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THE BEES OF THE GENUS *COLLETES* LATREILLE (HYMENOPTERA, COLLETIDAE) COLLECTED BY THE SOVIET-MONGOLIAN EXPEDITIONS 1967-1982

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An annotated list of 26 species of *Colletes* collected in Mongolia by Soviet-Mongolian expeditions in 1967–1982 is given. Two species, *Colletes perforator* Smith, 1869 and *C. pauljohni* Kuhlmann, 2002 are newly recorded from Mongolia. An updated checklist of the 34 species of *Colletes* so far known from Mongolia is provided.

KEY WORDS. Bees, Apoidea, Apiformes, Palaearctic region, biodiversity, new records.

М. Ю. Прошчалыкин¹⁾, М. Кульман²⁾. Пчелы рода *Colletes* Latreille (Hymenoptera, Halictidae), собранные в результате Советско-Монгольских экспедиций 1967-1982 гг. // Дальневосточный энтомолог. 2015. N 296. С. 1-18.

Приводится список 26 видов пчел из рода *Colletes*, собранных в Монголии в результате Советско-Монгольских экспедиций в 1967–1982 гг. и хранящихся в Зоологическом институте РАН, Санкт-Петербург. Из них два вида: *Colletes perforator* Smith, 1869 и *C. pauljohni* Kuhlmann, 2002 указываются впервые для

фауны Монголии. Дан уточненный список *Colletes* Монголии, насчитывающий 34 вида.

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INTRODUCTION

Mongolia is located in central Asia, bordered by Russia to the north and China in the south. It is the sixth largest country in Asia, covering 1,564,100 sq. km and is divided into 21 provinces called “aimags” (Fig. 1).



Fig. 1. Administrative map of Mongolia showing provinces (aimags) (from Kuhlmann & Proshchalykin, 2013a).

Soviet-Mongolian expeditions were conducted from 1967 to 1983 and collected extensive entomological material, which became the basis for the publication of numerous articles and books (including *Insects of Mongolia* in 11 volumes), devoted to the study of various insect families. However, taxonomic information about the Mongolian bee fauna is still fragmentary. Based on the material collected by these expeditions only four papers on Halictidae bees have been published (Pesenko, 1977, 1984a,b; Astafurova & Proshchalykin, 2015). In 2014 previously unstudied *Colletes* specimens collected by the Soviet-Mongolian expeditions were discovered in the Zoological Institute, Russian Academy of Sciences, St. Petersburg (ZISP) that complement previous studies (Kuhlmann & Dorn, 2002; Kuhlmann, 2009a; Kuhlmann & Proshchalykin, 2013a).

The results presented in this paper are based on 558 specimens collected by M.A. Kozlov (357 specimens), E.P. Narchuk (78), I.M. Kerzhner (63), E.S. Sugonyaev (44), V.F. Zaitsev (10), D. Myagmarsuren (3), E.L. Gur'eva (2), and G.S. Medvedev (1) in Mongolia during the eleven Soviet-Mongolian expeditions (1967–1971, 1973, 1975, 1976, 1978, 1980, 1982), that are currently housed in ZISP (Table 1).

Places and dates of collecting bees in Mongolia follows Emeljanov *et al.* (1968, 1973, 1977, 1978) and Kerzhner *et al.* (1982). 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; affiliation to a present day country).

In the present study we report additional records of 26 *Colletes* species with two species recorded from Mongolia for the first time. In total 34 *Colletes* species are now recorded from Mongolia (Table 2) with its centre of diversity in the South-West of the country (Fig. 2). *Colletes conradti* Noskiewicz, 1936 is removed from the list of Mongolian species (see Proshchalykin & Kuhlmann, 2015 for details).

We have used the following abbreviations for collectors: DM – D. Myagmarsuren, EG – E.L. Gur’eva, EN – E.P. Narchuk; ES – E.S. Sugonyaev; GM – G.S. Medvedev, IK – I.M. Kerzhner; MK – M.A. Kozlov. New distribution records are marked with an asterisk (*). The general distribution of *Colletes* follows Kuhlmann & Proshchalykin (2013a,b; 2014a,b), Proshchalykin & Kuhlmann (2015), and Niu *et al.* (2014). The definition of *Colletes* species-groups follows Noskiewicz (1936) and Kuhlmann *et al.* (2009).

Table 1. Details of the Soviet-Mongolian expeditions (1967–1982)

| Years | Aimags | Collectors | Number of <i>Colletes</i> specimens/species |
|---------------|---|---|---|
| 1967 | Arkhangai, Bayan-Khongor, Uvurkhangai, Umnugovi, Ulaanbaatar, Tuv | I. Kerzhner, M. Kozlov, V. Zaitsev | 15/11 |
| 1968 | Usv, Khovd, Khuvsgul, Zavkhan | M. Kozlov | 16/7 |
| 1969 | Bayan-Khongor, Uvurkhangai, Umnugovi | I. Kerzhner, M. Kozlov, V. Zaitsev | 43/7 |
| 1970 | Usv, Khovd, Bayan-Khongor, Govi-Altai, Khuvsgul, Uvurkhangai, Selenge | I. Kerzhner, E. Narchuk, M. Kozlov, D. Myagmarsuren, V. Zaitsev | 28/10 |
| 1971 | Bayan-Khongor, Khentii, Dornogovi, Dornod, Sukhbaatar | I. Kerzhner, M. Kozlov | 35/5 |
| 1973 | Umnugovi | G. Medvedev | 1/1 |
| 1975 | Khuvsgul, Arkhangai, Selenge, Khentii, Dornogovi, Dornod, Sukhbaatar | E. Narchuk, E. Sugonyaev, M. Kozlov | 177/18 |
| 1976 | Tuv, Khentii, Dornod, Sukhbaatar | I. Kerzhner, M. Kozlov | 165/9 |
| 1978 | Bayan-Ulgii, Uvs, Bayan-Khongor, Govi-Altai | M. Kozlov, E. Gur’eva | 28/8 |
| 1980 | Khovd, Govi-Altai, Arkhangai | I. Kerzhner, M. Kozlov | 39/8 |
| 1982 | Bayan-Khongor | I. Kerzhner | 1/1 |
| <i>Total:</i> | | | 558/26 |

Table 2. The list of *Colletes* bees of Mongolia

| № | Species | Reference date | | | |
|---------------|---|----------------|----|-----|----|
| | | I | II | III | IV |
| 1 | <i>Colletes alini</i> Kuhlmann, 2000 | + | + | + | + |
| 2 | <i>C. arsenjevi</i> Kuhlmann, 2006 | | + | + | + |
| 3 | <i>C. chengtehensis</i> Yasumatsu, 1935 | + | + | + | + |
| 4 | <i>C. cinerascens</i> Morawitz, 1893 | + | + | + | + |
| 5 | <i>C. collaris</i> Dours, 1872 | + | + | + | + |
| 6 | <i>C. cunicularius</i> (Linnaeus, 1761) | + | | + | |
| 7 | <i>C. daviesanus</i> Smith, 1846 | + | + | + | + |
| 8 | <i>C. dorni</i> Kuhlmann, 2002 | + | | + | |
| 9 | <i>C. dubitatus</i> Noskiewicz, 1936 | | | + | + |
| 10 | <i>C. ebmeri</i> Kuhlmann, 2002 | + | + | + | + |
| 11 | <i>C. edentuloides</i> Kuhlmann, 2011 | | | + | |
| 12 | <i>C. edentulus</i> Noskiewicz, 1936 | + | + | + | |
| 13 | <i>C. emaceatus</i> Noskiewicz, 1936 | | + | + | + |
| 14 | <i>C. floralis</i> Eversmann, 1852 | + | + | + | + |
| 15 | <i>C. fodiens</i> (Fourcroy, 1785) | + | | + | + |
| 16 | <i>C. fulvicornis</i> Noskiewicz, 1936 | + | + | + | + |
| 17 | <i>C. gusi</i> Kuhlmann, 2009 | | + | + | + |
| 18 | <i>C. impunctatus</i> Nylander, 1852 | + | + | + | + |
| 19 | <i>C. inexpectatus</i> Noskiewicz, 1936 | + | | + | |
| 20 | <i>C. jankowskyi</i> Radoszkowski, 1891 | + | + | + | + |
| 21 | <i>C. kaszabi</i> Kuhlmann, 2002 | + | + | + | + |
| 22 | <i>C. kozlovi</i> Friese, 1913 | + | + | + | + |
| 23 | <i>C. mixtus</i> Radoszkowski, 1891 | + | | + | + |
| 24 | <i>C. pauljohni</i> Kuhlmann, 2002 | | | | + |
| 25 | <i>C. perforator</i> Smith, 1869 | | | | + |
| 26 | <i>C. plumuloides</i> Kuhlmann et Proshchalykin, 2013 | | | + | |
| 27 | <i>C. popovi</i> Noskiewicz, 1936 | | | + | + |
| 28 | <i>C. pseudocinerascens</i> Noskiewicz, 1936 | + | + | + | + |
| 29 | <i>C. ravulus</i> Noskiewicz, 1936 | + | | + | + |
| 30 | <i>C. reinigi</i> Noskiewicz, 1936 | | + | + | |
| 31 | <i>C. roborovskyi</i> Friese, 1913 | + | | + | |
| 32 | <i>C. sidemii</i> Radoszkowski, 1891 | + | + | + | + |
| 33 | <i>C. wacki</i> Kuhlmann, 2002 | + | + | + | + |
| 34 | <i>C. wahrmani</i> Noskiewicz, 1959 | | + | + | + |
| <i>Total:</i> | | 23 | 21 | 32 | 26 |

References data source: I – Kuhlmann & Dorn, 2002; II – Kuhlmann, 2009; III – Kuhlmann & Proshchalykin, 2013; IV – current data.

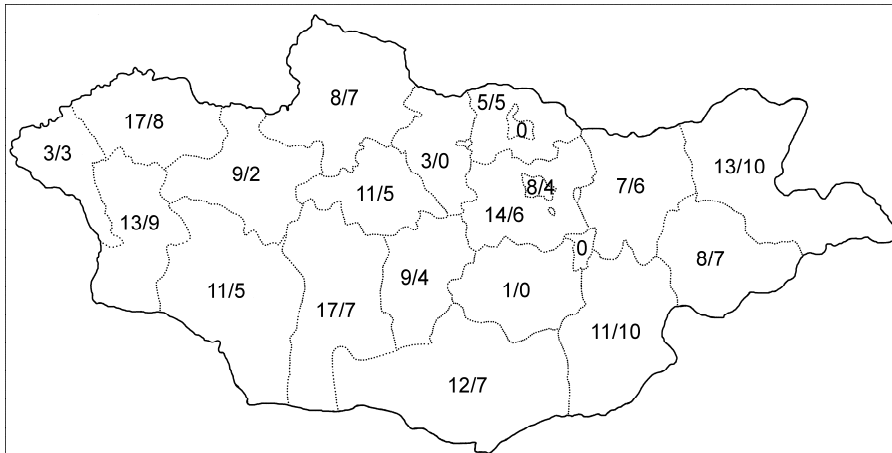


Fig. 2. Number of Mongolian *Colletes* species by aimags (the names of the aimags in Fig. 1). Number of *Colletes* species recorded from Mongolian aimags/number of *Colletes* species collected by Soviet-Mongolian expeditions (1967–1982).

LIST OF SPECIES

Colletes caspicus species-group

Colletes alini Kuhlmann, 2000

Colletes alini Kuhlmann, 2000: 161–162, ♀, ♂ (type locality: “Mandschurei, Charbin”, Heilongjiang, China); Kuhlmann & Dorn, 2002: 90; Kuhlmann, 2009a: 21; Kuhlmann & Proshchalykin, 2011: 7; 2013a: 256; Proshchalykin, 2012: 449; Niu *et al.*, 2014: 455; Proshchalykin & Kuhlmann, 2015: 336.

Colletes seitzi: Osytshnjuk & Romankova, 1995: 483; Proshchalykin, 2007: 879.

SPECIMENS EXAMINED. **Mongolia.** *Uvs Aimag*: 50 km E Ulangom [92°70'E 49°59'N], 10-11.VII 1968, 3 ♂ (MK); Togtokhyn-Shil Ridge, 50 km ESE Ulangom [92°04'E 49°59'N], 7.VIII 1970, 2 ♂ (IK); *Bayan-Khongor Aimag*: Orog-Noor Lake [100°42'E 45°03'N], 15-16.VIII 1967, ♂ (VZ); Shine-Dzhinst, Uluziin-Gol River [99°05'E 44°25'N], 15.VII 1982, 1 ♂ (IK); *Selenge Aimag*: 25 km E Darkhan, Sharyn-Gol Mt. [106°15'E 49°10'N], 30.VII 1975, ♂ (MK); *Tuv Aimag*: Kerulen, Kerulen River [108°30'E 47°50'N], 15.VIII 1976, ♀ (MK); *Khentii Aimag*: 25 km NE Bayan-Adraga [111°50'E 48°30'N], 6-7.VII 1976, 7 ♂ (IK); *Dornogovi Aimag*: 60 km NW Choir, Sumber [108°45'E 46°35'N], 12.VIII 1975, ♂ (MK); 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, ♂ (EN); 70 km ENE Sain-Shand, Dolotyn-Khuduk [111°10'E 44°45'N], 17.VIII 1975, ♂ (EN); *Dornod Aimag*: 7 km S Erentsav [114°80'E 49°61'N], 22.VIII 1975, ♂ (EN); 60 km ENE Bayan-Burd, Derkhin-Tsagan-Obo Mt. [119°00'E 46°80'N], 3-4.VII 1976, 2 ♂ (MK); 33 km SE Khalkh-Gol, Khalkin-Gol River [118°25'E 47°90'N], 31.VII 1976, 8 ♂ (MK); *Sukhbaatar Aimag*: 80 km NNE Barun-Urt [113°70'E 47°10'N], 19.VIII 1975, ♂ (EN); Dzotol-Khan-Ula Mt. [114°00'E 45°33'N], 20.VII 1976, ♀ (MK).

DISTRIBUTION. Mongolia (Uvs Aimag, Khovd Aimag, Bayan-Khongor Aimag, Umnugovi Aimag, *Selenge Aimag, Tuv Aimag, *Khentii Aimag, *Dornogovi Aimag, Dornod Aimag, Sukhbaatar Aimag), Russia (Eastern Siberia, Far East), China (Beijing, Tianjin, Hebei, Inner Mongolia, Heilongjiang, Liaoning, Shandong, Shanxi, Jiangsu, Ningxia, Xinjiang).

***Colletes squamosus* species-group**

***Colletes wahrmani* Noskiewicz, 1959**

Colletes wahrmani Noskiewicz, 1959: 43–45, ♂ (type locality: Bevsekhir, Turkey); Kuhlmann, 2009a: 21; 2009b: 16; Kuhlmann & Proshchalykin, 2013a: 257; 2013b: 416; Niu *et al.*, 2014: 472.

SPECIMENS EXAMINED. **Mongolia.** *Umnugovi Aimag*: 60 km E Talyn-Bilgakh-Bulak River [104°47'E 44°12'N], 17-19.VIII 1969, ♂ (IK); *Dornogovi Aimag*: 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, ♀ (EN).

DISTRIBUTION. Mongolia (Govi-Altai Aimag, Umnugovi Aimag, *Dornogovi Aimag), China (Xinjiang), Kazakhstan, Uzbekistan, Turkmenistan, Pakistan, Turkey, Armenia.

***Colletes mixtus* species-group**

***Colletes dubitatus* Noskiewicz, 1936**

Colletes dubitatus Noskiewicz, 1936: 241–242, ♂ (type locality: Tartugai, Kazakhstan); Kuhlmann & Proshchalykin, 2013a: 257; 2013b: 417.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 12 km S Altai [92°22'E 45°83'N], 22.VII 1970, ♀ (IK); *Bayan-Khongor Aimag*: Ekhin-Gool Oasis [99°81'E 42°31'N], 11-14.VIII 1969, ♀, 3 ♂ (MK).

DISTRIBUTION. Mongolia (Khovd Aimag, Bayan-Khongor Aimag), Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan.

***Colletes kozlovi* Friese, 1913**

Colletes kozlovi Friese, 1913: 59, ♀, ♂ (type locality: “Mongolia” [China: Xinjiang]); Noskiewicz, 1936: 240; Kuhlmann & Dorn, 2002: 91; Kuhlmann, 2005: 1369; 2009a: 21; 2009b: 16; Kuhlmann & Proshchalykin, 2011: 7; 2013a: 257; 2013b: 418; Niu *et al.*, 2014: 470; Proshchalykin & Kuhlmann, 2015: 336.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 50 km SSW Uench, Utyun-Mod [91°45'E 45°55'N], 27.VI 1980, 2 ♀, 12 ♂ (MK); *Govi-Altai Aimag*: 20 km ENE Khatan-Khairkhan-Ula Mt. [96°30'E 45°00'N], 4-5.VIII 1978, 5 ♂ (MK); 5.VIII 1978, ♂ (EG); *Arkhangai Aimag*: Terkhin-Tsaagan-Nuur Lake, 15 km W Taryat [99°43'E 48°09'N], 19.VII 1980, ♂ (MK); *Dornogovi Aimag*: 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, 2 ♀ (MK); 14.VIII 1975, ♂ (EN).

DISTRIBUTION. Mongolia (Khovd Aimag, Zavkhan Aimag, *Govi-Altai Aimag, *Arkhangai Aimag, Bayan-Khongor Aimag, Umnugovi Aimag, Dornogovi Aimag, Dornod Aimag), Russia (South-East of European part, Eastern Siberia), China (Inner Mongolia, Qinghai, Gansu, Ningxia, Xinjiang), Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, Azerbaijan.

***Colletes mixtus* Radoszkowski, 1891**

Colletes mixtus Radoszkowski, 1891: 257–258, ♀, ♂ (type locality: no locality); Kuhlmann & Dorn, 2002: 91; Kuhlmann, 2005: 1370; Kuhlmann & Proshchalykin, 2013a: 258; Niu *et al.*, 2014: 471.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 25 km S Altai, Elkhon [92°20'E 45°36'N], 22-23.VI 1980, ♀, 4 ♂ (MK); *Bayan-Khongor Aimag*: Ekhin-Gool Oasis [99°81'E 42°31'N], 11-14.VIII 1969, 3 ♀, 19 ♂ (MK); 31.VIII 1970, ♂ (MK); Talyn-Bilgekh-Bulak, 13 km E Tsagan-Bogdo-Ula [99°23'E 42°85'N], 16.VIII 1969, 4 ♀, 6 ♂ (MK); 100 km SE Bayan-Obo [101°12'E 45°10'N], 21.VI 1971, ♂ (MK).

DISTRIBUTION. Mongolia (Khovd Aimag, Govi-Altai Aimag, Bayan-Khongor Aimag), China (Gansu, Xinjiang), Kazakhstan, Uzbekistan, Turkmenistan, Tajikistan, Turkey.

***Colletes roborovskyi* species-group**

***Colletes roborovskyi* Friese, 1913**

Colletes roborovskyi Friese, 1913: 59, ♀, ♂ (type locality: "Mongolia" [China: Xinjiang]); Kuhlmann & Proshchalykin, 2013a: 258; 2013b: 419.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 25 km N Bulgan, Ulyastain-Gol River [91°85'E 46°32'N], 31.VII 1970, 4 ♂ (MK).

DISTRIBUTION. Mongolia (Khovd Aimag, Umnugovi Aimag), Russia (South-East of European part, Eastern Siberia), China (Inner Mongolia, Xinjiang), Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, Iran, Pakistan, Turkey, Georgia, Azerbaijan.

***Colletes uralensis* species-group**

***Colletes kaszabi* Kuhlmann, 2002**

Colletes kaszabi Kuhlmann in Kuhlmann & Dorn, 2002: 92, ♀, ♂ (holotype: ♀, "Menengijn tal 80 km WSW vom SW Ecke des Sees Bujr nur", Dornod Aimag, Mongolia); Kuhlmann, 2009a: 21; Kuhlmann & Proshchalykin, 2013a: 258; Niu *et al.*, 2014: 473; Proshchalykin & Kuhlmann, 2015: 338.

SPECIMENS EXAMINED. **Mongolia.** *Govi-Altai Aimag*: 20 km ENE Khatan-Khairkhan-Ula Mt. [96°30'E 45°00'N], 4-5.VIII 1978, 5 ♂ (MK); 5.VIII 1978, ♂

(EG); 25 km NE Bayan [96°00'E 46°30'N], 16.VI 1980, 2 ♂ (MK); *Khuvsgul Aimag*: 20 km SE Toson-Tsengel, Selenga River [100°50'E 49°25'N], 25.VII 1975, ♂ (ES); *Tuv Aimag*: Kerulen, Kerulen River [108°30'E 47°50'N], 15.VIII 1976, ♀ (MK); *Dornogovi Aimag*: 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, 2 ♀, 16 ♂ (EN); 10 km E Dzun-Bayan [110°03'E 44°18'N], 15.VIII 1975, 5 ♂ (ES); 70 km ENE Sain-Shand, Dolotyn-Khuduk [111°10'E 44°45'N] 17.VIII 1975, ♂ (EN); *Sukhbaatar Aimag*: 15 km SE Khongor, Ongon-Els [113°09'E 45°72'N], 5-6.VII 1971, ♂ (MK); Dzutol-Khan-Ula Mt. [114°00'E 45°33'N], 20.VII 1976, ♂ (MK).

DISTRIBUTION. Mongolia (Uvs Aimag, Zavkhan Aimag, Govi-Altai Aimag, *Khuvsgul Aimag, Bayan-Khongor Aimag, Bulgan Aimag, Ulaanbaatar, Tuv Aimag, Dornogovi Aimag, Dornod Aimag, Sukhbaatar Aimag), Russia (Eastern Siberia) China (Inner Mongolia).

***Colletes flavicornis* species-group**

***Colletes emaceatus* Noskiewicz, 1936**

Colletes emaceatus Noskiewicz, 1936: 264–267, ♂ (type locality: Muin-Kum desert, Kazakhstan); Kuhlmann, 2009a: 22; Kuhlmann & Proshchalykin, 2013a: 258; 2013b: 420.

SPECIMENS EXAMINED. **Mongolia.** *Bayan-Khongor Aimag*: Tuin-Gool River, S Bogdo-Ula [101°04'E 45°09'N], 5.VIII 1969, ♂ (IK); *Umnugovi Aimag*: Bordzon-Goby, 80 km SSE Nomgon [105°77'E 42°35'N], 5-8.VIII 1967, ♀, ♂ (IK); *Dornogovi Aimag*: 70 km ENE Sain-Shand, Dolotyn-Khuduk [111°10'E 44°45'N], 17.VIII 1975, 4 ♀ (EN); 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, 2 ♀ (MK); 15 km E Dzun-Bayan [110°12'E 44°26'N], 15.VIII 1975, ♂ (ES).

DISTRIBUTION. Mongolia (Bayan-Khongor Aimag, Uvurkhangai Aimag, Umnugovi Aimag, *Dornogovi Aimag), Kazakhstan, Turkmenistan.

***Colletes gusi* Kuhlmann, 2009**

Colletes gusi Kuhlmann, 2009a: 22, ♀, ♂ (holotype: ♂, 28 km SE Chatun-Bulag, Dornogovi Aimag, Mongolia); Kuhlmann & Proshchalykin, 2013a: 259.

SPECIMENS EXAMINED. **Mongolia.** *Usv Aimag*: 50 km E Ulangoma, Uvs-Noor Lake [92°15'E 50°22'N], 6.VIII 1970, ♂ (MK); *Umnugovi Aimag*: 60 km E Talyn-Bilgakh-Bulak River [104°45'E 44°06'N], 14-19.VIII 1969, ♀ (MK); *Dornogovi Aimag*: 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, ♀ (EN); 14.VIII 1975, ♂ (MK).

DISTRIBUTION. Mongolia (Usv Aimag, Umnugovi Aimag, Dornogovi Aimag, Dornod Aimag).

***Colletes popovi* Noskiewicz, 1936**

Colletes popovi Noskiewicz, 1936: 271–274, ♀ (type locality: “Schibendu Schigusa s. Satschjou, Gasch. Gob.” [China: Xinjiang]); Kuhlmann, 2005: 1372; Kuhlmann & Proshchalykin, 2013a: 259; 2013b: 423.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 12 km SW Altaj-som, Bodonchin-Gol River [92°25'E 45°81'N], 22.VII 1970, ♂ (MK); *Govi-Altai Aimag*: 60 km SW Tsel [95°08'E 45°42'N], 19.VII 1970, ♂ (VZ); *Bayan-Khongor Aimag*: Talyn-Bilgekh-Bulak, 13 km E Tsagan-Bogdo-Ula [99°23'E 42°85'N], 16.VIII 1969, ♂ (MK); *Uvurkhangai Aimag*: Tatsyn-Tsagan-Noor Lake [101°61'E 44°85'N], 2-4.VIII 1969, ♀ (VZ).

DISTRIBUTION. Mongolia (Khovd Aimag, Govi-Altai Aimag, Bayan-Khongor Aimag, Uvurkhangai Aimag), China (Qinghai), Kazakhstan.

***Colletes fodiens* species-group**

***Colletes daviesanus* Smith, 1846**

Colletes daviesanus Smith, 1846: 1278, ♀, ♂ (type locality: England); Kuhlmann & Dorn, 2002: 93; Kuhlmann, 2005: 1373; 2009a: 24; Proshchalykin & Kuhlmann, 2012: 15; 2015: 330; Kuhlmann & Proshchalykin, 2013a: 260; 2013b: 424; Proshchalykin, 2012: 449; Niu *et al.*, 2014: 457.

SPECIMENS EXAMINED. **Mongolia.** *Umnugovi Aimag*: 65 km SE Nomgon [105°91'E 42°35'N], 9.VIII 1967, ♂ (IK).

DISTRIBUTION. Mongolia (Uvs Aimag, Zavkhan Aimag, Umnugovi Aimag, Tuv Aimag), Russia (European part, Siberia, Far East), China (Qinghai, Heilongjiang), Kazakhstan, Kyrgyzstan, Uzbekistan, Europe, Turkey, Armenia, Georgia.

***Colletes pauljohni* Kuhlmann, 2002**

Colletes pauljohni Kuhlmann, 2002: 750–751, ♀, ♂ (type locality: south shore of Issyk-Kul Lake, Teploklyuchenka [Ak-su], Kyrgyzstan).

SPECIMENS EXAMINED. **Mongolia.** *Bayan-Khongor Aimag*: 10 km ENE Samon-Khairkhan-Ula Mt. [97°60'E 44°35'N], 9-10.VIII 1978, ♀, ♂ (MK).

DISTRIBUTION. *Mongolia (*Bayan-Khongor Aimag), China (Xinjiang), Kazakhstan, Kyrgyzstan, Tajikistan.

***Colletes perforator* Smith, 1869**

Colletes perforator Smith, 1869: 205, ♀ (type locality: Japan).

SPECIMENS EXAMINED. **Mongolia.** *Selenge Aimag*: Dulan-Khan, Ero-Gol River [106°E 30' 49°56'N], 4.VIII 1975, 2 ♀ (EN); 4.VIII 1975, ♂ (MK).

DISTRIBUTION. *Mongolia (*Selenge Aimag), Russia (Eastern Siberia, Far East), China (Beijing, Shanxi, Inner Mongolia, Heilongjiang, Jilin, Jiangxi), Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima).

***Colletes ravulus* Noskiewicz, 1936**

Colletes ravulus Noskiewicz, 1936: 335–337, ♂ (type locality: “Nordmongolei”, Mongolia); Kuhlmann & Dorn, 2002: 94; Kuhlmann & Proshchalykin, 2011: 10; 2013a: 260; Niu *et al.*, 2014: 461; Proshchalykin & Kuhlmann, 2015: 336.

SPECIMENS EXAMINED. **Mongolia.** *Usv Aimag*: channel between Airag and Khirgis-Noor [93°20'E 49°10'N], 28-29.VIII 1968, 2 ♀ (MK); *Dornod Aimag*: 13 km W Dash-Balbar, Uldza River [114°00'E 49°20'N], 24.VIII 1975, 2 ♀ (EN).

DISTRIBUTION. Mongolia (Usv Aimag, Dornod Aimag), Russia (Eastern Siberia), China (Xinjiang, Shanxi, Inner Mongolia).

***Colletes clypearis* species-group**

***Colletes cinerascens* Morawitz, 1893**

Colletes cinerascens Morawitz, 1893: 80, ♂ (type locality: “Jagnob, Kol”, Tajikistan); Kuhlmann & Dorn, 2002: 95; Kuhlmann, 2005: 1377; 2009a: 25; 2009b: 18; Kuhlmann & Proshchalykin, 2013a: 261; 2013b: 429; Niu *et al.*, 2014: 474; Proshchalykin & Kuhlmann, 2015: 332.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 20 km N Bulgan, Ulyastain-Gol River [92°10'E 46°05'N], 30.VI-1.VII 1980, ♂ (MK); *Bayan-Ulgii Aimag*: 20 km NW Bulgan, Ikh-Dzhargalantyn-Gol River [91°00'E 47°00'N], 22-23.VII 1978, ♂ (MK).

DISTRIBUTION. Mongolia (*Bayan-Ulgii Aimag, Uvs Aimag, Khovd Aimag, Govi-Altai Aimag, Bayan-Khongor Aimag), Russia (Eastern Siberia), China (Gansu, Qinghai, Xinjiang), Kazakhstan, Kyrgyzstan, Tajikistan.

***Colletes ebmeri* Kuhlmann, 2002**

Colletes ebmeri Kuhlmann in Kuhlmann & Dorn, 2002: 95, ♀, ♂ (holotype: ♂, “18 km S Pass Egijn davaa”, Bayan-Khongor Aimag, Mongolia); Kuhlmann, 2009a: 25; Kuhlmann & Proshchalykin, 2013a: 261; 2013b: 430; Proshchalykin & Kuhlmann, 2015: 332.

SPECIMENS EXAMINED. **Mongolia.** *Khovd Aimag*: 40 km N Uench [92°06'E 46°38'N], 31.VII-1.VIII 1968, ♀ (MK); 15 km WNW Dut [91°30'E 47°37'N], 8.VII 1980, ♀, 2 ♂ (MK); *Govi-Altai Aimag*: 37 km NE Tsogt, Dutiin-Daba Ridge [97°13'E 45°67'N], 14.VII 1970, ♂ (MK); *Khuvsgul Aimag*: 20 km SW Buren-Khan [99°85'E 49°51'N], 30.VI 1968, ♂ (MK); 25 km km NNE Ulan-Ula [99°13'E 50°40'N], 15.VII 1975, 2 ♀, ♂ (EN); 17 km N Shine-Ider [99°50'E 49°10'N], 21.VII 1975, ♀ (ES); *Ulaanbaatar* [106°59'E 47°45'N], 11.VI 1967, ♂ (IK); *Dornogovi Aimag*: 60 km NW Choir, Sumber [108°45'E 46°35'N], 12.VIII 1975, 3 ♂ (MK).

DISTRIBUTION. Mongolia (Khovd Aimag, Govi-Altai Aimag, Khuvsgul Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Ulaanbaatar, *Dornogovi Aimag), Russia (Eastern Siberia), Kazakhstan.

***Colletes floralis* Eversmann, 1852**

Colletes floralis Eversmann, 1852: 46, ♀, ♂ (type locality: “in prov. Orenburg., Saratov. et Astrachanensi”, Russia); Kuhlmann & Dorn, 2002: 96; Kuhlmann, 2005: 1377; 2009a: 28; 2009b: 18; Proshchalykin, 2007: 878; 2012: 449; Kuhlmann & Proshchalykin, 2011: 15; 2013a: 261; 2013b: 430; Niu *et al.*, 2014: 475; Proshchalykin & Kuhlmann, 2015: 332.

SPECIMENS EXAMINED. **Mongolia.** *Bayan-Ulgii Aimag*: 20 km NW Bulgan, Ikh-Dzhargalantyn-Gol River [91°00'E 47°00'N], 22-23.VII 1978, ♂ (MK); *Selenge Aimag*: 25 km E Darkhan, Sharyn-Gol Mt. [106°15'E 49°10'N], 30.VII 1975, ♀ (MK); *Ulaanbaatar* [106°59'E 47°45'N], 14.VII 1967, ♂ (VZ); *Tuv Aimag*: Kerulen [108°30'E 47°50'N], 15.VIII 1976, 2 ♂ (MK); *Dornod Aimag*: 13 km W Dash-Balbar, Uldza River [114°00'E 49°20'N], 24.VIII 1975, ♀ (EN); 32 km SE Salkhit Mt., Numregiin-Gol River [119°45'E 47°00'N], 9.VIII 1976, ♂ (MK); *Sukhbaatar Aimag*: 65 km NNW Dariganga [113°10'E 45°55'N], 14.VII 1976, 2 ♂ (MK).

DISTRIBUTION. Mongolia (*Bayan-Ulgii Aimag, Khuvsgul Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Bulgan Aimag, Uvurkhangai Aimag, Selenge Aimag, Ulaanbaatar, Tuv Aimag, *Dornod Aimag, *Sukhbaatar Aimag), Russia (European part, Siberia, Far East), China (Hebei, Qinghai, Xinjiang, Xizang, Guangdong, Yunnan), Japan (Hokkaido, Honshu), Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Iran, Europe, Georgia, India.

***Colletes fulvicornis* Noskiewicz, 1936**

Colletes fulvicornis Noskiewicz, 1936: 416, ♂ (lectotype: ♂, designated by Kuhlmann, 2000: 180, Cholt, Gobi, 16.VI 1926, Kozlov leg., Mongolia); Osytshnjuk & Romankova, 1995: 483; Kuhlmann & Dorn, 2002: 96; Kuhlmann, 2009a: 28; Kuhlmann & Proshchalykin, 2011: 16; 2013a: 262; Proshchalykin & Kuhlmann, 2015: 333.

SPECIMENS EXAMINED. **Mongolia.** *Uvs Aimag*: 20 km S Under-Khangai, Chigdzhiin-Gol River [95°00'E 48°30'N], 2.VII 1978, 2 ♀, 3 ♂ (MK); *Khuvsgul Aimag*: 25 km NNE Ulan-Ula, Shikshid-Gol River [99°13'E 50°40'N], 15.VII 1975, ♂ (EN); *Umnugovi Aimag*: 40 km S Bulgan, Gurvan-Saikhan Ridge [103°87'E 43°78'N], 28-29.VII 1967, ♀ (IK); *Khentii Aimag*: 12 km N Gal-Shara [111°08'E 46°84'N], 30.VII 1971, ♂ (MK); *Dornod Aimag*: Khukh-Nur Lake [115°40'E 49°35'N], 25.VI 1976, ♂ (MK); *Sukhbaatar Aimag*: Dzotol-Khan-Ula Mt. [114°00'E 45°33'N], 20.VII 1976, 8 ♀, 26 ♂ (MK).

DISTRIBUTION. Mongolia (Uvs Aimag, Khovd Aimag, Govi-Altai Aimag, *Khuvsgul Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Uvurkhangai Aimag, Umnugovi Aimag, Ulaanbaatar, Tuv Aimag, Dundgovi Aimag, Khentii Aimag, Dornod Aimag, *Sukhbaatar Aimag), Russia (Siberia), China (Xinjiang, Xizang).

***Colletes impunctatus* Nylander, 1852**

Colletes impunctatus Nylander, 1852: 249, ♀, ♂ (type locality: North Sweden); Kuhlmann & Dorn, 2002: 97; Proshchalykin, 2007: 879; 2012: 450; Kuhlmann, 2009a: 28; Kuhlmann & Proshchalykin, 2011: 17; 2013a: 263; 2013b: 431; Proshchalykin & Kuhlmann, 2015: 333.

SPECIMENS EXAMINED. **Mongolia.** *Bayan-Ulgii Aimag*: 20 km NW Bulgan, Ikh-Dzhargalantyn-Gol River [91°00'E 47°00'N], 22-23.VII 1978, ♂ (MK); *Uvs Aimag*: 20 km S Under-Khangai, Chigdzhiin-Gol River [95°00'E 48°30'N], 2.VII 1978, ♀ (MK); Ureg-Nur Lake, mouth of Karga River [91°00'E 50°20'N],

6.VII 1978, ♀ (MK); *Khovd Aimag*: 40 km N Uench-Somon [92°06'E 46°38'N], 31.VII-1.VIII 1968, ♂ (MK); *Zavkhan Aimag*: 30 km WNW Tes-Somon [96°13'E 48°25'N], 3-4.VII 1968, ♂ (MK); *Govi-Altai Aimag*: 8 km NE Argalant-Ula Mt. [93°05'E 45°50'N], 20.VI 1980, ♂ (MK); 25 km NE Bayan [96°00'E 46°30'N], 16.VI 1980, 2 ♂ (MK); *Khuvsgul Aimag*: Delger-Muren River, Buren-Khan [99°02'E 50°21'N], 28-29.VI 1968, 2 ♂ (MK); 25 km NNE Ulan-Ula, Shikshid-Gol River [99°13'E 50°40'N], 15.VII 1975, 4 ♀, 6 ♂ (EN); 15.VII 1975, 2 f, ♂ (ES); 17 km N Shine-Ider [99°50'E 49°10'N], 22.VII 1975, 2 ♀ (EN); 22.VII 1975, 6 ♀, 6 ♂ (ES); 20 km SE Toson-Tsengel, Selenga River [100°50'E 49°25'N], 25.VII 1975, ♂ (EN); *Arkhangai Aimag*: Terkhin-Tsaagan-Nuur Lake, 15 km W Taryat [99°43'E 48°09'N], 19.VII 1980, ♀, ♂ (MK); Chulutyn-Gol River, Chulut [100°18'E 47°65'N], 29.VI 1975, 7 ♀, 4 ♂ (MK); *Tuv Aimag*: Mungen-Mor't [108°42'E 48°17'N], 6-7.VIII 1967, 2 ♂ (MK); *Ulaanbaatar*, Tola River [106°55'E 47°55'N], 19.VI 1967, ♀ (IK); *Dornod Aimag*: Khukh-Nur Lake [115°40'E 49°35'N] 25.VI 1976, 2 ♂ (MK).

DISTRIBUTION. Mongolia (Bayan-Ulgii Aimag, Uvs Aimag, Khovd Aimag, Zavkhan Aimag, Govi-Altai Aimag, Khuvsgul Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Uvurkhangai Aimag, Umnugovi Aimag, Ulaanbaatar, Tuv Aimag, Dornod Aimag), Russia (European part, Siberia, Far East), China (Inner Mongolia), Kazakhstan, Europe.

***Colletes jankowskyi* Radoszkowski, 1891**

Colletes jankowskyi Radoszkowski, 1891: 253, ♀ (type locality: "sur les bords de la riviere Sidémi (non loin de Vladivostok)", Primorskiy Terr., Russia); Osytsnjuk & Romankova, 1995: 484; Kuhlmann & Dorn, 2002: 98; Kuhlmann, 2009a: 29; 2009b: 18; Kuhlmann & Proshchalykin, 2011: 17; 2013a: 263; 2013b: 431; Proshchalykin, 2012: 450; Proshchalykin & Kuhlmann, 2015: 334.

SPECIMENS EXAMINED. **Mongolia.** *Uvurkhangai Aimag*: Arts-Bogdo Ridge, 20 km S Khovd [102°15'E 44°43'N], 12-13.VIII 1967, ♀ (VZ); *Khentii Aimag*: 8 km S Norovlin [111°59'E 48°40'N], 25.VIII 1975, ♂ (MK); *Dornod Aimag*: 13 km W Dash-Balbar, Uldza River [114°00'E 49°20'N], 24.VIII 1975, 2 ♀ (EN).

DISTRIBUTION. Mongolia (Uvs Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Uvurkhangai Aimag, Ulaanbaatar, Tuv Aimag, *Khentii Aimag), Russia (Siberia, Far East), China (Beijing, Hebei, Shandong, Shanxi, Gansu, Heilongjiang, Jilin, Inner Mongolia, Yunnan), Tajikistan.

***Colletes pseudocinerascens* Noskiewicz, 1936**

Colletes pseudocinerascens Noskiewicz, 1936: 424, ♀, ♂ (lectotype: ♂, designated by Kuhlmann, 2000: 181, Jakutsk, Russia); Kuhlmann & Dorn, 2002: 98; Kuhlmann, 2009a: 29; Kuhlmann & Proshchalykin, 2011: 18; 2013a: 263; Proshchalykin & Kuhlmann, 2015: 334.

SPECIMENS EXAMINED. **Mongolia.** *Usv Aimag*: Togtokhyn-Shil Ridge, 50 km ESE Ulangom [92°04'E 49°59'N], 7.VIII 1970, 3 ♀ (MK); *Zavkhan Aimag*:

30 km WNW Tes-Somon [96°13'E 48°25'N], 3-4.VII 1968, ♂ (MK); *Khuvsgul Aimag*: 25 km NNE Ulan-Ula [99°13'E 50°40'N], 15-16.VII 1975, 2 ♀, ♂ (MK).

DISTRIBUTION. Mongolia (Usv Aimag, Zavkhan Aimag, Khuvsgul Aimag), Russia (Siberia).

Colletes sidemii Radoszkowski, 1891

Colletes sidemii Radoszkowski, 1891: 252 (type locality: “sur les bords de la riviere Sidémi (non loin de Vladivostok)”, Primorskiy Terr., Russia); Osytsnjuk & Romankova, 1995: 484; Kuhlmann & Dorn, 2002: 98; Proshchalykin, 2007: 879; 2012: 450; Kuhlmann, 2005: 1378; 2009a: 29; Kuhlmann & Proshchalykin, 2011: 19; 2013a: 264; 2013b: 431; Niu *et al.*, 2014: 477; Proshchalykin & Kuhlmann, 2015: 335.

SPECIMENS EXAMINED. **Mongolia.** *Usv Aimag*: 5 km S Khyargas-Noor [93°20'E 49°10'N], 10.VIII 1970, ♂ (VZ); 20 km S Under-Khangai, Chigdzhiin-Gol River [95°00'E 48°30'N], 2.VII 1978, ♀, 3 ♂ (MK); *Khuvsgul Aimag*: Delger-Muren River, Buren-Khan [99°02'E 50°21'N], 28-29.VI 1968, ♂ (MK); 17 km N Shine-Ider [99°50'E 49°10'N], 22.VII 1975, ♀, ♂ (EN); 20 km SE Toson-Tsengel, Selenga River [100°50'E 49°25'N], 25.VII 1975, ♂ (ES); Ider River, Dzhargalant [100°83'E 48°79'N], 19-20.VII 1975, 2 ♂ (MK); *Arkhangai Aimag*: 30 km E Tsetslerleg [102°00'E 47°20'N], 1.VII 1975, ♂ (MK); 2.VII 1975, ♂ (ES); *Uvurkhangai Aimag*: Arts Bogdo Ridge [102°08'E 44°65'N], 11.VII 1970, 3 ♂ (DM); *Selenge Aimag*: 25 km E Darkhan, Sharyn-Gol Mt. [106°15'E 49°10'N], 30.VII 1975, 4 ♀, 4 ♂ (MK); 30.VII 1975, 3 ♀ (ES); Dulan-Khan, Ero-Gol River [106°30'E 49°56'N], 4.VIII 1975, 2 ♀, ♂ (MK); 20 km NNE Darkhan [105°60'E 49°25'N], 5.VIII 1975, ♀, 2 ♂ (ES); *Ulaanbaatar* [106°59'E 47°45'N], 14.VII 1967, ♂ (VZ); 1.VII 1967, ♂ (IK); *Tuv Aimag*: Kerulen [108°30'E 47°50'N], 15.VIII 1976, 3 ♂ (IK); 17.VIII 1976, 2 ♀, ♂ (MK); *Khentii Aimag*: 25 km NE Bayan-Adraga [111°50'E 48°30'N], 6.VII 1976, 9 ♂ (MK); 6-7.VII 1976, 3 ♂ (IK); *Dornod Aimag*: 32 km SE Salkhit Mt., Numregin-Gol River [119°45'E 47°00'N], 22-23.VII 1971, ♂ (MK); 20 km ENE Bayan-Ula [113°30'E 49°10'N], 8.VII 1976, ♂ (IK); 60 km ENE Bayan-Burd, Derkhin-Tsagan-Obo Mt. [119°00'E 46°80'N], 2.VIII 1976, 2 ♂ (MK); 10 km SE Salkhit Mt., Dege-Gol River [119°30'E 47°10'N], 5.VIII 1976, ♂ (MK); *Sukhbaatar Aimag*: Dzotol [115°10'E 45°90'N], 12.VII 1971, 3 ♂ (IK); Dzotol-Khan-Ula Mt. [114°00'E 45°33'N], 20-21.VII 1976, 4 ♀, 2 ♂ (MK); 65 km NNW Darigang [113°10'E 45°55'N], 14.VII 1976, 2 ♂ (MK); 9 km SW Darigang [114°05'E 45°33'N], 6.VII 1971, 2 ♂ (MK).

DISTRIBUTION. Mongolia (Usv Aimag, Khovd Aimag, Zavkhan Aimag, Govi-Altai Aimag, Khuvsgul Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Uvurkhangai Aimag, Selenge Aimag, Ulaanbaatar, Tuv Aimag, *Khentii Aimag, Dornod Aimag, Sukhbaatar Aimag), Russia (European part, Siberia, Far East), China (Beijing, Hebei, Inner Mongolia, Qinghai, Shandong, Sichuan, Xinjiang, Xizang, Yunnan), Kazakhstan, Uzbekistan, Kyrgyzstan, Nepal.

***Colletes conradti* species-group**

***Colletes wacki* Kuhlmann, 2002**

Colletes wacki Kuhlmann in Kuhlmann & Dorn, 2002: 102–103, ♂ (holotype: ♂, 30 km S Ulangom, Uvs Aimag, Mongolia); Kuhlmann, 2005: 1381; Kuhlmann & Proshchalykin, 2013a: 266; Proshchalykin & Kuhlmann, 2015: 335.

Colletes conradti: Kuhlmann & Dorn, 2002: 99; Kuhlmann, 2005: 1379; 2009a: 30; Kuhlmann & Proshchalykin, 2013a: 264.

SPECIMENS EXAMINED. **Mongolia.** *Umnugovi Aimag*: Tost-Ula, Tsagan-Ders-Khuduk [100°53'E 43°28'N], 22.VI 1973, ♂ (GM); *Dornod Aimag*: Khukh-Nur Lake [115°40'E 49°35'N], 25.VI 1976, ♀, 8 ♂ (MK).

DISTRIBUTION. Mongolia (Uvs Aimag, Zavkhan Aimag, Govi-Altai Aimag, Uvurkhangal Aimag, Umnugovi Aimag, Ulaanbaatar, Tuv Aimag, *Dornod Aimag), Russia (Eastern Siberia), China Hebei, Inner Mongolia, Qinghai), Kazakhstan.

***Colletes marginatus* species-group**

***Colletes chengtshensis* Yasumatsu, 1935**

Colletes chengtshensis Yasumatsu, 1935: 1–2, 35–36, ♀, ♂ (type locality: Jehol, Cheng-teh, China); Kuhlmann, 2009a: 30; 2009b: 18; Kuhlmann & Proshchalykin, 2011: 19; 2013a: 265; 2013b: 434; Proshchalykin & Kuhlmann, 2012: 25; 2015: 339; Niu *et al.*, 2014: 468.

Colletes pallescens: Kuhlmann & Dorn, 2002: 99; Kuhlmann, 2005: 1379.

SPECIMENS EXAMINED. **Mongolia.** *Usv Aimag*: 30 km NE Barun-Turun [94°24'E 49°39'N], 5.VII 1968, 2 ♀ (MK); *Khovd Aimag*: 5 km SW Altaj-som, Bodonchin-Gol River [92°25'E 45°81'N], 4.VIII 1968, ♀ (MK); 22.VII 1970, ♂ (MK); 20 km SE Altaj, Elkhon [92°45'E 45°80'N], 27.VII 1970, ♂ (VZ); 25 km N Bulgan, Ulyastain-Gol River [92°10'E 46°07'N], 31.VII 1970, 3 ♂ (MK); 20 km N Bulgan, Ulyastain-Gol River [92°10'E 46°05'N], 30.VI–1.VII 1980, 7 ♂ (IK); *Khuvsgul Aimag*: 25 km W Tevshrulekh [101°75'E 47°10'N], 11.VIII 1970, 2 ♂ (MK); 17 km N Shine-Ider [99°50'E 49°10'N], 22.VII 1975, ♀ (EN); 20 km SE Toson-Tsengel, Selenga River [100°50'E 49°25'N], 25.VII 1975, 2 ♀, 7 ♂ (MK); 25.VII 1975, ♂ (ES); 25.VII 1975, 5 ♂ (EN); *Bayan-Khongor Aimag*: Orog-Noor Lake [100°42'E 45°05'N], 15–16.VIII 1967, ♂ (VZ); Orog-Noor Lake, near Tuin-Gool River [100°42'E 45°03'N], 5.VIII 1969, ♂ (IK); 60 km SW Shine-Dzhinst, Burkhan-Bulak [98°62'E 44°45'N], 29.VIII 1970, ♂ (EN); *Uvurkhangai Aimag*: Tatsyn-Tsagan-Noor Lake [101°75'E 45°46'N], 2–4.VIII 1969, ♂ (MK); *Selenge Aimag*: Ero-Gol River [106°91'E 49°72'N], 26.VII 1970, ♂ (MK); 25 km E Darkhan, Sharyn-Gol Mt. [106°15'E 49°10'N], 30.VII 1975, 2 ♀ (ES); Dulan-Khan, Ero-Gol River [106°30'E 49°56'N], 4.VIII 1975, ♂ (MK); 4.VIII 1975, ♀, 2 ♂ (ES); 4.VIII 1975, ♂ (EN); *Khentii Aimag*: 12 km N Gal-Shara [110°85'E 46°71'N], 30.VII 1971, 1 ♀, 6 ♂ (MK); 25 km NE Bayan-Adraga [111°50'E 48°30'N], 6–7.VII 1976, 14 ♀,

5 ♂ (IK); *Dornogovi Aimag*: 10 km SW Sainshand, Tushilge Mt. [110°08'E 44°53'N], 1.VIII 1971, 8 ♂ (IK); 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, 6 ♂ (EN); *Dornod Aimag*: 60 km ENE Bayan-Burd, Derkhin-Tsagan-Obo Mt. [119°00'E 46°80'N], 21.VII 1971, 2 ♂ (MK); 2-4.VIII 1976, 5 ♀, 5 ♂ (MK); 75 km SW Salkhit, Ar-Bulak [118°30'E 46°86'N], 24.VII 1971, 2 ♂ (MK); 20 km NW Sangin-Dalai-Noor Lake [116°55'E 47°10'N], 25.VII 1971, m # (MK); E part of Buir-Nur Lake [117°40'E 47°47'N], 6-7.VI 1976, 5 ♂ (IK); 26-28.VII 1976, ♀ (IK); 15 km E Dzun-Bayan [110°12'E 44°26'N], 15.VIII 1975, 3 ♂ (ES); 10 km SE Salkhit Mt., Dege-Gol River [119°30'E 47°10'N], 5.VIII 1976, 6 ♂ (IK); 32 km SE Salkhit Mt., Numregin-Gol River [119°45'E 47°00'N] 23.VII 1971, 2 ♂ (MK); 25.VI 1976, ♂ (MK); 9.VIII 1976, ♂ (MK); *Sukhbaatar Aimag*: 20 km E Baruun-Urt [113°16'E 46°41'N], 14.VII 1971, ♂ (MK); 40 km SE Baruun-Urt [113°18'E 46°48'N], 14.VII 1971, ♂ (MK); 9 km SW Darigang [114°05'E 45°33'N], 8.VII 1971, 2 ♂ (MK); Dzotol-Khan-Ula Mt. [114°00'E 45°33'N], 20-21.VII 1976, 3 ♀, 7 ♂ (MK).

DISTRIBUTION. Mongolia (Usv Aimag, Khovd Aimag, Zavkhan Aimag, Govi-Altai Aimag, Khuvsugul Aimag, Arkhangai Aimag, Bayan-Khongor Aimag, Bulgan Aimag, Uvurkhangai Aimag, Umnugovi Aimag, Selenge Aimag, Tuv Aimag, Khentii Aimag, Dornogovi Aimag, Dornod Aimag, Sukhbaatar Aimag), Russia (European part, Siberia), China (Beijing, Hebei, Shanxi, Gansu, Inner Mongolia, Heilongjiang, Xinjiang), Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan, Tajikistan, Iran, Europe, Georgia, Azerbaijan.

Colletes succinctus species-group

Colletes arsenjevi Kuhlmann, 2006

Colletes arsenjevi Kuhlmann in Kuhlmann & Quest, 2006: 3, ♂ (type locality: Lazovsky Nature Reserve, Primorskiy Terr., Russia); Kuhlmann & Quest, 2006: 2; Proshchalykin, 2007: 878; 2012: 449; Kuhlmann, 2009a: 31; 2009b: 19; Kuhlmann & Proshchalykin, 2011: 20; 2013a: 265; 2013b: 436; Niu *et al.*, 2013: 178; 2014: 454; Proshchalykin & Kuhlmann, 2015: 340.

Colletes succinctus: Kuhlmann & Dorn, 2002: 100.

SPECIMENS EXAMINED. **Mongolia.** *Arkhangai Aimag*: Ugij-Noor Lake [102°46'E 47°45'N], 1.IX 1967, ♀ (VZ); 15 km W Teryat, Tsagan-Nur Lake [99°65'E 48°20'N], 19.VII 1980, ♂ (MK); *Khentii Aimag*: 8 km S Norovlin [111°59'E 48°40'N], 25.VIII 1975, ♀ (MK); *Dornogovi Aimag*: 40 km W Erdene [110°20'E 44°50'N], 14.VIII 1975, ♂ (MK); 70 km ENE Sain-Shand, Dolotyn-Khuduk [111°10'E 44°45'N], 17.VIII 1975, ♂ (EN); 10 km E Dzun-Bayan [110°03'E 44°18'N], 15.VIII 1975, ♂ (ES); 13 km W Dash-Balbar, Uldza River [114°00'E 49°20'N], 24.VIII 1975, 5 ♂ (EN); *Sukhbaatar Aimag*: 80 km NNE Barun-Urt [114°00'E 47°10'N], 19.VIII 1975, ♀ (ES).

DISTRIBUTION. Mongolia (Arkhangai Aimag, *Khentii Aimag, *Dornogovi Aimag, Dornod Aimag, Sukhbaatar Aimag), Russia (Far East), China (Shanxi, Gansu, Inner Mongolia, Xinjiang), Kazakhstan.

***Colletes collaris* Dours, 1872**

Colletes collaris Dours, 1872: 296, ♀, ♂ (type locality: “Cannes, Algérie, îles de l’Archipel grec”); Kuhlmann & Dorn, 2002: 100; Kuhlmann, 2005: 1379; 2009a: 31; Proshchalykin, 2007: 878; 2012: 449; Kuhlmann & Proshchalykin, 2011: 21; 2013a: 265; 2013b: 436; Niu *et al.*, 2013: 181; 2014: 478.

SPECIMENS EXAMINED. **Mongolia.** *Arkhangai Aimag*: Tsagan-Noor Lake, 18 km NE Dash-Baldoro [99°83'E 48°38'N], 23.VII 1975, 2 ♂ (MK); *Tuv Aimag*: Kerulen [108°30'E 47°50'N], 15.VIII 1976, ♂ (MK); *Dornogovi Aimag*: 70 km ENE Sain-Shand, Dolotyn-Khuduk [111°10'E 44°45'N], 17.VIII 1975, ♂ (EN); *Dornod Aimag*: 55 km NNE Khavirga [116°00'E 48°55'N], 21.VIII 1975, 2 ♂ (MK); 13 km W Dash-Balbar, Uldza River [114°00'E 49°20'N], 24.VIII 1975, ♀, ♂ (EN).

DISTRIBUTION. Mongolia (Arkhangai Aimag, Tuv Aimag, Khentii Aimag, *Dornogovi Aimag, Dornod Aimag, Sukhbaatar Aimag), Russia (forest zone of European part, Siberia, Far East), China (Beijing, Hebei, Jiangxi, Inner Mongolia, Heilongjiang, Qinghai, Xizang, Sichuan, Yunnan), Kazakhstan, South Korea, Japan (Honshu).

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