The Alticinae (Coleoptera: Chrysomelidae) of the provincial estate "Rivierenhof" (Deurne, Belgium)

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Summary

A faunistical survey of the Alticinae of the provincial estate "Rivierenhof" in Deurne (Belgium) was carried out. In total 28 species were caught, of which five are rare for the Belgian fauna.

Samenvatting

De Alticinae fauna van het provinciaal domein "Rivierenhof" te Deurne (België) werd onderzocht. In totaal werden 28 soorten verzameld, waarvan er vijf zeldzaam zijn in België.

Introduction

The beetle family Chrysomelidae contains about 37.000 described species, grouped in 19 subfamilies and over 2.000 genera (JOLIVET, 1988). Within the Chrysomelidae, the Alticinae (with over 7.000 species described) is the largest subfamily (FURTH, 1982; JOLIVET, 1988). Alticine beetles are characterised by thickened hind femora and the ability to jump. This ability to jump is related to the "metafemoral spring", a chitinized structure present in the hind femora of the beetles (FURTH, 1980).

The systematics and ecology of most Alticinae species remains poorly studied. The knowledge of the distribution and ecology of the Belgian species is mainly restricted to the faunistic surveys of MOFFARTS (1893) and DERENNE (1963).

During our M.Sc. study on the faunistics and ecology of the Belgian Alticinae fauna (VERDYCK, 1990) we carried out a faunistical survey of the provincial estate "Rivierenhof" in Deurne. The aim of this study was to gather information on the resident Alticinae community.

Material & Methods

The area in which the study was carried out consisted mainly of moist to wet biotopes. The vegetation was characterised by plants such as *Rumex hydrolaphatum* HUDS., *Polygonum hydropiper* L., *Filipendula ulmaria* (L.) MAXIM., *Symphytum officinale* L. and *Thalictrum flavum* L. Some monotonous vegetation types present consisted of *Iris pseudacorus* L., *Rorippa amphibia* (L.) BESSER or *Salix sp.*

In order to collect the beetles, 25 pitfall traps were placed in different biotopes in the park. The traps remained active during 30 weeks (April till November), and were emptied weekly. The pitfalls consisted of a glass pot with a 6 cm diameter opening. The traps contained a 0.04 % formaldehyde solution with a small amount of odourless and colourless detergent.

In order to make correct identifications, genital preparations were made according to the technique of SMITH (1979).

Results & Discussion

In total 1406 specimens were caught, belonging to 28 different species. 12 species were represented with more than 10 animals. Table 1 gives the list of species and the number of specimens caught. Five species are rare for the Belgian fauna. These species are discussed below.

Table 1. Species caught during the study (# ♂ = number of males, # ♀ = number of females, total # = total number)

Species	# ♂	# ♀	total #
Altica lythri (Aubé, 1843)	2	9	11
Aphthona coerulea (Geoffroy, 1785)	290	257	547
Aphthona euphorbiae (Schrank, 1781)	4	4	8
Chaetocnema concinna (Marsham, 1802)	1	0	1
Chaetocnema hortensis (Geoffroy, 1785)	4	2	6
Chalcoides aurata (Marsham, 1802)	6	15	21
Chalcoides plutus (Latreille, 1804)	3	8	11
Crepidodera ferruginea (Scopoli, 1763)	3	2	5
Crepidodera transversa (Marsham, 1802)	0	1	1
Epithrix pubescens (Koch, 1803)	8	30	38
Longitarsus brunneus (Duftschmid, 1825)	55	45	100
Longitarsus luridus (Scopoli, 1763)	2	2	4
Longitarsus nigrofasciatus (Goeze, 1777)	0	1	1
Longitarsus parvulus (Paykull, 1799)	6	2	8
Longitarsus succineus (Foudras, 1860)	0	1	1
Longitarsus symphyti Heikertinger, 1912	32	24	56
Mantura chrysanthemi (Koch, 1803)	2	0	2
Phyllotreta dilatata Thomson, 1866	44	57	101
Phyllotreta exclamationis Thunberg, 1784	35	35	70
Phyllotreta ochripes Curtis, 1837	187	183	370
Phyllotreta undulata Kutschera, 1860	3	1	4
Phyllotreta vittata (Fabricius, 1801)	1	0	1
Psylliodes affinis (Paykull, 1799)	1	6	7
Psylliodes cuprea (Koch, 1803)	0	1	1
Psylliodes dulcamarae (Koch, 1803)	6	7	13
Psylliodes napi (Fabricius, 1792)	4	1	5
Psylliodes picina (Marsham, 1802)	11	3	14
Sphaeroderma testaceum Weise, 1893	0	1	1

***Longitarsus brunneus* (DUFTSCHMID, 1825)**

This species is recorded from northern and middle Europe and southwards up to the south of France and Italy (HEIKERTINGER & CSIKI, 1940; MOHR, 1962, 1966; KEVAN, 1967; BIONDI, 1983; SILFERBERG, 1992).

According to DERENNE (1963) this species is very rare in Belgium (only one record from Overmeire (27.IV.1909, collection GUILLEAUME)). In total 100 specimens of *L. brunneus* were caught. This indicates that though the species may be rare, it locally can be very abundant.

Recorded host plants are *Aster tripolium* L., *Thalictrum aquilegifolium* L. and *Thalictrum flavum* L. (MOHR, 1962, 1966; KEVAN, 1967). In our study the presence of *L. brunneus* is related to the places where the hostplant *Thalictrum flavum* L. is present. Non of the hostplants is abundant in Belgium, and this may explain the fact why *L. brunneus* is a rare species in Belgium.

***Longitarsus symphyti* HEIKERTINGER, 1912**

L. symphyti is recorded from northern Italy, France, middle and southern Germany and Poland (HEIKERTINGER & CSIKI, 1940; MOHR, 1962; SILFERBERG, 1992). According to DERENNE (1963) it is a rare species in Belgium, and was last recorded from Villers-devant-Orval (29.VI.1956, E. DERENNE). In total 56 specimens were caught.

It's only known hostplant is *Symphytum officinale* L. (MOHR, 1962; DERENNE, 1963; MOHR, 1966), which was very abundant at different sampling places, and is a common species. In our study *L. symphyti* was only present on those sampling sites that were very wet and shaded, with *S. officinale* plants at the border of *Salix*-brushwood. This may indicate that apart from the presence of *S. officinale*, other microhabitat characteristics may be important for the presence of *L. symphyti*.

***Phyllotreta dilatata* THOMSON, 1866**

This species is known from northern and middle Europe (MOHR, 1966; DOGUET, 1986). In Belgium it is a rare species (DERENNE, 1963), last recorded from Heusden (20.IV.1945, J. VERBEKE). It feeds on *Armoracia* sp., *Nasturtium* sp. and *Rorippa* sp. (DERENNE, 1963; MOHR, 1966). In "Rivierenhof" it was very abundant on patches of *Rorippa amphibia* (L.) BESSER, together with *P. ochripes* (CURTIS, 1837) and *P. exclamationis* (THUNBERG, 1784).

***Psylliodes cuprea* (KOCH, 1803)**

This species is present in southern and middle Europe, Denmark and Sweden (HEIKERTINGER & CSIKI, 1940; MOHR, 1966; SILFERBERG, 1992). According to DERENNE (1963) it is a rare species in Belgium. The fact that we only captured one female specimen may indicate that *P. cuprea* is not resident in our study area, but possibly only is an accidental immigrant.

P. cuprea is an oligophagous species feeding on *Alyssum* sp., *Brassica* sp., *Diplotaxis* sp. and *Sisimbrium* sp. (HEIKERTINGER, 1926; DOBSON, 1960; MOHR, 1966). Non of these hostplants were present at the sampled sites.

***Psylliodes picina* (MARSHAM, 1802)**

This species is known from southern and middle Europe and Fennoscandia (HEIKERTINGER, 1926; HEIKERTINGER & CSIKI, 1940; MOHR, 1966; SILFERBERG, 1992). According to DERENNE this is a rare species for Belgium. Its recorded hostplants are *Cirsium palustre* SCOP., *Lythrum* sp., *Lysimachia* sp. and *Quercus* sp. (DERENNE, 1963; MOHR, 1966). Both *Cirsium palustre* SCOP. and *Lythrum salicaria* L. were present in the studied area.

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Admissions / Toelatingen :

M. Frank HIDVEGI, avenue du Bois de la Cambre 12, 1170 Bruxelles, est présenté en tant que membre associé par MM. P. GROOTAERT et G. COULON et s'intéresse à l'entomologie générale.
Dhr Jan SCHEIRS, Departement Biologie R.U.C.A., Swenenborgerlaan 171, 2020 Antwerpen, wordt voorgesteld als gewoon lid door dhr. L. DE BRUYN en P. GROOTAERT. Dhr. J. SCHEIRS is specialist in Diptera.
Dhr Luc INT PANIS, U.I.A., Departement Biologie, Universiteitsplein 1, 26110 Wilrijk/Antwerpen, wordt voorgesteld als gewoon lid door dhr. L. DE BRUYN en P. GROOTAERT. Dhr. J. SCHEIRS is specialist in Diptera.
M. Dominique PERRIN, rue de Flemalle-Grande 255, 4400 Flemalle, est présenté par MM. C. VERSTRAETEN et G. COULON en tant que membre associé et s'intéresse aux Silphidae et Curculionidae (Coleoptera).
Melle Valérie LIÉNARD, rue Dejardin 108, 7080 Frameries, est présentée en tant que membre associé par Melle C. THIRION et M. C. VERSTRAETEN et s'intéresse à l'entomologie appliquée.
Dhr Frank VEN, Departement Biologie R.U.C.A., Swenenborgerlaan 171, 2020 Antwerpen, wordt voorgesteld als gewoon lid door dhr. L. DE BRUYN en P. GROOTAERT. Dhr. F. VEN is specialist in Diptera.
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Communications / Mededelingen :

1. Dhr. K. DESENDER geeft een voordracht over het sporadisch voorkomen van *Amara majuscula* in België. Hij vraagt tevens of collega's misschien deze soort reeds verzamelden en of ze twijfelachtige exemplaren willen laten kontroleren en eventuele waarnemingen doorgeven. Tenslotte richt hij meer in het bijzonder een oproep tot entomologen, die met een vlinderlamp insekten vangen, om hun eventuele bijvangsten van loopkevers ter determinatie door te geven (ook indien het materiaal zou betreffen dat reeds lang geleden verzameld werd):