

Brief report

***Ceutorhynchus larvatus* Schultze and *Ceutorhynchus pallidicornis* Gougelet & Brisout de Barneville: on *Pulmonaria obscura* living weevils in Finland (Coleoptera: Curculionidae)**

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In Finland two weevil species, *Ceutorhynchus pallidicornis* and *C. larvatus*, have *Pulmonaria obscura* as their host plant. Data on the occurrence of both species are presented and their extremely poorly-known biology is commented upon. Both species are rare but seem to be overlooked in Finland because of their secretive habits.

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1. Introduction

In Finland two species of the weevil genus *Ceutorhynchus* Germar are known to live on *Pulmonaria obscura* which grows in herb-rich forests in the southern part of Finland. Both the species *Ceutorhynchus larvatus* Schultze and *Ceutorhynchus pallidicornis* Gougelet & Brisout de Barneville belong to the subgenus *Boraginobius* Wagner, in which most species are monophagous or oligophagous on different species of Boraginaceae. Both species are easily identified with the keys in e.g. Dieckmann (1972) or Lohse (1983). *C. larvatus* is the largest species of the genus in Finland (3,6–4,4 mm). It is black with striking white pattern on elytra. *C. pallidicornis* belongs to the bigger species (3,1–3,5 mm) of the genus as well. It is dull black with indistinct white pattern.

Besides the host plant, the biology of these species is almost unknown. There is no information on the larval development. *C. pallidicornis* is said to be found during a very short period in the flowering time of *Pulmonaria* only (Dieckmann 1972, Baranowski 1977). Finnish observations support

this. All specimens have been netted from flowering *Pulmonaria* and it seems possible that oviposition takes place in the flowers. *C. larvatus* has usually been found later in the summer, when the leaves of *Pulmonaria* are fully developed. Beetles have been caught by netting or by sieving the soil under the plants.

2. Occurrence of *Ceutorhynchus larvatus*

C. larvatus has been recorded from four localities:

N: Kirkkonummi, Espoo, *Ab:* Vihti Siikajärvi (668:36), first in Kirkkonummi 17.VI.1950, V.J. Karvonen leg. (Karvonen 1951). Several specimens were collected in many years from 1950 at least until 1964 from this area situated on the borders of three districts. The exact locations are not known, and the present occurrence of the species has not been verified.

Ab: Lohja rural district (nowadays Lohja), Osuniemi (6680:329) 4.VI.1983 4 exx. and 11.VI.1983 5 exx., I. Mannerkoski leg. (Mannerkoski 1984); 18.VIII.1984 3 ex and 8.VI.1985 1 ex I. Mannerkoski leg. Some specimens were also collected by J. Perkiömäki and O. Ranin during the same summers. Most of the specimens were found in a clear-cut area with luxuriant vegetation, a few in the forest nearby. The area has not been studied later.

N: Pukkila, Venunmetsä (6728:416), 22.VI.1987 2 exx. I. Mannerkoski leg. (Rutanen 1994). Specimens were collected by sieving under *Pulmonaria* in a small clear-cut area. *C. larvatus* has not been found on later visits, but is most probably still living there. At least the host plant is still growing in the same place.

N: Nurmijärvi (6705:381) 16.VI.1991 2 exx. I. Mannerkoski leg. Specimens were caught by netting at a distance of about one hundred meters in older forest with very much *Pulmonaria*. In the same area another rare weevil *Apion opeiticum* Bach (Brentidae) was abundant on *Lathyrus vernus*.

It seems obvious that *C. larvatus* is a difficult species to find. It drops easily to the ground when disturbed, and is only seldom caught by sweep net. At the known sites and in other potential locations many fruitless attempts have been made to find the species by netting. The most certain way to collect *C. larvatus* is to sieve it from the ground. It is also possible to pick up the beetles directly from the ground under the leaves. The beetles are not quick to move after disturbance, but when on their back the white underside with two black spots in abdomen is distinctive. There are usually small holes in the leaves of *Pulmonaria* in places where *C. larvatus* has been found, but it has not been verified whether the holes are really made by the weevils. This kind of injury on the leaves has been observed at other places as well indicating that *C. larvatus* may be a more common species than believed. It is almost certain that the species is not a recent newcomer in Finland although it was found so late. In the adjacent countries it is known only from Denmark and Lithuania. In Denmark the 3 known specimens are all more than one hundred years old.

3. Occurrence of *Ceutorhynchus pallidicornis*

C. pallidicornis has been found at two localities in Finland only:

N: Pukkila, Venunmetsä (6728:416) 3.VI.1987 1 ex. I. Rutanen leg. (Rutanen 1987, 1994), 22.V.1998 1 ex. I. Mannerkoski leg. Both specimens were caught by sweep net from a small bushy opening surrounded by spruce forest.

N: Sipoo, Pohjois-Paippinen (6708:402) 23.V.1998 12 exx. I. Mannerkoski leg. All specimens were caught by sweep net on flowering *Pulmonaria* growing very abundantly in old spruce forest along a brook. Another rare weevil *Scleropterus serratus* (Germar) was abundant in the vegetation in the same area. On a new visit to the place on 8.VI.1998 not a single specimen of *C. pallidicornis* was found, although *S. serratus* was as abundant as during the first visit. This supports the idea that beetles are to be found only during the flowering time of *Pulmonaria*, as only a few of the latest plants

were still in blossom at that time. According to Lohse (1983) *C. pallidicornis* is most active in the evening and only when the weather is favourable. Both my successful attempts were, however, made in early afternoon and the unsuccessful on 8.VI. in the evening.

According to Baranowski (1977) *C. pallidicornis* is easily overlooked because of the short time of the occurrence of the adult beetles. That surely holds for Finland as well. After I had found this species at its only known place of occurrence in Pukkila I could detect it immediately at another place the next day. No other places with *Pulmonaria* were studied at the proper time. The site in Sipoo has exceptionally much *Pulmonaria*, and there are also other rare beetles living in that area (Mannerkoski 2000). *C. pallidicornis* most probably is a rare species in Finland but is certainly to be found in new places when looked for at the right time. In Sweden it has been found only in Scania and Uppland (Lundberg & Gustafsson 1995), suggesting that the distribution is certainly also insufficiently known there.

4. Discussion

Both *C. pallidicornis* and *C. larvatus* must be considered as rare beetles in Finland. They have both been included in the list of threatened beetles in Finland as species in need of monitoring (Rassi *et al.* 1992). According to the new IUCN red listing categories (IUCN 1994, Kanerva *et al.* 1998) they are classified as threatened, but when assessing their status the insufficient knowledge must be carefully considered. Earlier most of the suitable habitats have been taken for agricultural use. Nowadays the worst cause of threat is the scattered occurrence and the small size of the populations. The species seem not to be very sensitive to forestry, as they have been found both in forest and open areas some years after clear-cutting. Apparently the host plant is more important for the beetles than the place where it grows.

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