

## ***BOMBUS HAEMATURUS* (HYMENOPTERA: APIDAE), NEW SPECIES IN THE SLOVENIAN BUMBLEBEE FAUNA**

Aljaž JENIČ<sup>1</sup>, Andrej GOGALA<sup>2</sup> & Janez GRAD<sup>3</sup>

<sup>1</sup> Janežičeva 21, 1000 Ljubljana, Slovenia, e-mail: aljazzj@gmail.com

<sup>2</sup> Prirodoslovni muzej Slovenije, Prešernova 20, p.p.290, SI-1001 Ljubljana

<sup>3</sup> Petelinje 16, 1262 Dol pri Ljubljani, Slovenia

**Abstract** - Records of *Bombus haematurus*, a new species in the Slovenian bumblebee fauna, are presented. The distribution of the species, its expansion towards the north west and possible implications are discussed.

**KEY WORDS:** Hymenoptera, Apidae, *Bombus*, new records

### **Izveček – *BOMBUS HAEMATURUS* (HYMENOPTERA: APIDAE), NOVA VRSTA V SLOVENSKI FAVNI ČMRLJEV**

Predstavljene so najdbe vrste *Bombus haematurus* v Sloveniji, nove priseljenke v slovenski favni čmrljev. Opisana je celotna razširjenost vrste, njeno širjenje proti severozahodu in možni razlogi zanj.

**KLJUČNE BESEDE:** Hymenoptera, Apidae, *Bombus*, nove najdbe



**Fig. 1:** Distribution of *B. haematurus*. Dots present records from: Anagnostopoulos (2005), Baker (1996), Ban-Calefariu et al. (2007), Neumayer (2004), Šima et al. (2009), Özbek (1998), Yilmaz et al. (2004), Knechtel (1955), Tkalců (1969), Reinig (1967), Reinig (1974), Sarospataki et al. (2003), Teppner (2010). Distribution on the Crimean Peninsula is taken from Konovalova (2010). Records in the recently colonized territory are marked in red.

The source of the map groundwork: ESRI Data & Maps 9.3 [DVD]. Global Imagery and Shaded Relief, Redlands, CA, 2008.

*Bombus haematurus* Kriechbaumer, 1870 is a polylectic species, bound mainly to forest, forest edge or forest clearings (Baker 1996, Knechtel 1955, Reinig 1972). It is mostly a species of low-altitude sites, although some data from the southern part of its range show it occurs quite frequently at higher altitudes (up to 2100 m).

Older distribution data of *Bombus haematurus* come from Iran (Baker 1996), Turkey (Reinig 1967, Reinig 1968), Greece (Anagnostopoulos 2005), Bulgaria (Reinig 1974), Romania (Knechtel 1955), Serbia (Reinig 1974) and Albania (Tkalců 1969). Reinig (1974) considered records from Albania (Kruja) and from Serbia (Vršac, Fruška gora) as the most western and at the northern edge of its distribution.

Recently, the species has spread towards the north west. In 1982 it was recorded in Hungary (Jozan 2007), 1995 (first record) and in 2002 (second record) in Austria (Teppner 2010) and 2003 in Slovakia (Šima et al. 2009) (fig. 1). It seems that the species is spreading relatively quickly and successfully since new records are more and more common.

In Slovenia it was observed and photographed for the first time by Prof. Dr. Janez Grad in 2007 in Petelinje near Dol pri Ljubljani, feeding on *Lonicera* sp. But it was identified only later, when a specimen was caught in May 2009.

List of records of *B. haematurus* in Slovenia:

1. 19.5. 2007, Petelinje, Dol pri Ljubljani, Lat: 46,096; Lon: 14,673, photo Grad J., 1 sp. feeding on *Lonicera* sp.
2. 21.3. 2008, Petelinje, Dol pri Ljubljani, Lat: 46,096; Lon: 14,673, vid: Grad J., 1♀ feeding on *Prunus armeniaca*
3. 22.4. 2009, Petelinje, Dol pri Ljubljani, Lat: 46,096; Lon: 14,673, vid: Grad J., 1♀ feeding on *Wisteria* sp.
4. 29.5. 2009, Zasavci, Miklavž pri Ormožu, Lat: 46,454; Lon: 16,230, leg: Jenič A., det. Gogala A., 1♀ feeding on ornamental flowers
5. 5.4. 2010, Petelinje, Dol pri Ljubljani, Lat: 46,096; Lon: 14,673, vid.: Grad J., 1♀ feeding on *Prunus armeniaca*
6. 11.4. 2010, Ljubljana, Lat: 46,030; Lon: 14,459, vid: Grad J., 1♀ feeding on *Erica* sp.
7. 14.4. 2010, Ljubljana, Lat: 46,078; Lon: 14,508, leg Presetnik P., det. Gogala A., 1♀ found dead on window sill

One of the most important land use changes recorded in southern and eastern Europe is the abandonment of agricultural lands due to economic and social changes. Reforestation can occur in these places (Koulouri et al. 2007, Moreira et al. 2007). A greater proportion of woodlands, together with global warming, may be the cause for spread of this hylophilous Eastern Mediterranean species towards the north west.

## References

- Anagnostopoulos, I.T., 2005: The bumblebee fauna of Greece: An annotated species list including new records for Greece (Hymenoptera: Apidae, Bombini). *Linzer biol. Beitr.*, 37: 1013-1026.

- Baker, D.B.**, 1996: On a collection of humble-bees from northern Iran (Hymenoptera: Apoidea, Bombinae). *Beitr. Ent., Berlin*, 46(1): 109-132.
- Ban-Calefariu, C., Sárospataki, M.**, 2007: Contributions to the knowledge of *Bombus* and *Psithyrus* Genera (Apoidea: Apidae) in Romania. *Travaux de Museum National d'Historie Naturelle »Grigore Antipa«*, L: 239-258.
- Jozan, Z.**, 2007: Újabb adatok a Zselic fullánkos hártványászárnyú (Hymenoptera, Aculeata) faunájának ismeretéhez. *Somogyi Múzeumok Közleményei* 17: 169–182 (2006).
- Knechtel, W.K.**, 1955: Apinae (Insecta: Hymenoptera). Fauna Republici Populare Romîne. Vol. 9, part 1.
- Konovalova, I., B.**, 2010: The Bumble Bees of Ukraine: Species Distribution and Floral Preferences. *Psyche*, vol. 2010, Article ID 819740, 10 pp.
- Koulouri, M., Giourga, C.**, 2007: Land abandonment and slope gradient as key factor of soil erosion in Mediterranean terraced lands. *Cataena*, 69: 274-281.
- Moreira, F., Russo D.**, 2007: Modelling the impact of agricultural abandonment and wildfires on vertebrate diversity in Mediterranean Europe. *Landscape Ecology*, 22:1461-1476.
- Neumayer, J.**, 2004: Erstfund von *Bombus haematurus* Kriechbaumer, 1870 (Hymenoptera, Apidae) in Österreich. *Beitr. Entomofaunistik* (Wien), 5: 134-135.
- Özbek, H.**, 1998: On the bumblebee fauna of Turkey:II. The genus *Pyrobombus* (Hymenoptera, Apidae, Bombinae). *Zoology in The Middle East*, 16:89-106.
- Reinig, W. F.**, 1967: Zur Kenntnis der Hummelfaunen einiger Gebirge West-Kleinasien (Hym., Apidae). *NachrBl. Bayer. Ent.*, 16: 81-91.
- Reinig, W. F.**, 1968: Über die Hummeln und Schmarotzerhummeln Nordwest-Anatoliens (Hym., Apidae). *NachrBl. Bayer. Ent.*, 17: 101-112.
- Reinig, W. F.**, 1972: Ökologische Studien an mittel- und südosteuropäischen Hummeln (*Bombus* Latr., 1802; Hym., Apidae). *Mitteilungen der Münchner Entomologischen Gesellschaft*, 60(1970): 1-56.
- Reinig, W.F.**, 1974: Zur Verbreitung einiger Hummelarten auf der Balkan-Halbinsel (Hym., Bombidae), *NachrBl. Bayer. Ent.*, 23, 11-13.
- Sárospataki, M., Novák, J., Molnár, V.**, 2003: Hazai poszméh- és álposzméhfajok (Hymenoptera: Apidae, *Bombus* és *Psithyrus*) UTM- térképezése és az adatok természetvédelmi felhasználhatósága., *Állattani Közlemények*, 88:85-108.
- Šima, P., Smetana, V.**, 2009: Current distribution of the bumble bee *Bombus haematurus* (Hymenoptera: Apidae, Bombini) in Slovakia. *Klapalekiana*, 45: 209-212.
- Teppner H.**, 2010. Flower visitation of *Bombus haematurus* Kriechbaumer 1870 (Hymenoptera, Apidae) in Graz, Styria. *Linzer biol. Beiträge* 42(1): 89-94
- Tkalců, B.**, 1969: Ergebnisse der Albanien-Expedition 1961 des Deutschen Entomologischen Institutes. *Beitr. Entomol. (Berlin)*, 19: 887-916.
- Yilmaz, Z., Uğurtaş, İ. H.**, 2004: A contribution to the bumble bee fauna of Bursa province (Hymenoptera:Apidae, Bombini), *Uludag Bee Journal*, 3: 121-126.

Received / Prejeto: 23. 9. 2010

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Acta Entomologica Slovenica](#)

Jahr/Year: 2010

Band/Volume: [18](#)

Autor(en)/Author(s): Jenic Aljaz, Gogala Andrej, Grad Janez

Artikel/Article: [BOMBUS HAEMATURUS \(HYMENOPTERA: APIDAE\), NEW SPECIES IN THE SLOVENIAN BUMBLEBEE FAUNA 168-170](#)