



Conference Abstract

Chalcidoid fauna (Hymenoptera: Chalcidoidea) of grasslands situated in rapeseed (*Brassica napus* L.) surroundings in Bulgaria

Ivaylo Todorov[‡], Peter Stoykov Boyadzhiev[§], Teodora Teofilova^l, Milka Elshishka[¶], Vlada Peneva[¶]

[‡] Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, Sofia, Bulgaria

[§] Plovdiv University "Paisii Hilendarski", Plovdiv, Bulgaria

^l Institute of Biodiversity and Ecosystem Research (IBER), Bulgarian Academy of Sciences (BAS), Sofia, Bulgaria

[¶] Bulgarian Academy of Sciences, Sofia, Bulgaria

Corresponding author: Ivaylo Todorov (i.todorov@abv.bg)

Received: 10 Sep 2019 | Published: 11 Sep 2019

Citation: Todorov I, Boyadzhiev PS, Teofilova T, Elshishka M, Peneva V (2019) Chalcidoid fauna (Hymenoptera: Chalcidoidea) of grasslands situated in rapeseed (*Brassica napus* L.) surroundings in Bulgaria. ARPHA Conference Abstracts 2: e46451. <https://doi.org/10.3897/aca.2.e46451>

Abstract

The objective of the current study was to assess the potential of semi-natural grasslands to serve as parasitoid sources from which individuals can spread to the surrounding cultivated habitats. The composition of chalcidoid fauna was studied in nine non-harvested grasslands located near to but not bordering oilseed rape (*Brassica napus* L.) fields. The investigated areas were generally used as pastures for domestic animals, but vegetation was not intensively grazed in all sampling sites. Samples were collected by sweep-netting during the period between full flowering and the end of flowering of the rapeseed (stages 65-70 according to the BBCH-scale). Insect counts showed significant dominance of Eulophidae Westwood (84 individuals; 42%) and Pteromalidae Dalman (60 ind.; 30%), with lower abundance of Eurytomidae Walker (22 ind.; 11%). Some other groups were poorly represented – Torymidae Walker (10 ind.; 5%), Encyrtidae Walker (9 ind.; 5%), Ormyridae Förster (6 ind.; 3%), Eupelmidae Walker (4 ind.; 2%), Chalcididae Latreille (2 ind.; 1%) and Tetracampidae Förster (2 ind.; 1%). Most numerous among eulophids were *Baryscapus* Förster (38 ind.; 46%), *Aprostocetus* Westwood (21 ind.; 25%) and *Necremnus* Thomson (11 ind.; 13%). Nine other genera comprised the remaining 23% of the eulophid collection – *Diglyphus* Walker, *Elachertus* Spinola, *Entedon* Dalman, *Eulophus* Geoffroy,

Neochrysocharis Kurdjumov, *Neotrichoporoides* Girault, *Pnigalio* Schrank, *Sympiesis* Förster and *Tetrastichus* Haliday. The most abundant pteromalids were *Mesopolobus* Westwood (20 ind.; 37%) and *Pteromalus* Swederus (11 ind.; 20%), followed by 13 genera with 7% or less – *Catolaccus* Thomson, *Chlorocyclus* Graham, *Cyrtogaster* Walker, *Cyclogastrella* Bukovskii, *Gastrancistrus* Westwood, *Glyphognathus* Graham, *Halticoptera* Spinola, *Homoporus* Thomson, *Norbanus* Walker, *Psilocera* Walker, *Trichomalus* Thomson, *Spalangia* Latreille and *Systasis* Walker. Parasitoid diversity and its possible beneficial role were discussed according to the present knowledge on the rapeseed pests and their natural enemies.

Keywords

parasitoids, fauna, diversity, pastures, semi-natural habitats

Presenting author

Ivaylo Todorov

Presented at

Vth International Congress on Biodiversity: „Taxonomy, Speciation and Euro-Mediterranean Biodiversity“

Acknowledgements

The present study was carried out thanks to the financial aid and in parallel with the implementation of the Project BiodivERsA-FACCE2014-47 “SusTaining AgriCultural ChAnge Through ecological engineering and Optimal use of natural resources (STACCATO)”.