

Entomofauna	39/1	Heft 5: 083-086	Ansfelden, 2. Januar 2018
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Three green lacewings new to the Bulgarian fauna (Neuropterida: Chrysopidae)

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Abstract

Three green lacewings new to Bulgaria: *Pseudomallada marianus* (NAVÁS, 1905), *Pseudomallada venustus* (HÖLZEL, 1974) & *Pseudomallada benedictae* (SÉMÉRIA, 1976) were found in a cohort of insects collected in the north-west of the country in 2001.

Keywords: Neuroptera, Chrysopidae, Bulgarian fauna.

Zusammenfassung

Drei Arten grüner Florfliegen sind neu in Bulgarien aufgetreten: *Pseudomallada marianus* (NAVÁS, 1905), *Pseudomallada venustus* (HÖLZEL, 1974) & *Pseudomallada benedictae* (SÉMÉRIA, 1976) wurden 2001 im Nordwesten des Landes in einer Schar von Insekten gefunden.

Introduction

A short trip was carried out in western Bulgaria in the relatively narrow spur of land between Serbia and Romania. The samplings gave the opportunity to catch some lacewings, of which 93 were Chrysopidae. Within the cohort, three species appeared to be new to the Bulgarian fauna. They raise to 30 the number of green lacewings, including the species constituting the *carnea*-complex occurring in this country.

Material and Methods

The samplings were performed in the Vidin region, near Belogradtchik (43.6277 ° N / 26.2269 ° E), at 550 m asl, in the lower and median canopy of deciduous trees bordering a sparse wood. That issues forth a wild corridor (CHETKIEWICZ et al. 2006), open in the south via the valley of the River Struma to Greece and the Aegean Sea (POPOV 2002).

The handnet collection was made every day during 2 hours, from 01 to 14 July 2001. The samples were kept in a solution of alcohol 70 ° + glycerin 5 % and stored in the collection of D. Thierry.

Results

We collected :

<i>Chrysoperla lucasina</i> (LACROIX, 1912)	23 ♂	27 ♀
<i>Pseudomallada marianus</i> (NAVÁS, 1905)	4 ♂	13 ♀
<i>Pseudomallada prasinus</i> (BURMEISTER, 1839)	4 ♂	6 ♀
<i>Cunctochrysa albolineata</i> (KILLINGTON, 1935)	3 ♂	5 ♀
<i>Pseudomallada flavifrons</i> (BRAUER, 1850)	5 ♂	3 ♀
<i>Chrysoperla affinis</i> (STEPHENS, 1836)	3 ♂	4 ♀
<i>Chrysoperla carnea</i> (STEPHENS, 1836) sensu stricto	1 ♂	4 ♀
<i>Pseudomallada benedictae</i> (SÉMÉRIA, 1976)	4 ♂	2 ♀
<i>Nineta flava</i> (SCOPOLI, 1863)	1 ♂	1 ♀
<i>Chrysopa viridana</i> SCHNEIDER, 1865	3 ♂	4 ♀
<i>Nothochrysa fulviceps</i> (STEPHENS, 1836)	0 ♂	1 ♀
<i>Pseudomallada venustus</i> (HÖLZEL, 1974)	0 ♂	1 ♀
<i>Hemerobius micans</i> OLIVIER, 1792	3 ♂	8 ♀
<i>Micromus lanosus</i> (ZELENY, 1962)	1 ♂	2 ♀
<i>Symphorobius pygmaeus</i> (RAMBUR, 1842)	0 ♂	3 ♀
<i>Hemerobius humulinus</i> LINNAEUS, 1758	0 ♂	1 ♀
<i>Hemerobius gilvus</i> STEIN, 1863	0 ♂	1 ♀
<i>Hemerobius schedli</i> HÖLZEL, 1970	1 ♂	0 ♀

Discussion

Pseudomallada venustus is characterized without any ambiguity by its brownish ground colour, its vertex bearing strong reddish marks but no formal inter-antennal black spot, its claws quadrangularly dilated. This Chrysopidae is known as a xerothermophilous discreet species, always and everywhere rare. It has a north Mediterranean distribution including continental Italy (IORI et al. 1995), mainland of Greece (CANARD 2001) and several islands of the Mediterranean sea: Crete, Cyprus (CANARD 2007), Corsica (LETARDI et al. 2008), Montecristo (HÖLZEL 1974), Sicily (NICOLI ALDINI 2012), etc. It was recently discovered in Croatia on the Dalmatian coast (THIERRY & CANARD 2015). Its presence in Bulgaria far away of the coasts (more than 300 km to Aegan Sea and 400 km to Black Sea) and 550 m of altitude enlarges considerably its ecological requirements.

Pseudomallada benedictae is different of the closely related species by the ornatation of the scapes showing a small reddish spot in dorsal position, and the palpi uncoloured. It was also first considered as a dweller on the Mediterranean vegetation story, manifesting an exclusive xerophily (SÉMÉRIA 1980). However, other observations suggest that caution should be exercised in interpreting previous statements of its ecological preferences.

Pseudomallada marianus, long ago misappreciated by neuropterists was recently reinstated a valid species, mainly on the basis of the oviposition way which is operated in compact groups (DUELLI 1989) instead of isolated in *Pseudomallada prasinus*. Morphological characters were investigated by CANARD & THIERRY (in press) and allow satisfactory identification of this species. It is well defined by its great size making it one of the largest green lacewings in Europe and the pale green colour of all the transverse veinlets, including the gradates. The distribution of *Pseudomallada marianus* is yet little known and records are scattered because of the past failure by entomologists to recognise this species; equally, it is impractical to assess its ecological requirements. It was found in France in several counties, in Spain, Italy, Switzerland. The occurrence in Bulgaria extends its distribution area significantly eastwards.

Acknowledgements

Thanks are due to Colin W. Plant (Bishops Stortford, England) for minor linguistic corrections.

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Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Entomofauna](#)

Jahr/Year: 2018

Band/Volume: [0039](#)

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