

## Notes on Hymenoptera

By STELLAN ERLANDSSON

### 2. Contribution to the knowledge of the Aculeate Hymenoptera in the Island of Bornholm

At midsummer in 1958 I visited the Island of Bornholm for ten days. My trip to Bornholm was due to my wish to investigate the fauna of wild apids and to some extent other hymenoptera. In Jørgensen's paper (1921) there are only a few apid-species reported from Bornholm and the same thing can be seen in the scientific Danish journals.

As this island is situated in the southern part of the Baltic not far from the German coast and has a very mild climate there was good chances to make interesting finds.

My visit was favoured by rather good wheather so I could make several trips by car to different parts of the island. I was very much interested in the localities on the seashores between Arnager Bugt and Fredensberg (Rønne). Here I made two interesting finds viz. *Anthophora aestivalis* Pz., the first find in the Scandinavian countries and *Sphecodes spinulosus* v. Hgs., the second find in Denmark (see Faester 1953).

In the following list of species there are also some finds of species captured by Prof. O. Lundblad, in the list abbreviated O. L. He has captured these insects at Rønne (14.7 and 15.7.1958) and Paradisbakkene (18.7.1958). I wish convey my sincerest thanks to Prof. Lundblad and the following experts who have helped me with some determinations viz. Dr. h.c. P. Blüthgen (*Halictus* and solitary wasps), Dr. W. Grünwaldt (some *Andrena*-species), Keeper E. Kjellander (*Sphecodes*) and Mr. E. Valkeila (some *Sphecides* and *Pompilides*).

#### Fam. Mutillidae

*Smicromyrne rufipes* F. — Sandvig ♀.

#### Fam. Sapygidae

*Sapyga quinquepunctata* F. — Arnager Bugt 2 ♀.

#### Fam. Vespidae

*Vespa crabro crabro* L. — Helligdomen ♂.

*Paravespula vulgaris* L. — Fredensborg 2 ♀.

Fam. *Eumenidae*

*Oplomerus reniformis reniformis* Gmel. — Sandvig ♂.

*Nannopterochilus phaleratus phaleratus* Panö. — Sandvig ♀ ♂ (the female visited *Thymus serpyllum*); Balka ♀ ♂ (the female visited *Echium vulgare*). Concerning this species Blüthgen (1961 p. 88) says; "Aus Dänemark, wo ssp. *phaleratus* sicher vorkommt, liegt m. W. noch kein Nachweiss vor." But Blüthgen has determined these Danish specimens. However, Nielsen (1907 p. 72) mentions this species as belonging to Denmark's fauna. Probably it is a rare species.

*Ancistrocerus parietum* L. — Sandvig ♀ ♂. — *A. trifasciatus* Müll. — Fredensborg ♀. — *A. parietinus* L. — Arnager Bugt ♀. — *A. oviventris* Wesm. ssp. *hibernicus* Blüth. — Sandvig ♀ 6 ♂; Boderne 2 ♂; Balka ♀. (The female visited *Lotus corniculatus*). According to Blüthgen (l.c. p. 179) all specimens belong to var. *rufipes* Blüth.

Fam. *Pompilidae*

*Ceropales maculatus* L. — Sandvig ♀ ♂; Rønne ♀ ♂ (O. L.).

*Episyron rufipes* L. — Sandvig 3 ♂, Balka ♂.

*Anoplius infuscatus* Lind. — Fredensborg ♀.

Fam. *Sphecidae*

*Crabro cribarius* L. — Balka 2 ♀; Rønne ♀. — *C. pettarius* Schreb. — Sandvig ♀ 3 ♂; Balka ♀ 3 ♂; Rønne 4 ♀.

*Crossocerus vagabundus* Panz. — Sandvig ♀ ♂; Arnager Bugt ♀ ♂.

*Lindenius albilabris* F. — Sandvig ♀.

*Oxybelus argentatus* Curt. — Sandvig ♀ 2 ♂ (*Chrysanthemum leucantemum*); Balka 2 ♂. — *O. uniglumis* L. — Sandvig 3 ♂ (Collected together with the preceding species on the same plant); Rønne.

*Bembix rostrata* L. — Fredensborg ♀ 3 ♂ (In the hotel's garden); Rønne 2 ♀ 3 ♂ (O. L.).

*Tachysphex pompiliformis* Panz. — Sandvig 2 ♂. — *T. nitidus* Spin. — Arnager Bugt 2 ♂; Sandvig 2 ♀; Balka 2 ♂.

*Astata minor* Kohl. — Fredensborg ♀ ♂. — *A. pinguis* Dhlb. — Sandvig ♀.

*Cerceris rybyensis* L. — Sandvig 2 ♀. — *C. arenaria* L. — Sandvig 3 ♀; Hammaren 4 ♀; Rønne 7 ♀ 6 ♂ (O. L.).

*Ammophila affinis* K. — Balka ♀. — *A. pubescens* Curt. — Sandvig ♀ and ♀ ♂ (in couple); Balka 2 ♂.

*Psen shuckardi* Wesm. — Fredensborg ♀ 2 ♂.

Fam. *Apidae*

*Colletes daviesanus* Sm. — Rønne ♀ (O. L.).

*Prosopis gibba* Saund. — Paradisbakkarne ♀ (O. L.). — *P. confusa* Nyl. — Sandvig 2 ♂. — *P. brevicornis* Nyl. — Paradisbakkarne ♀ (O. L.); Rønne ♂. — *P. hyalinata* Sm. — Sandvig 2 ♀ 4 ♂; Balka ♂ 5 ♀; Rønne ♀ (*Chrysanthemum leucantemum*).

*Andrena tibialis* K. — Sandvig ♀. — *A. nigroaenea* K. — Sandvig 2 ♀ (flying together with the preceding species round a bush). — *A. fulvago* Chr. — Sandvig ♂ (*Trifolium repens*). — *A. barbilabris* K. — Sandvig 11 ♀ 6 ♂ (*Trifolium repens*); Arnager Bugt ♂ 4 ♀ (*Lotus corniculatus*, *Trif. repens*); Rønne ♀ (O. L.); Paradisbakkarne ♀ (O. L.). — *A. varians* K. (det. Grünwaldt) — Sandvig ♀; Tejn ♀ (Both

specimens captured on *Hypochaeris radiata*). — *A. hattorfiana* F. — Arnager Bugt ♂ 4 ♀ (*Knautia arvensis*); Rønne ♀ (O.L.). — *A. albofasciata* Thoms. (det. Grünwaldt). — Arnager Bugt ♀ (*Trif. repens*). — *A. wilkella* K. — Sandvig ♂ 16 ♀; Fredensborg 4 ♀; Arnager Bugt 4 ♂ (All specimens captured on *Trif. repens*).

*Panurgus banksianus* K. — Sandvig 2 ♀ 6 ♂; Tejn ♀ (All specimens captured on *Hypochaeris radiata*); Rønne ♀ (O. L.); Paradisbakkerne ♀ ♂ (O. L.). — *P. calcaratus* Scop. — Sandvig ♀ 5 ♂ (*Crepis paludosa*).

*Halictus rubicundus* Christ. — Hammershus ♀ (*Hypochaeris radiata*). — *H. maculatur* Sm. — Sandvig 4 ♀ (*Leontodon autumnalis*). — *H. tumulorum* L. — Sandvig 6 ♀; Tejn ♀; Paradisbakkerne ♂ (O. L.). — *H. leucozonius* Schrank. — Sandvig 13 ♀ (*Bertoria incana*); Arnager Bugt 3 ♀ (*Potentilla anserina*); Rønne ♀; Boderne ♀. — *H. villosus* K. — Sandvig 6 ♀ (*Gnaphalium arenarium*); Hammershus ♀; Rønne ♀. — *H. leucopus* Schrank. — Sandvig 2 ♀. — *H. viridinaeus* Blüth. — Sandvig ♀. — *H. semilucens* Alf. — Sandvig ♀. — *H. minutissimus* K. — Rønne, near the shooting range ♀. — *H. punctulatus* Schenck. — Sandvig 2 ♀. — *H. nitidusculus* K. — Arnager Bugt ♀. — *H. morio* F. — Sandvig ♀; Rønne ♀ ♂, Dueodde ♀; Paradisbakkene ♂ (O. L.). — *H. smeathmanellus* K. — Rønne ♀ (O. L.). Blüthgen (1944) points out that the metallic green *Halictus*-species in Mitteleuropa with the name *H. smeathmanellus* is a special species that Blüthgen has given the name of *H. continentalis*. The real *H. smeathmanellus* is hitherto found in England, in Bretagne, the north coast of Spain and the Azores and is a subatlantic species. The find of *H. smeathmanellus* in the Island of Bornholm is very interesting. — *H. albipes* F. — Sandvig 3 ♀.

*Sphcodes spinulosus* v. Hagens. — Arnager Bugt ♀. The second find in Denmark (cf. Faester 1953). The specimen was captured flying in a gravel-pit. — *Sph. monilicornis* K. — Arnager Bugt 7 ♀; Boderne ♀; Balka, seaside watering-place ♀ — *Sph. pellucidus* Sm. — Arnager Bugt ♀; Sandvig 5 ♀. — *Sph. ephippius* L. — Arnager Bugt ♀. — *Sph. puncticeps* Thoms. — Boderne ♀. *Sph. crassus* Thoms. — Arnager Bugt, sand-beach ♀.

*Melitta leporina* Panz. — Rønne, near the shooting-range, 3 ♀ (*Trif. repens*).

*Dasygaster plumipes* F. — Sandvig 4 ♀ 8 ♂ (*Arachium paludosum*); Rønne 11 ♀ 9 ♂ (O. L.).

*Anthidium manicatum* L. — Rønne 3 ♀ ♂ (O. L.). — *A. punctatum* Latr. — Balka 2 ♀ (*Lotus corniculatus*).

*Osmia caerulescens* L. — Arnager Bugt ♀ 2 ♂; Sandvig 3 ♀; Balka 2 ♀ (All specimens captured on *Lotus corniculatus*); Rønne, near the shooting-range ♂ (*Trifolium repens*). — *O. leucomelaena* K. — Sandvig ♀ ♂ (*Trif. repens*); Rønne ♀ (*Lotus corniculatus*).

*Megachile centuncularis* L. — Sandvig ♂ (*Lotus corniculatus*); Rønne ♀ (*Trif. repens*), 8 ♀ 5 ♂ (O. L.). — *M. willoughbiella* K. — Sandvig 2 ♂ (one of them visiting *Lathyrus pratensis*); Helligdomen ♀. — *M. lagopoda* L. — Boderne ♂; Rønne, near the shooting-range 4 ♀ 8 ♂ (*Centaurea scabiosa*); Rønne ♂ (O. L.). — *M. pyrenaea* Pérez — Sandvig ♀; Helligdomen ♂; Rønne ♀ (O. L.). — *M. argentata* Fabr. — Boderne 11 ♂ (All the specimens flying near the ground); Sandvig 5 ♂ (*Thymus serpyllum*); Rønne ♀; near the shooting-range, and 4 ♀ visiting *Lotus corniculatus*, *Thymus serpyllum* and *Trifolium repens*. Concerning the distribution of this species in the Scandinavian countries see Erlandsson (1960).

*Coelioxys conoidea* Ill. — Rønne ♂ (O. L.). — *C. mandibularis* Nyl. — Sandvig 3 ♂ visiting *Thymus serpyllum* and flying together with the host *Megachile argentata*.

*Nomada marshamella* K. — Arnager Bugt ♀. — *M. lineola* Panz. v. *cornigera* K.

— Arnager Bugt 2 ♀. — *N. lathburiana* K. — Boderne ♀. — *N. glabella* Thms. — Rønne, near the shooting-range 6 ♀ (*Trif. repens*). — *N. rufipes* F. — Rønne ♂ (O. L.).

*Eucera longicornis* L. — Arnager Bugt ♂; Sandvig 2 ♀ 2 ♂ (*Vicia cracca*); ♂ 2 ♀ (*Lathyrus pratensis*); Boderne ♂; Rønne 2 ♂; Helligdomen ♀ 2 ♂ (*Lathyrus pratensis*).

*Anthophora retusa* L. — Sandvig ♀ (*Anchusa officinalis*). — *A. aestivalis* Panz. — Fredensborg 2 ♀ ♂ (*Hyoscyamus niger*). (The first find in the Scandinavian countries). — *A. plagiata* Ill. (= *partietina* F.). — Rønne ♀ ♂ (O. L.). — *A. quadrimaculata* Panz. (= *vulpina* Panz.). — Rønne ♀ ♂ (O. L.); Fredensborg ♀ (*Anchusa officinalis*).

*Bombus lucorum* L. — Arnager Bugt ♀♀; Sandvig ♀ (*Lathyrus pratensis*); Boderne ♀; Tejn ♀ (Both on *Trifolium pratense*). — *B. pratorum* L. — Arnager Bugt ♀ (*Trif. pratense*); Sandvig ♀ (*Symphytum officinale*). — *B. soroënsis soroënsis* F. — Arnager Bugt ♀♀ (*Trif. pratense*); Hammershus ♀ (*Trif. repens*); Balka ♀. — *B. hortorum* L. — Arnager Bugt ♀ (*Anchusa officinalis*); Sandvig ♀ (*Symphytum officinale*); Boderne ♀ (*Echium vulgare*); Balka ♀ (*Trif. pratense*); Fredensborg ♀; Tejn ♀ (*Echium vulgare*). — *B. distinguendus* Mor. — Sandvig 2 ♀; Boderne 2 ♀; Tejn ♀ (All captured on *Trif. pratense*). — *B. agrorum* F. ssp. *barcai* Vogt. — Arnager Bugt 2 ♀ (*Trif. pratense*); Hammershus ♀ (*Anchusa officinalis*); Sandvig 3 ♀ (*Trif. repens*); Boderne ♀ (*Echium vulgare*). — *B. muscorum* F. — Boderne 5 ♀ (*Anchusa officinalis*). — *B. silvarum* L. v. *nigrescens* Pérez. — Arnager Bugt ♀; Sandvig 5 ♀; Hammershus ♀; Helligdomen ♀ (All visiting *Trif. pratense* and *repens*), *Echium vulgare*, *Lathyrus pratensis*).

*Psithyrus bohemicus* Seidl. — Balka ♀ (*Lathyrus pratensis*).

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