

The occurrence of *Evarcha michaelovi* Logunov, 1992 in Belgium, replacing *Evarcha laetabunda* (C.L. Koch, 1846) on the Belgian spider checklist

Mark Alderweireldt* & Marc Janssen**

*University Ghent, Terrestrial Ecology Unit,
K.L. Ledeganckstraat 35, B-9000 Gent, Belgium, malderweireldt@hotmail.com

**Weg naar Ellikom 128, B-3670 Meeuwen, Belgium

Summary

The status and distribution of *Evarcha laetabunda* and *Evarcha michaelovi* in Belgium is revised. This contribution confirms that *E. michaelovi* is well represented in Belgium whereas the occurrence of *E. laetabunda* remains to be confirmed. All known locality data are summarized and habitat preferences are shortly discussed.

Samenvatting

De status en het voorkomen van *Evarcha laetabunda* en *Evarcha michaelovi* in België is gereviseerd. Deze bijdrage toont aan dat *E. michaelovi* goed vertegenwoordigd is in België, terwijl het voorkomen in België van *E. laetabunda* nog aangetoond moet worden. Alle bekende verspreidingsgegevens worden samengevat en de habitatvoorkeur wordt kort behandeld.

Résumé

Le statut et la distribution de *Evarcha laetabunda* et *Evarcha michaelovi* en Belgique sont révisés. Cette contribution démontre que *E. michaelovi* est bien présente en Belgique. La présence de *E. laetabunda* en Belgique doit encore être confirmée. Toutes les localités connues sont résumées et l'habitat préféré est brièvement discuté.

Introduction

The checklist of the spiders of Belgium (BOSMANS, 2009) mentions four species of *Evarcha* Simon, 1902. *Evarcha arcuata* (Clerck, 1757) and *Evarcha falcata* (Clerck, 1757) are relatively widespread (JANSSEN & BAERT, 1987). The third species on the Belgian list, *Evarcha laetabunda* (C.L. Koch, 1846), is known from very few records only. A fourth species, *Evarcha jucunda* (Lucas, 1846) was found only once, probably introduced by accident from southern Europe where it is not uncommon (ALDERWEIRELDT, 1996).

During a study of spiders from Tuva (central Siberia), LOGUNOV (1992) described a new *Evarcha* species which is morphologically very closely related to *Evarcha laetabunda*, named *Evarcha michaelovi*. In this way, LOGUNOV (1992) promoted to species level a morph that was already described by PROSZYNSKI (1982). The latter author considered the subtle morphological differences in the copulatory organs as an example of intra-specific variation, probably because of a small number of specimens available for study.

In his "Tuva-paper", LOGUNOV (1992) considered both closely related species of *Evarcha* to be geographical vicariants, with *Evarcha laetabunda* being the species occurring in Europe.

However, it became soon evident that this is not the case. The revision of material in collections revealed that both species occur in Europe! Already in 1996, *Evarcha michaelovi* was cited from several localities in France (LEDoux *et al.*, 1996). Other examples are the occurrence in Slovenia (FIŠER & KOSTANJŠEK, 2001) and later also in the Netherlands (VOGELS, 2012), while it was only very recently discovered in Germany as well (MARTIN, 2014). See also VAN HELSDINGEN (2016) and BENELUX SPIDER DISTRIBUTION MAPS (2016). Besides this, *E. michaelovi* is now also known from Spain, Macedonia, Turkey, Russia and further east (NENTWIG *et al.*, 2016). Checking our personal and museum collections from Belgium, confirms that *Evarcha michaelovi* is clearly present in Belgium (see also LAMBRECHTS *et al.*, 2015). In order to find out more about its distribution as compared to the sibling *Evarcha laetabunda*, all available material from Belgium was restudied and the results are presented hereby. Comparative material of *Evarcha laetabunda* was available from Spain (private collection M. Alderweireldt).

Results and discussion

1. The occurrence in Belgium

As *Evarcha michaelovi* was not described yet at that time, the catalogue of spiders of Belgium, part IV, Salticidae (JANSSEN & BAERT, 1987), mentions only *Evarcha laetabunda* as being present in Belgium (VAN HELSDINGEN, 2016). From literature data, ten localities of this species were retained as is summarized in Table 1.

Table 1: Historical citations of *Evarcha laetabunda* in Belgium (from JANSSEN & BAERT, 1987)

Locality	Literature source
Kalmthout	Janssen & Baert, 1987
Bosvoorde	Becker, 1882
Brussel	Becker, 1882
Houwaert	Bosmans & Cottenie, 1977; Tips, 1978
Maasmechelen	Janssen & Baert, 1987
Neerpelt	Alderweireldt & Seys, 1988; Janssen & Baert, 1987
Hotton	Bosmans, 1978
Redu	Bosmans, 1978
Treignes	Janssen & Baert, 1987
Dinant	Bosmans, 1978

The available museum collections were checked (Royal Belgian Institute for Natural Sciences, Brussels) as historical material collected in Belgium is normally preserved there. All private spider collections from Belgium that we know of were interrogated through the members of the Belgian Arachnological Society (ARABEL).

However, not all historically cited material was available. All older records cited in Table 1 that could be checked with the available material proved to be *Evarcha michaelovi*, a species mentioned already from the province Antwerpen by LAMBRECHTS *et al.* (2015). Moreover, further checks revealed that all more recently collected material (after the catalogue of 1987) proved to belong to the species *Evarcha michaelovi*. No Belgian material of *Evarcha laetabunda* has been found so far.

All data that are currently known to us are summarized in Table 2. Most recent records are concentrated in the province of Limburg in the north-eastern part of Belgium.

Table 2: Occurrence of *Evarcha michaelovi* in Belgium.

Locality	Area	UTM	Date	male/female
Maasmechelen	Mechelse heide	FS84B	May, June 1981	1 / 2
Neerpelt	Hageven	FS68D	10 June 1986	1 / 0
Zolder	Mijnterril	FS65A	July-August 1998	1 / 0
Maasmechelen	Mechelse heide	FS84BT	April, May, June 1999	3 / 5
Zolder	Mijnterril	FS65A	May, June 1999	1 / 0
Houthalen	Ten Haagdoornheide	FS65D	June, August 1999	4 / 1
Zonhoven	De Teut	FS75C	May, June, August 1999	2 / 6
Eksel	Pijnven	FS67D	May, June 2005	1 / 0
Lommel	Stort	FS68C	June 2010	1 / 0
Eisden	Teutelberg	FS8853	May, June 2010	1 / 0
Eisden	Teutelberg	FS8853	May, June, August 2012	4 / 1
Houthalen	Bosrand in heidegebied	FS6660	June 2012	1 / 0
As	Mijnterrein Waterschei	FS7854	May, August 2014	1 / 3

Balen	Keiheuvel	FS5572	April, May 2014	1 / 0
Hamont	Beverbeekse heide	FS7485	June, July 2015	1 / 0
Winterslag	Mijnterein	FS7351	July 2016	0 / 1

2. Habitat preference

Our data of *Evarcha michaelovi* show that in Belgium, the species seems to prefer dry, xerothermic, sandy places, in many cases dry *Calluna*-heathland (with high abundance of *Calluna vulgaris*). This is in agreement with LAMBRECHTS *et al.* (2015) and with its habitat preference in neighboring Germany, “dry heathland” (MARTIN, 2014), or “in the drier and hotter areas” of southern France (LEDoux *et al.*, 1996).

3. Consequences for the Belgian spider checklist

Evarcha michaelovi and not *Evarcha laetabunda* is to be added to the Belgian spider checklist (see also LAMBRECHTS *et al.*, 2015). The presence of *Evarcha laetabunda* needs to be confirmed. It is hereby deleted from the Belgian checklist (BOSMANS, 2009). A new version of the Belgian spider checklist is at this very moment in preparation (BOSMANS, in prep.).

However, it is likely that *Evarcha laetabunda* also DOES occur in Belgium as the species has been confirmed from neighboring countries such as Germany and France. This however remains to be demonstrated by new, recent material.

Acknowledgements

We would like to thank all members of the Belgian Arachnological Society (ARABEL) who kindly checked their personal collection on the occurrence of *Evarcha* species. Many thanks are also due to Dr. Léon Baert for allowing us to check material preserved in the collections of the Royal Belgian Institute for Natural Sciences, Brussels and to Dr. Robert Bosmans for checking the manuscript.

References

- ALDERWEIRELDT, M., 1996. *Evarcha jucunda* Simon (Araneae, Salticidae) nieuw voor de Belgische fauna: introductie, zwerver of noordwaartse areaalsuitbreiding? *Nieuwsbrief van de Belgische Arachnologische Vereniging*, 11 (3): 79-80.
- ALDERWEIRELDT, M. & SEYS, J., 1988. Enkele voor de Belgische fauna zeldzame spinnen (Araneae). *Nieuwsbrief van de Belgische Arachnologische Vereniging*, 7: 19-21.
- BECKER, L., 1882. Les Arachnides de Belgique (1 partie). *Annales du Musée royal d'Histoire naturelle de Belgique*, X : 1 246, pl. I-XXVII.
- BENELUX SPIDER DISTRIBUTION MAPS, 2016. <http://www.tuite.nl/iwg/Araneae/Arabel/>
- BOSMANS, R., 1978. Faunistique des araignées de Belgique. *Bulletin et Annales de la Société royale belge d'Entomologie*, 114 : 38 49.
- BOSMANS, R., 2009. Een herziene soortenlijst van de Belgische spinnen. *Nieuwsbrief van de Belgische Arachnologische Vereniging*, 24 (1-3): 33-58.
- BOSMANS, R. & COTTENIE, P., 1977. Araignées rares ou nouvelles pour la fauna belge des cultures. (Communication). *Bulletin et Annales de la Société royale belge d'Entomologie*, 113 : 100.
- FIŠER, C. & KOSTANJŠEK, R., 2001. Prispevek k poznavanju favne skakacev v Sloveniji (Araneae, Salticidae). *Natura Sloveniaeae*, 3 (2): 33-40.
- JANSSEN, M. & BAERT, L., 1987. Catalogus van de spinnen van België. Deel IV. Salticidae. *Studiedocumenten van het Koninklijk Belgisch Instituut voor Natuurwetenschappen*, 43: 1-32.
- LAMBRECHTS, J., VAN KEER, J. & JACOBS, M., 2015. De spinnen van de Most-Keiheuvel te Balen (provincie Antwerpen): onderzoek van stuifzand tot laagveen. *Nieuwsbrief van de Belgische Arachnologische Vereniging*, 2015, 30 (1): 16-51.
- LEDoux, J.C., EMERIT, M. & PINAULT, G., 1996. Les araignées et opilions de Nohèdes (Pyrénées Orientales). *Office pour l'information Eco-entomologique du Languedoc-Rousillon*, 1996: 1-36.

- LOGUNOV, D.V., 1992. The spider family Salticidae (Araneae) from Tuva. II. An annotated check list of species. *Arthropoda Selecta*, 1 (2): 47-71.
- MARTIN, D., 2014. Erstnachweis von *Evarcha michaelovi* in Deutschland (Araneae: Salticidae) sowie weitere für Mecklenburg-Vorpommern neue Spinnenarten. *Arachnologische Mitteilungen*, 48: 8-12.
- NENTWIG, W., BLICK, T., GLOOR, D., HÄNGGI, A. & KROPF, C., 2016. Spiders of Europe. www.araneae.unibe.ch Version 05.2016
- PROSZYNSKI, J., 1982. Salticidae (Araneae) from Mongolia. *Annales historico-naturales Musei nationalis hungarici*, 74: 273-294.
- TIPS, W., 1978. The spiderfauna of alder carr and other ecotypes at the walenboscomplex, Belgium. *Biologisch Jaarboek Dodonaea*, 46 : 172-185.
- VAN HELSDINGEN, P., 2016. *Evarcha* in Fauna Europaea. <http://www.fauna-eu.org/>
- VOGELS, J., 2012. *Evarcha michaelovi* new for the Netherlands. <http://forum.spinnen-forum.de/index.php?topic=13235.0>

INHOUD-SOMMAIRE

KOEN VAN KEER

In memoriam Bryan Goethals (25/02/1964 – 22/09/2016).....113

MARC ALDERWEIRELDT & MARC JANSSEN

The occurrence of *Evarcha michaelovi* Logunov, 1992 in Belgium, replacing *Evarcha laetabunda* (C.L. Koch, 1846) on the Belgian spider checklist.....115

SAM VAN DE POEL & PALLIETER DE SMEDT

Harvestmen (Opiliones) from deciduous forest fragments in two agricultural landscapes in Flanders, Belgium.....119

ROBERT KEKENBOSCH

Contribution à la connaissance de l'aranéofaune du Parc Naturel Viroin-Hermeton. Huitième partie: le "Tienne Delvaux" à Dourbes (Viroinval).....126

Verslag van de 106^{de} Vergadering van ARABEL: 24 september 2016, 14.00u in het Koninklijk Belgisch Instituut voor Natuurwetenschappen (Vautierstraat 29, 1000 Brussel).....139

Rapport de la 106^{ème} réunion d'ARABEL: 14 septembre 2016, 14h00 à l'Institut royal des Sciences naturelles de Belgique (rue Vautier 29, 1000 Bruxelles).....140

CHRSTOPH HÖRWEG, JASON DUNLOP & KOEN VAN KEER

Europese Spin van het jaar 2017/L'araignée Européenne de l'année 2017.....142