

NEW RECORDS AND ADDITIONAL NOTES ON FAUNISTICS OF SOLITARY BEES (HYMENOPTERA: APOIDEA) FROM CZECH AND SLOVAK REPUBLIC

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Abstract

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New records and corrections (based on material in existing collections and on literary data) are presented. *Hylaeus cardioscapus* Cockerell 1924, *Chelostoma emarginatum* (Nylander 1856), *Stelis iugae* Noskiewicz 1962 and *Sphecodes puncticeps* Thomson 1870 are new for Slovakia. *Megachile versicolor* Smith 1844 is repeatedly recorded for Slovakia; *Andrena fulva* (Müller 1766), *Megachile alpicola* Alfken 1924 and *Sphecodes schenckii* v. Hagens 1882 are confirmed for Moravia. *Hylaeus lepidulus* Cockerell 1924 and *M. flabellipes* Pérez 1895 are new for Czech Republic (Moravia); *Hylaeus gredleri* Förster 1871 is new for Czech Republic and for Slovakia. This species was incorrectly identified as *Hylaeus brevicornis* Nylander 1852 and is newly recorded with notes on its correct identification. The existing check-list (KOCOUREK 1989) is, moreover, completed for the individual territoris by *Halictus leucaheneus* Ebmer 1972, *Hylaeus confusus* Nylander 1852, *H. cornutus* Curtis 1831, *H. sinuatus* (Schenck 1853), *Colletes impunctatus* Nylader 1852, *Coelioxys polycentris* Förster 1853, *Megachile genalis* Morawitz 1880, *Nomada emarginata* Morawitz 1878, *Osmia xanthomelana* (Kirby 1802), *Anthophora plagiata* (Illiger 1806), *Psithyrus maxillosus* (Klug 1817), *Megachile pilidens* Alfken 1924 and *Colletes collaris* Dours 1872 on the basis a published record.

Apoidea, solitary bees, identification, faunistics, Czech Republic, Slovakia

The absence of apidologists is one of the factors endangering the present faunistics and taxonomy of Apoidea in Central Europe (O'TOOLE, 1996). This is also the case in the Czech Republic compared with neighbouring countries. This situation results from the general development of entomology during the past decades.

The present study is a review of corrections and of additional data in the faunistics of solitary bees especially after 1989 or earlier. These corrections result from little known and scattered literary data and from materials in collections of the Moravian Museum, of Dalibor Všianský and of the present author.

RESULTS AND DISCUSSION

Andrenidae

Andrena fulva (Müller 1766).

Moravia mer., Brno - Bílá Hora (6766), 16.v.1991, 1 female, M. Říha lgt., A. Přidal det., D. Všianský coll.; Příbram na Moravě (6863b), 30.iv.1998, 1 female, captured on *Ribes* sp., one alone nest was recorded, A. Přidal lgt., det., coll.

This species is known from the whole of Europe, mainly from its southern parts (Austria, Switzerland, Hungary, Italy etc., DYLEWSKA, 1987). It is a rare and endangered species. In the Czech Republic, this species was known only in Bohemia (KOCOUREK, 1989) but PÁDR (1995)

recorded it from Pálava [Dolní Věstonice (7165b), Klentnice (7165)]. He recorded, furthermore, this species from Pálava after publication of KOCOUREK (1966). KOCOUREK (1966), however, did not mention either *Andrena fulva* (Müll.) nor its synonym *Andrena armata* (Gmelin 1790) from Pálava, but only from Bohemia.

Colletidae

Hylaeus cardioscapus Cockerell 1924.

Slovakia mer., Kamenica n.Hronom (8178), ?.vii.1964, 1 male, M. Kocourek lgt., A. Přidal det., Moravian Museum coll.

This species is known from eastern part of central and eastern Europe (DATHE, 1980). The species is known also from Austria and Germany (Schwarz et al., 1996). From Slovakia is recorded for the first time.

Hylaeus confusus Nylander 1852.

Moravia mer., Příbram na Moravě (6863), 3.ix.1997, 1 male and 1 female, both A.Přidal lgt., det. and coll.; Slovakia mer., Fil'akovo (8477), 5.vii.1992, 1 male and 1 female, both D. Všianský lgt. and coll., A. Přidal det.

This species is common in Europe (DATHE, 1980). KOCOUREK (1989) recorded it possibly under the name *H. gibbus confusus*. TKALCÚ (1964) presented *H. confusus* from Mohelno, 10.6.1963, Moravia mer. The above data corrects this deficiency in the check-list.

Hylaeus gredleri Förster 1871.

Moravia mer., Brno - Hády (6766), 2.viii.1990, 3 males; Adamov - Josefov (6766), 12.vii.1990, 1 male, all D. Všianský lgt. and coll., A. Přidal det.; Brno - Stránská skála (6866), 9.vii.1991, 1 female, M. Říha lgt., A. Přidal det., D. Všianský coll.; Břeclav - Pohansko (7267), 29.vi.1997, 9 males; Příbram na Moravě (6863), 30.vii.1997, 1 female, 3.ix.1997, 2 females; Troubsko (6865), 31.vii.1997, 1 female; Moravia or., Šanov - Odměřín (6973), 16.viii.1997, 1 female, Hostětín - Bukovina (6973), 16.viii.1997, 2 females; Slavičín (6973), 17.viii.1997, 1 female, all A. Přidal lgt., det. and coll. Slovakia mer., Fil'akovo (8477), 5.vii.1992, 1 female, D. Všianský lgt. and coll., A. Přidal det.

It is known from western, central and southern Europe, from the Caucasus and from the Ural (DATHE, 1980). This common species ascends the elevations up to 1600 m a.s.l. It was repeatedly incorrectly identified as *H. brevicornis* Nylander 1852. WESTRICH (1990) mentions the similarity of both species and lack of comparative material. Recently WESTRICH & DATHE (1997) registered *H. gredleri* for Germany. This species is not known from Poland (BANASZAK 1991).

The identification of both species is distinct. The males of *H. gredleri* show dense dotting on fovea scapalis which is silky lustrous in *H. brevicornis*. The distinguishing characters are also in genitalia. The genital forceps is not so arched as in *H. brevicornis*, the end of the forceps is more rounded. In *H. gredleri* the end of the penis valve is narrow and elongate pointed in lateral view. The characters in females are less easy. The head of *H. gredleri* is wider than in *H. brevicornis* and the face pattern is delicate and elongate; in *H. brevicornis* the face pattern is short and rounded. Additional identification characters are seen on the lateral area of propodeum. In *H. gredleri* the propodeum shows a sharp ledge.

New species for the Czech Republic and Slovakia.

Hylaeus lepidulus Cockerell 1924.

Moravia mer., Hodonín (7168), vi. 1958, 1 female, Kocourek M. lgt., Moravian Museum coll.; Blansko - Písečná (6665), 9.ix.1990, 1 female, D. Všianský lgt. and coll., A. Přidal det.; Břeclav - Pohansko (7267), 26.vi.1997, 1 male, D. Všianský lgt. and coll., Dathe H. H. det.

This species was confused with *H. gracilicornis* (Mor.) (DATHE et al. 1996). The authors mentioned its identification, distribution and habitat preferences. Both species show Eurosiberian distribution. *H. lepidulus* was recorded from Switzerland, Austria, Germany, Russia and Poland (DATHE et al. 1996).

The habitat of Břeclav - Pohansko is very warm and dry lowland habitat. The individual was swept from an unidentified shrub. No specimens of this obviously rare species were detected even in the collections of the Moravian Museum.

New species for the Czech Republic (Moravia).

Halictidae

Sphecodes puncticeps Thomson 1870.

Slovakia or., Somotor (7696), ?.vii.1959, 3 females; Slovakia mer., Chotín (8175), Čenkov (8277), ?.vii.1963, 2 males, Chotín (8175), ?.vi.1964, 3 female, M.Kocourek lgt., A. Přidal det., Moravian Museum coll.

This species is common in Europe, northern Africa from Morocco to Egypt, Israel, Turkey etc. (WARNCKE, 1992a). However, KOCOUREK (1989) did not record this common species in the check-list for Slovakia in spite of presence it in his collection. The species is new for Slovakia.

Sphecodes schenckii v. Hagens 1882.

Moravia mer., Čejč (7067), viii.1958, 3 males, M. Kocourek lgt., A. Přidal det., Moravian Museum coll.

The species is distributed in southern part of Europe (northeast of Spain, southern France, Switzerland, Italy, Hungary - after WARNCKE,

1992a). In Germany and Austria is known as well (SCHWARZ et al., 1996). This species was not yet recorded from Moravia (ŠUSTERA, 1959; KOCOUREK, 1989). The species is new for Moravia.

Megachilidae

Chelostoma emarginatum (Nylander 1856).

Slovakia mer., Bratislava - Vinosady (7769), 12.v.1990, 1 female, D. Všianský lgt. and coll., A. Přidal det.

The distribution of this species in Europe is little known. The species distribution is noted locally from Austria and Switzerland but it is not known from Germany (after SCHWARZ et al. 1996) and Poland (BANASZAK 1991). In the Czech Republic the species is known only from Moravia (KOCOUREK 1989). New species for Slovakia.

Megachile alpicola Alfken 1924.

Moravia mer., Olomučany (6666), 25.v.1992, 1 female; Adamov - Horka (6766), 25.v.1997, 1 female, both D. Všianský lgt. and coll., A. Přidal det.; Moravia or., Pitín (6973), 16.viii.1997, 1 female, A. Přidal lgt., det. and coll.

This species is locally living in Central Europe (DORN & WEBER 1988). KOCOUREK (1989) recorded it only in Bohemia and from Slovakia. TKALCÚ (1977) published its presence in the entire territory of Czechoslovakia. Correction is in the check-list.

Megachile flabellipes Pérez 1985.

Moravia mer., Mikulov - Svatý Kopeček (6571), 10.vii.1951, 2 males, Mikulov - bažantnice (6571), 7.vii.51, 1 male, ? lgt., Moravian Museum Brno coll., B. Tkalcú and A. Přidal det.

This species is still known from southern Europe (also from Slovakia, Hungary according DORN & WEBER 1988; from Austria and Switzerland is also known according Schwarz et al. 1996), further from northern Africa. This species is new for the Czech Republic - Moravia mer.

The species is repeatedly recorded from southern Europe. The above record is its northternmost habitat. The species should be added to the check-list for Slovakia.

Megachile versicolor Smith 1844.

Slovakia mer., Hlohovec (7572), 11.vii.1991, 1 male, 2 females, D. Všianský lgt. and coll., A. Přidal det.

This species is common in Central Europe (DORN & WEBER 1988) including Bohemia and Moravia (KOCOUREK 1989). BELÁKOVÁ & LUKÁŠ (1991) and LUKÁŠ (1987, 1991) recorded it repeatedly from the entire territory of Slovakia. Correction in the Check-list.

Stelis iugae Noskiewicz 1962.

Slovakia mer., Kamenica nad Hronom (8178) without detailed information (WARNCKE, 1992).

This record is the northernmost habitat of *S. iugae*. Its distribution according to WARNCKE (1992) includes Rumania, Bulgaria, Turkey (flight period July - August). Czechoslovak hymenopterists did not record this species from the Slovak territory. However, the species should be additionally added to the check-list.

Additional faunistical notes

BOUČEK et ŠUSTERA (1957) recorded *Colletes impunctatus* Nylander 1852 from Vysoké Tatry (High Tatra Mts.) in Slovakia. This record was not included in the Check-list of KOCOUREK 1989. PÁDR et LUKÁŠ (1994) repeat this recording on the collector (Šustera) and the collection (National Museum in Prag). This record was never subsequently repeated. However, its record should be completed in the check-list for Slovakia.

Several existing records were not included in the Check-list of KOCOUREK 1989. These are the following species: TKALCÚ (1974) published *Coelioxys polycentris* Förster 1853 and *Megachile genalis* Morawitz 1880 from Moravia and *Osmia xanthomelana* (Kirby 1802) from Slovakia. WARNCKE (1978) published record of *Colletes collaris* Dours, 1872 from Moravia [Moravia mer., Čejč (7067)].

PÁDR (1990) recorded some species from the neighbourhood of Prague which are new for Bohemia. These are: *Anthophora plagiata* (Illiger 1806), *Halictus leucaheneus* Ebmer 1972 (also according EBMER, 1988), *Hylaeus cornutus* Curtis 1831, *H. sinuatus* (Schenck 1853), *Megachile pilidens* Alfken 1924, *Psithyrus maxillosus* (Klug 1817) (the last species also after POPOV 1936).

LUKÁŠ et al. (1998) collected *Nomada emarginata* Morawitz 1878 next to Czech border [Nebrová (6874), 3.vii.1992, female, Slovakia or.]. The species is newly recorded from Slovakia.

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SOUHRN

Nové nálezy a některé další poznámky k faunistice samotářských včel
(*Hymenoptera: Apoidea*) na území České republiky a Slovenské republiky

Tato práce shrnuje nové a doplňující údaje o faunistice včel (*Apoidea*) od roku 1989, kdy byl zpracován poslední seznam včel na území tehdejší ČSFR (KOCOUREK 1989). Uvádíme zde nové záznamy druhů podle entomologických sbírek, ale i podle roztroušených literárních údajů. Změny se týkají území Slovenska a České republiky.

Hylaeus cardioscapus Cockerell 1924, *Chelostoma emarginatum* Nylander 1856, *Stelis iugae* Noskiewicz 1962 a *Sphecodes puncticeps* Thomson 1870 se nově uvádějí pro Slovensko. *Megachile versicolor* Smith 1844 byla zřejmě omylem neuvedena pro Slovensko, tímto se tedy seznam opravuje. *Megachile alpicola* Alfken 1924, *Megachile flabellipes* Pérez 1985, *Andrena fulva* (Müller 1766) a *Sphecodes schenckii* v. Hagens 1882 jsou uvedeny jako nové pro území Moravy. *Hylaeus lepidulus* Cockerell 1924 jsou nové druhy pro Českou republiku (Moravu); *Hylaeus gredleri* Förster 1871 je novým druhem pro Slovensko a Českou republiku. V minulosti byl tento druh našimi entomology nesprávně determinován jako *Hylaeus brevicornis* Nylander 1852. Z těchto důvodů jsou zde uvedeny poznámky ke správné determinaci. Dále byly shrnuty neucelené literární údaje, které doplňují či opravují dosavadní seznam včel pro jednotlivá území, tj.: pro Čechy *Anthophora plagiata* (Illiger 1806), *Halictus leucaheneus* Ebmer 1972, *Hylaeus cornutus* Curtis 1831, *H. sinuatus* (Schénck 1853), *Megachile pilidens* Alfken 1924, *Psitthyrsus maxillosus* (Klug 1817); pro Moravu *Coelioxys polycentris* Förster 1853, *Megachile genalis* Morawitz 1880, *Colletes collaris* Dours 1872; pro Slovensko *Colletes impunctatus* Nylander 1852, *Nomada emarginata* Morawitz 1878, *Osmia xanthomelana* (Kirby 1802); *Hylaeus confusus* Nylander 1852 obecně pro všechna území.

Apoidea, samotářské včely, determinace, faunistika, Česká republika, Slovensko

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ERRATA:

The name *Sphecodes schenckii* Hagens, 1882 to replace by name *Sphecodes reticulatus* Thomson, 1870. pages: the 27th (abstract the 5th line); the 28th (the 2nd column and the 6th line from end of item); the 30th (summary in Czech (the 9th line).

Adresa

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