

**CONTRIBUTION TO THE BEE FAUNA  
(HYMENOPTERA: APOIDEA: ANTHOPHILA)  
OF POLAND. III.**

**Waldemar Celary<sup>1</sup>, Bogdan Wiśniowski<sup>2</sup>**

<sup>1</sup>Świętokrzyska Academy, Świętokrzyska 15, 25-406 Kielce, Poland.

<sup>2</sup>Ojców National Park, 32-047 Ojców, Poland. E-mail: bogdan@isez.pan.krakow.pl

*Received 05 December 2006; accepted 05 March 2007*

S u m m a r y

The article presents new records of 10 very rare species of long-tongued bees (Megachilidae and Apidae), known so far from only single localities in Poland: *Stelis odontopyga* Noskiewicz, 1925; *Hoplitis claviventris* Thomson, 1872; *Hoplitis papaveris* Latreille, 1799; *Ammobates punctatus* Fabricius, 1804; *Nomada bifasciata* Olivier, 1811; *Nomada errans* Lepeletier, 1841; *Nomada facilis* Schwarz, 1967; *Nomada furva* Panzer, 1798; *Nomada obscura* Zetterstedt, 1838 and *Nomada opaca* Alfken, 1913. For each and every species the following information is given: Polish localities (with UTM coordinates), distribution, as well as bionomics.

**Keywords:** Hymenoptera, Apoidea, Megachilidae, Apidae, distribution, bionomics, Poland.

**INTRODUCTION**

The present paper gives new data on the distribution of 10 rare species of long-tongued bees (Megachilidae and Apidae) in Poland<sup>1</sup>. The paper also summarizes information concerning bionomics and distribution of these species. The partitioning of Poland into zoogeographical regions follows the one used in the "Katalog fauny Polski" (Burakowski et al. 1973). For each locality the UTM coordinates are given. Material is housed in the collection of the Museum of Ojców National Park (ONP, Ojców).

**SYSTEMATIC PART**

Megachilidae

*Stelis odontopyga* Noskiewicz, 1925

This rare cleptoparasitic bee occurs in Western Asia (Turkey) and in warm regions of Europe. Its northern limit of distribution reaches 50.5°N (Celary 1995 a). Adults of *S. odontopyga* appear in the first

half of June and are on wings till the beginning of August (Celary 1995 a). The species visits blooming plants of the families Apiaceae, Asteraceae and Boraginaceae. Females of the species lay their eggs in the nests of *Hoplitis spinulosa* (Kirby) (Celary 1995 a).

Until now this species in Poland was known only from three stands in Kraków-Wieluń Upland, and one in Małopolska Upland (Celary 1995 a). Recently three new localities in Małopolska Upland were found.

New localities. Małopolska Upland: DA27 Rzeżuśnia, 15.06.2002 – 3 males on *Echium vulgare* L. in a xerothermic sward, 21.06.2005 – a male in the same locality, leg. B. Wiśniowski; DA47 "Wały" reserve near Raławice, 20.06.2006 – a male in a xerothermic sward on chalk, leg. B. Wiśniowski; DA69 Góry Pińczowskie near Pińczów, 24.07.2006 – a female and a male on *Daucus carota* L., leg. B. Wiśniowski.

<sup>1</sup>The first contribution was published in 2001, the second in 2003 (Celary and Wiśniowski 2001, 2003).

*Hoplitis claviventris* (Thomson 1872)

Palearctic species occurring in Central and Eastern Europe, and reaching to the southern parts of Northern Europe (Westrich 1990). The bee has also been recorded from Caucasus, Kazakhstan, Siberia, Mongolia and Russian Far East (Banaszak and Romasenko 1998). Adults of *H. claviventris* fly from the second half of May till the mid of August. The species strongly prefers blooming plants of the family Fabaceae (*Coronilla varia* L., *Lathyrus tuberosus* L., *Lotus corniculatus* L. and *L. uliginosus* Schkuhr, *Melilotus officinalis* (L.) Pall. and *M. alba* Medik., *Onobrychis viciifolia* Scop., *Trifolium pratense* L. and *T. repens* L., *Vicia cassubica* L., *V. cracca* L., *V. sepium* L. and *V. tenuifolia* Roth), but sometimes it also visits flowers of *Centaurea jacea* L., *Echium vulgare* L., *Hypericum perforatum* L., *Rubus fruticosus* L., *Sedum reflexum* L. (Westrich 1990) and *Aegopodium podagraria* L. Females nest in the pith of dry stems of *Arctium* spp., *Cirsium* spp. and *Onopordum* spp., *Rubus* spp., *Sambucus* spp. and *Verbascum* spp. (Westrich 1990).

Until now this species in Poland was known only from a few, scattered stands in Baltic Coast (given as *H. leucomelana*: Hel, Sopot – Alfken 1912, Darłowo, Goleniów, Ustka – Blüthgen 1919), Pomeranian Lakeland (Bory Tucholskie National Park – Banaszak and Wendzonka 2002; given as *H. leucomelana*: Starogród – Alfken 1912, Karlino, Słupsk and Żelice – Blüthgen 1919, Starogród), Masurian Lakeland (given as *H. leucomelana*: Mała Guja – Möschler 1938), Wielkopolska-Kujawy Lowland (given as *H. leucomelana*: Ciechocinek-Raciażek and Rzęczkowo – Pawlikowski and Hirsch 2002, Folusz near Szubin – Banaszak et al. 2004, Kicin near Poznań

– Banaszak 2000, Nakło – Torcka 1913), Lublin Upland (given as *H. leucomelana*: Izbica – Pawlikowski et al. 1993), Rostocze (given as *H. leucomelana*: Bełżec, Biłgoraj, Sigła, Zwierzyniec – Pawlikowski et al. 1993) and Western Beskidy Mts (Poręba Wielka – Śnieżek 1910). Recently six new localities were found.

New localities. Podlasie: FD18 Koziółek near Kurów (Narew National Park), 26.06.2003 – a female, leg. A. Klasa. Upper Silesia: CA98 Dąbrówka Hill by the northern border of the “Błęarów Desert”, 23.06.2004 – a male on *Aegopodium podagraria* L., the same locality, 29.06.2005 – a male, leg. B. Wiśniowski. Kraków-Wieluń Upland: DA15 Będkowska Valley, 16.06.1984 – a female, leg. W. Celary; DA16 Grodzisko (Ojców National Park), 16-27.05.2003 – a male in a xerothermic sward, the same locality, 7-17.06.2003 – a male, leg. B. Wiśniowski. Małopolska Upland: CC84 Teofilów by Pilica river, 27.05.2000 – a female, leg. A. Klasa; DA28 “Biała Góra” reserve near Tunel, 14.06.2006 – a female in a xerothermic sward on chalk, leg. B. Wiśniowski.

*Hoplitis papaveris* Latreille, 1799

This rare bee species occurs in Western, Central and Eastern Europe, Caucasus, Central Asia and Kazakhstan (Banaszak and Romasenko 1998). Its northern limit of distribution reaches 54°N. Adults of *H. papaveris* fly from the beginning of June till the mid of August (Westrich 1990). The species prefers blooming plants of the family Asteraceae (*Centaurea cyanus* L., *C. jacea* L. and *C. scabiosa* L.; *Cichorium intybus* L., *Hieracium pilosella* L. and *Picris hieracioides* L.), it also visits flowers of *Campanula rotundifolia* L., *Helianthemum nummularium* (L.) Mill., *Convolvulus arvensis* L., *Melilotus* spp. and *Papaver rhoeas* L. (Banaszak and

Romasenko 1998, Westrich 1990). Females dig nests in soil, their burrows contain usually one brood cell (seldom two). The cell is constructed mainly from pieces of petals of *Papaver rhoeas* L., but sometimes females use petals of other flowers, e.g. *Centaurea cyanus* L., *Convolvulus arvensis* L., *Genista tinctoria* L., various species of *Helianthemum* Mill., as well as *Malva* L. (Westrich 1990).

Until now this species in Poland was known only from a few, scattered stands on the Baltic Coast (Ustka – Blüthgen 1942), Pomeranian Lakeland (Wałcz environs – Alfken 1912, Kiełp and “Gruczno” reserve – Banaszak 1980, Banaszak et al. 2006), Wielkopolska-Kujawy Lowland (Bydgoszcz and Nakło – Banaszak et al. 2006, Torka 1913; Kulin, Rzęczkowo, Unisław Pomorski – Pawlikowski and Hirsch 2002), Mazovian Lowland (environs of Dziekanów Polski – Banaszak and Plewka 1981, Plewka 2003), Lower Silesia (Legnica, Mirków and Wrocław – Dittrich 1903), Małopolska Upland (“Góry Pieprzowe” reserve near Sandomierz – Banaszak 2003), and Sandomierz Lowland (Jarosław – Banaszak 1984). Recently a further stand was found.

New locality. Małopolska Upland: DA28 “Biała Góra” reserve near Tunel, 14.06.2006 – 2 males in a xerothermic sward on chalk, leg. B. Wiśniowski.

#### Apidae

##### *Ammobates punctatus* Fabricius, 1804

This very rare cleptoparasitic bee occurs in Northern Africa (Algeria), as well as in Southern and Central Europe. Its northern limit of distribution reaches 53.5°N (Celary 1990). Adults of *A. punctatus* appear in the end of June and fly till the second half of August (Celary 1990). The species visits flowers of *Jasione montana* L., *Thymus* spp., *Centaurea* spp., *Echium vulgare* L., *Scabiosa columbaria* L. and *Trifolium arvense* L. (Celary 1990,

Westrich 1990). Females of the species lay their eggs in the nests of *Anthophora bimaculata* (Panzer) (Celary 1990).

Until now this species in Poland was known from eleven stands, but eight of them come from the first half of 20<sup>th</sup> century (data before the second world war) (Celary 1990). Recently a new locality was discovered.

New locality. Lublin Upland: FC40 Kolonia Wola Wereszczyńska, “Szeroki Las” (Polesie National Park), 8.07.2006 – 2 females on a sunny meadow with *Helichrysum arenarium* (L.) Moench, leg. B. Wiśniowski.

##### *Nomada bifasciata* Olivier, 1811

West mediterranean species inhabiting Northern Africa (Algeria, Morocco, Tunisia), as well as Southern and Central Europe (Celary 1995 b). Its northern limit of distribution reaches 53.5°N. Adults of *N. bifasciata* appear in the second half of April and fly till the beginning of June (Celary 1995 b). The species visits flowers of *Euphorbia cyparissias* L., *Potentilla verna* L., *Salix* spp., *Taraxacum officinale* F. H. Wigg. and *Tussilago farfara* L. (Celary 1990). Females of *N. bifasciata* lay their eggs in the nests of *Andrena grävada* Imhoff (Celary 1995 b).

Until now this species in Poland was known only from ten stands, scattered in Pomeranian Lakeland (“Gruczno” reserve – Banaszak et al. 2006, Płutowo – Banaszak 2000), Wielkopolska-Kujawy Lowland (Ciechocinek-Raciążek and Unisław Pomorski – Pawlikowski and Hirsch 2002, Wielkopolska National Park – Cierzniak 2003), Kraków-Wieluń Upland (Będkowiec Valley and Kraków – Celary 1995 b), Małopolska Upland (Krzyżanowice – Celary 1995 b), Western Beskidy Mts (Cieszyn – Celary 1995 b) and Eastern Beskidy Mts (Łuczyce – Celary 1995 b). Recently a further seven stands were found.

New localities. Kraków-Wieluń Upland: DA16 Grodzisko (Ojców National Park), 5.05.2003 – a female in a xerothermic sward, 23.04.2004 – 4 females in a xerothermic sward, leg. B. Wiśniowski; the same locality, 23.04.2004 – a female, leg. A. Klasa; DA16 Sąpów Valley (Ojców National Park), 18.05.2003 – a female on a meadow near “Warzechówka” house, leg. B. Wiśniowski; DA16 Sąpów Valley, Zabugaje (Ojców National Park), 2.05.2004 – a female on *Taraxacum officinale* F. H. Wigg., leg. B. Wiśniowski; DA16 Sąpów Valley, meadows near “Borowcowa” (Ojców National Park), 21.05.2005 – a female, leg. B. Wiśniowski. Małopolska Upland: EB51 “Góry Pieprzowe” reserve near Sandomierz, 8.06.2004 – a female in a xerothermic sward, leg. A. Klasa. Lublin Upland: FB07 Lublin-Ponikwoda, 27.05.2006 – a female in a xerothermic sward, leg. P. Juszczynski. Eastern Beskidy Mts: EV38 near Ciechania (Magurski National Park), 14.05.2005 – a female on a slope near a grassland community with *Calluna vulgaris* (L.) Hull, leg. B. Wiśniowski.

*Nomada errans* Lapeletier, 1841

This very rare species occurs in Southern and Central Europe (Celary 1995 b). Its northern limit of distribution reaches 54°N. Adults of *N. errans* appear in the first half of July and fly till the end of August (Celary 1995 b). The species strongly prefers flowers of *Daucus carota* L. and *Pastinaca sativa* L., but sometimes visits also flowers of *Achillea millefolium* L. and *Senecio jacobea* L. (Celary 1995 b). Females of *N. errans* lay their eggs in the nests of *Andrena nitidiuscula* Schenck and *A. pallitarsis* Perez (Celary 1995 b).

Until now this species in Poland was known only from three stands, scattered in Mazurian Lakeland (Wigry National Park – Banaszak and Krzysztofiak 1996),

Wielkopolska-Kujawy Lowland (Nakło – Torka 1913), and Roztocze (Łabunie – Anasiewicz 1975). Recently a further two stands were discovered.

New localities. Western Beskidy Mts: DA13 Skawina, 16.07.2001 – a male sunny slope on loes, on flowers of *Daucus carota* L., leg. B. Wiśniowski. Eastern Beskidy Mts: EV37 near Ożenna (Magurski National Park), 3.08.2006 – a male on a sunny slope on the edge of a beach forest, leg. B. Wiśniowski.

*Nomada facilis* Schwarz, 1967

This very rare species of cuckoo bee inhabits Southern and Central Europe, moreover it was found also in Southern Sweden (Celary 1995 b). Its northern limit of distribution reaches 57°N. Adults of *N. facilis* appear in the second half of May and fly till the beginning of July (Celary 1995 b). The species visits flowers of *Senecio vernalis* Waldst. and Kit. (Celary 1995 b). Females of *N. facilis* lay their eggs in the nests of *Andrena humilis* Imhoff (Celary 1995 b).

Until now this species in Poland was known only from two stands (Mazovian Lowland: Rembertów, and Kraków-Wieluń Upland: Olsztyn – Celary 1995b). Recently a new stand in Kraków-Wieluń Upland was found.

New locality. Kraków-Wieluń Upland: DA16 Skały Wdowie (Widows' Rocks), (Ojców National Park), 9.06.2003 – a male on Apiaceae, leg. B. Wiśniowski.

*Nomada furva* Panzer, 1798

This Submediterraneo-Pontic species lives in Northern Africa (Algeria), warm regions of Europe and Western Asia (Celary 1995 b). Its northern limit of distribution reaches 53.5°N. *N. furva* has two generations. Adults of this species are on wings from the beginning of May till the mid of June and from the second half of July till the end of August (Celary 1995 b). The species prefers blooming

plants of the family Asteraceae (*Achillea millefolium* L., *Erigeron annuus* (L.) Pers., *Hieracium pilosella* L., *Taraxacum officinale* F. H. Wigg.) and Rosaceae (*Fragaria vesca* L. and *Potentilla erecta* (L.) Raeusch.), but also visits flowers of *Heracleum sphondylium* L. and *Veronica chamaedrys* L. (Celary 1995 b). Females of *N. furva* lay their eggs in the nests of *Evylaeus morio* (Fabr.), *E. leucopus* (Kirby) and *E. punctatissimus* (Schenck) (Celary 1995 b).

Until now this species in Poland was known only from six stands, scattered in Pomeranian Lakeland (Bory Tucholskie National Park – Banaszak and Wendzonka 2002, “Gruczno” reserve – Banaszak et al. 2006), Wielkopolska-Kujawy Upland (Wielkopolska National Park – Banaszak and Cierzniak 1994, Cierzniak 2003), Upper Silesia (Zawadzkie – Celary 1995 b), Lublin Upland (Gródek – Pawlikowski et al. 1993) and Eastern Beskidy Mts (Węgierka – Banaszak 1984). Recently a new stand in Upper Silesia was discovered.

New locality. Upper Silesia: CA98 “Błędów Desert”, near Chechło, 13.06.2006 – a male on Asteraceae, leg. B. Wiśniowski.

*Nomada obscura* Zetterstedt, 1838

This Boreo-Montane species inhabits Sweden, Finland, Lithuania, as well as some other cold regions and mountains of Europe. Its northern limit of distribution reaches 68°N (Celary 1995 b). Adults of this species fly from the beginning of April till the mid of May (Celary 1995 b). The species visits flowers of *Taraxacum officinale* F.H. Wigg., *Tussilago farfara* L., various species of *Salix* L. and *Thlaspi alpestre* L. (Celary 1995 b). Females of *N. obscura* lay their eggs in the nests of *Andrena ruficrus* Nyl. (Celary 1995 b).

Until now this species in Poland was known only from two stands (Upper

Silesia: Lubliniec, and Eastern Sudety Mts: Podzamek and Prudnik – Celary 1995 b). Recently a new locality was discovered.

New locality. Eastern Beskidy Mts: EV38 near Ciechania (Magurski National Park), 14.05.2005 – a female in a grassland community with *Calluna vulgaris* (L.) Hull, leg. B. Wiśniowski.

*Nomada opaca* Alfken, 1913

This very rare species occurs in Northern and Central Europe, its northern limit of distribution reaches 61°N (Celary 1995 b). Adults of this species fly from the beginning of May till the end of June, sometimes till the beginning of July (Celary 1995 b). The species visits flowers of *Vaccinium myrtillus* L. and *Galium* spp. (Celary 1995 b). Females of *N. opaca* lay their eggs in the nests of *Andrena fulvida* Schenck (Celary 1995 b).

Until now this species in Poland was known only from four, scattered stands in Mazurian Lakeland (Wigry National Park – Banaszak and Krzysztofiak 1996), Upper Silesia (Lubliniec – Celary 1995b) and Eastern Sudety Mts (Podzamek and Prudnik – Celary 1995b). Recently a new locality in Western Sudety Mts was discovered.

New locality. Western Sudety Mts: WS52 Karkonosze Mts, Karpacz-Wilcza Poręba, 26.05.2001 – a female, leg. L. Buchholz.

## ACKNOWLEDGEMENTS

Although most of the material has been collected by one of the authors (BW), we would like to express our sincere thanks to all the collectors for making some specimens of bees available to our studies. Our special thanks go to Dr Anna Klasa and Dr Lech Buchholz (both ONP, Ojców), as well as to Dr Robert Rozwałka (Marie Curie University, Lublin).

## REFERENCES

- Alfken J.D. (1912) – Die Bienenfauna von Westpreussen. *Bericht der westpreussischen botanisch-zoologischen Verein.* 34: 1-96.
- Anasiewicz A. (1975) – The bees (Apoidea, Hymenoptera) on alfalfa (*Medicago media* Pers.) plantation. I. The species composition and variation of flights. *Ekologia Polska.* 23: 129-146.
- Banaszak J. (1980) – Pszczoły (Apoidea, Hymenoptera) siedlisk kserotermicznych rejonu dolnej Wisły. *Fragmenta faunistica.* 25: 335-360.
- Banaszak J. (1984) – Materiały do znajomości pszczół (Hymenoptera, Apoidea) fauny Polski. III. *Badania fizjograficzne nad Polską zachodnią*, ser. C. 32: 127-147.
- Banaszak J. (2000) – Contribution to bee fauna (Hymenoptera, Apoidea) of Poland. IV. *Acta Universitatis Lodzianis, Folia zoologica.* 4: 25-28.
- Banaszak J. (2003) – “Góry Pieprzowe” Hills in the vicinity of Sandomierz (SE Poland) as the European refuge of xerothermic bees (Hymenoptera: Apoidea). *Polskie Pismo entomologiczne.* 72: 111-130.
- Banaszak J., Cierznia T. (1994) – Spatial and temporal differentiation of bees (Apoidea) in the forests of Wielkopolski National Park, Western Poland. *Acta Universitatis Lodzianis, Folia zoologica.* 2: 3-28.
- Banaszak J., Cierznia T., Kriger R., Wendzonka J. (2006) – Bees of xerothermic swards in the lower Vistula valley: diversity and zoogeographic analyses (Hymenoptera: Apoidea: Apiformes). *Polskie Pismo entomologiczne.* 75: 105-154.
- Banaszak J., Krzysztof A. (1996) – The natural wild bee resources (Hymenoptera: Apoidea) of the Wigry National Park. *Polskie Pismo entomologiczne.* 65: 33-50.
- Banaszak J., Plewka T. (1981) – Apoidea (Hymenoptera) Kampinoskiego Parku Narodowego. *Fragmenta faunistica.* 25: 435-452.
- Banaszak J., Ratyńska H., Banaszak W. A. (2004) – Proponowany rezerwat “Folusz” pod Szubinem jako ostoja termofilnej szaty roślinnej i fauny żądłówek (Hymenoptera: Aculeata: Apoidea, Scolioidea). *Badania fizjograficzne nad Polską zachodnią*, ser. C. 50: 101-132.
- Banaszak J., Romasenko L. (1998) – Megachilid Bees of Europe (Hymenoptera, Apoidea, Megachilidae). *Wydawnictwa Uczelniane WSP w Bydgoszczy, Bydgoszcz.* 239pp.
- Banaszak J., Wendzonka J. (2002) – Bees (Hymenoptera: Apoidea) of the Bory Tucholskie National Park (NW Poland). *Polskie Pismo entomologiczne.* 71: 327-350.
- Blüthgen P. (1919) – Die Bienenfauna Pommerns. *Stettiner entomologische Zeitung.* 80: 65-131.
- Blüthgen P. (1942) – Die Bienenfauna Pommerns (2. Nachtrag). *Stettiner entomologische Zeitung.* 103: 81-91.
- Burakowski B., Mroczkowski M., Stefańska J. (1973) – Katalog fauny Polski. Part 22, 2(1), Chrząszcze Coleoptera, Biegaczowate – Carabidae. *PWN.* Warszawa, 233pp.
- Celary W. (1990) – Review of the parasitic bees of the family Anthophoridae (Hymenoptera, Apoidea) in Poland (excluding the genus *Nomada* Scop.). *Polskie Pismo entomologiczne.* 60: 9-23.
- Celary W. (1995a) – Redescription of male *Stelis odontopyga* Noskiewicz, 1925 (Hymenoptera, Apoidea, Megachilidae). *Acta zoologica cracoviensia.* 38(2):201-203.
- Celary W. (1995b) – *Nomadini* (Hymenoptera, Apoidea, Anthophoridae) of Poland. Monografie Fauny Polski, 20, *Wydawnictwa ISEZ PAN, Kraków.* 281 pp.
- Celary W., Wiśniowski B. (2001) – Contribution to bee fauna (Hymenoptera: Apoidea) of Poland. *Acta zoologica cracoviensia.* 44(4): 413-418.
- Celary W., Wiśniowski B. (2003) – Contribution to bee fauna (Hymenoptera: Apoidea) of Poland. II. *Acta zoologica cracoviensia.* 46(4): 359-364.

- Dittrich R. (1903) – Verzeichnis der bisher in Schlesien aufgefundenen Hymenopteren. I. Apidae. *Zeitschrift für Entomologie. Hrsg. vom Verein für Schlesische Insektenkunde zu Breslau*. 28: 22-54.
- Möschler A. (1938) – Ein Beitrag zur Bienenfauna in Ostpreussen, insbesondere der Kurischen Nehrung. *Schriften der Physikalisch-Ökonomischen Gesellschaft zu Königsberg*. 70: 243-288.
- Pawlikowski T., Fijał J., Kosior A. (1993) – Dzikie pszczołowate (Hymenoptera: Apoidea) województwa zamojskiego. *Acta Universitatis Nicolai Copernici, Biol.* 47, 90: 51-66.
- Pawlikowski T., Hirsch J. (2002) – Bees (Hymenoptera: Apoidea) as indicators of xerisation processes in the lower Vistula Valley. *Acta zoologica cracoviensia*. 45: 321-336.
- Plewka T. (2003) – Pszczoły (Hymenoptera, Apoidea) w środowiskach Kampinoskiego Parku Narodowego i jego otuliny. [In:] R. Andrzejewski (ed.) *Kampinoski Park Narodowy. Tom 1. Przyroda Kampinoskiego Parku Narodowego*: 577-593.
- Śnieżek J. (1910) – Błonkówki pszczołowate (Apidae), zebrane w Galicji. *Sprawozdania Komisji fizjograficznej*. 44: 31-46.
- Torka V. (1913) – Die Bienen der Provinz Posen. *Zeitschrift der Naturwissenschaftlichen Abteilung*. 20: 97-181.
- Westrich P. (1990) – Die Wildbienen Baden-Württembergs. Spezieller Teil. *Verlag Eugen Ulmer, Stuttgart*. 535pp.

### MATERIAŁY DO FAUNY PSZCZÓŁ POLSKI (HYMENOPTERA: APOIDEA: ANTHOPHILA). III.

Celary W., Wiśniowski B.

#### S t r e s z c z e n i e

W artykule przedstawiono nowe stanowiska 10 bardzo rzadkich gatunków pszczoł długojęczkowych (Megachilidae and Apidae), znanych dotąd w Polsce z pojedynczych notowań: *Stelis odontopyga* Noskiewicz, 1925; *Hoplitis claviventris* Thomson, 1872; *Hoplitis papaveris* Latreille, 1799; *Ammobates punctatus* Fabricius, 1804; *Nomada bifasciata* Olivier, 1811; *Nomada errans* Lepeletier, 1841; *Nomada facilis* Schwarz, 1967; *Nomada furva* Panzer, 1798; *Nomada obscura* Zetterstedt, 1838 i *Nomada opaca* Alfken, 1913. Dla każdego gatunku podano informacje o polskich stanowiskach (ze współrzędnymi UTM), rozszedleniu oraz bionomii.

**Słowa kluczowe:** Hymenoptera, Apoidea, Megachilidae, Apidae, rozmieszczenie, bionomia, Polska.