



Short note – Kurzmitteilung

No. 5/2016 Nr. 5/2016

Faunistics – Faunistik

Palaeartic Region – Paläarktische Region

***Arctophila bequaerti* HERVÉ-BAZIN (Diptera: Syrphidae),
new to the Serbian fauna**

[*Arctophila bequaerti* HERVÉ-BAZIN (Diptera: Syrphidae),
neu für die serbische Fauna]

by

Mihailo VUJIĆ, Zorica NEDELJKOVIĆ and Tamara TOT

Belgrade (Serbia)

Novi Sad (Serbia)

Novi Sad (Serbia)

Hoverflies (Diptera: Syrphidae) represent one of the most species-rich dipteran families, with over 6000 described species (THOMPSON & ROTHERAY, 1998). The genus *Arctophila* SCHINER, 1860 represent a robust bumblebee-like species, with long hairs on the abdomen and thorax (VAN VEEN 2004).

In the Palaeartic region, only three species of the genus *Arctophila* (Eristalinae: Sericomiyini) are known (PECK 1988). SPEIGHT & SARTHOU (2010) provided a key for European *Arctophila* species: *Arctophila bombiformis* (FALLÉN, 1810), *Arctophila bequaerti* HERVÉ-BAZIN, 1913, and *Arctophila mussitans* (FABRICIUS, 1776) which is now a junior synonym of *Arctophila superbiens* (MÜLLER, 1776). Adults of this genus are found

in wet forests, near streams and subalpine grasslands (SPEIGHT 2016). The larva is undescribed but it is probably aquatic and lives among organic debris in semi-liquid mud close to streams (SPEIGHT 2016).

Two *Arctophila* species – *Arctophila bombiformis* and *Arctophila superbiens* – have been recorded in Serbia so far (RADENKOVIĆ et al. 2013). *Arctophila bequaerti* HERVÉ-BAZIN, 1913 (Fig. 1) is listed in the Catalogue of Palaeartic Diptera by PECK (1988) for the former Yugoslavia, but this data has never been checked. The presence of this species has been confirmed in Albania, Armenia, Bulgaria, Greece, Turkey, southern Russia, and Ukraine (SPEIGHT 2016). This species can be distinguished from other species of the genus *Arctophila* by the presence of long black hairs on scutellum.



Fig. 1: *Arctophila bequaerti* HERVÉ-BAZIN ♂, habitus in lateral view. Photo: M. VUJIĆ.

In this study, fieldwork took place in the area of protected landscape “Vlasina”, south-eastern Serbia. Identification was based on the key in SPEIGHT & SARTHOU (2010). The studied material is deposited in the entomological collection of the Department of Biology and Ecology, Faculty of Sciences, University of Novi Sad, Serbia (FSUNS).

Arctophila bequaerti HERVÉ-BAZIN, 1913

Material examined: SERBIA: Landscape of outstanding features “Vlasina”, Vlasina Rid, 42.725365°N 22.326445°E, 2 ♂♂, 4.10.2017, leg. M. VUJIĆ.

Habitat: Edge of birch-spruce forest.

Remarks: New to Serbia. Although *Arctophila bequaerti* has been recorded for the territory of the former Yugoslavia (PECK 1988, SPEIGHT 2016) this data has never been proved. There is no any evidence such as voucher specimen or written report about the presence of this species in Serbia. According to DIRICKX (1994) this species was registered in Bosnia and Herzegovina which was a part of the former Yugoslavia. Anyway, the data from the present study are the first documented for Serbia. It is assumed that this species is present during autumn at high altitudes, which may be the reason why it has not been recorded in Serbia before. Hoverflies living in areas with lower temperature such as higher altitudes are generally darker in colour because dark coloration maximizes the potential to absorb heat (HODKINSON 2005). According to this *Arctophila bequaerti* is characterized by the presence of long black hairs on scutellum which distinguish this species from all other *Arctophila* species. Further faunistic studies should be carried out in the Balkan Peninsula to map the present distribution of this species and to take the most effective management measures for its conservation.

Acknowledgements

The authors give their thanks to the protected landscape “Vlasina” administration and Scientific Research Society of Biology Students “Josif Pančić”, Novi Sad, Serbia. We also thank to participants of the camp Aleksandar ĐUKIĆ (Novi Sad, Serbia), Isidora BOLESNIKOV (Novi Sad, Serbia) and Marko MARIČIĆ (Novi Sad, Serbia) for assisting in collecting and processing hoverfly material. Financial support was provided by the Ministry of Education, Science and Technological Development of the Republic of Serbia (research project no. OI173002).

Literature

- DIRICKX, H. G. (1994): Atlas des Diptères syrphides de la région méditerranéenne. – Studiedocumenten van het Koninklijk Belgisch Instituut voor Natuurwetenschappen **75**: 317 pp; Brussel: Koninklijk Belgisch Instituut voor Natuurwetenschappen.
- HODKINSON, I. D. (2005): Terrestrial insects along elevation gradients: species and community responses to altitude. – Biological Reviews **80**: 489–513.
- PECK, L. V. (1988): Family Syrphidae. – Pp. 11–230. – In: Soós, A. & PAPP, L. (eds): Catalogue of Palearctic Diptera. Syrphidae – Conopidae **8**: 363 pp.; Budapest: Akadémiai Kiadó.
- RADENKOVIĆ, S.; NEDELJKOVIĆ, Z.; RICARTE, A.; VUJIĆ, A. & ŠIMIĆ, S. (2013): The saproxylic hoverflies (Diptera: Syrphidae) of Serbia. – Journal of Natural History **47**: 87–127.
- SPEIGHT, M. C. D. (2016): Species accounts of European Syrphidae (Diptera), Glasgow 2015. – In: SPEIGHT, M. C. D.; CASTELLA, E.; SARTHOU, J.-P. & VANAPPELGHEM, C. (eds): Syrph the Net. The database of European Syrphidae **93**: 288 pp.; Dublin: Syrph the Net publication.
- SPEIGHT, M. C. D. & SARTHOU, J.-P. (2010): StN keys for the identification of adult European Syrphidae (Diptera), 2010. – Syrph the Net. The database of European Syrphidae **60**: 107 pp.; Dublin: Syrph the Net publications.
- THOMPSON, F. C. & ROTHERAY, G. E. (1998): Family Syrphidae. – Pp. 81–139. – In: PAPP, L. & DARVAS, B. (eds): Contributions to a Manual of Palearctic Diptera (with special reference to flies of economic importance). Higher Brachycera **3**: 880 pp.; Budapest: Science Herald.
- VAN VEEN, M. (2004): Hoverflies of Northwest Europe. Identification keys to the Syrphidae. 256 pp.; Utrecht: KNNV Publishing.

Authors' addresses

Mihailo VUJIĆ
Bulevar revolucije 33
11224 Vrčin
Serbia
E-mail: mihailovujic01@gmail.com

Zorica NEDELJKOVIĆ

BioSense Insitute - Research Institute for Information Technologies in Biosystems

University of Novi Sad

Dr Zorana Đinđića 1

21000 Novi Sad

Serbia

E-mail: zoricaned14@gmail.com

Tamara Tot

Department of Biology and Ecology

Faculty of Sciences

Trg Dositeja Obradovića 2

21000 Novi Sad

Serbia

E-mail: tamaratot90@gmail.com

The paper was accepted on 19 December 2017.

Editum: 28 December 2017.