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## Trombidia (Acari: Actinotrichida: Parasitengona) of the “Łęczczok” Nature Reserve (Silesia, S Poland)

<http://doi.org/10.5281/zenodo.1133715>

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**Abstract:** This article is a faunistic review of Trombidia (= Parasitengona terrestria) mites found in the water-forest nature reserve “Łęczczok” (Silesia, S Poland). Twelve species represented by active postlarval stages of three families: Erythraeidae (8), Trombidiidae (1) and Microtrombidiidae (3) have been recorded. Except for *Abrolophus strojnyi* GABRYŚ, 1992, *Microtrombidium pusillum* (HERMANN, 1804), *Camerotrombidium rasum* (BERLESE, 1910), *Campylothrombium clavatum* (GEORGE, 1909) and *Trombidium holosericeum* (L.), seven of them have never been listed from this area before, i. e.: *Erythraeus cinereus* (DUGÈS, 1834), *E. regalis* (C.L. KOCH, 1837), *E. rupestris* (L.), *Leptus trimaculatus* (ROSSI, 1794), *Charletonia cardinalis* (C.L. KOCH, 1837), *Abrolophus norvegicus* (THOR, 1900) and *A. quisquiliarus* (HERMANN, 1804).

**Key words:** Trombidiformes, Prostigmata, Erythraeidae, Trombidiidae, Microtrombidiidae, nature conservation.

## INTRODUCTION

The water-forest nature reserve “Łęczczok” is one of the most interesting protected territories in Upper Silesia, which is a part of the Western Palaearctic region. The area is relatively well studied in respect to flora and fauna, especially the fauna of vertebrates and certain invertebrate taxa (HARMATA 1963, 1969, GIŁOWSKI & JEŚMAN 1975). Unfortunately, the acarofauna of “Łęczczok” reserve has never been studied systematically. So, any new data about mites that occur in this area is important and should be published, even in the form of a basic faunistic list. Nevertheless, methodical studies on soil fauna in general, and acarofauna in particular, covering phenological aspects, and using all collecting methods should be carried out in the near future.

During preliminary studies in “Łęczczok” nature reserve in 1984-1985, the senior author collected several samples that appeared to contain species of terrestrial Parasitengona mites. Five of them have already been mentioned in three publications: *Abrolophus strojnyi* GABRYŚ, 1992,

*Microtrombidium pusillum* (HERMANN, 1804), *Camerotrombidium rasum* (BERLESE, 1910), *Campylothrombium clavatum* (GEORGE, 1909) and *Trombidium holosericeum* (L.) (GABRYŚ 1992, 1996, MAKOL 2005). Seven species, listed below in the taxonomical part of this paper, are new for the “Łęczczok” Nature Reserve (see GABRYŚ 1990, unpublished data). The fragmentary nature of studies is probably the reason why many common species of Trombidia have not been found, while it is highly probable that they occur in the “Łęczczok” area. Further investigations of this extremely diverse and interesting nature reserve should be planned in the near future. It seems necessary because of the ecological changes that may come soon in this industrial, vulnerable and endangered region of Poland. The present paper is the next one in the series of studies on Trombidia mites fauna of Silesia in the broad historical and geographical meaning of the region (see also ROLAND & GABRYŚ 2006, ROLAND *et al.* 2014, 2015).

## MATERIAL AND METHODS

Mites were collected mainly directly from the soil, litter, turf and other substrates, occasionally entomological (sweeping) net was used. Material was preserved in 70–75% ethyl alcohol. Specimens were macerated in KOH prior to fixation on slides in Faure’s liquid (cf. GABRYŚ 1994). Identification was made under Nikon Eclipse E600 with differential interference contrast and phase contrast. The nomenclature and taxonomy after GABRYŚ (1999, 2016a, b). Abbreviations used in the text: **F** – female(s), **M** – male(s), **AD** – adult(s), **DN** – deutonymph(s), **PLv** – postlarval form(s), **U** – direct method of collection, **C** – entomological (sweeping) net, **GAB** – collected by G. Gabryś.

## TAXONOMY

List of Trombidia mites recorded from “Łęczczok” Nature Reserve:

**Erythraeidae** ROBINEAU-DESVOIDY, 1828

**Erythraeinae** ROBINEAU-DESVOIDY, 1828

*Erythraeus* LATREILLE, 1806

*E. cinereus* (DUGÈS, 1834)

20 May 1984, sedge meadow, turf and litter, 1 F, U, GAB; alder carr with *Acer campestre* and *Allium ursinum*, litter, 1 F, U, GAB; alder litter near a path, 2 F, U, GAB; reed belt along a path, 3 F, U, GAB (GABRYŚ 1990).

*E. regalis* (C.L. KOCH, 1837)

20 May 1984, sedge meadow, turf, 1 M, 2 F, U, GAB; sedge meadow, turf and litter, 1 M, U, GAB; 26 May 1985, wet meadow with *Lychnis flos-cuculi* and *Ranunculus* spp., 1 F, U, GAB (GABRYŚ 1990).

*E. rupestris* (LINNAEUS, 1758)

20 May 1984, sedge meadow, turf, 10 DN, U, GAB (GABRYŚ 1990).

**Leptinae** BILLBERG, 1820

*Leptus* Latreille, 1796

*L. trimaculatus* (ROSSI, 1794)

20 May 1984, sedge meadow, turf, 2 M, 5 F, 5 DN, U, GAB; sedge meadow, turf and litter, 1 M, 3 F, 1 DN, U, GAB (GABRYŚ 1990).

**Callidosomatinae** SOUTHCOTT, 1957

*Charletonia* OUDEMANS, 1910

*Ch. cardinalis* (C.L. KOCH, 1837)

26 May 1985, mud near a drainage ditch, 1 DN, U, GAB (GABRYŚ 1990).

**Abrolophinae** WITTE, 1995

*Abrolophus* BERLESE, 1891

*A. norvegicus* (THOR, 1900)

20 May 1984, sedge meadow, turf, 1 M, 4 F, U, GAB; meadow with young oaks, 1 F, U, GAB (GABRYŚ 1990).

*A. quisquiliarus* (HERMANN, 1804)

26 May 1985, mud near a drainage ditch, 1 F, U, GAB; meadow, 1 F, C, GAB (GABRYŚ 1990).

*A. strojnyi* GABRYŚ, 1992

20 May 1984, sedge meadow, turf, 2 F, U, GAB (GABRYŚ 1992).

**Trombidiidae** LEACH, 1815

**Trombidiinae** LEACH, 1815

*Trombidium* FABRICIUS, 1775

*T. holosericeum* (LINNAEUS, 1758)

20 May 1984, reed belt along a path, 1 AD, 1 DN, U, GAB (MAKOL 2005).

**Microtrombidiidae** THOR, 1935

**Microtrombidiinae** THOR, 1935

*Microtrombidium* HALLER, 1882

*M. pusillum* (HERMANN, 1804)

20 May 1984, meadow with young oaks, turf, 1 PLV, U, GAB; meadow with sedges, turf, 5 PLV, U, GAB (GABRYŚ 1996 as *Microtrombidium parvum*).

## *Camerotrombidium* THOR, 1936

### *C. rasum* (BERLESE, 1910)

20 May 1984, meadow with young oaks, turf, 3 PLv, U, GAB; meadow with sedges, turf, 3 PLv, U, GAB; 26 May 1985, wet meadow with *Lychnis flos-cuculi* and *Ranunculus* spp., 2 PLv, U, GAB (GABRYŚ 1996).

## *Campylothrombium* KRAUSSE, 1916

### *C. clavatum* (GEORGE, 1909)

20 May 1984, alder carr with *Acer campestre* and *Allium ursinum*, litter, 2 PLv, U, GAB (GABRYŚ 1996 as *Campylothrombium barbarum*).

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## STRESZCZENIE

### **Trombidia (Acari: Actinotrichida: Parasitengona) rezerwatu przyrody „Łęczok”**

Praca stanowi przegląd faunistyczny roztoczy należących do grupy Trombidia (= Parasitengona terrestria) występujących w rezerwacie wodno-leśnym „Łęczok”, położonym w Kotlinie Raciborskiej na południu Polski. Wykazanych zostało dwanaście gatunków, reprezentujących stadia postlarwalne, należących do trzech rodzin: Erythraeidae (8), Trombidiidae (1) i Microtrombidiidae (3). Oprócz *Abrolophus strojnyi* GABRYŚ, 1992, *Microtrombidium pusillum* (HERMANN, 1804), *Camerotrombidium rasum* (BERLESE, 1910), *Campylothrombium clavatum* (GEORGE, 1909) i *Trombidium holosericeum* (L.), pozostałe siedem gatunków nie było wcześniej wykazanych z tego obszaru. Są to: *Erythraeus cinereus* (DUGÈS, 1834), *E. regalis* (C.L. KOCH, 1837), *E. rupestris* (L.), *Leptus trimaculatus* (ROSSI, 1794), *Charletonia cardinalis* (C.L. KOCH, 1837), *Abrolophus norvegicus* (THOR, 1900) i *A. quisquiliarus* (HERMANN, 1804).

Accepted: 22 December 2017; published: 28 December 2017

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