

Key to the DEB (Dryinidae, Embolemidae, Bethylidae) genera.
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Key to the families of the Chrysoidea

- 1A. Antenna with 10 segments.2
 1B. Antenna with 12-13 segments.....3
- 2A. Head in lateral view triangular, with antennae projecting from the apex of the head and remote from the mouth. Wings of male (female wingless) with four enclosed cells, including one in the middle of the wing. Fore tarsus with normal claws.**Embolemidae (*Embolemus ruddii* (Westwood, 1833))**

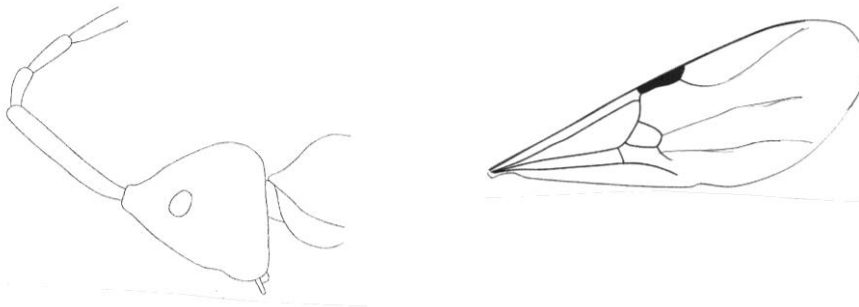


Fig. 30 – Lateral view of head and fore wing of *Embolemus*

- 2B. Head in lateral view rounded, antennae low down near the mouth. Wings, if present, with one or three enclosed cells at the base of the wing. Fore tarsus usually chelate in female, otherwise normal. (Sexes usually difficult to separate). ..**Dryinidae**

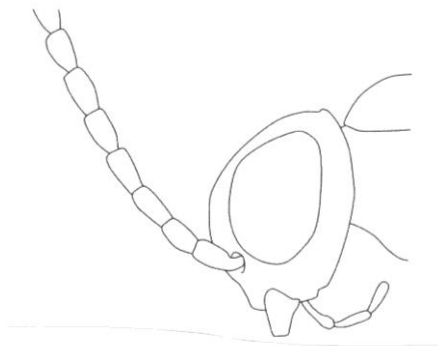


Fig. 31 - Lateral view of head of an dryinid

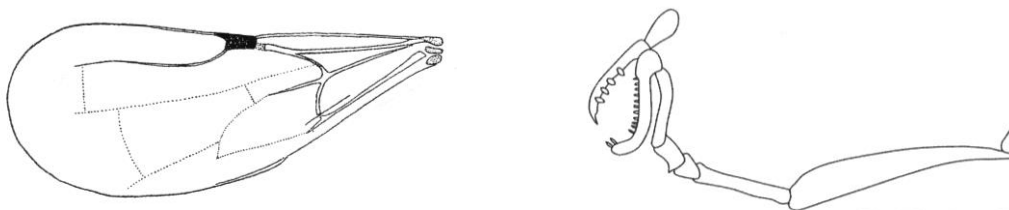


Fig. 32 – View of fore wing (*Pseudisobrachium*) and a chela of a dryinid

- 3A. Gaster with three to five visible tergites. Body, at least in part, with bright metallic colouration and strongly and coarsely punctures.**Chrysididae**
- 3B. Gaster with more than five visible tergites. Body dark and not metallic, and only superficially sculptured.**Bethylidae**

Key to the genera of the Dryinidae

- 1A. Fore tarsi of female not chelate. Fore wings with one enclosed cell (Fig. 40A). (To sex need to look for male genitalia) (6 species).**Aphelopus**
- 1B. Fore tarsi of females chelate (Fig. 39). Fore wings of females, if winged, and males with three enclosed cells (Fig. 40B).2

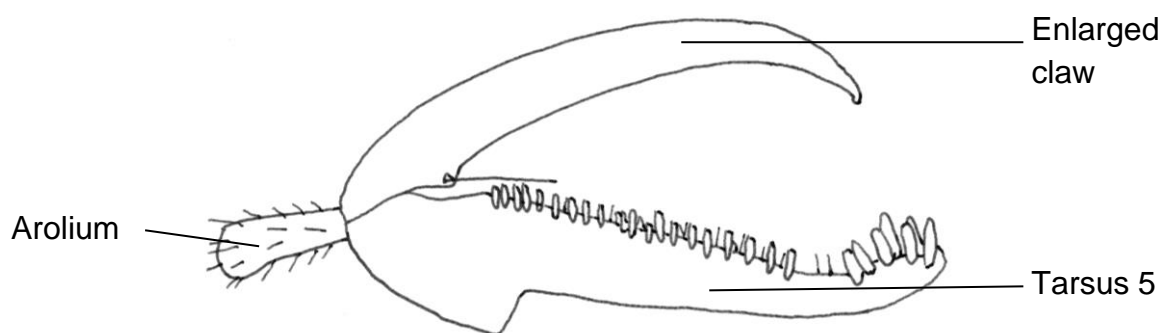


Fig. 39 – View of chelate fore tarsus of *Anteon tripartitum*



Fig. 40 - View of fore wing: A – *Aphelopus*, B – *Anteon*

- 2A. Females.3
- 2B. Males.8
- 3A. Occipital ridge complete (Fig. 41). Chela without rudimentary claw. Usually fully winged, rarely short-winged.4
- 3B. Occipital ridge absent or only visible behind ocellar triangle. Chela with rudimentary claw (may be difficult to see) (Fig.42). Fully winged or wings absent. ...6

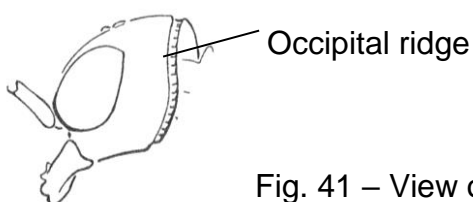


Fig. 41 – View of complete occipital carina on head.

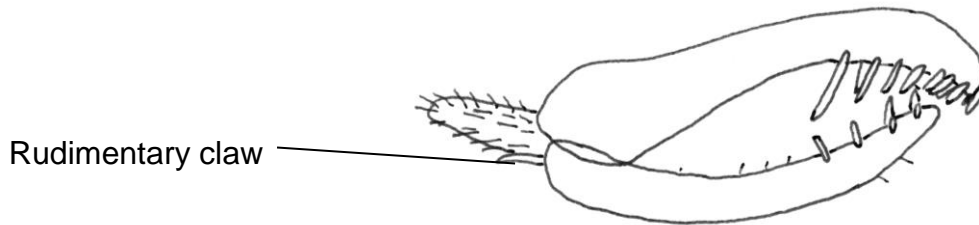


Fig. 42 – View of chela of *Dryinus niger*

4A. Short wings with wings not reaching line of apex of scutellum. Mandible with three large teeth and a rudimentary tooth between the two posterior teeth. (Note with occipital ridge complete and rudimentary claw present.) (Only two male of *Mystrophorus formicaeformis* known).

..... ***Mystrophorus formicaeformis*** Ruthe. 1859

4B. Rarely short-winged when wings extend beyond apex of scutellum. Mandible with four teeth.5

5A. Distal part of stigmal vein as long as or longer than proximal part (Fig. 43A). Epienemia complete (Fig. 44), at most narrowly erased centrally. Spur of middle leg about as long as apical breadth of tibia. (1 species).

..... ***Lonchodryinus ruficornis*** (Dalman, 1818)

5B. Distal part of stigmal vein shorter than proximal part (Fig. 43B). Epienemia absent or, at most, present as a pair of very short ridges. Spur of middle leg conspicuously longer than apical breadth of tibia. ***Anteon***



Fig 43 - Views of fore wing: A – *Lonchodryinus*, B - *Anteon*

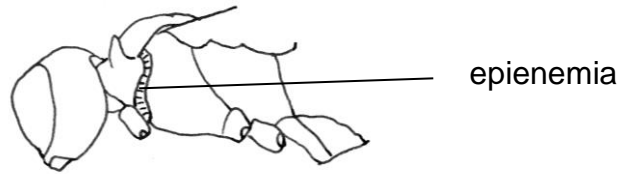


Fig. 44. View of lateral head and mesosoma to show position of epienemia

- 6A. Fully winged. Occipital ridge present dorsally. Mid-tibiae with one long spur. (2 species, few records).**Dryinus**
- 6B Wingless. Occipital ridge absent or on female maybe briefly visible on sides of posterior ocelli, never present dorsally. Mid-tibiae without a spur.7
- 7A. Maxillary/labial/ palpal formula 2/1. (1 species, 2 records).
.....**Haplogonatopus oratorius** Westwood, 1833
- 7B Maxillary/labial/ palpal formula 2/2, 3/2, 4/2, 5/2, 4/3, 5/3, 6/3, difficult to see). (9 species).**Gonatopus**
- 8A Occipital carina absent or only visible dorsally, absent on lateral side of head. Mandibles with 1-3 teeth.9
- 8B Occipital carina complete including lateral side of head. Mandibles with four teeth.11
- 9A. Occipital ridge visible on dorsal side of head, touching eyes laterally. Parameres without a dorsal lobe. (2 species, few records).**Dryinus**
- 9B. Occipital carina absent or briefly visible on sides of posterior ocelli, nearer reaching eyes laterally. Parameres with a dorsal lobe (Fig 45).10

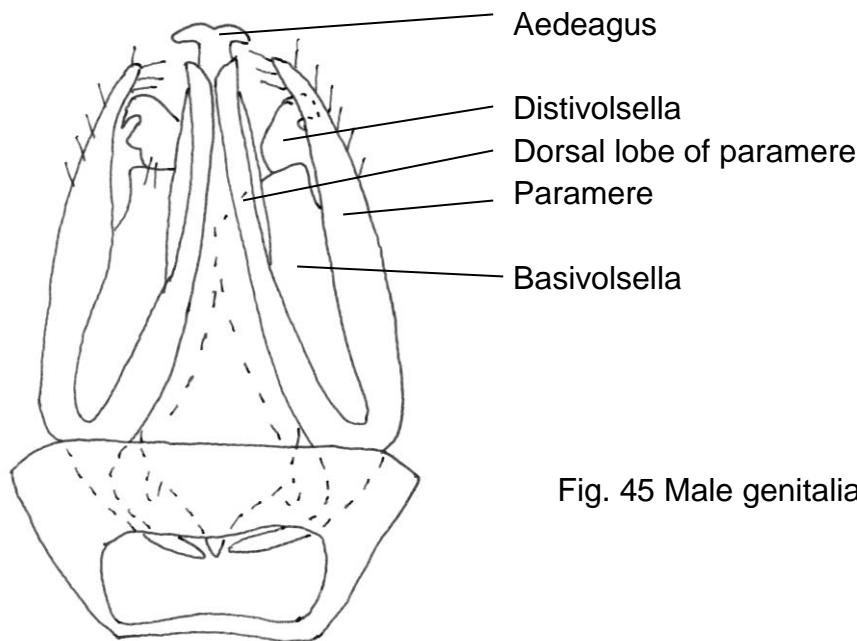


Fig. 45 Male genitalia of a dryinid

- 10A. Maxillary/labial/ palpal formula 2/1. (1 species, 2 records).
.....**Haplogonatopus oratorius** Westwood, 1833

10B Maxillary/labial/ palpal formula 2/2, 3/2, 4/2, 5/2, 4/3, 5/3, 6/3, difficult to see). (9 species). **Gonatopus**

11A. Mandible with three large teeth and a rudimentary tooth between the two posterior teeth. Wings spoon-shaped (Fig. 46). (Only two male of *Mystrophorus formicaeformis* known). **Mystrophorus formicaeformis** Ruthe, 1859

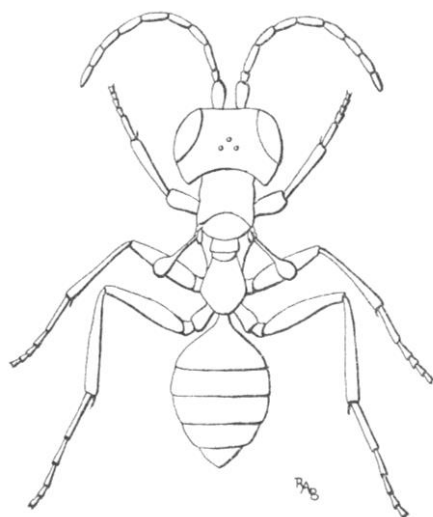


Fig.46 Dorsal view of male *Mystrophorus formicaeformis*

11B. Mandible with four teeth. Fully winged.12

12A. Distal part of stigmal vein as long as or longer than proximal part (Fig 43A). Epienemia complete (Fig. 44), at most narrowly erased centrally. Epienemia complete, at most narrowly erased centrally. (1 species).

..... **Lonchodryinus ruficornis** (Dalman, 1818)

12B. Distal part of stigmal vein shorter (Fig. 43B) than proximal part. Epienemia absent or, at most, present as a pair of very short ridges. (14 species). **Anteon**

Key to the genera of the Bethylidae

1A. Fully winged species.2

1B. Wingless or reduced wing species.11

2A. Antennae with 12 segments.3

2B. Antennae with 13 segments.5

3A. Fore-wings without a stigmal vein (Fig. 33A). (Outdoor and warehouse species).
..... **Cephalonomia**

3B. Fore-wings with a stigmal vein (Fig. 33B, 33D).4

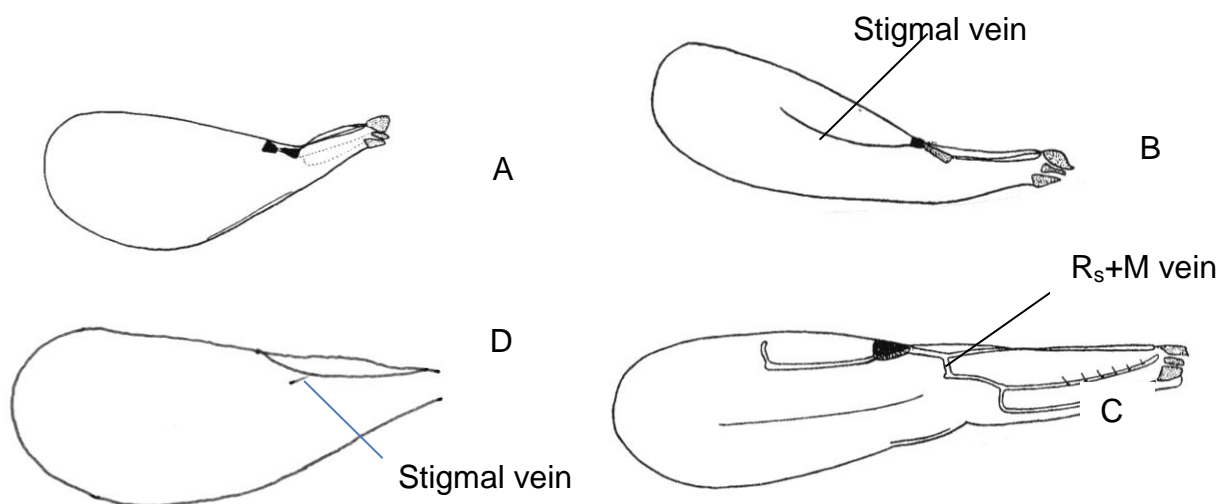


Fig. 33. View of fore wing: A – *Cephalonomia*, B – *Plastanoxus*, C – *Bethylus*, D - *Sclerodema*

4A. Length 2.2-5mm. Fore wing with R_s+M vein present (33C). Claws with a strong basal lobe and strongly curved apically. (Outdoor species).***Bethylus***

4B. Length less than 1.8mm. Fore wing without R_s+M vein absent (33B). Claws without a strong basal lobe and not strongly curved apically. (Outdoor and warehouse species, few records).***Plastanoxus***

5A. Fore-wing without R_s+M vein. 9Fig. 33D. (Outdoor species).
.....***Sclerodema domestica*** Klug, 1809

5B. Fore-wing with a R_s+M vein (Fig. 4C).6

6A. Fore-wing with $R_s +M$ vein divided basally (Fig.34A). Face with a central carina on the clypeus strongly produced between antennal sockets (Fig. 34B). Claws with a strong basal lobe and strongly curved apically. (Outdoor species).
.....***Goniozus claripennis*** (Förster, 1851)

6B. Fore-wings with R_s+M vein not forked basically (e.g. *Holepyris*) (Fig. 35A). Face with a central carina on the clypeus not produced upwards or only very weakly in *Holepyris*. Claws with a weak basal lobe, only moderately curved apically, sometimes with a pre-apical tooth^h7

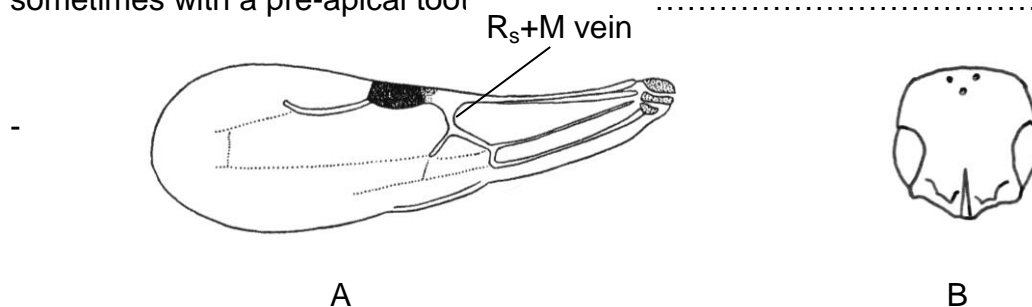


Fig. 34 – Views of *Goniozus*: A – Fore wing, B – Frontal face

- 7A. Costal cell absent (Fig. 35A). Metanotum centrally absent so that apex of mesoscutellum and base of propodeum are contiguous (Fig 36A).8
 7B. Costal cell present (Fig. 35B) Metanotum present centrally so mesoscutellum and propodeum are separated (Fig. 36B). (Female wingless).10

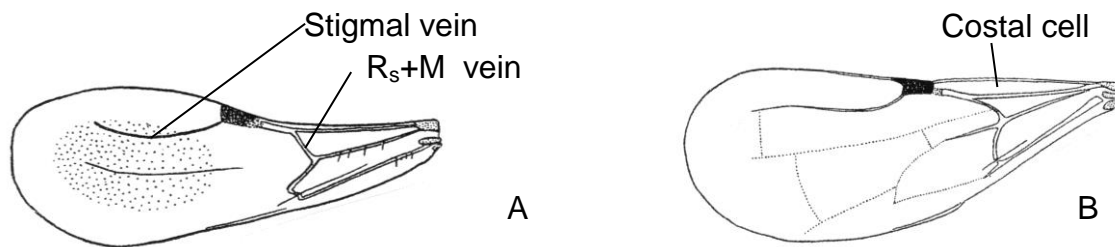


Fig. 35 – View of fore wing: A – *Holepyris*, B – *Pseudisobrachium*5

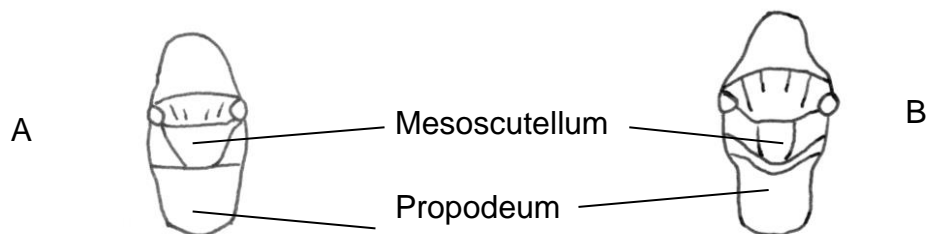


Fig. 36 – View of mesosoma: A – *Epyris*, B - *Pseudisobrachium*

- 8A. Fore wings with the stigma vein shorter than the R_s+M vein (Fig. 37)
 (Outdoor species, few records).***Laelius***
 8B. Fore wings with the stigma vein longer than the R_s+M vein (Fig . 35A).9

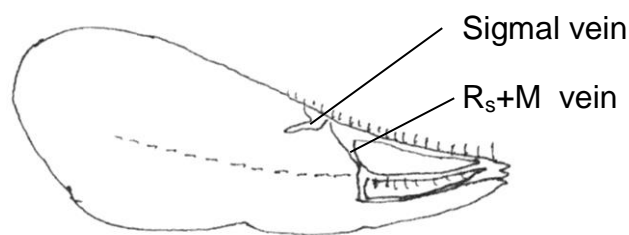


Fig. 37 – View of fore wing *Laelius*

- 9A. Scutellum with two impressions, either circular or transverse. Clypeus with no notch on each side of central lobe. (Outdoor species).***Epyris***
 9B. Scutellum impression absent. Clypeus with a notch on each side of central lobe. (Warehouse species).***Holepyris***

10A. Eyes hairy. Scutellum with a strong anterior transverse impression. Gaster red. Claws with a preapicaltooth. (Outdoor species, 1 record).

.....***Pristocera depressa*** (Fabricius, 1805)

10B. Eyes bare. Scutellum with no anterior transverse impression. Gaster black. Claws without a preapicaltooth (Outdoor species).

.....***Pseudisobrachium subcyaneum*** (Haliday, 1838)

11A. Propodeum oval and constricted anteriorly where it joins the thorax (Fig. 38 A, B). Antennae with 13 segments. Wings absent. (Females)12

11B. Propodeum sub-rectangular (rounded posteriorly) and not constricted anteriorly where it joins the thorax (Fig. 38C). Antennae with 12 or 13 segments. Wings present, at least as scale-like rudiments.13

12A. Females propodeum broadly in contact with mesonotum; eyes small but present; mesoscutum transverse (Fig. 38A); Head not much longer than broad; entirely pale brownish-yellow coloured. For males eyes not hairy; metasoma red; clypeus with a broadly rounded central lobe; claws with a preapical tooth. (Outdoor species, 1 record).***Pristocera depressa*** (Fabricius, 1805)

12B. Females propodeum narrowly in contact with mesonotum; eyes absent; mesoscutum elongate (38B); head longer than broad; entirely pale brownish coloration. For males eyes hairy; metasoma black; clypeus with a projecting four-sided lobe (sides not parallel) and truncate anteriorly. (Outdoor species).***Pseudisobrachium subcyaneum*** (Haliday, 1838)