NEW RECORDS OF RARELY COLLECTED BEES OF THE GENUS \textit{Colletes} Latreille (Hymenoptera, Colletidae) FROM ASIA AND THE CAUCASUS

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Summary. An annotated list of 28 species of rarely collected and little known bees of the genus \textit{Colletes} from Asia and the Caucasus is given. Three species are firstly recorded from Iran, two species – from China, five – from Turkmenistan, three – from Uzbekistan, and two species – from Azerbaijan. The distribution data of other species are enlarged.

Key words: Apoidea, Apiformes, Central Asia, China, Iran, Caucasus.

Summary. Приводится список 28 редких видов пчёл из рода \textit{Colletes}, собранных в различных регионах Азии и Кавказа. Впервые для Ирана приводятся 3 вида, для Китая – 2, для Туркменистана – 5, для Узбекистана – 3 и для Азербайджана – 2 вида. Расширины данные по распространению остальных видов.
INTRODUCTION

The bee genus *Colletes* Latreille, 1802 currently includes 522 valid species, with an estimated total of about 700 species (Kuhlmann et al., 2009) from all continents except Antarctica, Australia, Madagascar and parts of Southeast Asia (Michener, 2007; Kuhlmann, 2014). The Palaearctic fauna is sufficiently well studied and includes 237 species, of which 70 species have been described in the last 20 years mainly from Central Asia (Kuhlmann, 2002, 2003; Kuhlmann & Proshchalykin, 2013a, 2014, 2015a; Proshchalykin & Kuhlmann, 2015), Mongolia (Kuhlmann & Dorn, 2002; Kuhlmann, 2009; Kuhlmann & Proshchalykin, 2013b), China (Kuhlmann, 2002, 2007; Niu et al., 2013a,b, 2014a,b) and the Caucasus region (Kuhlmann & Proshchalykin, 2015b, 2016).

To further complete the study on Palaearctic *Colletes* we here report additional records of twenty eight rarely collected and little known species with 13 species recorded from some countries for the first time (Table 1). This paper is meant as a further step towards a better documentation of the species of *Colletes* and their distribution patterns in the Palaearctic region and adjacent areas.

Table 1. The list of new records of *Colletes* bees by countries.

<table>
<thead>
<tr>
<th><em>Colletes</em> species</th>
<th>New records by countries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IR</td>
</tr>
<tr>
<td>C. annejohnae Kuhlmann, 2003</td>
<td>+</td>
</tr>
<tr>
<td>C. brevigena Noskiewicz, 1936</td>
<td>+</td>
</tr>
<tr>
<td>C. caspicus Morawitz, 1874</td>
<td>+</td>
</tr>
<tr>
<td>C. comaticus Kuhlmann, 2015</td>
<td>+</td>
</tr>
<tr>
<td>C. edentulus Noskiewicz, 1936</td>
<td>+</td>
</tr>
<tr>
<td>C. gusi Kuhlmann, 2009</td>
<td>+</td>
</tr>
<tr>
<td>C. kaline Kuhlmann et Proshchalykin, 2013</td>
<td>+</td>
</tr>
<tr>
<td>C. marginatus Smith, 1846</td>
<td>+</td>
</tr>
<tr>
<td>C. pallipes Noskiewicz, 1936</td>
<td>+</td>
</tr>
<tr>
<td>C. rubripes Noskiewicz, 1936</td>
<td>+</td>
</tr>
<tr>
<td>C. sellatus Morawitz, 1893</td>
<td>+</td>
</tr>
<tr>
<td>C. squamulosus Noskiewicz, 1936</td>
<td>+</td>
</tr>
<tr>
<td>C. wollmanni Noskiewicz, 1936</td>
<td>+</td>
</tr>
<tr>
<td>Total number of known species:</td>
<td>34</td>
</tr>
</tbody>
</table>

IR – Iran, CN – China, TU – Turkmenistan, UZ – Uzbekistan, AZ – Azerbaijan.

MATERIAL AND METHODS

Acronyms for collections from which specimens were borrowed or are deposited are as follows (the names of curators are given in parentheses): FCTB – Federal Scientific Center of the East Asia terrestrial biodiversity, Vladivostok, Russia (M. Proshchalykin); MNHW – Museum of Natural History, University of Wroclaw, Wroclaw, Poland (A. Wanat); NMW – Naturhistorisches Museum, Vienna, Austria (D. Zimmermann); OÖLM – Oberösterreichisches Landesmuseum, Linz, Austria
The results presented in this paper are based on 128 specimens. Hard brackets are used when information is added to specimen label information (e.g. geographical coordinates) or published data (e.g. current name of an old place name). New distribution records are marked with an asterisk (*). The definition of species groups in Colletes follows Noskiewicz (1936) and Kuhlmann et al. (2009). The general distribution of Colletes follows Proshchalykin (2017).

LIST OF SPECIES

Colletes nigricans group

Colletes bidentulus Noskiewicz, 1936


SPECIMENS EXAMINED. Tajikistan: Varsaminor[Aini] [68°32'E 39°23'N], 1892, 2 ♂, leg. Glasunov [ZISP].

DISTRIBUTION. Turkey, Azerbaijan, Iran, Uzbekistan, Turkmenistan, Tajikistan.

REMARKS. Additional record of this rarely collected species.

Colletes caspicus group

Colletes caspicus Morawitz, 1874


Colletes balticus Alfken, 1912: 121, ♂, ♀ (type locality: Germany).

SPECIMENS EXAMINED. Iran: Hassankiadeh [49°48'E 37°26'N], 1915, 3 ♂, B. Iljin [ZISP]. China: Dyn-yuan'-in, N Alashan' [106°20'E 39°40'N], 3-4.VI 1908, 1 ♂, P. Kozlov [ZISP]; idem, 9.VI 1908, 1 ♂, P. Kozlov [ZISP].

DISTRIBUTION. Germany, Czech Republic, Poland, Lithuania, Belarus, Ukraine, Georgia, Azerbaijan, Russia, Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, Tajikistan, *Iran, *China (Inner Mongolia).

REMARKS. This widespread species is here recorded from Iran and China for the first time.
Colletes squamosus group

Colletes annulicornis Morawitz, 1876
Colletes annulicornis Morawitz, 1876: 266–267, ♀ (holotype: ♀, Uzbekistan, Ajkul Lake, 700 m, 5.VIII.1869, A. Fedchenko, ZMMU).

SPECIMENS EXAMINED. Uzbekistan: Karshi, Kashkadarya River [65°49'E 38°52'N], 6-7.IX 2017, 2 ♂, M. Proshchalykin [FCTB]; Ok-Kuduk [65°45'E 38°25'N], 18-19.IX 2017, 6 ♀, 4 ♂, M. Proshchalykin [FCTB].

DISTRIBUTION. Uzbekistan, Turkmenistan, Tajikistan, Pakistan.
REMARKS. Additional records of this rarely collected species.

Colletes bernadettae Kuhlmann, 2000

SPECIMENS EXAMINED. Turkmenistan: Khodzha, 12 km from Gyaurs, Kopetdag [58°35'E 37°45'N], 12.IX 1935, 2 ♂, Vlasov [ZISP]; Kara-Kala [Makh-tumkuli] [56°44'E 38°54'N], 28.V 1953, 1 ♂, D. Shteinberg [ZISP].

DISTRIBUTION. Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan.
REMARKS. Additional records of this rarely collected species.

Colletes comaticus Kuhlmann, 2015

SPECIMENS EXAMINED. Turkmenistan: Krasnovodsk [Turkmenbash] [52°58'E 40°01'N], 15.VI 1928, 1 ♂, V. Gussakovskij [ZISP].

DISTRIBUTION. Iran, *Turkmenistan.
REMARKS. This species has only been known from the type series (four males) collected 2010 in Kerman province, Iran (Kuhlmann & Proshchalykin, 2015a: 82).

Colletes cretaceus Morawitz, 1876
Colletes cretaceus Morawitz, 1876: 267, ♀ (holotype: ♀, Kazakhstan, Kyzyl-Kum, Karak Mt., ZMMU).

SPECIMENS EXAMINED. Kazakhstan: Iliisk [near Kapshagai] [77°03'E 43°52'N], 8.VI 1953, 1 ♂, L. Zimina [ZMMU]. Uzbekistan: Mirishkorskiy distr., Sundukli desert [64°32'E 38°57'N], 16.V 2015, 9 ♂; idem, 21.V 2015, 1 ♀, 6 ♀, M. Proshchalykin [FCTB].

DISTRIBUTION. Turkey, Armenia, Azerbaijan, Russia, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan.
REMARKS. Additional records of this rarely collected species.
Colletes jovel Kuhlmann et Proshchalykin, 2016


SPECIMENS EXAMINED. Azerbaijan: Nakhichevan [45°24'E 39°12'N], 19.VI 1933, 1 ♀, Znoiko [ZISP].
DISTRIBUTION. Azerbaijan.
REMARKS. This species has only been known from the holotype.

Colletes pollinarius Noskiewicz, 1936


SPECIMENS EXAMINED. Turkmenistan: Uzun-Ada [53°26'E 39°32'N], 1 ♀, Morawitz’s coll. [ZISP]; Kara-Bogaz, 40 km N Kizyl-Arva[Serder] [56°15'E 39°21'N], 19.V 1953, 1 ♂, Odintsova [ZISP]; idem, 18.VI 1953, 1 ♀, O. Kryzhановский [ZISP].
DISTRIBUTION. Turkmenistan.
REMARKS. Additional records of this rarely collected species.

Colletes rubripes Noskiewicz, 1936


SPECIMENS EXAMINED. Turkmenistan: Repetek[70 km SW Turkmenabad] [63°10'E 38°33'N], 19.VII 1925, 3 ♀, V. Gussakovskij [ZISP]; Uzun-Ada [53°26'E 39°32'N], 4 ♀, Morawitz’s coll. [ZISP]. Iran: Karasu River, NE Persia [48°00'E 38°30'N], 28.V 1913, 1 ♀, Solovkin [ZISP].
DISTRIBUTION. Turkmenistan, Tajikistan, *Iran.
REMARKS. This rarely collected species is here recorded for the first time from outside Central Asia.

Colletes sellatus Morawitz, 1893

Colletes sellatus Morawitz, 1893: 83–84, ♀ (holotype:♀, Tajikistan, Pachut [probably lost]).

SPECIMENS EXAMINED. Turkmenistan: Repetek[70 km SW Turkmenabad] [63°10'E 38°33'N], 23.VI 1925, 1 ♀, V. Gussakovskij [ZISP]; Farab[Farap], W Bukhara [63°36'E 39°10'N], 4.VIII 1928, 1 ♀, V. Gussakovskij [ZISP]. Uzbekistan: Bukhara, Karakul [63°51'E 39°30'N], 11.VIII 1924, 1 ♂, Maslovskiy [ZISP].
DISTRIBUTION. Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, *Uzbekistan.
REMARKS. First record of this rarely collected species from Uzbekistan.
**Colletes skorikowi Noskiewicz, 1936**


SPECIMENS EXAMINED. **Turkmenistan**: Uzun-Ada [53°26'E 39°32'N], 1 ♀, Morawitz’s coll. [ZISP]; Kara-Bogaz, 40 km N Kizyl-Arvat [Serdar] [56°15'E 39°21'N], 2 ♀, 31.V 1953, D. Shteinberg [ZISP]; idem, 31.V 1953, 1 ♀; idem, 1.VII 1953, 1 ♀, Odintsova [ZISP].

**DISTRIBUTION.** Kazakhstan, Turkmenistan, Tajikistan.

**REMARKS.** Additional records of this rarely collected species.

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**Colletes squamulosus Noskiewicz, 1936**


SPECIMENS EXAMINED. **Turkmenistan**: 35 km NW Tedzhen [60°11'E 37°29'N], 4 ♂, T. Adtaev [ZMMU].

**DISTRIBUTION.** Cyprus, Israel, Syria, Iran, Armenia, Azerbaijan, *Turkmenistan.*

**REMARKS.** First record of this species for Central Asia.

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**Colletes wollmanni Noskiewicz, 1936**


SPECIMENS EXAMINED. **Azerbaijan**: Gyandzha [46°21'E 40°40'N], 25.VII 1928, 2 ♂, S. Tarbinskiy [ZISP].

**DISTRIBUTION.** Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, Tajikistan, Iran, Pakistan, China, *Azerbaijan.*

**REMARKS.** First record of this species for Caucasus.

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**Colletes mixtus group**

**Colletes annejohnae Kuhlmann, 2003**


SPECIMENS EXAMINED. **Uzbekistan**: Uchkzyyl, Kattakum [67°17'E 37°21'N], 8-11.IX 2017, 1 ♂, M. Proshchalykin [FCTB].

**DISTRIBUTION.** Kazakhstan, Kyrgyzstan, Uzbekistan, China.

**REMARKS.** Additional record of this rarely collected species.
Colletes dubitatus Noskiewicz, 1936

Colletes dubitatus Noskiewicz, 1936: 241–242, ♂ (syntypes: 2 ♂, Tartugai [Kazakhstan]; Merv [Turkmenistan], MNHW).


DISTRIBUTION. Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Mongolia.

REMARKS. This species has been known in Uzbekistan only from two specimens (male and female) collected in Bukhara and Khatynrabat (Kuhlmann, 2005: 1369; Kuhlmann & Proshchalykin, 2013a: 417).

Colletes mixtus Radoszkowski, 1891


SPECIMENS EXAMINED. Uzbekistan: Mirishkorskiy distr., Sundukli desert [64°32′E 38°57′N], 21-22.IX 2017, 1 ♀, 5 ♂, M. Proshchalykin [FCTB].

DISTRIBUTION. Azerbaijan, Turkey, Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Mongolia, China (Xinjiang).

REMARKS. This species has been known in Uzbekistan only from two males collected in Khiva and Kokand (Kuhlmann & Proshchalykin, 2013a: 418). The record from “Uzbekistan: Szybjendu Szyguza” (Kuhlmann, 2005: 1370) belongs to Gansu, China.

Colletes stachi Noskiewicz, 1958


SPECIMENS EXAMINED. Uzbekistan: Uchkyzyl, Kattakum [67°17′E 37°21′N], 8-11.IX 2017, 1 ♀, 5 ♂, M. Proshchalykin [FCTB]; Mirishkorskiy distr., Sundukli desert [64°32′E 38°57′N], 21-22.IX 2017, 1 ♀, 4 ♂, M. Proshchalykin [FCTB].

DISTRIBUTION. Tajikistan, Uzbekistan.

REMARKS. This rarely collected species has been known in Uzbekistan only from two females collected in Pungan, Eastern Kuraminskii Ridge (Kuhlmann & Proshchalykin, 2015a: 97). Colletes stachi apparently is a rare example of a species that is only active in late summer / early autumn.
Colletes flavicornis group

**Colletes alicularis** Noskiewicz, 1936  

**SPECIMENS EXAMINED.**  
**Turkmenistan:** Repetek[70 km SW Turkmenabad] [63°10'E 38°33'N], 7.V 1937, 1 ♂, Vinogradov, Egorov [ZISP]; Orta-Kuyu, Central Kara-Kum [58°33'E 39°27'N], 19.V 1953, 3 ♀, 2 ♂, E. Arens [ZISP].  
**Tajikistan:** Petra Velikogo Ridge, Zakh-Bursi Pass [71°20'E 37°40'N], 5.VII 1913, 1 ♂, Golbek [ZISP].  
**DISTRIBUTION.** Kazakhstan, Turkmenistan, Tajikistan, Uzbekistan.  
**REMARKS.** Additional records of this rarely collected species.

**Colletes gusi** Kuhlmann, 2009  

**SPECIMENS EXAMINED.**  
**China:** Dyn-yuan'-in, N Alashan' [106°20'E 39°40'N], 9-21.VII 1908, 1 ♂, P. Kozlov [ZISP].  
**DISTRIBUTION.** Mongolia, *China (Inner Mongolia).*  
**REMARKS.** First record of this recently described species from China.

**Colletes kaline** Kuhlmann et Proshchalykin, 2013  

**SPECIMENS EXAMINED.**  
**Uzbekistan:** Khiva, Ak-Mechet' [60°21'E 41°22'N], 22.V 1927, 1 ♂, V. Gussakovskij [ZISP].  
**DISTRIBUTION.** Turkmenistan, *Uzbekistan.*  
**REMARKS.** First record of this recently described species from Uzbekistan.

**Colletes pallipes** Noskiewicz, 1936  

**SPECIMENS EXAMINED.**  
**Turkmenistan:** Uzun-Ada [53°26'E 39°32'N], 1 ♀, Morawitz's coll. [ZISP].  
**DISTRIBUTION.** Kazakhstan, *Turkmenistan.*  
**REMARKS.** This species has only been known from the types.

Colletes nanus group

**Colletes schwarzi** Kuhlmann, 2002  
SPECIMENS EXAMINED. Turkmenistan: Adzhi-Dere, 16 km SW Kizyl-Arvat[Serdar] [56°09'E 38°52'N], 5.VII 1953, 1 ♂, Odintsova [ZISP].

DISTRIBUTION. Armenia, Kazakhstan, Uzbekistan, Turkmenistan, Iran.

REMARKS. Additional record of this rarely collected species.

Colletes fodiens group

Colletes edentulus Noskiewicz, 1936

SPECIMENS EXAMINED. Turkmenistan: Firyuza [Archabil] [58°06'E 37°57'N], 17.V 1928, 1 ♀, V. Gussakovskij [ZISP]. Azerbaijan: Lenkoran [48°51'E 38°45'N], 29.VI 1930, 1 ♂, A. Shestakov [ZISP]; Nakhichevan Prov., Biston on Gilyanchai River [45°52'E 39°08'N], 29.VII 1933, 1 ♀, Znoiko [ZISP].

DISTRIBUTION. Georgia, Armenia, Azerbaijan, Turkey, Mongolia, *Turkmenistan.

REMARKS. First record of this species for Central Asia.

Colletes senilis group

Colletes laevifrons Morawitz, 1893

SPECIMENS EXAMINED. Tajikistan: Gunt River, Chartym [72°09'E 37°43'N], 25.VI 1909, 1 ♂, A. Yakobson [ZISP].

DISTRIBUTION. Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Iran.

REMARKS. Additional record of this rarely collected species.

Colletes clypearis group

Colletes impunctatus Nylander, 1852
Colletes impunctatus Nylander, 1852: 249, ♀, ♂ (syntypes: ♀♀, ♂♂, Northern Sweden).

SPECIMENS EXAMINED. China: Ikhe-gol, N Burkhan-Budda Ridge [96°50'E 37°20'N], 22.VII 1901, 1 ♂, P. Kozlov [ZISP].

DISTRIBUTION. Norway, Sweden, Finland, Netherlands, France, Denmark, Germany, Switzerland, Austria, Finland, Poland, Czech Republic, Italy, Russia, Kazakhstan, Mongolia, China (Inner Mongolia, *Qinghai).

REMARKS. This species has been known in China only from two specimens (male and female) collected in Inner Mongolia (Niu et al., 2013b: 106).
Colletes marginatus group

Colletes marginatus Smith, 1846

Colletes thomsoni Alfken, 1899: 146–147, ♀, ♂ (type locality: Sweden).

SPECIMENS EXAMINED. Turkmenistan: Chuli [Gokdepe], Kopetdag [58°01'E 37°59'N], 10.VI 1914, 1 ♂, Golbek [ZISP].

DISTRIBUTION. United Kingdom, Spain, Norway, Sweden, Netherlands, Belgium, Luxembourg, France, Denmark, Germany, Switzerland, Austria, Finland, Poland, Czech Republic, Slovakia, Hungary, Italy, Croatia, Serbia, Bulgaria, Romania, Greece, Belorussia, Ukraine, Russia, Turkey, Armenia, Georgia, Azerbaijan, Kazakhstan, *Turkmenistan.

REMARKS. First record of this widespread species for Turkmenistan.

Colletes succinctus group

Colletes brevigena Noskiewicz, 1936
Colletes succinctus brevigena Noskiewicz, 1936: 480–481, ♀, ♂ (syntypes: ♀♀, ♂♂, Balkanhalbinsel, die Inseln des östlichen Mittelmeeres, Kleinasien, Persien, Kaukasus [probably lost]).


DISTRIBUTION. Portugal, Spain, France, Italy, Austria, Hungary, Serbia, Croatia, Greece, Bulgaria, Turkey, Russia, Azerbaijan, *Iran.

REMARKS. First record of this widespread species for Iran.

Colletes iranicus Noskiewicz, 1962

SPECIMENS EXAMINED. Turkmenistan: Merv [30 km E Mary] [62°11'E 37°39'N], 1 ♀, Morawitz's coll. [ZISP].

DISTRIBUTION. Turkey, Iran, Turkmenistan.

REMARKS. This species has been known in Turkmenistan only from six specimens (five males and female) collected in Kara-Kala [Makhtumkuli] (Kuhlmann & Proshchalykin, 2014: 594).

ACKNOWLEDGMENTS

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REFERENCES


