

Notes on *Ecphylus* Först. and description of two new species (Ichneumonoidea, Braconidae, Doryctinae)

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From the palearctic region are 10 species of the genus *Ecphylus* Först. described. It has been very difficult to identificate all those species because the old descriptions are very short and the characteres are founded on the colour, which is variable. Some of the species described by RATZBURG (1848) are lost (destroyed during the last war). Following species are described from palearctic region:

- E. beltrani* Doc. Alb., Eos, 36, p. 25, 1960.
- E. caudatus* Ruschk., Ent. Blätter. 12, p. 25, 1916.
- E. chaetoptelii* Gaut. & Russo, Bol. Lab. Zool. Portici. 18, p. 152, 1925.
- E. eccoptogastri* (Ratzb.), Ichn. d. Forstins. II, p. 30, 1848 (Bracon e.).
- E. hattorii* Kôno et Watan., Ins. Mats. 10, p. 68, 1935.
- E. hylesini* (Ratzb.), Ichn. d. Forstins. II, p. 31, 1948.
- E. lavagnei* (Pic. & Licht.), Bull. Soc. Ent. France. 22, p. 285, 1917 (Sycosoter 1).
- E. minutissimus* (Ratzb.), Ichn. o. Forstins. II, p. 31, 1848 (Bracon m.).
- E. silasiacus* (Ratzb.), ibid., p. 30, 1848 (Bracon s.).
- E. weneri* Fahr., Denkschriften der Acad. Wissensch. Wien Math. nat. Klasse. 99, p. 96, 1924.

In the following key I have not included *E. beltrani* Doc. Alb., *E. chaetoptelii* Gaut. & Russo and *E. weneri* Fahr. because I have not seen specimens.

Key to Palearctic species of *Ecphylus* Först.

- 1. Micropterous species *E. caudatus* Ruschk.
- Macropterous species 2.
- 2. Hind wing without complete subcostella. Notaulices not complete, posterior obsolete.
- Entirely stramineous. Eyes black *E. caudatus* Ruschk.
- Hind wing with complete subcostella. Notaulices complete, distinct. Bicoloured species 3.
- 3. Notaulices crenulated. Eyes large, oval. Malar space as long as the breadth of eye 4.
- Notaulices not crenulated or if so very faintly and mostly anterior. Eyes moderate large, semicircular. Malar space nearly as long as the length of eye 6.
- 4. Terebra about 2/3 of gaster. Vertex striated. 1st segment of gaster, rectangular. 1st abscissa of subcostella not received in mediella. *E. eccoptogastri* Ratzb.

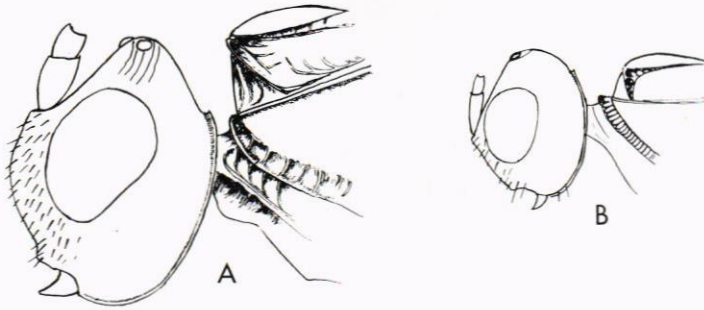


Fig. 1. A. *Ecphylus eccoptogastri* (Ratzb.) Head in lateral view. B. *E. silesiacus* (Ratzb.) Head in lateral view.

- Terebra as long as gaster or longer. 1st abscissa of subcostella more or less received in mediella 5.
- 5. Terebra as long as gaster. Vertex with a cross-carina *E. carinatus* sp. n.
- Terebra longer than gaster. Vertex without any distinct sculpture or with very faintly cross-striation *E. silesiacus* Ratzb.
- 6. Terebra as long as gaster. Male with the 1st segment of gaster distinct longer than wide. Slender species *E. hylesini* Ratzb.
- Terebra as long as half gaster. Male with the 1st segment of gaster nearly as wide as long. Stouter species *E. pinicola* sp. n.

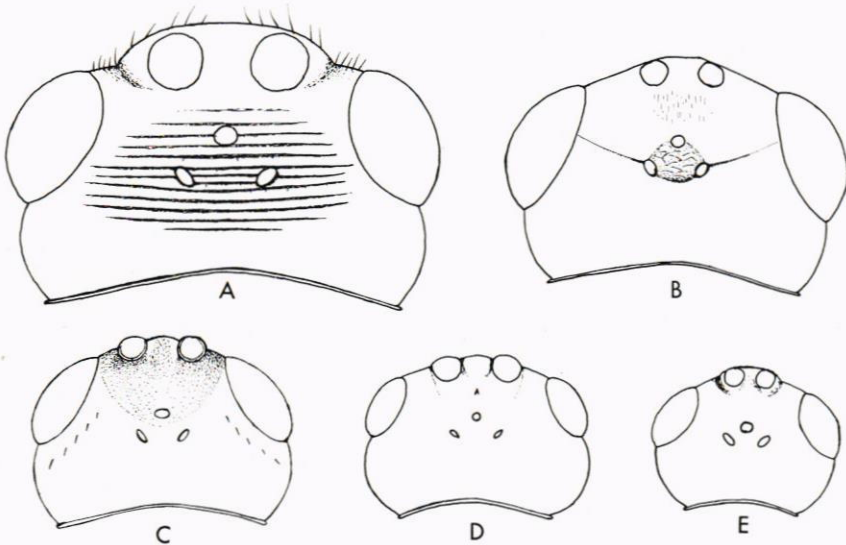


Fig. 2. A. *Ecphylus eccoptogastri* (Ratzb.) Head in dorsal view, B. *E. carinatus* sp.n. Head in dorsal view, C. *E. silesiacus* (Ratzb.) Head in dorsal view, D. *E. hylesini* (Ratzb.) Head in dorsal view and E. *E. caudatus* Ruschk. Head in dorsal view.

Ecphylus caudatus Ruschka

Ruschka, Ent. Blätter, 12, p. 25, 1916.

Syn.: *Sycosoter lavagnei* Ricard & Lichtenstein, Bull. Soc. Ent. France, p. 285, 1917.

Ecphylus hattorii Kôno et Watanabe, Ins. Mats. 10, p. 68, 1935, Watanabe Mushi, 18, pp. 96—97, 1948. Syn. n.

? *Bracon minutissimus* Ratzeburg, Ichn. Forst., II, p. 31, 1848.

Both micropterous and macropterous specimens. This species is entirely stramineous only eyes are black. Larger specimens somewhat darker on thorax and gaster (yellowish brown). According to the description and figures *Ecphylus hattorii* Kôno et Watanabe is synonymous to *E. caudatus* Ruschk. (see fig. 2 E, 4 A).

Distribution: France, Japan, Jugoslavia, Austria.

Host: *Cryphalus piceus* Egg., *Cryphalus fulvus* Nijj., *Hypoborus ficus* Er. *Liparthrum colchicum* Sem., *Sinoxylon chalcographum* Panz. (?).

Ecphylus eccoptogastris (Ratzb.)

Ratzeburg, Ichn. d. Forstins. II, p. 30, 1848. (Bracon e.)

Largest species in Europe of *Ecphylus*. Reddish brown, darker on propodeum and terebra. Antennae and legs yellow — yellowish brown. Wing veins yellowish brown. The colour is somewhat variably. Differs from the other known species in Europe by having striated vertex (fig. 2 A) and that 1st abscissa of subcostella not receives in mediella (fig. 4 B). (See also fig. 1 A).

Distribution: ČSR (Czechoslovakia), Russia, Austria.

Host: *Scolytus multistriatus* Marsh., *Sc. pygmeus* Fabr., *Sc. rugulosus* Mull., *Pityogenes bidentatus* Herbst. (?), *Pityophthorus micrographus* L. (?), *Ernobius pini* Sturm. (?).

Ecphylus carinatus sp. n.

♀. Brown, basal part of antennae and basal segments of gaster somewhat pale yellowish brown. Legs and palpi dirty yellow.

Head (fig. 2 B) semiglobular. Antennae inserted in the middle of the face. Eyes oval. Malar space nearly as long as the length of an eye. Antennae 18-jointed, 1st — 3rd funicle joints as long as eye. Mesonotum with anterior corner protuberant. Notaulices converging but reach prescutellarfurrow. Scutellum bordered, prescutellarfurrow with few carinae. Metathorax with a spine in the middle. Propodeum with a median carina, forked posterior, very fine striation over the whole propodeum. Mesopleura with a furrow below. In front of hind coxa a spine. Gaster with 1st tergite longitudinally striated, the rest smooth. Terebra as long as gaster. Fore wing with 1st abscissa of radius as long as 1st intercubitus. Hind wing with 1st abscissa of subcostella received in mediella.

♂. Similar to the female but the colour somewhat paler and antennae 16-jointed.

Length: ♀♀ 2.1—2.7 mm ♂ 2.3 mm.

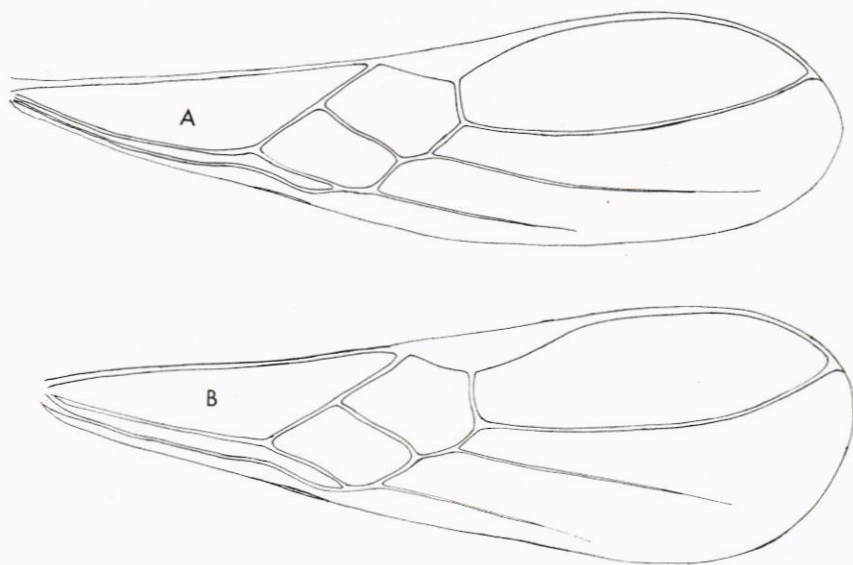


Fig. 3. A. *Ecphylus silesiacus* (Ratzb.) Fore wing. B. *E. hylesini* (Ratzb.) Fore wing.

Holotype: In the collection of the Muséum d'Histoire naturelle de Genève, Iran, Karadj, VIII-IX. 1959, leg. M. Chodjai.

Paratype: 9 specimens (8 ♀♀, 1 ♂♂) in the same coll. as holotype, one specimen in coll mea. All specimens (paratypes) from the same locality as holotype.

Host: *Ruguloscolytus mediterraneus* Egg.

Ecphylus silesiacus (Ratzb.)

Ratzeburg, Ichn. d. Forstins., II, p. 30, 1848 (Bracon s.).

Förster, Verh. naturh. Ver. preuss. Rheinl., XIX, p. 237, 1862.

Marshall, Spec. Hym. Eur., IV, p. 31, p. 210, 1888.

Black, mouth, base of antennae and largest part of legs pale brown. Wings with lengthways slightly (faintly) cloudy. *E. silesiacus* (Ratzb.) is like all other species of this genus variable in colour.

Terebra somewhat longer than gaster. Propodeum with a weak median carina. Antennae 15—16 jointed. (See fig. 1 B, 2 C, 3 A).

Distribution: Finland, ČSR, Sweden, Austria, Russia.

Host: *Cryphalus binodulus* Ratzb., *Scolytus pygmaeus* F. and *Dryocoetes alni* Georg.

Ecphylus hylesini (Ratzb.)

Ratzeburg, Ichn. d. Forstin., II, p. 31, 1848 (Bracon h.). Ibid., III, p. 31, n. 4, p. 71. 1852.

Marshall, Spec. Hym. Eur., IV, p. 31, p. 209, 1888.

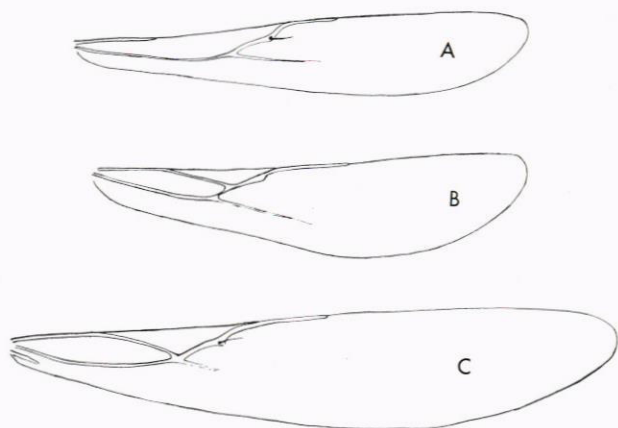


Fig. 4. A. *Ecphylus caudatus* Ruschk. Hind wing. B. *E. eccoptogastris* (Ratzb.) Hind wing. C. *E. hylesini* (Ratzb.) Hind wing.

Yellowish brown, but there are specimens with head, pro- and mesothorax, scutellum and posterior part of gaster more or less dark brown. Antennae towards apex darker.

Propodeum very fine rugose. Notaulices only crenulated anterior. Antennae 14—15 jointed. Slender species with terebra as long as gaster. (see fig. 2 D, 3 B, 4 C).

Host: *Phloeophthorus rhododactylus* Marsh., *Carphoborus minimus* F., *Polygraphus poligraphus* L., *Ips laricis* F., *Xylechinus pilosus* Ratz. *Hylurgops palliatus* Gyll. and *Pityophthorus micrographus* L.

Distribution: Finland, Sweden, Austria, CSR.

A careful study will reveal that *E. hylesini* (Ratzb.) is a parasitoid on barkbeetles living on spruce and all records of barkbeetles on pine must be transferred to *E. pinicola* sp. n.

Ecphylus pinicola sp. n.

♀. Stramineous with head dark brown, thorax dorsally brown, gaster dorsally dark yellowish brown, terebra and claws brown. Antennae from 3rd funicle joint successively darker brown toward apex. Wing veins brown.

Similar to *E. hylesini* (Ratzb.) but more stout and with terebra as long as half gaster. The space behind eye to the posterior carina = the breadth of an eye in *E. pinicola* sp. n., in *E. hylesini* (Ratzb.) distinctly longer.

♂. Similar to the female but gaster paler and all femora yellowish brown.

Length: ♀. 1,5—2,7 mm; ♂. 1,5—2,0 mm.

Holotype: in coll mea. Simonstorp, Province Östergötland, Sweden. 29/6 1959, leg. K.-J. Hedqvist, ex *Pityogenes quadridens* Htg.

Paratypes: 26 ex. (21 ♀ + 5 ♂) 20 ♀ + 5 ♂ from the same locality as holotype and from Vallentuna, Prov. Uppland, Sweden, ex *Pityogenes quadridens* Htg. leg. K.-J. Hedqvist. 1 ♀ E. H. Hattula, Finland, leg. M. Nuorteva, ex *Pityogenes quadridens* Htg.

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