

Notes on Helconini (Ichneumonoidea, Braconidae, Helconinae). Part I

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In this first part the author treats the species of the genera *Helcon* Nees., *Helconidea* Vier. and *Aspidocolpus* Wesm. for the palearctic region. The next part (part II) is planned to be a discussion of the world genera and the limitation of the tribe *Helconini*.

Key to the palearctic genera

1. Analcell with two transverse nervures 2.
- Analcell with only one transverse vein *Aspidocolpus* Wesm.
2. Hind femur (fig. 1 A) with a tooth *Helconidea* Vier.
- Hind femur with no tooth (fig. 1 B) *Helcon* Nees.

Key to the palearctic species of *Aspidocolpus* Wesm.

1. Frontal excavation with a tooth in the middle 2.
- Frontal excavation has no tooth but with a lump. Black; antennbasis, tegulae, trochanters reddish brown. Fore and mid tibiae and tarsi yellowish brown, hind tibia brown. (Fig. 2 D, E, F and fig. 3 C, D.) Length 8 mm ... *A. borealis* Thoms.
2. 2nd tergite only punctated laterally at the base. Black; palpi, tegulae and legs red to reddish yellow. Hind tibia and tarsus darker. (Fig. 2 A, B, C and fig. 3 A, B.) Length 8—11 mm *A. carinator* Nees.
- 2nd tergite rugose and striate punctured. Black; antennae, palpi, tegulae and legs reddish brown. Hind legs sometimes darker (Fig. 2 G, H.) Length 8 mm *A. eximius* Shest.

Key to the Japanese species

(Adopted after Watanabe)

1. 2nd abscissa of the radius as long as or longer than the 2nd abscissa of the cubitus; radial cell of the hind wing petiolate; 1st tergite rugose, longitudinally carinate at the base 2.
- 2nd abscissa of the radius shorter than the 2nd abscissa of the cubitus; radial cell of the hind wing sessil; antennae brownish red on the basal third; 1st and 2nd tergites rugose, the longitudinal carinae of the 1st tergite slightly indicated;

Entomol. Ts. Arg. 88. H. 3-4, 1967

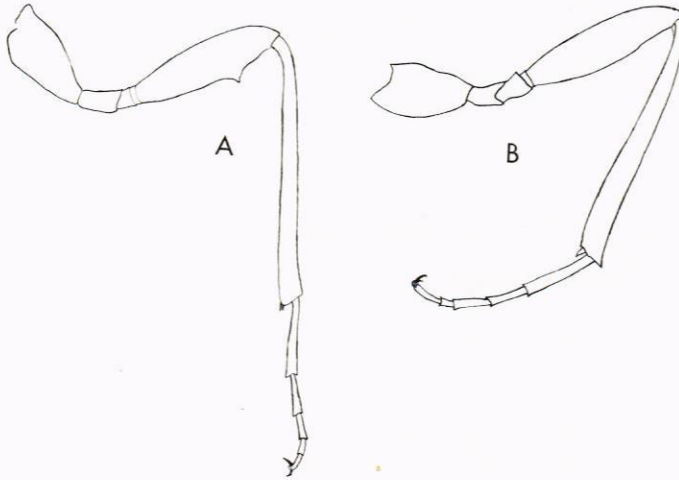


Fig. 1. A. Hind femur of *Helconidea* Vier., B. Hind femur of *Helcon* Nees.

- ovipositor a little shorter than the thorax and abdomen united. Length 11 mm
 *A. jozanum* Watan.
2. Antennae black, with a white ring at the middle; ovipositor longer than the body, the sheath with a white ring at the apex. Length 10 mm . . . *A. albiterebra* Watan.
- . Antennae entirely black 3.
3. Clypeus pointed at the middle of the anterior margin, but not forming a dentiform projection; face coarsely rugose; notaulices deeply impressed, coarsely crenulate, and converging on a smooth sunken area; 1st abscissa of the radius slightly shorter than one-third of the 2nd, which is slightly longer than the 2nd abscissa of the cubitus; 1st tergite slightly longer than the apical width, obviously widened toward the apex and fully twice as wide apically as basally; ovipositor — sheath shorter, and as long as the thorax and abdomen taken together. Length 8 mm *A. aino* (Watan.)
- . Clypeus forming a dentiform projection at the middle of the anterior margin; face closely punctate; notaulices broadly and shallowly impressed closely crenulate, and converging on a coarsely reticulate sunken area; 1st abscissa of the radius as long as or slightly longer than the 2nd, which is slightly shorter than the 2nd abscissa of the cubitus; 1st tergite obviously longer than its apical width, slightly widened toward the apex and nearly 1.3 times as wide apically as basally; ovipositor-sheath longer, about 1.3 times as long as the whole body. Length 6—7 mm *A. semanoti* Watan.

A. maximus Szepl. not included because no specimens seen.

A. borealis Thoms.

Thomson, Opusc. Entom. p. 16, p. 1726, 1891.

Host: *Chlorophorus herbsti* Brehm (leg. T.-E. Leiler).

Distribution: Sweden and Kamtchatka (East Siberia).

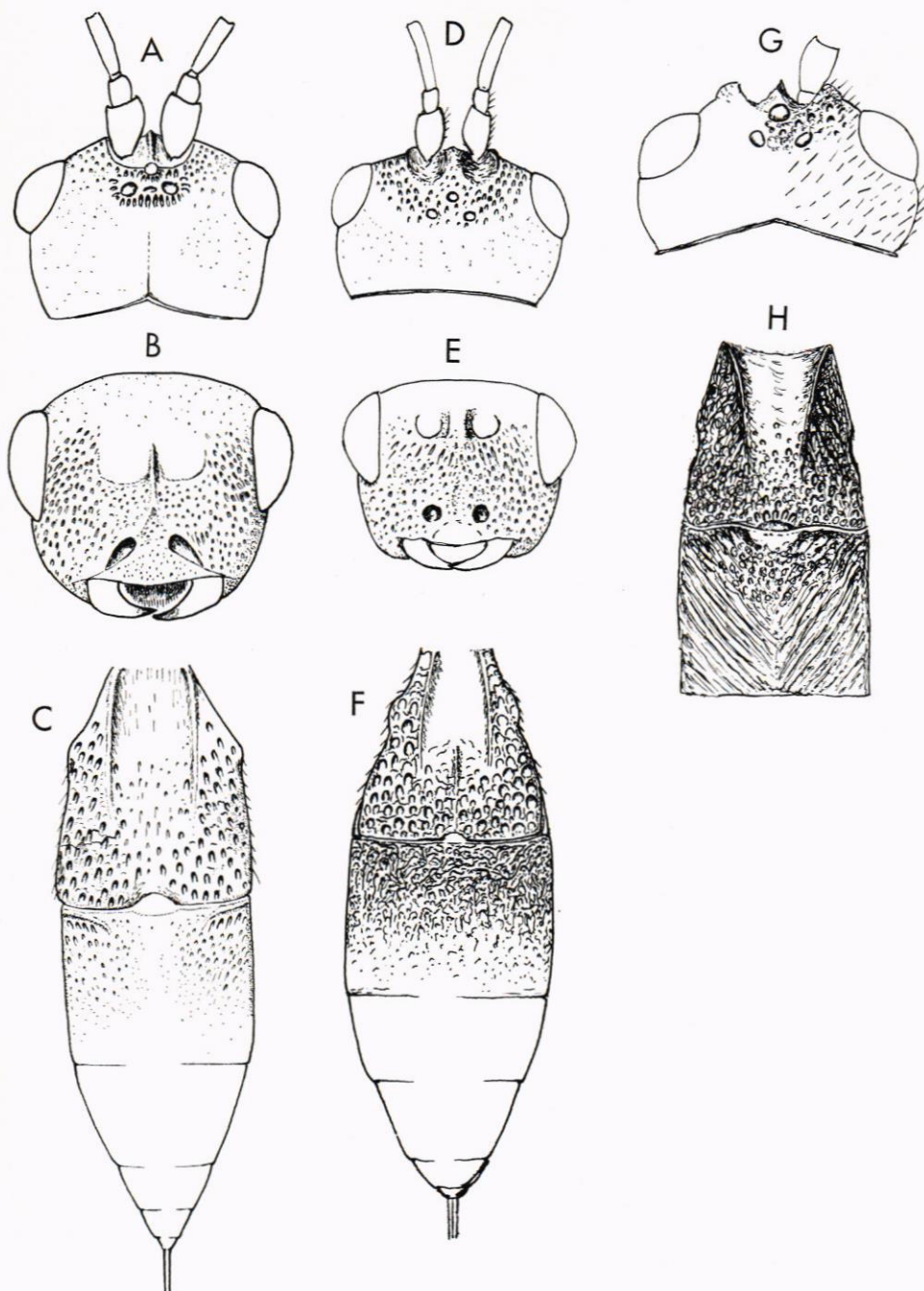


Fig. 2. *Aspidocolpus carinator* Nees. A. Head in dorsal view. B. Head in frontal view. C. Gaster. *Aspidocolpus borealis* Thoms. D. Head in dorsal view. E. Head in frontal view. F. Gaster. *Aspidocolpus eximius* Shest. G. Head in dorsal view. H. 1st and 2nd tergite of gaster.

A. carinatus Nees

Nees, Magaz. Ges. Naturf. Fr. Berlin. VI, p. 218, 1812.

Syn.: *Helcon helveticus* Haller, Mitt. schweiz. ent. Ges. IV, p. 4, p. 201, 1895.

Host: *Xylonites retusus* Ol., *Phymatodes testaceus* L. and *Callidium violaceum* L.

Distribution: Europe, Sibiria. Sweden (provinces Öland and Uppland).

A. eximius Shest.

Shestakow, Ark. f. Zool. 32 A, p. 19, 1940.

Host: unknown.

Distribution: East Sibiria.

A. albiterebra Watan.

Watanabe, Ins. Mats. VI, p. 30, 1931.

Host: unknown.

Distribution: Japan.

A. aino (Watan.)

Watanabe, Ins. Mats. VI, p. 29, 1931. (*Helcon aino* Watan.)

Host: unknown.

Distribution: Japan.

A. jozanum Watan.

Watanabe, Ins. Mats. VI, p. 28, 1931.

Host: unknown.

Distribution: Japan.

A. semanoti Watan.

Watanabe, Ins. Mats. 18, p. 81, 1954.

Host: *Semanotus rufipennis* Motsch.

Distribution: Japan.

Key to the palearctic species of Helconidea Vier.

1. Scutellum very strongly rugose 2.
- Scutellum smooth and finely punctated 3.
2. Propodeum strongly areolated in the middle. Cheek weakly punctated. 1st abscissa of the radius half as long as 2nd abscissa. Black; apex of tegulae, palpi and legs dark reddish brown. (Fig. 4 A, B.) Length 10–12 mm *H. ruspator* (L.)
- Propodeum not distinctly areolated. Cheek strongly punctated. Black; fore leg, mid leg, hind tibia and hind tarsus dark reddish brown; the rest of hind leg dark brown (fig. 4 C, D). Length 8.5–9 mm *H. orientalis* (Shest.)

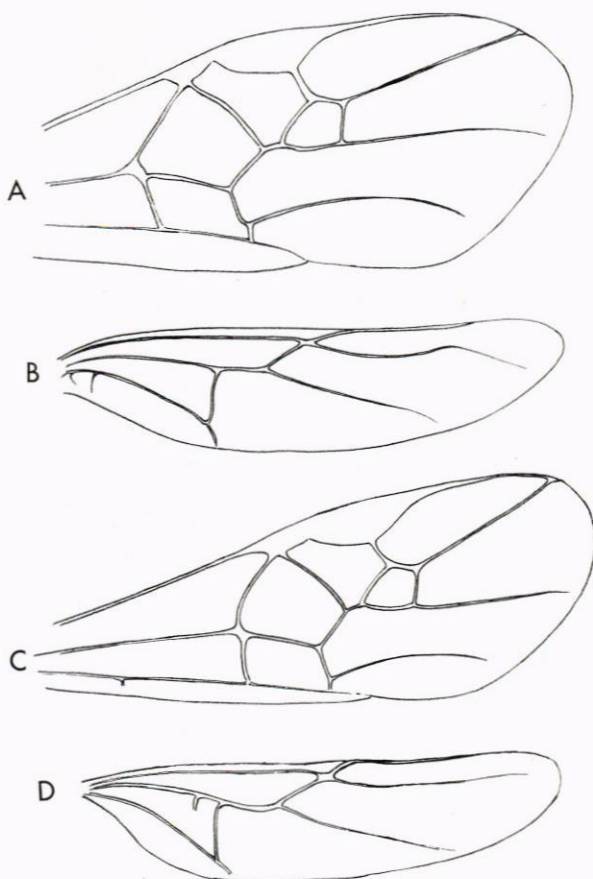


Fig. 3. *Aspidocolpus carinator* Nees, A. Fore wing and B. Hind wing. *Aspidocolpus borealis* Thoms., C. Fore wing and D. Hind wing.

3. Antennae with a white ring. Black; palpi and legs dark reddish brown. Antennae with a white ring in the middle. Apex of first and 2nd to 3rd segments of mid tarsus, 1st segment except base of hind tarsus and 2nd to 4th yellowish white. Hind tibia dark brown to black (fig. 5 A, B, C). Length 9—10 mm
 *H. spinator* (Lep.)
- Antennae with no white ring 4.
4. Tarsi white. Black with legs reddish brown except tarsi. Longitudinal carinae of the 1st tergite extending beyond the middle. Length 9—15 mm
 *H. uchidai* Watan.
- Tarsi not white 5.
5. Thorax flat with no strongly prominent median lobe of mesonotum. Black; antennae dark brown, fore and middle legs reddish yellow, the coxae black, and the tarsi pale testaceous, hind legs black; trochanters and basal half of the femora yellowish red, tibiae at extreme base yellowish and tarsi pale testaceous. 2nd transverse vein in the anal cell of fore wing antefurcal. Scutellum almost smooth, with scattered weak punctures. Length 8.5—9 mm
 *H. planidorsum* Watan.

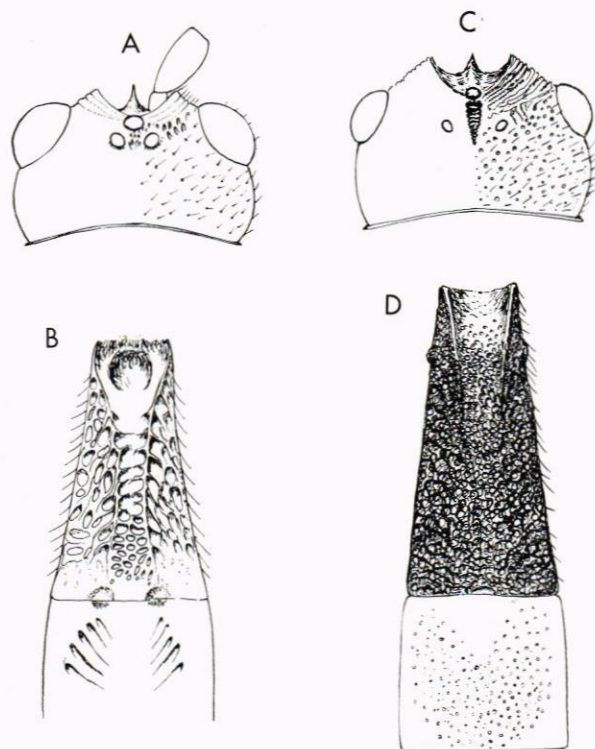


Fig. 4. *Helconidea ruspator* (L.), A. Head in dorsal view and B. 1st and 2nd tergite of gaster. *Helconidea orientalis* Shest., C. Head in dorsal view and D. 1st and 2nd tergite of gaster.

- . Thorax not flat with prominent median lobe of mesonotum. Black; palpi, tegulae and legs reddish brown. Hind tibia dark brown. 2nd transverse vein in the anal cell of the fore wing postfurcal. Length 10—12 mm. (Fig. 6 A, B.)

..... *H. dentator* (F.)

H. armator Marsh. I have not included in the key because I have not seen specimens and according to the description this species looks dubious.

H. ruspator (L.)

Linné, Syst. nat. Ed. 10 a, I, p. 565, 1758 (*Ichneumon ruspator* L.)

Host: *Strangalia quadrifasciata* L., *Acanthocinus aedilis* L.

Distribution: Europe, West Asia, Saghalien, Japan, Korea. Sweden (Prov. Skåne—Uppland).

H. orientalis (Shest.)

Shestakow, Ark. f. Zool. 32 A, p. 19, 1940. (*Helcon orientalis* Shest.)

Host: unknown.

Distribution: Sedanka, East Sibiria.

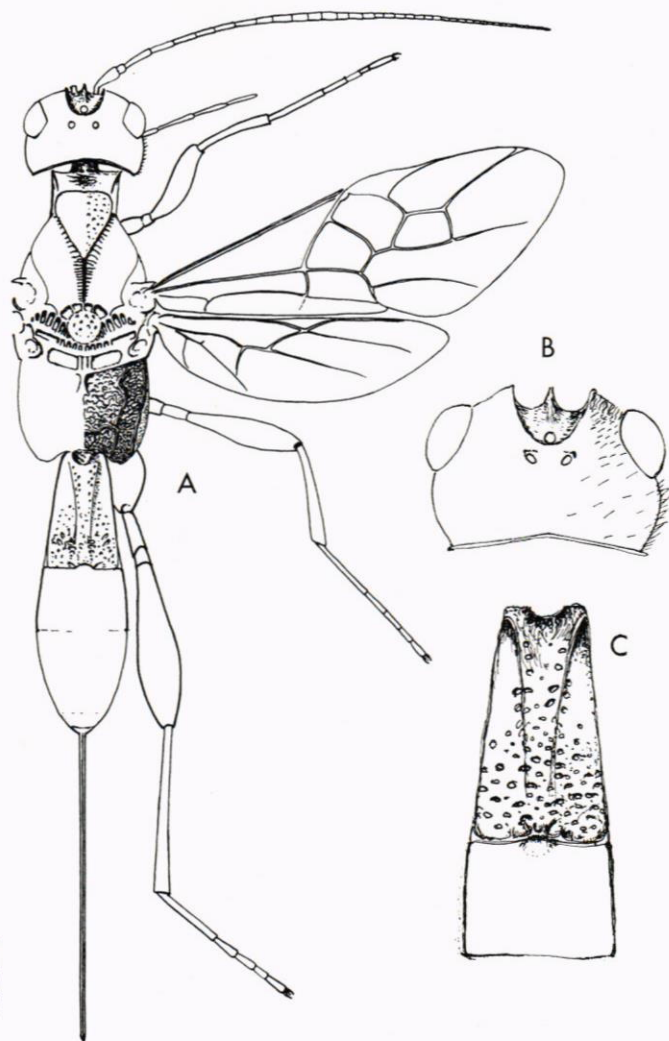


Fig. 5. *Helconidea spinator* (Lep.), A. Female, B. Head in dorsal view and C. 1st and 2nd tergite of gaster.

H. spinator (Lep.)

Lepelletier, *Encycl. Méthod. Insect.* X, p. 41, 1825. (*Helcon spinator* Lep.)

Syn.: *Helcon annulicornis* Nees, *Ichneum. affin. Monogr.* I, p. 231, 1834.

Host: *Phymatodes pusillus* F. (leg. Th. Palm).

Distribution: Europe, Japan. Sweden (Prov. Blekinge and Småland).

H. uchidai Watan.

Watanabe, *Ins. Mats.* VI, p. 25, 1931.

Host: unknown.

Distribution: Japan, Saghalien.

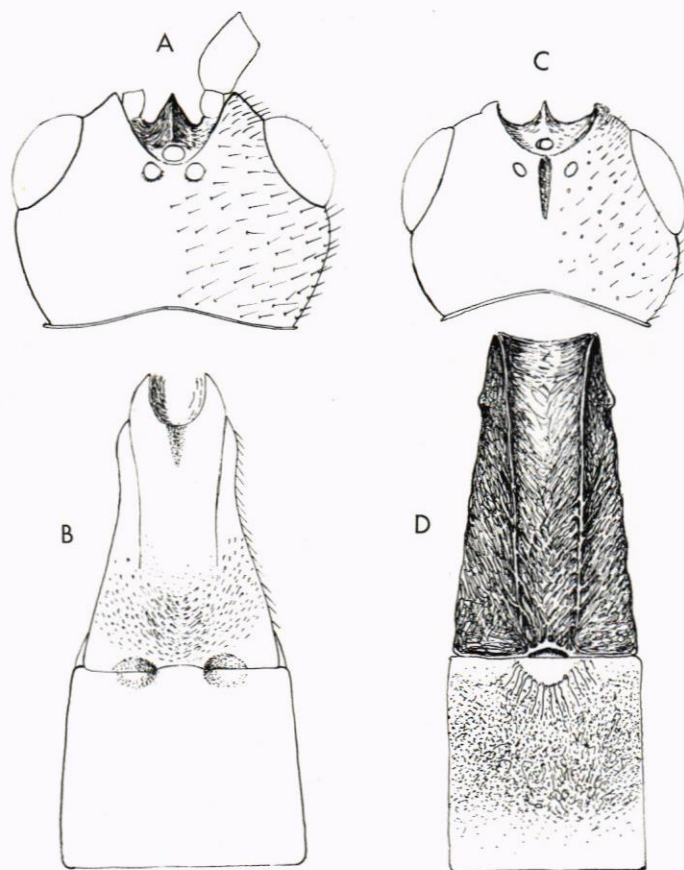


Fig. 6. *Helconidea dentator* (F.), A. Head in dorsal view and B. 1st and 2nd tergite of gaster. *Helcon heinrichi* sp.n., C. Head in dorsal view and D. 1st and 2nd tergite of gaster.

H. planidorsum Watan.

Watanabe, Ins. Mats. 18, p. 27, 1952.

Host: *Dere thoracica* White.

Distribution: Japan.

H. dentator (F.)

Fabricius, Syst. Piez., p. 114, 1804. (*Pimpla dentator* F.)

Syn.: *Helcon aequator* Nees, Magaz. Ges. Nat. Fr. Berlin. VI, p. 219, 1812.

Host: *Tetropium castaneum* L., *T. fuscum* F., *T. gabrieli* Weise, *Callidium violaceum* L. and *Monochamus sartor* F.

Distribution: Europe, West Asia, Saghalien. Sweden (Prov. Skåne—Uppland).

Key to the palearctic species of *Helcon* Nees

-. Antennae with a white ring before the middle. 2nd to 4th joints of the tarsi whitish yellow. Ovipositor as long as the propodeum and abdomen united. Black

- with legs dark brown to black except 2nd to 4th joints of tarsi. Length 9—11 mm
 *H. tricolor* Watan.
- . Antennae without a white ring 2.
2. Malar space as long as the breadth of an eye. Black with tegulae, mandibles, palpi and legs reddish brown. Length 10—14 mm (fig. 7 F, G) *H. tardator* Nees.
- . Malar space as long as half the breadth of an eye or shorter 3.
3. 1st tergite with very short carinae only visible at extreme base. Black with palpi, tegulae and legs reddish brown, hind leg more or less blackish brown. Length 9—10 mm (fig. 7 D, E) *H. redactor* (Thunb.)
- . 1st tergite with two longitudinal carinae 4.
4. 2nd tergite nearly smooth. Black with palpi, tegulae and legs reddish brown. Hind tibia sometimes darker. Length 5—8 mm (fig. 7 A, B)
 *H. claviventris* Wesm.
- . Basal part of 2nd tergite finely rugose. Black with palpi, tegulae and legs reddish brown. Hind tibia darker. Length 7—10 mm (fig. 6 C, D) *H. heinrichi* sp.n.

H. tricolor Watan.

Watanabe, Ins. Mats. VI, p. 26, 1931.

Host: unknown.

Distribution: Japan.

H. tardator Nees

Nees, Magaz. Ges. Nat. Fr. Berlin. VI, p. 218, 1812.

Syn.: *Helcon angustatus* Nees, *ibid.*, p. 219. *Helcon cylindricus* Wesmael, Nouv. Mém. Acad. Sci. Bruxelles, IX, p. 183, 1835.

Host: *Callidium violaceum* L., *Plagionotus arcuatus* L.

Distribution: Europe, West and North Asia, Korea. Sweden (Prov. Blekinge—Uppland).

H. redactor (Thunb.)

Thunberg, Bull. Acad. Sci. St. Petersburg. VIII, p. 273, 1822. (*Ichneumon redactor*).

Syn.: *Helcon femoralis* Thomson, Opusc. ent. p. 1725, 1891. *Helcon yezonicum* Watanabe, Ins. Mats. VI, p. 26, 1931.

Host: *Tetropium fuscum* F.

Distribution: North Europe, Sibiria, Saghalien, Japan. Sweden (Prov. Skåne—Lappland).

H. claviventris Wesm.

Wesmael, Nouv. Mém. acad. sc. Bruxelles, IX, p. 184, 1835.

Host: *Melandrya caraboides* L.

Distribution: Europe.

H. heinrichi sp.n.

♂. Black; palpi, tegulae and legs reddish brown. Hind tibia and tarsus brown. Antennae dark brown. Wing veins brown.

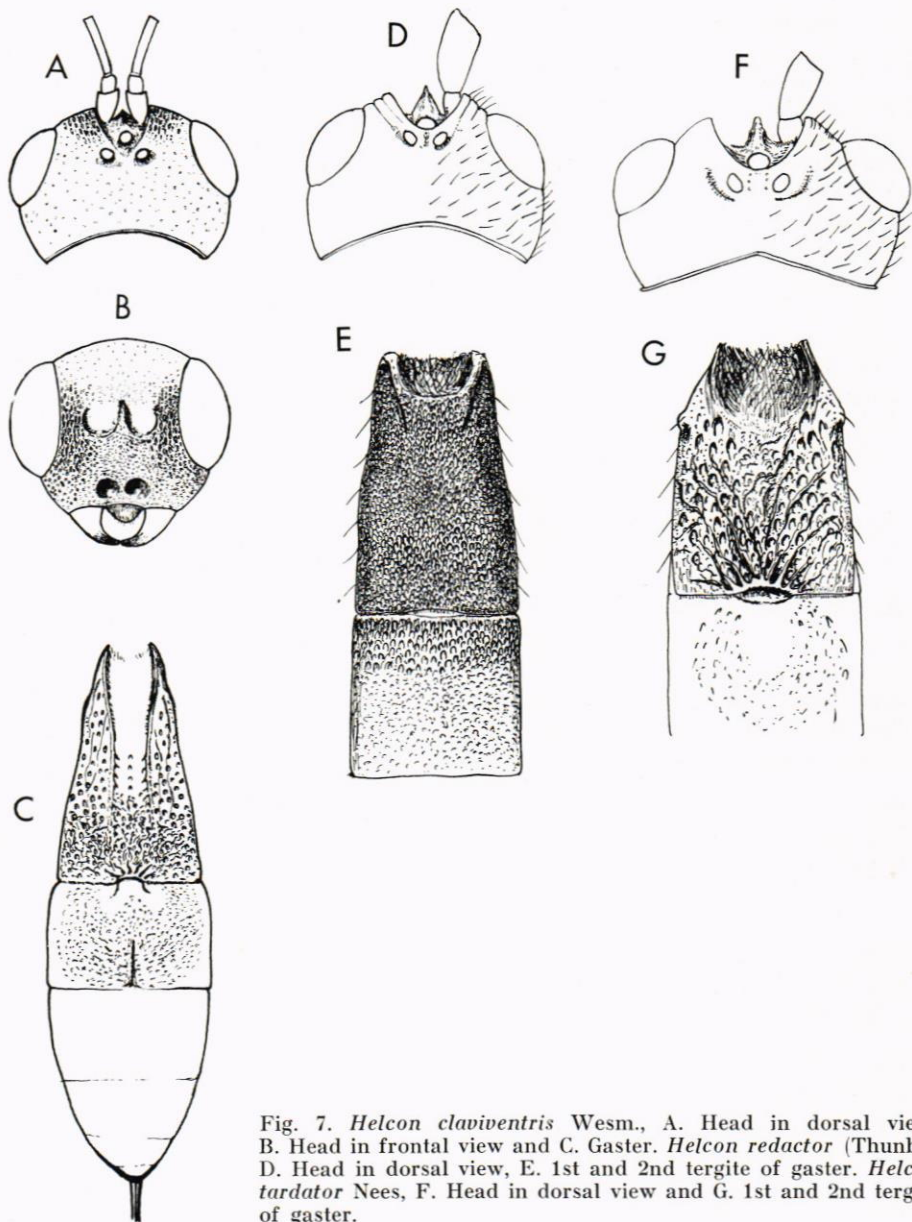


Fig. 7. *Helcon claviventris* Wesm., A. Head in dorsal view, B. Head in frontal view and C. Gaster. *Helcon redactor* (Thunb.), D. Head in dorsal view, E. 1st and 2nd tergite of gaster. *Helcon tardator* Nees, F. Head in dorsal view and G. 1st and 2nd tergite of gaster.

Head (fig. 6 C) with face rugose, cheek and vertex smooth with weak, scattered punctures. The space between ocelli very narrow. Malar space half the breadth of an eye. Antennae with 46 joints, as long as the body. Mesonotum smooth with crenulated notaulices. Median lobe of mesonotum prominent. Scutellum smooth with few scattered punctures. Pronotum, mesopleura

except an area in the middle and propodeum rugose. 1st tergite (fig. 6 D) rugose with two longitudinal carinae, 2nd tergite (fig. 6 D) fine rugose basally. Fore wing with 1st abscissa of radius nearly as long as 2nd abscissa. 2nd transverse vein in the anal cell interstitial.

♀. Unknown.

Length: 7—10 mm.

Holotype: In the collection of the Swedish Museum of Natural History, Stockholm.

Iran, Elburs (400 meters), 4. VI, 1927, leg. G. Heinrich.

Paratype: 4 ♂. 3 ♂ in the same collection as above and from the same locality.

1 ♂ in coll. mea.

Helcon heinrichi sp. n. is near related to *H. clavicornis* Wesm. Differs having 2nd tergite basally rugose. See also the key (p. 141).

References

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WATANABE, C.: A contribution to the knowledge of the braconid fauna of the empire of Japan. — Jour. Facul. Agr. Hokkaido Imp. Univ. Sapporo. XLIII, pp. 1—204, 1937.