Warncke (1982: 148) is unnecessary as the species was described from a single male that was directly written about by Morawitz (1876: 231).

**Distribution.** North Africa, South and East Europe, Russia (south to Urals Mountains on the east), Caucasus, Turkey, Near East, Iraq, Iran, Afghanistan, Central Asia, Kazakhstan, Mongolia, China (Astafurova and Proshchalykin 2017).
Halictidae described by Morawitz

Figure 10. Halictus ferganicus Morawitz, 1876, lectotype, male A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm.
Figure 11. *Halictus fucosus* Morawitz, 1876, holotype, female. **A** habitus, lateral view and labels **B** metasoma, dorsal view **C** head, frontal view **D** mesosoma, dorsal view. Scale bars: 1.0 mm.
13. *Halictus fulvitarsis* Morawitz, 1876

Figure 12

*Halictus fulvitarsis* Morawitz, 1876: 219 (key), 239, ♂.

**Type locality.** Khodzha-Chiburgan River (Tajikistan/Kyrgyzstan, not Uzbekistan as was indicated in Warncke 1982: 91).

**Published (original) locality.** Tajikistan/Kyrgyzstan: Khodzha-Chiburgan River.

**Holotype.** ♂, 26.[VI.1871] // Чибурганъ [Tajikistan/Kyrgyzstan: Khodzha-Chiburgan River (near Vorukh, ≈ 39°48’N, 70°41’E) // *Halictus fulvitarsis* Mor., [N]361 [handwritten by F. Morawitz] // Holotypus <red label> [ZMMU].

**Current status.** *Lasioglossum (Lasioglossum) fulvitarse* (Morawitz, 1876).

**Remarks.** Description of male. Blüthgen 1934b: 147.

The lectotype designation by Warncke (1982: 91) is unnecessary as the species was described from a single male that was directly written about by Morawitz (1876: 240).

**Distribution.** Tajikistan, Kyrgyzstan, Kazakhstan (Morawitz 1876, Pesenko 1986a, Murao et al. 2017).

14. *Halictus funerarius* Morawitz, 1876

Figure (see Astafurova and Proshchalykin 2020: 414, figs 11a–e).

*Halictus funerarius* Morawitz, 1876: 217 (key), 235, ♀.

**Type locality.** 30 km SSE Samarkand, Sangu-dzhuman Pass (Uzbekistan).

**Published (original) locality.** Uzbekistan: Sangu Dzhuman.

**Lectotype.** ♀, designated by Pesenko 1984: 21, <golden circle> // Сангы Джуманъ [Uzbekistan, Sangydzhuman Pass, 30 km SSE Samarkand, 39°22’N, 67°00’E] // 25.[V.1869] // funerarius Mor. Typ. [handwritten by F. Morawitz] // Lectotypus *H. funerarius* Mor., ♀, design. Pesenko [1]981 <red label> // Zoological Institute St. Petersburg INS_HYM_0000159 [ZISP].

**Parallectotypes (8 ♀).** 8 ♀, the same label as in lectotype // Paralectotypus *H. funerarius* Mor. design. Pesenko [1]981 <red labels> [3 ♀ – ZISP; 5 ♀ – ZMMU].

**Current status.** *Halictus (Protohalictus) funerarius* Morawitz, 1876.

**Distribution.** A rare montane Central Asian species: Kazakhstan, Uzbekistan, Tajikistan, Western Kyrgyzstan, Iran, north-eastern Afghanistan and north-western China (Pesenko 2005a).

15. *Halictus fuscicollis* Morawitz, 1876

Figure 13

*Halictus fuscicollis* Morawitz, 1876: 217 (key), 229, ♀.
Figure 12. *Halictus fulvitarsis* Morawitz, 1876, holotype, female A habitus, lateral view and labels B metasoma, dorsal view C head, frontal view D mesosoma, dorsal view. Scale bars: 1.0 mm.

**Type locality.** 50 km NW Chardara, Kyzylkum Desert (Turkistan Province, Kazakhstan).

**Published (original) locality.** Kazakhstan: “Kyzyl-Kum Steppe, near Baybek”.

**Lectotype.** ♀, designated by Warncke 1982: 137, 30.[IV.1871] // Кизилъкумъ [Kazakhstan, Baybek Well, Kyzylkum Desert, ca. 50 km NW Chardara, ≈ 41°44’N, 67°54’E] // *Halictus fuscicollis* Mor., [N]345 [handwritten by F. Morawitz] // *Halictus Vestitohalictus fuscicollis* Mor., ♀, Lectotypus, design. A.W. Ebmer 1994 //
Figure 13. *Halictus fuscicollis* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 0.5 mm.
Lectotypus *Halictus fuscicollis* Mor., design. Warncke <red label, labelled by Yu. Pesenko> [ZMMU].

**Paralectotype.** 1 ♀, <golden circle> Kisilkum [handwritten by F. Morawitz] // *fuscicollis* Mor. Typ. [handwritten by F. Morawitz] // Paralectotypus <red label>, labelled by Yu. Astafurova [ZISP].

**Current status.** *Halictus (Placidochalictus) fuscicollis* Morawitz, 1876.

**Remarks.** Description of male. Morawitz 1894: 68, as *Halictus flavocallosus* (synonymised by Blüthgen 1931a: 214).

**Distribution.** Southern Kazakhstan, Turkmenistan, Iran, China (Xinjiang) (Morawitz 1876, 1894, Murao et al. 2017, Ascher and Pickering 2020).

16. *Halictus hyalinipennis* Morawitz, 1876

Figure (see Astafurova and Proshchalykin 2018: 23, figs 21a–e).

*Halictus hyalinipennis* Morawitz, 1876: 218 (key to females), 220 (key to males), 253–254, ♂, ♀.

**Type locality.** Tashkent (Uzbekistan).

**Published (original) locality.** Kazakhstan: Chardara, steppe between Tashkent and Syr-Darya; Uzbekistan: Dzhamsk Gorge, Dzhizmansk Gorge, Ulus, Dzham, Urgut, Keles, Samarkand, Soch, Shakhimardan, Uch-Kurgan; Kyrgyzstan: Alay, Osh, Gulsha, Taka.

**Lectotype.** ♀, designated by Astafurova and Proshchalykin 2018: 22, Ташкентъ [Uzbekistan, Tashkent, 41°18’N 69°16’E] // *hyalinipennis* F. Mor., ♀ [handwritten by F. Morawitz] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz] // Lectotypus *Halictus hyalinipennis* Morawitz, 1876, ♂, design. Astafurova & Proshchalykin 2018 <red label> [ZISP].

**Paralectotypes** (29 ♀, 10 ♂). 1 ♀, Шагимарданъ [Shagimardan] // 3.[VII.1871] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz]; 1 ♂, Ташкентъ [Tashkent] // 29. [29.VI.1871] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz]; 1 ♀, 1 ♂, Сохъ [Sokh] // 1.[VIII.1871] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz]; 1 ♂, Уч-Курганъ [Uch-Kurgan] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz]; 2 ♀, Ташкентъ [Tashkent] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz] [ZISP]; 1 ♂, Ошъ [Osh] // 1.[VIII.1871]; 1 ♂, Самаркандъ [Samarkand] // 4.[VII.1869] // [N]384; 3 ♂, Самаркандъ [Samarkand] // 7.[VII.1869]; 2 ♀, Самаркандъ [Samarkand] // 3., 21.[III.1869]; 16 ♂, Ташкентъ [Tashkent] // 26., 27.[III.1871], 21., 23.[V.1871] and 1.,3.,5.,10.[VI.1871]; 1 ♀, Чардара [Chardara] // 27.[IV.1871]; 1 ♀, Уч-Курганъ [Uch-Kurgan] // 15.[VII.1871]; 2 ♂, Шагимарданъ [Shagimardan] // 2.[VII.1871] 5 ♀, Заравшанъ [Zeravshan River valley], 3., 11., 18., 23.[III.1871] // Paralectotypus *Halictus hyalinipennis* Morawitz, 1876, design. Astafurova & Proshchalykin 2018 <identical red labels on each paralectotype specimen> [ZMMU].
Current status. *Lasioglossum (Sphecodogastra) hyalinipenne* (Morawitz, 1876).

**Distribution.** Iran, Afghanistan, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan (Morawitz 1876, Ebmer 1974, Warncke 1982, Murao et al. 2017).

17. *Halictus laevinodis* Morawitz, 1876

Figure (see Astafurova and Proshchalykin 2018: 24, figs 23a–e).

*Halictus laevinodis* Morawitz, 1876: 218 (key to females), 248, ♀.

**Type locality.** 30 km SSE Samarkand, Sangu-dzhuman Pass (Uzbekistan).

**Published (original) locality.** Uzbekistan: Sangy Dzhuman.

**Lectotype (designated here).** ♀, <golden circle> // Сангы Джуманъ [Uzbekistan, Sangy-dzhuman Pass, 30 km SSE Samarkand, Zeravshan Ridge, 39°27′N, 67°14′E] // 25.[III.1869] // *laevinodis* Mor., Typ. [handwritten by F. Morawitz] // Lectotype *Halictus laevinodis*, design. Astafurova et Proshchalykin, 2020 <red label> [ZISP].

**Paralectotypes** (2 ♀). 1 ♀, 25.[III.1869] // Сангы Джуманъ [Sangy Dzhuman] // *Halictus laevinodis* Mor. [handwritten by F. Morawitz]; 1 ♀ 25.[III.1869] // Сангы Джуманъ [Sangy Dzhuman] // [N]375 // Paralectotype *Halictus laevinodis*, design. Astafurova et Proshchalykin, 2020 <identical red labels on each paralectotype specimen> [ZMMU].

Current status. *Lasioglossum (Hemihalictus) laevinode* (Morawitz, 1876).

**Remarks.** Astafurova and Proshchalykin (2018: 23) indicated the lectotype specimen as «Holotype», but Morawitz (1876) did not directly indicate a single specimen and two specimens from the type series are deposited in ZMMU.

Description of male. Blüthgen, 1934b: 154, Fig. 3.

**Distribution.** Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan (Morawitz 1876, Blüthgen in Popov 1935, Ebmer 1980, Murao et al. 2017).

18. *Halictus limbellus* Morawitz, 1876

Figure 14

*Halictus limbellus* Morawitz, 1876: 218 (key), 249, ♀.

**Type locality.** Samarkand (Uzbekistan).

**Published (original) locality.** Uzbekistan: Samarkand; Tajikistan: Peti.

**Lectotype (designated here).** ♀, 5.[IV.1869] // Самаркандаъ [Uzbekistan, Samarkand, 39°39′N, 66°57′E] // *Halictus limbellus* Mor., [N]377 [handwritten by F. Morawitz] // Lectotypus *Halictus limbellus* Mor., Astafurova et Proshchalykin, 2020 <red label> [ZMMU].

**Paralectotypes** (3 ♀). 1 ♀, 5.[IV.1869] // Самаркандаъ [Samarkand] // [N]377 // Typus <red label> [ZMMU]; 1 ♀, <golden circle> // 5.[IV.1869] // Самаркандаъ [Samar-
Figure 14. *Halictus limbellus* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A), 0.5 mm (B–D).
Halictidae described by Morawitz

19. Halictus longirostris Morawitz, 1876

Figure 15

_Halictus longirostris_ Morawitz, 1876: 216 (key to females), 219 (key to males), 236, ♀, ♂.

_Type locality._ Shakhimardan (Uzbekistan).

_Published (original) locality._ Uzbekistan: on the road to Sangy-dzhuman Pass, Shakhimardan; Tajikistan: Peti.

_Lectotype._ ♂, designated by Warncke 1982: 80, 3.[VII.1871] // Шагимарданъ [Shakhimardan in the Uzbek enclave in the territory of Kyrgyzstan, Alai Ridge; 39°58’N, 71°47’E] // Halictus longirostris Mor., [N]356 [handwritten by F. Morawitz] // Lectotypus Halictus longirostris Mor., design. Warncke [19]82 <red label, labelled by Yu. Astafurova> [ZMMU].

_Paralectotypes_ (2 ♀). 1 ♀, 25.[V.1869] // Сангы Джуманъ [Sangy Dzhuman] // [N]356; 1 ♀, 12.[VII.1870] // Фанъ [Fan] // [N]356 [ZMMU]; 1 ♀, 2.[VII.1871] // Шагимарданъ [Shagimardan] // к.алаекция Ф. Моравица [Collection of F. Morawitz] // Halictus longirostris Mor. [handwritten by F. Morawitz] // Paralectotypus Halictus longirostris Mor., design. Warncke < identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> [ZISP].

_Current status._ Lasioglossum (Hemihalictus) longirostre (Morawitz, 1876).

_Distribution._ Greece, Israel, Lebanon, Turkey, Caucasus, Iran, Afghanistan, Central Asia, Kazakhstan, China (Xinjiang) (Murao et al. 2017, Niu et al. 2020).

20. Halictus maculipes Morawitz, 1876

Figure 16

_Halictus maculipes_ Morawitz, 1876: 218 (key to females), 247, ♀.
Figure 15. *Halictus longirostris* Morawitz, 1876, lectotype, male A head, frontal view B habitus, lateral view C mesosoma, dorsal view D metasoma, dorsal view E labels. Scale bars: 1.0 mm (A, B), 0.5 mm (C, D).
**Type locality.** Sokh District [Uzbekistan].

**Published (original) locality.** Kekh [Sokh District, Uzbekistan].

**Lectotype.** ♀ designated by Warncke 1982: 68, <golden circle> // 27.[VI.1871] // СОХЬ [Uzbekistan, Sokh District, 39°57’N, 71°07’E] // Halictus maculipes Mor., [N]373 [handwritten by F. Morawitz] // Lectotypus Halictus maculipes Mor., design. Warncke <red label, labelled by Yu. Astafurova> [ZMMU].

**Current status.** Lasioglossum (Hemihalictus) maculipes (Morawitz, 1876).

**Remarks.** Male unknown.

**Distribution.** Turkey, Turkmenistan, Tajikistan, Uzbekistan, Iran, Afghanistan (Morawitz 1876, Ebmer 1984, 1986, Warncke 1982, Ascher and Pickering 2020).

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**21. Halictus melanarius Morawitz, 1876**

*Figure 17*

_Halictus melanarius_ Morawitz, 1876: 241, ♂.

**Type locality.** Shakhimardan (Uzbekistan).

**Published (original) locality.** Near Shakhimardan.

**Holotype.** ♂, 9.[VII.1871] // ШАКИМАРДАНЬ [Shakhimardan in the Uzbek enclave in the territory of Kyrgyzstan, Alai Ridge; 39°58’N, 71°47’E] // Halictus melanarius Mor., [N]364 [handwritten by F. Morawitz] // Lasioglossum fallax (Mor.) syn: melanarium (Mor.) det. A.W. Ebmer 1979 // Holotypus <red label> [ZMMU].

**Current status.** Lasioglossum (Lasioglossum) fallax ssp. melanarium (Morawitz, 1876) (subspecies status according to Ebmer 1998: 382).

**Remarks.** Description of female: Ebmer 1980: 493, Figs 12 and 13, as Lasioglossum melanarium Ebmer, 1980 (synonymised by Ebmer 1998: 382).

The lectotype designations by Ebmer (1980: 495) and by Warncke (1982: 91) were unnecessary as the species was described from a single male that was directly written about by Morawitz (1876: 241).

**Distribution.** Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, Afghanistan, Mongolia (Hovd) (Pesenko 2006b).

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**22. Halictus minor Morawitz, 1876**

*Figure (see Astafurova and Proshchalykin 2020: 418, figs 15a–e).*

_Halictus minor_ Morawitz, 1876: 217 (key), 233, ♀.

**Type locality.** 30 km SSE Samarkand, Sangu-dzhuman Pass (Uzbekistan).

**Published (original) locality.** Uzbekistan: Gus [near Urgut], Sangy-Dzhuman; Tajikistan: Pyandzhikent.
Figure 16. *Halictus maculipes* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A), 0.5 mm (B–D).
Figure 17. *Halictus melanarius* Morawitz, 1876, holotype, male. A view habitus, lateral view and labels. B head, frontal. C genitalia, dorsal view. D mesosoma, dorsal view. E metasoma, dorsal view. Scale bars: 1.0 mm (A, B, D, E), 0.5 mm (C).
**Lectotype.** ♀, designated by Pesenko 1984: 23, <golden circle> // Сангы Джуманъ [Uzbekistan, Sangy-dzhuman Pass, 30 km SSE Samarkand, 39°20’N, 67°19’E] // 25. [V.1869] // minor Mor. [handwritten by F. Morawitz] // Lectotypus H. minor Mor., design. Pesenko, [1]981, ♀ <red label> // Zoological Institute St. Petersburg INS_HYM_0000164 [ZISP].

**Paralectotypes** (3 ♀). 1 ♀, Сангы Джуманъ [Sangy Dzhuman] // к.коллекция Ф. Моравица [Collection of F. Morawitz] // minor Mor. [handwritten by F. Morawitz] // Syn.: jarkandensis Strand, ♀ // Paralectotypus H. minor Mor., design. Pesenko, [1]981, ♀ <red label> [ZISP]; 1 ♀, 25. [V.1869] // Сангы Джуманъ [Sangy Dzhuman] // Halictus minor Mor., [N]352 [handwritten by F. Morawitz]; 1 ♀, 24. [V.1869] // Заравшан.[ская] дол.[ина] // Halictus minor Mor., [N]352 // Paralectotypus H. minor Mor., design. Pesenko, [1]981, ♀ <identical red labels on each paralectotype specimen> [ZMMU].

**Current status.** Halictus (Platyhalictus) minor Morawitz, 1876.

**Remarks.** Description of male. Blüthgen 1936: 295, fig. 11.

**Distribution.** Azerbaijan, Afghanistan, Iran, Kazakhstan, Central Asia, Altai, Pakistan, north-western and northern China, northern India (Pesenko 2005a, b).

23. *Halictus modernus* Morawitz, 1876

Figure 18

*Halictus modernus* Morawitz, 1876: 217 (key), 235, ♀.

**Type locality.** Samarkand (Uzbekistan).

**Published (original) locality.** Uzbekistan: near Samarkand.

**Holotype.** ♀, 5. [VII.1870] // Самаркандъ [Uzbekistan, Samarkand, 39°39’N, 66°57’E] // Halictus modernus Mor., [N]354 [handwritten by F. Morawitz] // Holotypus <red label> [ZMMU].

**Current status.** Halictus (Lampralictus) modernus Morawitz, 1876.

**Remarks.** The lectotype designation of Warncke (1982: 147) is unnecessary as the species was described from a single female that was directly written about by Morawitz (1876: 235).

**Description of male.** Ebmer 1984: 315, figs 3–5.

**Distribution.** Turkmenistan, Uzbekistan, Kyrgyzstan, Afghanistan, Pakistan (Pesenko 2005a).

24. *Halictus nasica* Morawitz, 1876

Figure 19

*Halictus nasica* Morawitz, 1876: 216 (key to females), 219 (key to males), 229, ♀, ♂.

**Type locality.** Samarkand (Uzbekistan).
Figure 18. *Halictus modernus* Morawitz, 1876, holotype, female A habitus, lateral view B head, frontal view C mesosoma, dorsal view D labels E metasoma, dorsal view. Scale bars: 1.0 mm.
**Published (original) locality.** Southern Kazakhstan: Kysyl-Kum [desert] near draw-well Chakany; Uzbekistan: steppe between Katty-Kurgan and Ulus, Samarkand, Murzarabat, Chinaz, Sokh.

**Lectotype (designated here).** ♀, 9.[VI.1869] // Заравшан.[ская] дол.[ина] [Uzbekistan, Zeravshan River valley, near Samarkand, 39°39'N, 66°57'E] // Halictus nasica Mor., [N]346 [handwritten by F. Morawitz] // Lectotypus Halictus nasica Mor., design. Astafurova et Proshchalykin, 2020 <red label> [ZMMU].

**Paralectotypes** (28 ♀, 44 ♂). 14 ♀, the same label as in the lectotype; 11 ♀, 2 ♂, 13.[VI.1869], 4., 7.[VII.1869] // Самаркандъ [Samarkand] // [N]346; 12 ♂, 24.[VII.1870], 29.[VIII.1870] // Мурзарабадъ [Murzarabat] // [N]346; 1 ♂, 9 ♂, 28.[IV.1871] // Кизилькъумъ [Kizilikum] // [N]346; 17 ♂, 25.[VII.1870] // Чиназъ [Chinaz] // [N]346 [ZMMU]; 1 ♀, 28.[IV.1871] // Кизилькъумъ [Kizilikum] // к.[коллекция] Ф. Моравица // Halictus nasica Mor. [handwritten by F. Morawitz]; 1 ♀, <golden circle> // 9.[VI.1869] // Заравшан.-[ская] дол.[ина] [Zeravshan River valley, near Samarkand] // nasica Mor. Typ. [handwritten by F. Morawitz]; 3 ♂, 28.[VI.1871] // Сохъ [Sokh] // к.[коллекция] Ф. Моравица // Collection of F. Morawitz]; 1 ♂, 9.[VI.1869] // Самаркандъ [Samarkand] // к.[коллекция] Ф. Моравица [Collection of F. Morawitz] // Paralectotypus Halictus nasica Mor., design. Astafurova et Proshchalykin, 2020 <identical red labels on each paralectotype specimen> [ZISP].

**Current status.** Halictus (Vestitohalictus) nasica Morawitz, 1876.

**Remarks.** The lectotype designation by Warncke (1982: 138) is invalid because he labelled none of the 15 females from “valle Serafshan” deposited in ZMMU.

**Distribution.** Morocco, Kazakhstan, Uzbekistan, Turkmenistan, Iran, Afghanistan, Pakistan (Murao et al. 2017, Ascher and Pickering 2020).

### 25. Halictus nigrilabris Morawitz, 1876

**Figure 20**

*Halictus nigrilabris* Morawitz, 1876: 249, ♂.

**Type locality.** Sarafshan River valley, Yeri (Tajikistan).

**Published (original) locality.** Tajikistan: valley Sarafshan between Iori and Dashty-Kazy.

**Lectotype.** ♂, designated by Warncke 1982: 91, <golden circle> // 31.[V.1869] // Заравшан.-[ская] дол.[ина] [Tajikistan, Zeravshan River valley, near Iori (= Yeri), 39°29'N, 67°53'E] // Halictus nigrilabris Mor., [N]378 [handwritten by F. Morawitz] // Lectotypus Halictus nigrilabris Mor. design. Warncke [1]982 <red label, labelled by Yu. Pesenko> [ZMMU].

**Paralectotype.** 1 ♂, Заравшан.-[ская] дол.[ина] [Zeravshan River valley] // Halictus nigrilabris F. Morawitz [handwritten by F. Morawitz] // к.[коллекция] Ф. Моравица [Collection of F. Morawitz] // Paralectotypus Halictus nigrilabris Mor., design. Warncke.
Figure 19. *Halictus nasica* Morawitz, 1876, lectotype, female **A** habitus, lateral view and labels **B** head, frontal view **C** mesosoma, dorsal view **D** metasoma, dorsal view. Scale bars: 1.0 mm (**A, D**), 0.5 mm (**B, C**).
Figure 20. *Halictus nigrilabris* Morawitz, 1876, lectotype, male A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D antennae, dorsal view E metasoma, dorsal view. Scale bars: 1.0 mm.
26. *Halictus nigripes* Morawitz, 1876

*Halictus nigripes* Morawitz, 1876: 251, ♂.

**Type locality.** Karazuk, vicinity of Shakhimardan (Uzbekistan).

**Published (original) locality.** Tajikistan: Iori George, Iskander River; Uzbek enclave in Kyrgyzstan: Karakazuk; Kyrgyzstan: Alay.

**Lectotype.** ♂, designated by Blüthgen 1934a: 302, 11.[VII.1871] // Каразук [Uzbekistan, Karazuk, vicinity of Shakhimardan 39°60’N, 71°50’E] // *Halictus nigripes* Mor., [N]380 [handwritten by F. Morawitz] // nigripes Mor., ♂, lecto-holotype, Blüthgen det. 1933 // Lectotypus Halictus nigripes Mor., design. Blüthgen [19]34 <red label labelled by Yu. Astafurova [ZMMU].

**Paralectotypes** (3 ♂). 1 ♂, 23.[VII.1871] // Алаи [Alay] // [N]380 // nigripes Mor. ♂, Lecto-Paratype, Blüthgen det., 1933 (ZMMU); 1 ♂, <golden circle> // 23.[VII.1871] // Алаи [Alay] // nigripes Mor. Typ., [N]380 [handwritten by F. Morawitz]; 1 ♂, 22.[VII.1871] // Алаи [Alay] // к. [коллекция] Ф. Моравица [Collection of F. Morawitz] // Halictus nigripes Mor. [handwritten by F. Morawitz] // Paralectotypus Halictus nigripes Mor., design. Blüthgen <identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> // [ZISP].

**Current status.** Lasioglossum (Hemihalictus) melanopus (Dalla Torre, 1896), replacement name for *Halictus nigripes* Morawitz, 1876 (nec *H. nigripes* Lepeletier, 1841).

**Remarks.** The specimens from Iskander and Iori George in the Morawitz type series are the holotype and paratypes of *Halictus pseudonigripes* Blüthgen, 1934.

**Description of female:** Vachal 1902: 229, as *Halictus attritus* (synonymised by Blüthgen 1934a: 301).

**Distribution.** Uzbekistan, Kyrgyzstan, Kazakhstan, Tajikistan, Afghanistan, China (Xinjiang) (Morawitz 1876, Murao et al. 2017, Ascher and Pickering 2020).

27. *Halictus obscuratus* Morawitz, 1876

*Halictus obscuratus* Morawitz, 1876: 218 (key), 245, ♀.
Figure 21. *Halictus nigripes* Morawitz, 1876, lectotype, male A habitus, lateral view B metasoma, dorsal view C head, frontal view D mesosoma, dorsal view E labels. Scale bars: 1.0 mm (A), 0.5 mm (B–D).
Figure 22. *Halictus obscuratus* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B metastoma, dorsal view C mesosoma, dorsal view D head, frontal view E. Scale bars: 1.0 mm.

**Type locality.** Sangy-dzhuman Pass, 30 km SSE Samarkand [Uzbekistan].

**Published (original) locality.** Uzbekistan: Samarkand, Aksay; Tajikistan: Iori Gorge, Varzaminor [=Ayni], Sangy-Dzhuman Pass.
Lectotype. ♀, designated by Warncke 1982: 116, 25.[V.1869] // Сангы́ Джуманъ [Uzbekistan, Sangy-dzhuman Pass, 30 km SSE Samarkand, 39°20’N, 67°19’E] // Halictus obscuratus Mor., [N]370 [handwritten by F. Morawitz] // Lectotypus Halictus obscuratus Mor., design. Warncke [19]82 <red label, labelled by Yu. Astafurova> [ZMMU].

Paralectotypes (7 ♀). 1 ♀, 3.[IV.1869] // Са́маркандъ [Samarkand] // [N]370; 1 ♀, 27.[II.1869] // Са́маркандъ [Samarkand] // [N]370 // obscuratus [handwritten by F. Morawitz]; 1 ♀, [V.1869] // Варзаминоръ [Varzaminor] // [N]370; 1 ♀, 16.[V.1869] // Заравшанъ, [спская] Долина [Zeravshan River valley, Aksay] // N[370]; 1 ♀, 2.[VI.1869] // Заравшанъ, [спская] Долина [Zeravshan River valley, Iori Gorge] // N[370]; 1 ♀, <golden circle> // 25.[V.1869] // Сангы́ Джуманъ [Sangy Dzhuman] // obscuratus Mor., Typ. [handwritten by F. Morawitz]; 1 ♀, Сангы́ Джуманъ [Sangy Dzhuman] // к. [коллекция] Ф. Моравица [Collection of F. Morawitz] // Halictus obscuratus Mor., Typ. [handwritten by F. Morawitz]; 1 ♀, Заравшанъ, [спская] Долина [Zeravshan River valley] // к. [коллекция] Ф. Моравица [Collection of F. Morawitz] // Halictus obscuratus F. Morawitz, ♀ [handwritten by F. Morawitz] // Paralectotypus Halictus obscuratus Mor., design. Warncke <identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> [ZISP].

Current status. Lasioglossum (Sphecodogastra) obscuratum ssp. obscuratum (Morawitz, 1876).

Remarks. Description of male. Blüthgen 1923a: 277.

Distribution. Europe (except North), Cyprus, Azerbaijan, Russia (North Caucasus), Turkey, Syria, Jordan, Israel, Iran, Afghanistan, Central Asia, Kazakhstan (Astafurova and Proshchalykin 2017).

28. Halictus palustris Morawitz, 1876

Figure 23

Halictus palustris Morawitz, 1876: 217 (key), 234, ♀.

Type locality. Iskanderkul Lake (Tajikistan).

Published (original) locality. Tajikistan: “near Iskander-Kul Lake”.

Lectotype. ♀, designated by Warncke 1982: 147, <golden circle> // 15.[VI.1870] // Искандеръ [Tajikistan, Iskanderkul Lake, Hissar Ridge, 39°04’N, 68°22’E] // Halictus palustris Mor., [N]353 [handwritten by F. Morawitz] // Lectotypus Halictus palustris Mor., ♀, design. Warncke [1]982 <red label>, labelled by Yu. Pesenko [ZMMU].

Paralectotype. 1 ♀, <golden circle> // 15.[VI.1870] // Искандеръ [Iskander] // palustris Mor., Typ. [handwritten by F. Morawitz] // Paralectotypus H. palustris Mor., ♀, design. Pesenko [1]981 <red label> [ZISP].

Current status. Halictus (Tytthalictus) palustris Morawitz, 1876.

Remarks. Description of male. Blüthgen 1936: 291.

Distribution. Kazakhstan, Uzbekistan, Tajikistan, Kyrgyzstan, China (Xinjiang) (Pesenko 1986b, Murao et al. 2017).
Figure 23. Halictus palustris Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm.
29. *Halictus pectoralis* Morawitz, 1876

Figure 24

*Halictus pectoralis* Morawitz, 1876: 218 (key), 251, ♀.

**Type locality.** Gulcha (Kyrgyzstan).

**Published (original) locality.** Kyrgyzstan: Gulsha [Gulcha].

**Holotype.** ♀, 10.[VIII.1871] // Гульша [Kyrgyzstan, Gulcha, 40°19’N, 73°26’E] // *Halictus pectoralis* Mor., [N]381 [handwritten by F. Morawitz] // Holotype H. *pectoralis* Mor., 1876 <red label, labelled by Yu. Pesenko> [ZMMU].

**Current status.** *Lasioglossum* (Hemihalictus) *subaenescens* ssp. *asiaticus* (Dalla Torre, 1896), replacement name for *Halictus pectoralis* Morawitz, 1876 (nec *H. pectoralis* Smith, 1853) (subspecies status according to Ebmer 1997: 932).

**Remarks.** Description of male. Blüthgen 1923a: 271, as *Halictus proximus* (synonymised by Warncke 1975: 96).

The lectotype designation by Warncke (1982: 106) is unnecessary as the species was described from a single female that was directly written about by Morawitz (1876: 251).

**Distribution.** Egypt, Turkey, Near East, Iran, Azerbaijan, Central Asia, Mongolia (Hovd), China (Xinjiang) (Ebmer 1997, Pesenko 2007).

30. *Halictus picipes* Morawitz, 1876

Figure 25

*Halictus picipes* Morawitz, 1876: 218 (key), 244, ♀.

**Type locality.** Zeravshan River valley (Tajikistan).

**Published (original) locality.** between Panjakent and Iori (Tajikistan).

**Lectotype.** ♀, designated by Pesenko 1986a: 138, 30.[V.1869] // Заравшан.дол. [Tajikistan, Zeravshan River valley, between Panjakent and Iori (= Yeri)] // *Halictus picipes* Mor., [N]369 [handwritten by F. Morawitz] // Lectotype *Halictus picipes* Mor., ♀, design. Pesenko [1]985 <red label> [ZMMU].

**Paralectotypes** (3 ♀). 1 ♀, the same label as in the lectotype [ZMMU]; 1 ♀, <golden circle>, the same label as in the lectotype; 1 ♀, Заравшан.ск.дол. [Zeravshan River valley] // к.коллекция Ф. Моравица [Collection of F. Morawitz] // *Halictus picipes* Mor., ♀ [handwritten by F. Morawitz] // Paralectotypus *Hal. picipes* Mor., design. Pesenko [1]985 <identical red labels on each paralectotype specimen> [ZISP].

**Current status.** *Lasioglossum* (Leuchalictus) *picipes* (Morawitz, 1876).

**Remarks.** The lectotype designation by Warncke (1982: 111) is invalid because he labelled neither of the two females from “valle Serafshan” deposited in ZMMU.

Description of male. Blüthgen in Popov 1935: 362.

**Distribution.** Israel, Turkey, Iraq, Iran, Afghanistan, Turkmenistan, Uzbekistan, Tajikistan (Pesenko 1986a, Ascher and Pickering 2020).
Figure 24. *Halictus pectoralis* Morawitz, 1876, holotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A), 0.5 mm (B–D).
Figure 25. *Halictus picipes* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm (A, C, D), 0.5 mm (B).
31. *Halictus rynchites* Morawitz, 1876

*Halictus rynchites* Morawitz, 1876: 217 (key to females), 220 (key to males), 222, ♀, ♂.

**Type locality.** Shakhimardan (Uzbekistan).

**Published (original) locality.** Usbekistan: Khodzha-Chiburgan gorge, near Shakhimardan Usbekistan]; Kyrgyzstan: Alay, Kichi-alay.

**Lectotype (designated here).** ♂, 7.[VII.1871] // Шагимарданъ [Shakhimardan in the Uzbek enclave in the territory of Kyrgyzstan, Alai Ridge, 39°58’N, 71°47’E] // [N]334 // Lectotypus *Halictus rynchites* Mor., design. Astafurova et Proshchalykin, 2020 <red label> [ZMMU].

**Paralectotypes** (8 ♀, 5 ♂). 1 ♂, the same label as in a lectotype // *Halictus rynchites* Mor., [N]334 [handwritten by F. Morawitz]; 1 ♀, 2 ♂, 26.[VI.1871] // Чибугранъ [Chiburgan] // [N]334; 1 ♀, 21.[VI.1871] // Чибугранъ [Chiburgan] // [N]334; 2 ♀, 28.[VII.1871] // Кичи-Алай [Kichi-Alay] // [N]334 [ZMMU]; 2 ♀, 1 ♂, Чибугранъ [Chiburgan] // к.[алекция] Ф. Моравица [Collection of F. Morawitz] // *rhynchites* F. Mor. [handwritten by F. Morawitz]; 1 ♂, Кичи-Алай [Kchi-Alay] // к.[алекция] Ф. Моравица [Collection of F. Morawitz] // *rhynchites* F. Mor. [handwritten by F. Morawitz]; 1 ♀, < golden circle> // 22.[VII.1871] // Алай [Alay] //*rhynchites* Mor., Typ. [handwritten by F. Morawitz]; 1 ♀, 22.[VII.1871] // Алай [Alay] // *rhynchites* Mor., design. Astafurova et Proshchalykin, 2020 <identical red labels on each paralectotype specimen> [ZISP].

**Current status.** *Lasioglossum* (*Sphecodogastra*) *rhynchites* (Morawitz, 1876).

**Remarks.** The lectotype designation by Warncke (1982: 81) is invalid because he labelled neither of the two females from “Shakhimardan” deposited in ZMMU.

**Distribution.** Turkey, Afghanistan, southern Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan (Ebmer 1995, Murao et al. 2017).

32. *Halictus scutellaris* Morawitz, 1876

*Halictus scutellaris* Morawitz, 1876: 218 (key), 238, ♀.

**Type locality.** Bairkum (Chimkent Province, Kazakhstan).

**Published (original) locality.** Kazakhstan: Bayrakum [= Bairkum]; Tajikistan: Pendzhikent, Iori.

**Lectotype.** ♀, designated by Pesenko 1986a: 140, 4.[V.1871] // Байракумъ [Kazakhstan, Chimkent Province, Bairkum, Syr-Darya River, 42°05’N, 68°10’E] //
Figure 26. *Halictus rynchites* Morawitz, 1876, lectotype, male **A** habitus, lateral view and labels **B** metasoma, dorsal view **C** mesosoma, dorsal view **D** antenna. Scale bars: 1.0 mm (**A**), 0.5 mm (**B–D**).
Figure 27. *Halictus scutellaris* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B metasoma, dorsal C view head, frontal view D mesosoma, dorsal view. Scale bars: 1.0 mm.
Halictus scutellaris Mor., [N]359 [handwritten by F. Morawitz] // Lectotypus Halictus scutellaris Mor., ♀, design. Pesenko [1]985 <red label> [ZMMU].

Parallectotypes (5 ♀). 1 ♀, the same label as in the lectotype; 1 ♀, 30.[V.1869] // Заравшан. [Zeravshan River valley, Iori] // N[359] [ZMMU]; 1 ♀, Байракумъ [Bayrakum] // к.ОАКЕПИЯ Ф. Моравица [Collection of F. Morawitz] // scutellaris F. Mor., ♂ [handwritten by F. Morawitz]; 2 ♀, 4.[V.1871] // Байракумъ [Bayrakum] // к.ОАКЕПИЯ Ф. Моравица [Collection of F. Morawitz] // Paralectotypus Hal. scutellaris Mor., design. Pesenko [1]985 <identical red labels on each paralectotype specimen> [ZISP].

Current status. Lasioglossum (Leuchalictus) scutellare (Morawitz, 1876).

Remarks. Description of male. Blüthgen 1929: 53, as Halictus scutellaris.

The lectotype designation by Warncke (1982: 111) is invalid because he labelled neither of the two females from “Bayrakum” deposited in ZMMU.

Distribution. Southern Kazakhstan, Turkmenistan, Tajikistan, Kyrgyzstan, China (Xinnjiang) (Pesenko 1986a, Murao et al. 2017).

33. Halictus sogdianus Morawitz, 1876
Figures 28

Halictus sogdianus Morawitz, 1876: 216 (key), 227, ♂.

Type locality. Samarkand (Uzbekistan).

Published (original) locality. Uzbekistan: Samarkand, Dshyuzak [=Jizzakh], Iskander [River]; Kyrgyzstan: Osh.

Lectotype. ♀, designated by Blüthgen 1934a: 303, 7.[VII.1870] // САМАРКАНД [Uzbekistan, Samarkand, 39°39’N, 66°57’E] // Halictus sogdianus Mor., [N]342 [handwritten by F. Morawitz] // sogdianus Mor., ♂, Lecto-Holotype, Blüthgen det. 1931 // Lecto-Type <red label> // Lectotypus Halictus sogdianus Mor., design. Blüthgen 1934 <red label> [ZMMU].

Paralectotypes (5 ♀). 1 ♀, 21.[VI.1870] // ИСКАНДЕР [Iskander] // [N]342; 1 ♀, 2.[VIII. 1871] // ОШ [Osh ] // [N]342; 2 ♀, 4.[VII.1869] // САМАРКАНД [Samarkand] // [N]342; 1 ♀, 18.[VII.1870] // ДЖЮЗАК [Dzhyuzak] // [N]342 // Paralectotype Halictus sogdianus Mor. design. Blüthgen <identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> [ZMMU].

Current status. Halictus (Vestitohalictus) pulvereus Morawitz, 1874 (synonymised by Ebmer 1988b: 576).

Distribution. Russia (European part, North Caucasus, Crimea), Cyprus, Turkey, Iran, Afghanistan, Central Asia, Mongolia, north-western China (Astafurova and Proshchalykin 2017).
Figure 28. *Halictus sogdianus* Morawitz, 1876, lectotype, female **A** habitus, lateral view and labels **B** head, frontal view **C** metasoma, dorsal view **D** mesosoma, dorsal view. Scale bars: 1.0 mm (**A**), 0.5 mm (**B–D**).
34. *Halictus trifasciatus* Morawitz, 1876

*Figure 29*

*Halictus trifasciatus* Morawitz, 1876: 218 (key), 240, ♀.

**Type locality.** Bairkum (Chimkent Province, Kazakhstan).

**Published (original) locality.** Kazakhstan: Bayrakum.

**Lectotype.** ♀, designated by Warncke 1982: 90, <golden circle> // 4.[V.1871] // Байракумъ [Kazakhstan, Chimkent Province, Bairkum, Syr-Darya River, 42°05'N, 68°10'E] // *Halictus trifasciatus* Mor., [N]362 [handwritten by F. Morawitz] // Lectotypus *Halictus trifasciatus* Mor., design. Warncke [19]82 <red label, labelled by Yu. Pesenko> [ZMMU].

**Current status.** *Lasioglossum (Lasioglossum) lebedevi* Ebmer, 1972, replacement name for *Halictus trifasciatus* Morawitz, 1876 (nec *Hylaeus trifasciatus* Schenck, 1853).

**Remarks.** Male unknown.

**Distribution.** Southern Kazakhstan (Morawitz 1876, Mutao et al. 2017). The record from Azerbaijan (Aliyev et al. 2007) is doubtful and needs checking.

35. *Halictus varipes* Morawitz, 1876

*Figure 30*

*Halictus varipes* Morawitz, 1876: 217 (key to females), 220 (key to males), 223, ♀, ♂.

**Type locality.** Jizzakh (Uzbekistan).

**Published (original) locality.** Uzbekistan: Katty-Kurgan [= Kattakurgan], Dzhyuzak [= Jizzakh], Karatyube [= Karatepa near Samarkand], Urgut, Sangy-Dzhuman; Kyrgyzstan: near Osh.

**Lectotype.** ♀, designated by Blüthgen 1955: 17, 19.[VII.1870] // Джюзакъ [Uzbekistan, Dzhyuzak (= Jizzakh), 40°07'N, 67°51'E] // [N]337 // *Halictus varipes* Mor., ♀, Lecto-Holotype, P. Blüthgen det. // Typus <red label> // Lectotypus *Halictus varipes* Mor., 1876, design. Blüthgen, 1955 <red label> [ZMMU].

**Paralectotypes** (1 ♀, 2 ♂). 1 ♂, the same labels as in the lectotype // *Halictus varipes* Mor. ♂, lecto-Paratype, Blüthgen det.; 1 ♂, the same label, but 14.[VII.1870] // *Halictus varipes* Mor. ♂, lecto-Holotype, Blüthgen det.; 1 ♀, 20. [VI.1869] // Катты-Курганъ [Katty-Kurgan] // *Halictus varipes* Mor. ♀, lecto-Paratype, Blüthgen det. // Paralectotype *Halictus varipes* Mor., design. Blüthgen 1955 <identical red labels on each paralectotype specimen, labelled by Yu. Astafurova> [ZMMU].

**Current status.** *Halictus (Seladonia) lucidipennis* Smith, 1853 (synonymised by Sakagami and Ebmer 1987: 326).

**Distribution.** Southern Palaeartic and Oriental Regions. North Africa, Israel, Arabian Peninsula, Turkey, Central Asia, Iraq, Iran, Afghanistan, Pakistan, Mongolia, north-western China, India, Nepal, Myanmar, Thailand, Sri Lanka (Pesenko 2006a).
Figure 29. *Halictus trifasciatus* Morawitz, 1876, lectotype, female **A** habitus, lateral view **B** labels **C** metasoma, dorsal view **D** head, frontal view **E** mesosoma, dorsal view. Scale bars: 2.0 mm (**A**), 1.0 mm (**C–E**).
Figure 30. *Halictus varipes* Morawitz, 1876, lectotype, female A head, frontal view B habitus, lateral view and labels C metasoma, dorsal view D mesosoma, dorsal view. Scale bars: 1.0 mm (B), 0.5 mm (A, C, D).
36. *Halictus vulgaris* Morawitz, 1876

Figure 31

*Halictus vulgaris* Morawitz, 1876: 218 (key), 250, ♀.

**Type locality.** Samarkand (Uzbekistan).

**Published (original) locality.** Uzbekistan: Tashkent, Samarkand, Katty-Kurgan [Kattakurgan].

**Lectotype (designated here).** ♀, 3.[III.1869] [Uzbekistan, Samarkand, 39°39’N, 66°57”E// *Hylaeus* [sic!] *vulgaris* Mor., [N]379 [handwritten by F. Morawitz] // Lectotypus *Halictus vulgaris* Mor., design. Astafurova et Proshchalykin, 2020 <red label> [ZMMU].

**Paralectotypes** (257 ♀). 26 ♀, 4., 20., 23., 30.[III.1869], 3., 11., 19.[IV.1869] // Самаркнъ [Samarkand]; 5 ♀, 28.[IV.1869] // Каттыкурганъ [Kattakurgan]; 222♀, 10., 11., 24., 26., 27., 28., [II.1871], 23., 24. [III.1871], 1., 2., 3., 5., 8., 10., 11.[IV.1871] // Ташкентъ [Tashkent] [ZMMU]; 1 ♀, 3.[IV.1871] // Ташкентъ [Tashkent] // к. Ф. Моравица // *Halictus vulgaris* Mor. [handwritten by F. Morawitz]; 1 ♀, 5.[IV.1871] // Ташкентъ [Tashkent] // к.[о]ллекция [Collection of F. Morawitz]; 2 ♀, 8.[IV.1871] // Ташкентъ [Tashkent] // к.[о]ллекция Ф. Моравица [Collection of F. Morawitz]; 1 ♀, 1.[IV.1871] // Ташкентъ [Tashkent] // к.[о]ллекция Ф. Моравица [Collection of F. Morawitz] // Paralectotypus, *Halictus vulgaris* Mor., design. Astafurova et Proshchalykin <identical red labels on each paralectotype specimen> [ZISP].

**Current status.** *Lasioglossum (Evylaeus) marginatum* (Brullé, 1832) (synonymised by Blüthgen 1926: 391).

**Distribution.** Europe (except North), North Africa, Caucasus, Russia (East of European part, North Caucasus), Turkey, Syria, Jordan, Israel, Iraq, Iran, Afghanistan, Pakistan, Central Asia, Kazakhstan, north India, Nepal (Astafurova and Proshchalykin 2017).

**Remarks.** The lectotype designation by Warncke (1982: 116) is invalid because he labelled none of the 222 females from Tashkent deposited in ZMMU.

Genus *Sphecodes* Latreille, 1804

37. *Sphecodes nigripennis* Morawitz, 1876

Figure 32

*Sphecodes nigripennis* Morawitz, 1876: 257, ♀.

**Type locality.** shardara District of Turkistan Province (Kazakhstan).

**Published (original) locality.** Kazakhstan: coasts of Kosaral Lake; Uzbekistan: Khodzhaduk [= Khozyay-Dun].

**Lectotype.** ♀, designation by Warncke 1992: 30, 24.IV.1871 [the original blue data label was damaged] // Kosaralъ [Kazakhstan, “Kosaral Lake”, Shardara (= Chardara) District of Turkistan (= South-Kazakhstan) Province, ≈ 41°10’N, 68°06’E] // *Sphecodes nigripennis* Mor. [handwritten by F. Morawitz] // Lectotypus, Warncke 1975 <red label> [ZMMU].
Figure 31. *Halictus vulgaris* Morawitz, 1876, lectotype, female A head, frontal view B habitus, lateral view and labels C metasoma, dorsal view D mesosoma, dorsal view. Scale bars: 1.0 mm (B, C), 0.5 mm (A, D).
Figure 32. *Sphecodes nigripennis* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 2.0 mm (A, D), 1.0 mm (B, C).
Paralectotype. 1 ♀, 21.[V.1869] // Заравшан.[ская] дол.[ина] [Zeravshan River valley] // Paralectotype *Sphecodes nigripennis* Mor., design. Warncke <red label, labelled by Yu. Astafurova> [ZMMU].

**Current status.** *Sphecodes gibbus* (Linnaeus 1758) (synonymised by Blüthgen 1923b: 510).

**Distribution.** North Africa, Europe (north to 63°), Israel, Jordan, Russia (east to Yakutia), Turkey, Iran, Pakistan, Central Asia, Kazakhstan, Mongolia, NW China, India (Warncke 1992, Bogusch and Straka 2012, Astafurova et al. 2019).

38. *Sphecodes pectoralis* Morawitz, 1876

*Sphecodes pectoralis* Morawitz, 1876: 256, ♀.

**Type locality.** Shardara District of Turkistan Province (Kazakhstan).

**Published (original) locality.** Kazakhstan: coasts of Kosaral Lake; Kyzylkum [desert] near Chakany Well.

**Lectotype.** ♀, designation by Warncke 1992: 24, 24.[IV.1871] // Косаралъ [Kazakhstan, “Kosaral Lake”, Shardara (= Chardara) District of Turkistan (= South-Kazakhstan) Province], ≈ 41°10'N, 68°06'E // *Sphecodes pectoralis* Mor. [handwritten by F. Morawitz] // Lectotypus, Warncke 1975 <red label> [ZMMU].

**Paralectotype.** 1 ♀, 28.[VI.1871] // Кызылъкумъ [Kyzylkum] // Paralectotype *Sphecodes pectoralis* Mor., design. Warncke <red label, labelled by Yu. Astafurova> [ZMMU].

**Current status.** *Sphecodes pectoralis* Morawitz, 1876.

**Remarks.** Description of male. Meyer 1919: 126, as *Sphecodes cristatus* sensu Meyer (non Hagens 1882) (see Blüthgen 1924: 475).

**Distribution.** South Kazakhstan, Central Asia, China (Gansu, Xinjiang) (Astafurova et al. 2018a, b, 2020).

39. *Sphecodes rufithorax* Morawitz, 1876

*Sphecodes rufithorax* Morawitz, 1876: 255, ♀, ♂.

**Type locality.** Bairkum (Chimkent Province, Kazakhstan).

**Published (original) locality.** Kazakhstan: Bayrakum [Bairkum]; steppe between Syr-Darya River and Tashkent.

**Lectotype.** ♀, designated by Warncke 1992: 24, 17. [V.1871] // Байракумъ [Kazakhstan, Chimkent Province, Bairkum, Syr-Darya River, 42°05’N, 68°10’E] // *Sphe-
Figure 33. *Sphecodes pectoralis* Morawitz, 1876, lectotype, female A head, frontal view B habitus, lateral view and labels C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 2.0 mm (B, D), 1.0 mm (A, C).
Figure 34. Sphecodes rufithorax Morawitz, 1876, lectotype, female A habitus, lateral view B head, frontal view C metasoma, dorsal view D vertex, dorso-lateral view E labels F mesosoma, dorsal view. Scale bars: 1.0 mm (A–C, F), 0.5 mm (D).
codes rufithorax F. Moraw., ♀ [handwritten by F. Morawitz] // Lectotypus Warncke, 1975 <red label> [ZMMU].

**Paralectotypes** (2 ♀, 1 ♂). 1 ♀, Баиракумъ [Bairkum] // кол. [Collection of F. Morawitz] // Sphecodes rufithorax F. Moraw., ♀ [handwritten by F. Morawitz] // F. Morawitz det., Typ.; 1 ♀, 20.[V.1871] // Степь м. [between] Сырдарь и Ташкент // Sphecodes rufithorax Mor., ♂ [handwritten by F. Morawitz] // Paralectotypus Sphec. rufithorax Mor., design. Warncke, [19]92 <red label, labelled by Yu. Astafurova> [ZMMU]; 1 ♀, the same labels [ZISP].

**Current status.** Sphecodes olivieri Lepeletier, 1825 (synonymised by Warncke 1992: 24).

**Distribution.** North Africa, the Arabian Peninsula, Israel, Jordan, South Europe, Russia (south of European part), Turkey, Caucasus, Iran, Pakistan, Central Asia, Kazakhstan, NW China (Astafurova et al. 2019).

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**Subfamily Nomiiinae**

**Genus Nomia Latreille, 1804**

40. *Nomia edentata* Morawitz, 1876

Figure 35

*Nomia edentata* Morawitz, 1876: 259, ♀, ♂.

**Type locality.** Jizzakh (Uzbekistan).

**Published (original) locality.** Uzbekistan: Samarkand, Dzhyuzak.

**Lectotype.** ♀, designated by Warncke 1976: 104, 20.[VII.1871] // Джюзакъ [Uzbekistan, Dzhyuzak (= Jizzakh), 40°07’N, 67°51’E] // Nomia edentata Mor. [handwritten by F. Morawitz] // Lectotypus, Warncke 1975 <red label> [ZMMU].

**Paralectotypes** (2 ♂). 1 ♂, the same labels as in the lectotype // Paralectotypus, Nomia edentata Mor., design. Warncke <red label> [ZISP]; 1 ♂, 8.[VII.1869] // Самаркандъ [Samarkand] // Paralectotypus Nomia edentata Mor., design. Warncke <red label> [ZMMU].

**Current status.** Pseudapis edentata (Morawitz, 1876).

**Distribution.** North Africa, Saudi Arabia, Turkey, Azerbaijan, Kazakhstan, Central Asia, Iraq, Iran, Afghanistan, Pakistan, India (Astafurova 2014).

41. *Nomia rufescens* Morawitz, 1876

Figure 36

*Nomia rufescens* Morawitz, 1876: 261, ♀.

**Type locality.** Zeravshan River valley (Uzbekistan).

**Published (original) locality.** Uzbekistan: “Aykul Lake” in Zeravshan River valley.
Figure 35. *Nomia edentata* Morawitz, 1876, lectotype, female A habitus, lateral view B head, frontal view C metapostnotum, dorsal view D metasoma, dorsal view E mesosoma, dorsal view F labels. Scale bars: 1.0 mm (A, D), 0.5 mm (B, C, E).

**Lectotype.** ♀, designated by Warncke 1976: 106, 5.[VIII.1869] // Заравш[анская]. дол.[ина] [Uzbekistan, Zeravshan River valley, Aykul Lake near Chelek, 39°56’N, 66°49’E] // *Nomia rufescens* Mor. // Lectotypus, Warncke 1975 <red label> [ZMMU].

**Current status.** *Pseudapis rufescens* (Morawitz, 1876).

**Remarks.** Description of male. Morawitz 1893: 79.

**Distribution.** Turkey, Central Asia, Kazakhstan (Astafurova 2014).
Figure 36. *Nomia rufescens* Morawitz, 1876, lectotype, female A habitus, lateral view and labels B head, frontal view C mesosoma, dorsal view D metasoma, dorsal view. Scale bars: 1.0 mm.
Subfamily Nomioidinae
Genus Nomioides Schenck, 1866

42. Nomioides parviceps Morawitz, 1876
Figure (see Astafurova and Proshchalykin 2019: 56, figs 51a–e)

Nomioides parviceps Morawitz, 1876: 215, ♂.

Type locality. Bairamali (Turkmenistan).
Published (original) locality. Uzbekistan: Samarkand.
Holotype. ♂, окр.[естности] Са́марканда [Uzbekistan, Samarkand, 39°39′N, 65°57′E], 13.VI[1869], lost (also see Pesenko 1983: 168–170).
Neotype. ♂, designated by Pesenko 1983: 168, В. Гусса́ковский [V. Gussakovskij leg.] // Nomioides conjungens m., ♂, Blüthgen det. 1931 // Neotypus Nomioides parviceps Mor., ♂, design. Pesenko [1980 handwritten by Yu. Pesenko] // Zoological Institute St. Petersburg, INS_HYM_0000142 [ZISP].

Current status. Nomioides (Nomioides) parviceps Morawitz, 1876.
Remarks. Description of female: Blüthgen 1925b: 45, as Nomioides conjungens (synonymised by Blüthgen 1934c: 253).
Distribution. Asia Minor, Afghanistan, Armenia, Central Asia (Astafurova and Proshchalykin 2019).

43. Nomioides turanica Morawitz, 1876
Figure (see Astafurova and Proshchalykin 2019: 68, figs 62a–e).

Nomioides turanica Morawitz, 1876: 214, ♀, ♂.

Type locality. Samarkand (Uzbekistan).
Published (original) locality. Tajikistan: Murzarabat; Uzbekistan: Sokh, Samarkand.
Lectotype. ♂, designated by Pesenko 1983: 174, 5.[VII.1870] // Са́марканда [Uzbekistan, Samarkand, 39°39′N, 66°57′E] // turanica Mor., Typ. [handwritten by F. Morawitz] // Lectotypus Nomioides turanica Mor., ♂, design. Pesenko, 1976 // Zoological Institute St. Petersburg, INS_HYM_0000131 [ZISP].
Parallectotypes (5 ♂). 1 ♂, 28.[VI.1871] // Со́х [Sokh] // Nomioides turanica n. sp. F. Morawitz det.; 1 ♂, <gold circle> 8.[VII.1870] // Са́марканда [Samarkand] // Nomioides turanica Mor. [handwritten by F. Morawitz] [ZMMU]; 3 ♂, Со́х [Sokh] // к.[оллекция] Ф. Моравица [Collection of F. Morawitz] // Nomioides turanica Mor. // Parallectotypus ♂ Nomioides turanica Mor., design. Pesenko, 1976 <identical red labels on each parallectotype specimen> [ZISP].

Current status. Nomioides (Nomioides) turanicus Morawitz, 1876.
Distribution. North Africa, Central Asia, Iran, Pakistan (Astafurova and Proshchalykin 2019).
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