

# Notes on Embolemidae and Bethylidae in Sweden with Description of a New Genus and Species (Hym., Bethyloidea)

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## Abstract

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The author has revised the Swedish Embolemidae and Bethylidae and selected lectotypes of the species described by Thomson. He also describes a new genus and a new species: *Snappania* gen.n. *ahusiensis* sp.n. from the province of

Skåne. The following species are recorded for the first time from Sweden: *Pseudisobrachium subcyaneum* (Hal.), *Cephalonomia hammi* Rich., *Cephalonomia formiciformis* Westw., *Laelius femoralis* (Först.), *Laelius utilis* Cocker., and *Rhabdepyris myrmecophilus* Kieff. The previously unknown male of *Rhabdepyris myrmecophilus* Kieff. is described.

## Family Embolemidae

A small family with only one species in Sweden.

### *Embolemus ruddi* Westw.

Westwood, 1833, Philos. Mag. (3) 2: 445.

Syn.: *Myrmecomorphus rufescens* Westwood, 1833, Mag. nat. Hist. 6: 496.

*Pedinomma rufescens* Förster, 1856, Hymenopt. Stud.: 94—95.

♀. (fig. 1). Reddish testaceous, only eyes black. Entirely wingless.

♂. Blackish brown — black with antennal joints 1—2 and legs somewhat paler; palpi testaceous. Wing veins brown and the wings a little infuscate. The male is winged (fig. 2 A) and is more slender than the female.

Distribution: Czechoslovakia, Denmark, England, France, Germany, Finland, Hungary, Russia (URSS), Sweden, Switzerland, Austria.

### Material seen from Sweden:

Skåne: Ringsjön 3 ♀ (coll. Thomson). — Blekinge: Rödeby, Gagnekulla 24.VIII.60 1 ♂ (SDH); Tving 22.IX.65 2 ♂ (SDH). — Öland: 1 ♀ without locality (coll. Thomson). — Småland: Virkvarn 19.IX.61 1 ♂ (HEQ); Växjö 29.IX.60 2 ♂ (HEQ); Lammhult 16.VIII.66 2 ♂ (SDH). — Uppland: Ryggmossen 16.IX.—22.X.61 3 ♀ (HMÅ); Vänge, Fiby urskog 12.V.46 1 ♀ (LBL). — Värmland: Vitsand 10.VIII.70 1 ♂ (SDH). — Medelpad: Överturingen 12.IX.58 1 ♂ (HEQ).

Biology: Nothing is known about the biology of *E. ruddi*. Males are taken in the autumn, the females seem to hibernate.

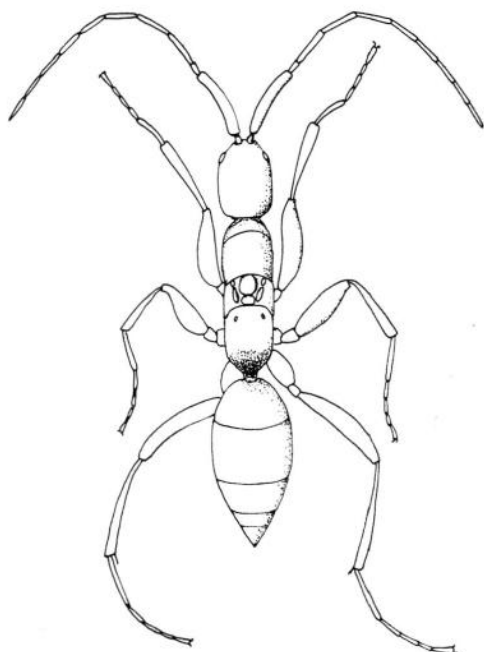


Fig. 1. *Embolemus ruddi* Westw. ♀.

### Family Bethyliidae

It is a large family of usually small species. In Sweden we have 13 species belonging to 9 genera. They are not true parasites, but somewhat intermediate in habits between parasitic and fossorial Hymenoptera. Many bethylids, after paralyzing the prey, drag it to a crevice and there stand guard over it. No true nests are formed as in Sphecidae or Pompilidae. Often more than one egg may be laid on each host. The eggs are placed externally. The mature larva spins a cocoon. The main hosts seem to be larvae of Coleoptera living in soil, wood and seeds but also larvae of Lepidoptera are attacked (chiefly borers, seed-feeders, case-bearers, and leaf-rollers). Adult Bethyliidae usually feed on the body fluids of the host, some species paralyse hosts only for feeding purposes. In a few genera (e.g. *Epyris*, *Anisepyris*, *Goniozus*) the adults also feed on carbohydrates, which they find in honeydew on leaves, more seldom in flowers.

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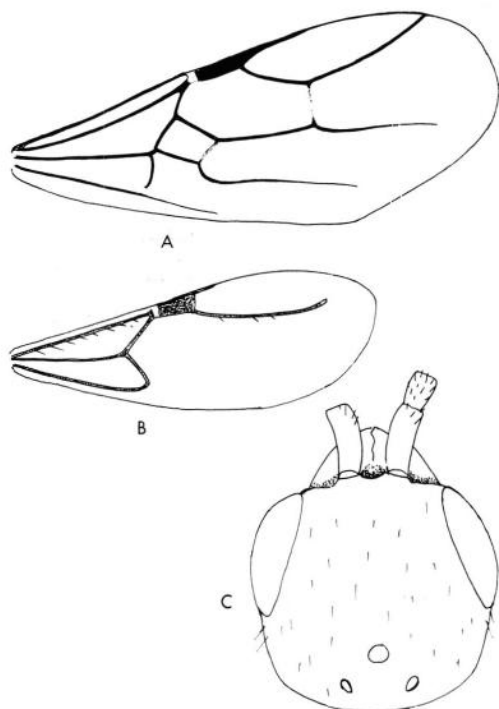


Fig. 2. A. *Embolemus ruddi* Westw. ♂, forewing. B—C. *Rhabdepyris myrmecophilus* Kieff. ♂. B. Forewing. C. Head in dorsal view.

All bethylid wasps have a characteristic facies (fig. 3) and with a little experience they are not difficult to separate from other Hymenoptera. They are small, elongate and often depressed wasps. Head usually elongate and somewhat prognathous; antennae have either twelve or thirteen segments in both sexes. Pronotum reaches to the tegulae and legs are short. Wings sometimes reduced or absent, when present the venation is reduced.

The family Bethyliidae is divided into three subfamilies: Bethylinae, Pristocerinae and Epyrinae.

### Key to subfamilies (modified after Evans 1964)

1. Wings (when fully developed) with a vein, sometimes shortened to a stub, arising from the basal vein (fig. 7 A—E). Clypeus with a

- median carina (or a polished area) which continues up the front well above the antennal bases (fig. 4 A—C); claws strongly curved and deeply bifid. . . . . *Bethylinae*
- . Wings (when fully developed) with the basal vein simple (or absent) without a vein or a stub of vein (fig. 9 A); clypeus variable, seldom (and then in winged forms) with its median area continuous with a polished streak or carina on the lower front; claws variable, very rarely bifid . . . . . 2.
2. Males with metanotum well developed with a fovea in front of scutellum. Scutellum and propodeum not nearly in contact medially. Females always apterous, with the eyes small to absent, ocelli absent and antennal scapus flattened to a thin flange at base . . . . . *Pristocerinae*
- . Males (like females) with the metanotum much reduced. The scutellum in contact with the propodeum medially or nearly so; or if slightly separated, the metanotum not emarginate or foveolate medially; females winged, brachypterous or nearly apterous, not entirely apterous as in *Pristocerinae* . . . . . *Epyrinae*

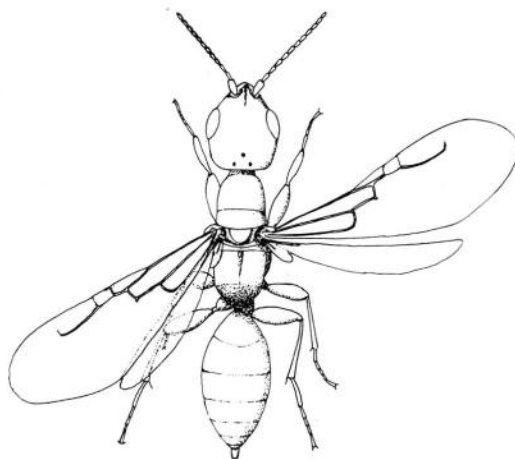


Fig. 3. *Bethylus fuscicornis* (Jur.) ♀.

k. svenska VetenskAkad. Förh. 18: 452. — A specimen (♀) from Skåne, Glimåkra selected as lectotype.

*Goniozus audounini* Westwood, 1874, Thesaur. ent. Oxon.: 168.

♀. Black; mandibles, antennae, tibiae and tarsi pale testaceous; antenna with segment 1 basally and the last four segments darkening; part of mid and hind tibiae and 5th segment of all tarsi darker; tegula brown; wings hyaline, beyond pterostigma more or less darkened; pterostigma, costa and radius brown, the rest of veins yellow. Forewing, fig. 7 B.

♂. Similar to female.

Length: 2.5—3.5 mm.

Distribution: Probably distributed throughout the Palearctic region. Material seen from Sweden (only number of localities given for each province):

Skåne: 6 loc. 28 ♀, 2 ♂ (HEQ, JNS, LBL, SDH, TJB). — Blekinge: 4 loc. 4 ♀, 1 ♂ (HEQ, LBL, SDH). — Öland: 3 loc. 3 ♀ (HEQ, SDH, WRN). — Gotland: 3 loc. 8 ♀ (HEQ, SDH). — Gotska Sandön: 19 ♀, 1 ♂ (HEQ, HUG, JNS, SDH). — Småland: 4 loc. 5 ♀, 1 ♂ (JNS). — Östergötland: 2 loc. 2 ♀ (HEQ, HUG). — Södermanland: 1 loc. 1 ♀ (SDH). — Närke: 6 loc. 3 ♀, 3 ♂ (JNS). — Värmland: 1 loc. 2 ♀ (JNS, WRN). — Hälsingland: 1 loc. 1 ♀ (SDH). — Ångermanland: 1 loc. 1 ♀ (HEQ).

Subfamily *Bethylinae*

Key to Swedish genera

1. Species with wings . . . . . 2.  
 -. Species apterous or with shortened wings 4.
2. Antennae with 13 joints. Head, fig. 5 A . . . . . *Goniozus* Först.  
 -. Antennae with 12 joints . . . . . 3.
3. Eyes nude . . . . . *Bethylus* Latr.  
 -. Eyes hairy . . . . . *Anoxus* Thoms.
4. Antennae with 12 segments. Propodeum not margined posteriorly. . . . . *Bethylus* Latr.

*Goniozus* Först.

Förster, 1856, Hymenopt. Stud. 2: 96.

Type: *Bethylus claripennis* Först.

In Sweden only one species.

*Goniozus claripennis* (Först.)

Förster, 1851, Verh. naturh. Ver. preuss. Rheinl. 8: 7, ♀.

Syn.: *Bethylus formicarius* Audouin, 1842, Hist. nat. Ins. nuisibles: 189; nec Panzer 1806. *Goniozus distigmus* Thomson, 1862, Öfvers.

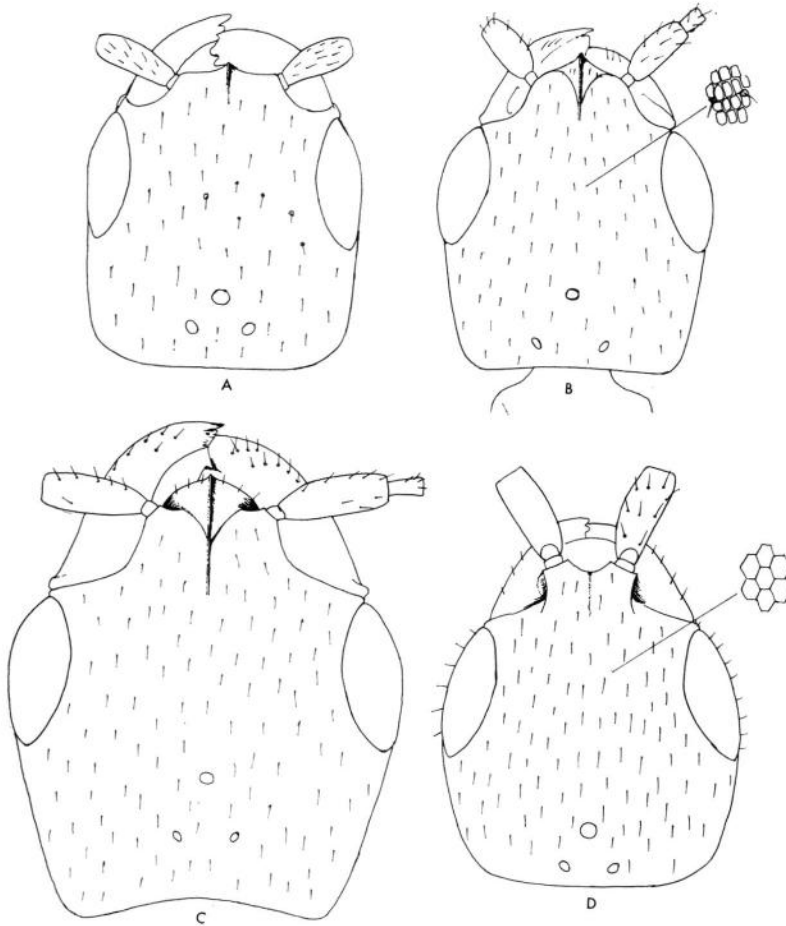


Fig. 4. Head in dorsal view of: A. *Bethylus nitidus* (Thoms.) ♀. — B. *Bethylus fuscicornis* (Jur.) ♀. — C. *Bethylus cephalotes* (Först.) ♀. — D. *Epyris bilineatus* Thoms. ♀.

### *Bethylus* Latr.

Latreille, 1802, Hist. Crust. Ins., 3: 315.

Syn.: *Perisemus* Förster, 1856, Hymenopt. Stud. 2: 95, 96.

*Episemus* Thomson, 1862, Öfvers. k. svenska VetenskAkad. Förh. 18: 452.

Type: *Omalus fuscicornis* Jurine.

Small black wasps with paler legs and antennae. Wings often very short but tegulae present. Maxillary palpi 5-jointed and labial palpi with two joints. Mandibles with four and five teeth. Clypeus short with a median carina. Antennae with twelve joints. Eyes glabrous, ocelli present. Mesonotum short without notauli but parapsidal furrows pres-

ent. Scutellum with a scutellar fovea or line. Propodeum only margined laterally. Tibiae without spines, claws deeply bifid and strongly bent. Adults fully winged with three closed cells in the forewing.

### Key to Swedish species

1. Apterous or brachypterous species .....  
..... *B. fuscicornis* (Jur.)
- Wings fully developed ..... 2.
2. Head with posterior ocelli separated from occiput as long as the distance between lateral ocellus and median ocellus ..... 3.
- Head (fig. 4 B) with the distance between posterior ocelli and occiput much shorter

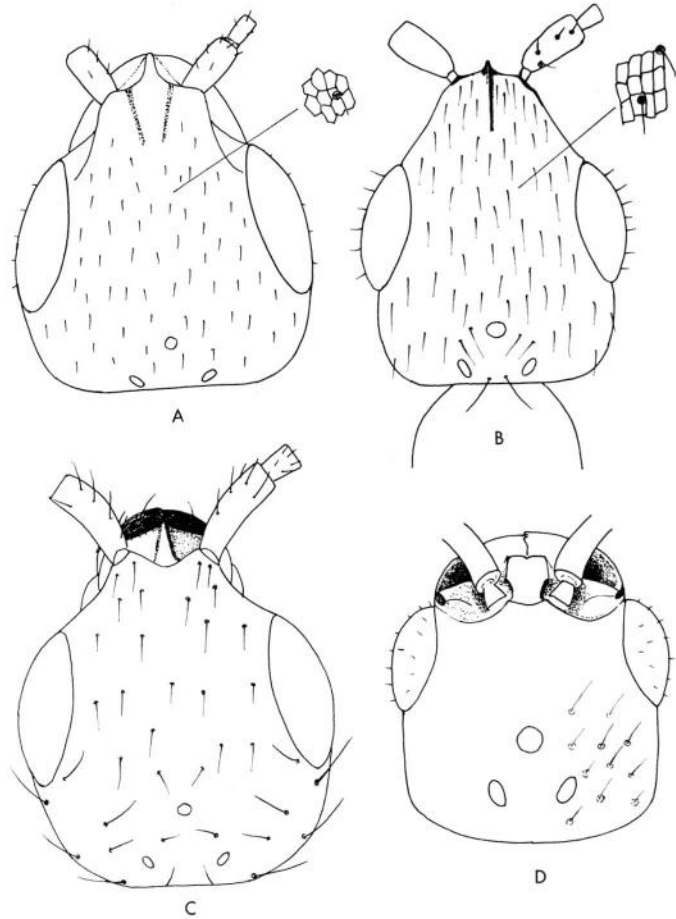


Fig. 5. Head in dorsal view of: A. *Goniozus claripennis* (Först.) ♀. — B. *Anoxus boops* Thoms. ♀. — C. *Laelius femoralis* (Först.) ♀. — D. *Pseudisobranchium subcyaneum* (Hal.) ♂.

- than the distance between lateral ocellus and median ocellus. Forewing fig. 7 C .....  
 ..... *B. fuscicornis* (Jur.)  
 3. Head quadratic (fig. 4 A) with the space between antennal sockets nearly straight. Wing veins, fig. 7 E ..... *B. nitidus* (Thoms.)  
 —. Head not quadratic (fig. 4 C) with the space between antennal sockets strongly arched. Wing veins, fig. 7 D .. *B. cephalotes* (Först.)

*Bethylus fuscicornis* (Jur.)

Jurine, 1807, Nouv. méth. class. Hymén. Dipt.: 301, ♀ (*Omalus fuscicornis*).

Syn.: See Richards (1939).

*Episemus variabilis* Thomson, 1862, Öfvers. k. svenska VetenskAkad. Förh. 18: 452—

453. Syn. n. — As lectotype is selected a specimen in coll. Thomson labelled "Rhm" (=Rössjöholm, Skåne) and with another label, written by Thomson, reading "variabilis".

*B. fuscicornis* (Jur.) is a very variable species. Both macropterous and micropterous forms occur, also a nearly apterous form. Specimens with shortened wings have a narrow mesonotum. Various authors have treated the shortwinged forms as true species. I have studied a large material from Sweden (250 specimens) and, besides the winglength, have found no character useful for separating short-winged forms from macropterous (cf. Richards 1939). A study of male genitalia gave also a negative result.

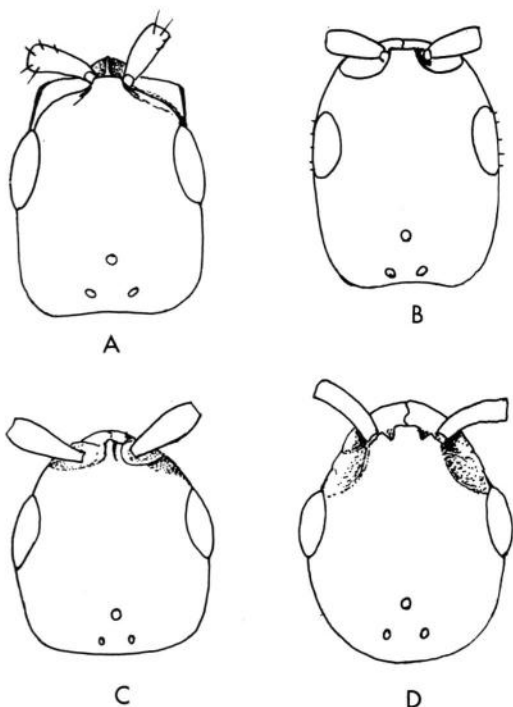


Fig. 6. Head in dorsal view of: A. *Cephalonomia formiciformis* Westw. ♀. — B. *Plastanoxus westwoodi* (Kieff.) ♀. — C. *Cephalonomia hammi* Rich. ♀. — *Snappania ahusiensis* gen.n., sp.n. ♀.

Subgenital plates (fig. 10 A) are very similar in *B. fuscicornis* (Jur.) and *B. cephalotes* (Först.). It seems that *B. fuscicornis* is a polymorphic species. In North America Evans (1962) studied the species of *Bethylus* and found the same variation among the American species as can be stated in our *B. fuscicornis*.

Host: Richards (1939) mentions that *B. fuscicornis* is attacking various larvae of Microlepidoptera (*Coleophora* Zell. and *Gelechia* Zell.).

Distribution: Whole Europe.

From Sweden material was seen from the following provinces (only number of localities given for each province):

Skåne: 17 loc. 39 ♀, 7 ♂ (BSV, GNL, HEQ, JNS, LBL, SDH, TJB, WAL). — Blekinge: 15 loc. 15 ♀, 12 ♂ (GNL, HEQ, JSN, SDH). —

Öland: 8 loc. 16 ♀, 1 ♂ (HEQ, HZE, JNS, KER, LBL, NYH, RMN, SDH). — Gotland: 9 loc. 10 ♀, 2 ♂ (GYD, HEQ, HUG, JNS, LBL, NYH, SDH). — Gotska Sandön: 6 ♀ (HEQ, JNS, NYH). — Småland: 8 loc. 6 ♀, 5 ♂ (AXE, GNL, JNS, LBL, SDH). — Halland: 3 loc. 2 ♀, 1 ♂ (ANH, HUG, SDH). — Bohuslän: 4 loc. 2 ♀, 1 ♂ (SDH). — Västergötland: 2 loc. 2 ♀, 1 ♂ (SDH). — Östergötland: 4 loc. 5 ♀ (JNS, SDH). — Södermanland: 9 loc. 11 ♀, 3 ♂ (JNS, LBL, NYH, OLS, SDH). — Uppland: 9 loc. 18 ♀, 4 ♂ (HEQ, JNS, LBL, SDH). — Närke: 9 loc. 16 ♀, 19 ♂ (JNS, SDH). — Värmland: 2 loc. 2 ♀, 2 ♂ (JNS, SDH). — Dalarna: 8 loc. 9 ♀, 2 ♂ (FRL, KLF, LBL, PAM, SDH, TJB). — Gästrikland: 1 loc. 1 ♀ (SDH). — Hälsingland: 5 loc. 8 ♀, 2 ♂ (JNS, LBL, SDH, SJO). — Jämtland: 3 loc. 5 ♀, 3 ♂ (BOH, JNS, LBL, SDH). — Härjedalen: 1 loc. 1 ♀ (JNS). — Ångermanland: 1 loc. 1 ♂ (SDH). — Västerbotten: 2 loc. 1 ♀, 1 ♂ (HEQ, HUG). — Norrbotten: 5 loc. 5 ♀ (JNS, LBL, LTH, SDH). — Lycksele Lappmark: 2 loc. 2 ♀, 2 ♂ (GNL, HEQ). — Lule Lappmark: 5 loc. 2 ♀, 5 ♂ (JNS, SDH).

#### *Bethylus cephalotes* (Först.)

Förster, 1860, Verh. naturh. Ver. preuss. Rheinh. 17: 111 (*Perisemus cephalotes*).

Syn.: See Richards (1939) and Móczár (1966).

Characterized by a large head (fig. 4 C) and differing from *B. fuscicornis* in the shape of head and the distance between ocelli and occiput (fig. 4 C), from *B. nitidus* (Thoms.) by not quadratic head and other wing veins (fig. 7 D). Subgenital plate see fig. 10 B.

Host: Richards (1939) found a female in a folded leaf of dandelion with the larva of *Cnephasia* sp. (Tortricidae), but the larva had not been attacked.

Distribution: Probably whole Europe.

From Sweden material was seen from the following provinces (only number of localities given):

Skåne: 14 loc. 14 ♀, 1 ♂ (AMM, ANH, JNS, KER, LJU, LBL, RGD, RON, SDH). — Blekinge: 2 loc. 3 ♀ (SDH). — Öland: 3 loc. 2 ♀, 1 ♂ (NYH, PAM, SDH). — Gotland: 2 loc. 3 ♀ (ENS, GNL, JNS). — Småland: 1 loc. 1 ♀ (GNL). — Bohuslän: 3 loc. 3 ♀ (HUG, JNS, RMN). —

Södermanland: 1 loc. 1 ♀ (WTP). — Uppland: 5 loc. 5 ♀ (EOS, HEQ, LBL). — Närke: 5 loc. 7 ♀ (JNS). — Dalarna: 1 loc. 1 ♀ (FRL). — Ångermanland: 1 loc. 1 ♀ (EOS).

*Bethylus nitidus* (Thoms.)

Thomson, 1862, Öfvers. k. svenska VetenskAkad. Förh. 18: 452 (*Episemus nitidus*).

In coll. Thomson there are 2 specimens under the name *Episemus nitidus*. One specimen bears a lectotype label by E. Valkeila. It is now validated. It is a female (not a male as Thomson says in his description) bearing the following 5 labels: K.K. (=Kinnekulle, Västergötland), Boh. (=C. H. Boheman, the collector), ♀, "nitidus" and Mr Valkeila's lectotype label. The other specimen bears a label "Scan" (=Skåne), which is a wrong locality.

*B. nitidus* (Thoms.) differs from *B. cephalotes* as follows: Head quadratic (fig. 4 A), wing veins (fig. 7 E) different and the puncturation more shining.

Distribution: Apparently a rare species. In the literature only recorded from Finland.

From Sweden the following material was seen:

Skåne: 1 ♀ (coll. Thomson). — Öland: Horn 24.VII.39 1 ♀ (JNS); Resmo alvar 16.VIII.51 1 ♀ (NYH). — Blekinge: Ronneby 17.VIII.54 1 ♀ (LBL). — Västergötland: (lectotype see above). — Närke: Örebro —.VII.55 1 ♀; Örebro, Ö.Mark —. —.35 1 ♀; Örebro, Brickebacken —.VII.55 1 ♀ (JNS).

*Anoxus* Thoms.

Thomson, 1862, Öfvers. k. svenska VetenskAkad. Förh. 18: 452.

Type: *Anoxus boops* Thoms.

Hairy eyes, shape of head (fig. 5 B) and veins of forewing (fig. 7 A) separate this genus from the others in the subfamily *Bethylinae*.

*Anoxus boops* Thoms.

Thomson, 1862, Öfvers. k. svenska VetenskAkad. Förh. 18: 452.

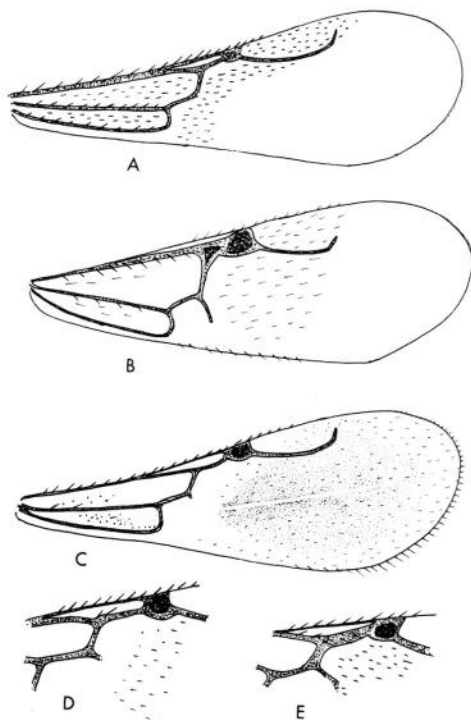


Fig. 7. A—C. Forewing of: A. *Anoxus boops* Thoms. ♀. — B. *Goniozus claripennis* (Först.) ♀. — C. *Bethylus fuscicornis* (Jur.) ♀.

D—E. Part of forewing of: D. *Bethylus cephalotes* (Först.) ♀. — E. *Bethylus nitidus* (Thoms.) ♀.

In coll. Thomson 3 specimens; as lectotype is selected a specimen labelled Sm (=Småland), Bhm (=C. H. Boheman, the collector). It is a female.

Distribution: Hungary and Sweden.

Material seen from Sweden:

Blekinge: Tving 23.VII.55 1 ♀ (SDH). — Småland: 1 ♀ (selected as lectotype, see above). — Öland: Karum 25.VIII.51 1 ♀ (NYH). — Gotland: Fårö, Sudersand 12.VIII.50 13 ♀, 13.VIII.50 2 ♀ (NYH). — Bohuslän: 1 ♀ without locality (BOH). — Närke: Örebro 1.VIII.49 1 ♀, 10.VIII.49 3 ♀ (JNS). — Uppland: Almunge, Harparbol 23.V.49 1 ♀ (LBL). — Hälsingland: Los 17.VIII.42 1 ♀ (SJO).

Subfamily *Pristocerinae*

Perhaps two genera in Sweden.

## Key to genera

1. Apterous; ocelli absent ..... ♀♀  
 - Winged; ocelli present ..... ♂♂

♀♀

1. Propodeum strongly constricted anteriorly forming a pair of small processes which embrace the tip of the elongate mesonotum. Eyes consisting of one facet or eyes absent ..... *Pseudisobrachium* Kieff.  
 - Propodeum pyriform but not so strongly constricted anteriorly and not forming a pair of small processes, broadly in contact with the mesonotum. Eyes consisting of more than one facet ..... *Pristocera* Klug.

♂♂

1. Median lobe of clypeus truncate, sometimes angulate or rounded, not trapezoidal. Subgenital plate with a long medial stalk ..... *Pristocera* Klug.  
 - Median lobe of clypeus somewhat trapezoidal, truncate, bidentate or with median tooth. Subgenital plate (fig. 10 C) with three short basal stalks ..... *Pseudisobrachium* Kieff.

*Pseudisobrachium* Kieff.

Kieffer, 1904, Ann. Mus. Genova. 41: 368.  
 Syn.: see Evans (1964).

Type: *P. laticeps* Kieff.

Only one species, new to the Swedish fauna.

*Pseudisobrachium subcyaneum* (Hal.)

Haliday, 1838, Ent. Mag. 5: 519. (*Epyris subcyaneum*).  
 Syn.: see Ricards (1939).

Only males up to now found in Sweden. It is a black species with antennae and legs brown. Head and forewing see fig. 5 D, 9 A. Subgenital plate, fig. 10 C.

Distribution: England, France, Italy, Sweden, Switzerland.

Material seen from Sweden:

Skåne: Ven 12.IX.48 2 ♂ (LBL).

Host: Very little is known about the biology. Some specimens collected in nests of ants (*Tetramorium caespitum* (L.)).

*Pristocera* Klug.

Klug, 1808, Mag. Ges. naturf. Fr. Berlin. 2: 49.  
 Syn.: see Evans (1964).

Type: *Bethylus depressus* F.

One species, *P. depressa* (F.), recorded from Denmark but up to now not taken in Sweden.

*Pristocera depressa* (F.)

Fabricius, 1804, Syst. Piez.: 287. (*Bethylus depressus*)

Syn.: see Richards (1939).

♂. Black with tergites 2 and 3 red. ♀. Brownish red, shining.

Distribution: Austria, England, Hungary, Italy, Spain, Denmark.

Subfamily *Epyrinae*

Evans (1964) divided this subfamily into three tribes and I am following him.

In Sweden we have representatives of two tribes: *Cephalonomiini* and *Epyrini*; they differ as follows:

1. Antennae with 12 segments ..... *Cephalonomiini*  
 - Antennae with 13 segments ..... *Epyrini*

Tribe *Cephalonomiini*

## Key to genera

1. Radial vein completely absent; wings frequently absent or much reduced ..... *Cephalonomia* Westw.  
 - Radial vein present at least in part; wings always fully developed ..... 2.  
 2. Without basal cells, maxillary palpi with four segments ..... *Plastanoxus* Kieff.  
 - With two basal cells, maxillary palpi with five segments ..... *Snappania* gen.n.

*Cephalonomia* Westwood

Westwood, 1833, Mag. nat. Hist. 6: 420.  
 Syn.: see Evans (1964).

Type: *C. formiciformis* Westw.

A genus with variable species, both macropterous and apterous forms occur. Two species up to now known from Sweden.



## Key to species

1. Head (fig. 6 A) rectangular in females, in males more quadratic, rounded behind. Median vein in forewing (fig. 8 D) indicated but hyaline. Brachypterous females occur .....  
 ..... *C. formiciformis* Westw.  
 -. Head (fig. 6 C) rounded (oval) in female. Median vein in forewing (fig. 8 C) distinct, pale brown. Males unknown .... *C. hammi* Rich.

*Cephalonomia formiciformis* Westw.

Westwood, 1833, Mag. nat. Hist. 6: 421.

Syn.: see Richards (1939).

♀. Black with mandibles and antennae dark brown, flagellar joints 2 and 3 (sometimes 4) pale yellow. Legs dark brown with tibiae and tarsi more or less yellow mixed with brown.

♂. Similar to the female.

Distribution: Germany, England, France, Finland, Sweden.

Material seen from Sweden:

Blekinge: Jämshög 10.VII.39 1 ♀ (LBL). — Småland: Markaryd 18.VII.50 1 ♀ (LBL); Sandbäckshult 25.VII.47 2 ♀ (JNS); Värnanäs 13.VII.70 22 ♀, 17.VIII.72. 1 ♀ (HUG). — Västergötland: Göteborg 23.VIII.70 1 ♀ (HUG). — Södermanland: Tullgarn 26.VII.69 1 ♀ (LBS). — Uppland: Vallentuna 6.II.56 3 ♀ (HEQ); Vänge, Fiby urskog 1.II.49 1 ♀, 17.VI.48 1 ♂; G. Uppsala, Johannesberg 29.IX.41 1 ♀ (LBL); Bällsta 15.VIII.59 1 ♀ (SDH). — Dalarna: Näs, Gräsberget 3.VIII.62 5 ♀ (ENS). — Västerbotten: Kassjö 1.VI.69 4 ♂; Klabböle 30.VI.70 1 ♀ (HUG).

Host: Species of the genera *Cis* Latr. and *Ennearthron* Mell. (Ciidae).

*Cephalonomia hammi* Rich.

Richards, 1939, Trans. R. ent. Soc. Lond. 89: 302—303.

♀. Black with antennae yellow except first joint which is brown, the distal segments of antennae yellowish brown. Legs brown with all tibiae and tarsi yellowish brown—brown.

Distribution: England, Finland, Sweden.

Material seen from Sweden: Småland: Ålem, Strömsrum 7.VI.57 1 ♀ (SDH).

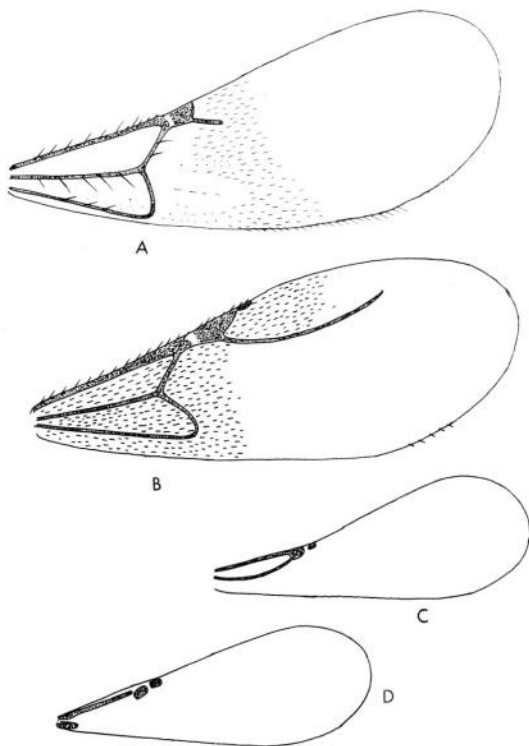


Fig. 8. Forewing of: A. *Laelius femoralis* (Först.) ♂. — B. *Epyris bilineatus* Thoms. ♂. — C. *Cephalonomia hammi* Rich. ♀. — D. *Cephalonomia formiciformis* Westw. ♀.

*Plastanoxus* Kieff.

Kieffer, 1905, Subfamily *Bethylinae* in: André, Spec. Hymen. Eur. Alger. 9: 244.

Syn.: see Evans (1964).

Type: *Anoxus chittendenii* Ashm.

*Plastanoxus westwoodi* (Kieff.)

Kieffer, 1914, Hymenoptera Bethylidae. Tierreich 41: 248 (*Cephalonomia westwoodi*).

*P. Westwoodi* is black with part of tibiae, all tarsi and most of antennal segment 2 testaceous—yellowish. Head, fig. 6 B; forewing, fig. 9 C.

Distribution: Africa, England, U.S.A. A cosmopolitan species.

Recorded from Finland in warehouses and might be taken in Sweden in the same places.

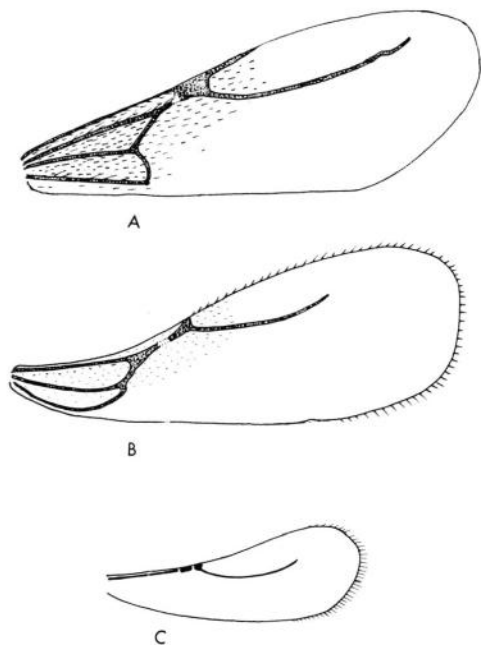


Fig. 9. Forewing of: A. *Pseudisobrachium subcyaneum* (Hal.) ♂. — B. *Snappania ahusiensis* gen.n., sp.n. ♂. — C. *Plastanoxus westwoodi* (Kieff.) ♀.

### *Snappania* gen. n.

Forewing (fig. 9 B) with radial vein long, stigma small, basal vein thickened where it meets the subcostal vein, two enclosed basal cells. Antenna with 12 segments. Mandibles with 4 teeth, maxillary palpi with 5 joints and labial palpi 3-jointed (fig. 10 E). Eyes with very short hairs. Pronotum elongate, mesonotum transverse without any furrows, scutellum separated from mesonotum by a fine cross-furrow. Propodeum rounded, with a margin and basally with a fine short median carina.

Type: *S. ahusiensis* sp.n.

### *Snappania ahusiensis* sp. n.

♂. Brown with mandibles and all tibiae and tarsi yellowish brown—brown.

Head (fig. 6 D) rounded. Clypeus with

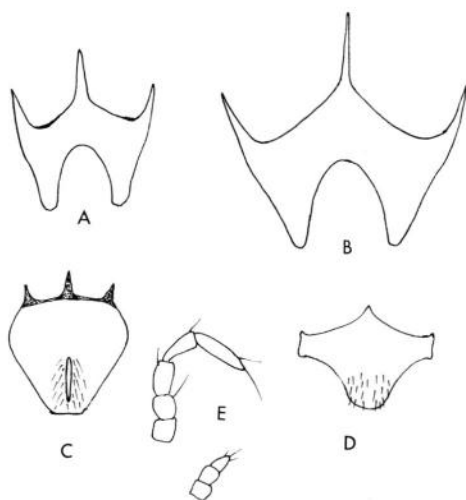


Fig. 10. A—C. Subgenital plate of: A. *Bethylus fuscicornis* (Jur.) ♂. — B. *Bethylus cephalotes* (Först.) ♂. — C. *Pseudisobrachium subcyaneum* (Hal.) ♀.

D—E. *Snappania ahusiensis* gen.n., sp.n. ♂. D. Subgenital plate. — E. Maxillary palp (above) and labial palp (below).

anterior margin straight. Ocelli in an equilateral triangle, the space from occiput to lateral ocellus as long as the space between the lateral ocellus and the median ocellus. Whole thorax and propodeum finely reticulated. All femora thickened. Subgenital plate, fig. 10 D.

Length: 1.8 mm.

♀. Unknown.

Holotype: ♂, in coll. mea; Skåne: Åhus 22.VII.1958, leg. K.-J. Hedqvist.

Paratype: 1 ♂, in coll. mea; Skåne: Åhus 17.VIII.1958, leg. K.-J. Hedqvist.

*Snappania* gen.n. belongs to subfamily Epyrinae, tribe Cephalonomiini and is nearest related to *Israelius* Rich. but differs from that genus by longer radial vein, four-toothed mandibles and rounded head.

*Snappania* is named after Swedish "snapphanar", partisans in South Sweden during the 17th century.

## Tribe Epyrini

## Key to Swedish genera

1. Radial vein short (fig. 8 A), body and major veins of forewings with large black setae . . . . . *Laelius* Ashm.  
 - Radial vein long (fig. 2 B, 8 B), body and veins of forewings without large black setae . . . . . 2.  
 2. Scutellum with a transverse groove basally . . . . . *Rhabdepyris* Kieff.  
 - Scutellum with two basal pits . . . . . *Epyris* Westw.

*Laelius* Ashm.

Ashmead, 1893, Bull. U. S. natn. Mus. 45: 50.  
 Syn.: see Evans (1964).

Type: *L. trogodermatis* Ashm.

Two species in Sweden, one of which occasionally.

## Key to species

1. Propodeum with 3 carinae and rugose transverse striation. Head and thorax with scattered pits with hairs . . *L. femoralis* (Först.)  
 - Propodeum with 3 carinae and with coriaceous puncturation. Head and thorax without scattered pits with hairs . . *L. utilis* Cocker.

*Laelius femoralis* (Först.)

Förster, 1860, Verh. naturh. Ver. preuss. Rheinl. 17: 107.

Black with basal part of antennae (2—3 first joints), all tibiae and tarsi and mandibles reddish yellow—brown. Head, fig. 5 C, forewing, fig. 8 A.

Distribution: Germany, Finland, Sweden.

Material seen from Sweden:

Skåne: Vittskövle 20.VII.74 3 ♀ (HEQ). — Småland: Långemåla, Hornsö 18.VII.42 1 ♀ (LBL). — Östergötland: Simonstorp 3.VIII.54 1 ♀ (HEQ). — Uppland: Vallentuna 11.VII.74 1 ♀, 5.II.70 1 ♂ (HEQ); Stockholm, Frescati 27.V.57 1 ♂ (HEQ). — Närke: Örebro, Adolfsberg 9.VIII.73 1 ♀ (NYH).

*Laelius utilis* Cocker.

Cockerell, 1920, Canad. Ent. 52: 34.

Distribution: U.S.A., Sweden.

Material seen from Sweden:

Värmland: Arvika 28.VI.55 1 ♀ (HEQ).

The specimen reared from an axe-handle imported from U.S.A. and infested by *Lyctus brunneus* Steph. (Col., Lyctidae).

*Rhabdepyris* Kieff.

Kieffer, 1904, Bull. Soc. Metz. 23: 32.

Type: *R. myrmecophilus* Kieff.

Only one species in Sweden.

*Rhabdepyris myrmecophilus* Kieff.

Kieffer, 1904, Bull. Soc. Metz. 23: 32.

The male of *R. myrmecophilus* is not described and it is with some hesitation that I refer the actual specimen as male to this species.

♂. Black, with legs dark brown. Wings hyaline, with veins brown.

Head (fig. 2 C) as well as thorax finely shagreened. Propodeum with a median carina and a rectangular rugose area. Forewing, fig. 2 B.

Distribution: Germany, Sweden.

Material seen from Sweden:

Gotland: Lojsta 22.IX.61 1 ♂ (GYD).

Host: The female is taken in the nest of *Tetramorium caespitum* (L.).

*Epyris* Westw.

Westwood, 1832, Phil. Mag. Brewster. ser. 3 (1): 129.

Syn.: see Evans (1964).

Type: *E. nigra* Westw.

A large genus with many species and distributed all over the world. In Sweden one species.

*Epyris bilineatus* Thoms.

Thomson, 1862, Öfvers. k. svenska VetenskAkad. Förh. 18: 452.

*E. bilineatus*. In Thomson's coll. there are 2 ♀ and 1 ♂ standing under this name. A female bears the following labels: Ld

(=Lund, Skåne), red label "typus" and a third label reading "2-lineata"; I select this specimen as lectotype.

♀. Black with mandibles, antennae, tegulae and legs testaceous; tip of fore tibiae and tarsi yellowish—yellowish brown; tip of gaster with a yellow spot. Forewing very weakly clouded by pale brown; wing veins pale brown.

♂. Similar to female but darker; antennae, mandibles, legs and tegulae dark brown. Wings also darker clouded. Both sexes with a large pit on upper part of mesopleura. Propodeum with three carinae.

Distribution: Roumania, Sweden.

Material seen from Sweden:

Skåne: Ilstorp 1 ♀ (coll. Thomson); Lund 1 ♂ (coll. Thomson); Ivö 10.VIII.50 1 ♀ (SDH); Lomma 7.VIII.50 1 ♀ (SJO). — Öland: Högsrum 1.IX.54 1 ♂ (JNS).

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### References

- BERLAND, L. 1928. Hyménoptères vespiformes II. — Faune de France XIX. 1—208.
- EVANS, H. E. 1964. A Synopsis of the American Bethyridae (Hymenoptera, Aculeata). — Bull. Mus. comp. Zool. Harv. 132 (1): 1—222.
- HELLÉN, W. 1953. Übersicht über die Bethyriden und Dryiniden Finnlands. — Notul. ent. 33: 88—102.
- KIEFFER, J. J. 1914. Bethyridae. Tierreich 41: 1—595.
- MÓCZÁR, L. 1966. Remarks on Kieffer's and Marshall's types (Hymenoptera, Bethyridae) in the Hungarian Natural History Museum. — Acta zool. hung. 12 (3—4): 339—361.
- NAGY, C. G. 1970. Contribution toward a revision of the European species of the genus *Epyris* Westw. (Hym., Bethyridae). — Mitt. zool. Mus. Berl. 46: 265—272.
- RICHARDS, O. W. 1939. The British Bethyridae (Hym.). — Trans. R. ent. Soc. Lond. 89: 185—344.
- THOMSON, C. G. 1862. Skandinaviens Proctotruper. — Öfvers. k. svenska VetenskAkad. Förh. 18: 451—453.

### List of abbreviations of collectors' names used in text

- ADR K. Ander  
 AMM I. F. C. Ammitzböll  
 ANH Hugo Andersson  
 AXE Rune Axelsson  
 BGW J. R. Bergvall  
 BOH C. H. Boheman  
 BSV S. Berdén  
 ENS B. Ehnström  
 EOS S. Erlandsson  
 FRL K.-H. Forsslund  
 GNL D. Gaunitz  
 GYD N. Gyllensvärd  
 HEQ K.-J. Hedqvist  
 HMÅ Å. Holm  
 HUG L. Huggert  
 HZE V. Heinze  
 JNS A. Jansson  
 KER N. A. Kemner  
 KLF E. Klefbeck  
 LBL O. Lundblad  
 LBS S. Lundberg  
 LJU T. Ljungbeck  
 LTH C. H. Lindroth  
 NYH T. Nyholm  
 OLS Axel Olsson  
 PAM T. Palm  
 RGD O. Ringdahl  
 RMN A. Roman  
 RON H. Rosén  
 SDH A. Sundholm  
 SJO O. Sjöberg  
 TJB Bo Tjeder  
 WAL A. L. Wennhagen  
 WDR E. Wieslander  
 WRN E. Wirén  
 WTP H. E. Wanntorp