

## Brief report

### ***Crossocerus assimilis* and *Bethylus boops*, two aculeate wasps new to the fauna of Finland (Hymenoptera, Crabronidae and Bethylinidae)**

Veli Vikberg

Vikberg, V. 1999: *Crossocerus assimilis* and *Bethylus boops*, two aculeate wasps new to the fauna of Finland (Hymenoptera, Crabronidae and Bethylinidae). — Entomol. fennica 10: 245–246.

*Crossocerus assimilis* (F. Smith, 1856) (Crabronidae) and *Bethylus boops* (Thomson, 1862) (Bethylinidae) are recorded from southern Finland, Ta: Janakkala for the first time in Finland. *Stigmus pendulus* (Panzer) (Pempredonidae) is reported from the provinces Ab and Ta in Finland.

Veli Vikberg, Liinalammintie 11 as. 6, FIN-14200 Turenki, Finland

Received 29 December 1998, accepted 16 September 1999

#### **1. *Crossocerus assimilis* (F. Smith, 1856) (Crabronidae), new to Finland**

One male of this rare species was captured on the leaves of *Quercus robur* L. in Ta: Janakkala, Tuulensuu (6754:367) on 21 August 1995 by me. The male was identified using the keys in Lomholdt (1976) and Dollfuss (1991). The specimen was quite intact and obviously represented the second generation of the year.

In 1999 two males and 40 females of *Crossocerus assimilis* were captured at the same locality. First six females were captured on 23 June on a rotten trunk of *Quercus robur* with many holes of Coleptera. One male and two females were swept on 27 June on the same trunk and rest of the females between 28 June and 29 July on the same trunk, except that one female was captured on another oak trunk. One male was swept on the leaves of oak with honey dew on 30 June. The females were studying the trunk and visiting the holes of beetles. I did not succeed to see or get any prey. Other *Crossocerus* in the same small oak wood were *Cr. cetratus* (Shuckard) (from 10 June on), *Cr. congener* (Dahlbom) (one female on 11 June) and *Cr. megacephalus* (Rossi) (on 11 and 17 June). *Crossocerus assimilis* was by far the most numerous species in the wood.

On 15 July and 9 August 1999 one female of *Cr. assimilis* was captured in Janakkala, 6758:372 by me, the last fe-

male was on *Pastinaca sativa* L. This locality is situated 7.5 km NE of Tuulensuu. On 30 July, 1999 one male of *C. assimilis* was netted from the leaves of *Populus tremula* L. x *tremuloides* Michx. in Janakkala, 6755:369 by me. On 5 October 1999 I again visited the oak forest in Janakkala, Tuulensuu and to my surprise one female of *Crossocerus annulatus* was swept from low bushes of *Quercus*. The date is unusually late for a crabronid wasp. The autumn has been 2–3 degrees warmer than the mean.

In North Europe *Cr. assimilis* was known in S. Norway, AK: Helgø, one male (Lomholdt 1976), Sweden, SM: one female in 1985 (Hedström 1987), SÖ: 2 males 10 females in five localities in 1989–1990 and ÖG: 1 female in 1990 (Nilsson 1992).

The species is distributed in mountains of C. Europe, Caucasus, Turkey, Mongolia and Japan. It has been associated with rotten deciduous wood, the prey consisted of Diptera (one observation in Japan).

In Tuulensuu at the same trunk of *Quercus* where most specimens of *C. assimilis* were captured *Stigmus pendulus* Panzer (Pempredonidae) was nesting numerous, the first specimens were observed on 10 June and on 5 August some females were still nesting. The females carried in their mandibles as prey wingless nymphs of *Tuberculatus annulatus* (Hartig) (Drepanosiphidae). According to Lomholdt (1975–1976) *Stigmus pendulus* was known in Finland only from Nylandia. Tavastia australis is thus a new province for it. I have earlier (in 1970's) found it in Hämeenlinna on rotten

trunks of *Tilia* sp. in the park near the castle and in Aulanko and in addition also in Ab: Turku, Ruissalo.

## 2. *Bethylus boops* (Thomson, 1862) (Bethylidae), new to Finland

Three females of the species were swept from lower vegetation near the border of a spruce forest and a fallow field in Ta: Janakkala, Kalpalinna (6759:370) on 18.9.1995, 20.9.1995 and 14.9. 1999 by me. The species differs easily from other Finnish species of *Bethylus* by distinctly hairy eyes. Thomson (1862) described it into new genus *Anoxus*. This has been synonymized with *Bethylus* by Polaszek & Krombein (1994). The species is known in S. Sweden north to Uppland and Hälsingland (Thomson 1862, Hedqvist 1975) and in Vb: Skatan near Åmsele (Nilsson 1988), in S. Norway in ON, BØ, VE and TEI (Hansen 1995), England (Burn 1997), the Czech Republic (Strejček 1989), Hungary, Romania and possibly S. France and Madeira (Graham 1984; identification with a questionmark). I have not seen any record on male in literature, perhaps the male is unknown.

"*Anoxus*" *boops* and *Crossocerus assimilis* were reported as new for Finland during the monthly meeting of the Finnish Entomological Society on 20 October 1995 by me.

## References

- Burn, J. T. 1997: Additions and changes to the Chrysoidea (Hym., Aculeata) occurring in Britain. — *Entomologist's Monthly Magazine* 133: 65–66.
- Dollfuss, H. 1991: Bestimmungsschlüssel der Grabwespen Nord- und Zentraleuropas (Hymenoptera, Sphecidae) mit speziellen Angaben zur Grabwespenfauna Österreichs. — *Staphia* 24: 1–247.
- Graham, M. W. R. de V. 1984: Madeira insects, mainly Hymenoptera Proctotrupoidea, Ceraphronoidea, and Bethyloidea. — *Boletim do Museu Municipal do Funchal* 36 (159): 83–110.
- Hansen, L. O. 1995: Aculeata of Norway. 1. Bethylidae (Hym., Apocrita). — *Fauna norv. Ser. B* 42: 43–48.
- Hedqvist, K.-J. 1975: Notes on Embolemidae and Bethylidae in Sweden with description of a new genus and species (Hym., Bethyloidea). — *Entomol. Tidskr.* 96(3–4): 121–132.
- Hedström, L. 1987: Svenska insektfynd — rapport 3. (Swedish insect records — report 3.). — *Entomol. tidskr.* 108: 149–158. (In Swedish, with an English summary)
- Lomholdt, O. 1976: The Sphecidae (Hymenoptera) of Fennoscandia and Denmark. — *Fauna entomol. scandinavica* 4, part 2: 225–452.
- Nilsson, G. E. 1988: Nya landskapsfynd av gaddsteklar med *Evagetes subnudus* ny för Nordeuropa och *Sphecodes albilabris* återfunnen i Sverige (Swedish provincial records of Hymenoptera Aculeata, with *Evagetes subnudus* new to Northern Europe and *Sphecodes albilabris* recovered from Scania). — *Entomol. Tidskr.* 109: 97–100. (In Swedish with an English summary).
- Nilsson, G. E. 1992: Nya fynd av gaddsteklar i Sverige. (New records of Hymenoptera Aculeata from Sweden). — *Ent. Tidskr.* 113(4): 53–57. (In Swedish, with an English summary)
- Polaszek, A. & Krombein, K. V. 1994: The genera of Bethylinae (Hymenoptera, Bethylidae). — *J. Hym. Res.* 3: 91–105.
- Strejček, J. 1989: Aculeata Chrysoidea Bethyloidea. In: Šedivý, J. (ed.): *Enumeratio insectorum bohemoslovakiae*, Check list of Czechoslovak insects 3. (Hymenoptera). — *Acta faunistica entomologica Musei nationalis Pragae* 19: 143–146.
- Thomson, C. G. 1862 (1861): Sveriges Proctotruper (Fortsättning). — *Öfversigt af k. svenska Vet.-Akademiens Förhandlingar* 18: 451–453.