

The hosts of some cuckoo wasps (*Hymenoptera*, *Chrysididae*) in Latvia

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Abstract

An investigation of 11 species of the cuckoo wasps (*Chrysididae*) was performed at 8 sites in the central part of Latvia from May 1992 to June 1994. The cuckoo wasps are ectoparasites on larvae of some bees (*Megachilidae*) and on digger wasps (*Sphecidae*). The species of the family *Chrysididae* and their hosts usually can be found in the same biotopes. The territory around the habitats of cuckoo wasps was investigated and 21 species of hosts were gathered.

Key words: *Chrysididae*, parasitism, hosts.

Introduction

So far very little attention has been paid to the study of trophic relations between parasites belonging to family *Chrysididae* and their hosts. It is known that the cuckoo wasps are parasites on larvae of some bees (*Megachilidae*) and of the digger wasps (*Sphecidae*). A cuckoo wasps find a host specimen, paralyse that and then lay one egg into the host's body. The females of *Chrysididae* invade the mature larva at the last stage of their development.

Ectoparasites are living usually in the same habitat as hosts. That reason simplify significantly the search for hosts of cuckoo wasps. The larvae of *Sphecidae* and *Megachilidae*, presumably infected by *Chrysididae*, were collected in spring and summer. The material was collected from 1992 to 1994 and is deposited in the collection of author.

Some of the observed trophic relations "parasite - host" have not been reflected in literature available to the author.

The larvae of the cuckoo wasps were reared from hosts, individuals of hosts were gathered, identified and systematized in the list below. Trophic relations "parasite - host", place and time of collecting are indicated.

Material and methods

The territory around the habitats of cuckoo wasps (*Chrysididae*) was investigated. They were usually observed near the nesting places of some *Megachilidae* and *Sphecidae*.

Larvae of wasps of the family *Sphecidae* and bees of the family *Megachilidae* were placed in boxes with sand. Usually more than 30% of them were invaded by *Chrysididae*.

List of *Chrysididae*

Subfamilia *Hedychrinae*

1. *Omalus auratus* L., 1 female ex *Megachile arginata* F., Kalngale, 2.6.1992.; 2 males ex *Crabro peltarius* Schreber, Sigulda, 13.6.1992.; 2 females ex *Osmia maritima* Friese, Mangaïi, 20.6.1992.
2. *Hedychrum nobile* Scop., 2 males ex *Cerceris arenaria* L., Vecâæi, 14.5.1993.; 1 female ex *Gorytes quinquecinctus* Costa, Kalngale, 2.6.1994.
3. *Hedychridium coriaceum* Dhlb., 1 male ex *Crabro cribrarius* L., Sigulda, 4.5.1993.; 1 male ex *Osmia rufa* L., Æemeri, 26.5.1993.; 2 females ex *Oxybelus mandibularis* Dhlb., Ropaïi, 28.6.1993.; 1 female ex *Megachile lagopoda* L., Sigulda, 15.6.1993.
4. *Euchrum roseum* Rossi, 1 female ex *Gorytes quadrifasciatus* F., Sigulda, 16.5.1993.; 1 female ex *Tachysphex pompiliformis* Pz., Riga, 11.5.1994.

Subfamilia *Chrysidinae*

5. *Trichrysis cyanea* L., 2 males ex *Osmia inermis* Zett., Kalngale, 18.5.1992., 1 male ex *Gorytes lunatus* Dhlb., Riga, 10.6.1993.; *Cerceris quinquefasciata* Rossi, Garciems, 23.6.1993.; 1 male ex *Crabro peltarius* Schreber, Garciems, 23.6.1993.
6. *Chrysis bicolor* Lep., 1 female ex *Osmia rufa* L., Æemeri, 20.6.1994.
7. *Chrysis iris* Christ, 1 female ex *Argogorytes fargei* Shuck., Sigulda, 15.5.1993.; 1 female ex *Osmia inermis* Zett., Kalngale, 24.5.1994.
8. *Chrysis viridula* L., 1 male ex *Osmia inermis* Zett., Garciems, 4.6.1994.; 2 females ex *Trypoxylon figulus* L., Sigulda, 15.6.1993.; 1 female ex *Diodontus minutus* F., Sigulda, 15.6.1993.
9. *Chrysis fulgida* L., 2 males ex *Trypoxylon figulus* L., Sigulda, 12.6.1994.; 1 male ex *Crabro scutellatus* Scheven, Ropaïi, 16.6.1994.; 1 female ex *Argogorytes mystaceus* L., Kalngale, 19.5.1994.
10. *Chrysis longula* Abeille, 1 male ex *Diodontus tristis* v.d. Linden, Riga, 11.6.1993.; 1 male ex *Osmia rufa* L., Kalngale, 15.6.1993.
11. *Pseudocrysis neglecta* Shuck., 2 males ex *Osmia rufa* L., Æemeri, 20.6.1994.; 1 male ex *Heriades truncorum* L., Sigulda, 29.6.1994.

Hosts of *Chrysididae*

The number in the list indicate the species in the *Chrysididae* list.

Familia *Megachilidae*

<i>Heriades truncorum</i> L.	11	<i>Osmia maritima</i> Friese	1
<i>Megachile arginata</i> F.	1	<i>O. inermis</i> Zett.	5,7,8
<i>M. lagopoda</i> L.	3	<i>O. rufa</i> L.	3,6,10,1 1

Familia *Sphecidae*

<i>Argogorytes fargei</i> Shuck.	7	<i>Diodontus minutus</i> F.	8
<i>A. mystaceus</i> L.	9	<i>D. tristis</i> v.d. Linden	10
<i>Cerceris arenaria</i> L.	2	<i>Gorytes quadrifasciatus</i> F.	4
<i>C. quinquefasciata</i> Rossi	5	<i>G. quinquecinctus</i> Costa	2
<i>Crabro cribrarius</i> L.	3	<i>G. lunatus</i> Dhlb.	5
<i>C. peltarius</i> Schreber	1,5	<i>Oxybelus mandibularis</i> Dhlb.	3
<i>C. scutellatus</i> Scheven	9	<i>Tachysphex pompiliformis</i> Pz.	4
		<i>Trypoxylon figulus</i> L.	8,9

Kopsavilkums

No 1992. gada maija līdz 1994. gada jūnijam 8 vietās Latvijas centrālajā daļā tika ievāktas 11 *Chrysididae* sugas, kas parazitē uz 21 biķu (*Megachilidae*) un racējlapsežu (*Sphecidae*) sugas.

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