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A Revision of some Western Palaearctic Oxytorine Genera Part II Genus *Eusterinx*

(Hymenoptera, Ichneumonidae)

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Abstract

A key to the Palaearctic Oxytorine Genera is given.

A new Genus *Proelicator* is introduced with two new species, viz. *P. proprius* (Type species) from the Palaearctic and *P. captiosus* from Alaska (U. S. A.).

Redescriptions of Western Palaearctic species of *Eusterinx* Förster are presented with keys for the identification. Five new species are proposed: *E. aquilonigena*; *E. circaea*; *E. disparilis*; *E. tartarea*; *E. refractaria*.

The Genus *Ephalmator* van Rossem, 1980 is a synonym of *Plectiscidea* Viereck, 1914.

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Key to the palaearctic genera of Oxytorinae¹⁾

1. Hind margin of apical truncation of scape membranous and in dried specimens somewhat infolded, the scape inflated and with a very oblique apical truncation. Areolet absent. Ovipositor shorter than apical truncation of gaster. First tergite long and approximately straight, its spiracle at or in front of middle. *Megastylus*
- Hind margin of apical truncation of scape not membranous. Otherwise not entirely as above 2

¹⁾ On the ground of the key by TOWNES, 1971

2.	Second recurrent vein with one bulla	3
–	Second recurrent vein with two bullae	5
3.	Head strongly protuberant just below antennal sockets. Apical fringe on hind side of hind tibia dense, its upper end slanted basad. Nervulus distad of basal vein by about 0.65 its length	<i>Microleptes</i>
–	Head not strongly protuberant below antennal sockets. Apical fringe on hind side of hind tibia not unusually dense, its upper end not slanted basad. Nervulus approximately opposite basal vein	4
4.	First abdominal segment slender, its sternite ending behind the middle. Areolet present except in one species. Apical 0.3 of female gaster compressed. Ovipositor sheath very broad, almost flat	<i>Oxytorus</i>
–	First abdominal segment rather stout, 1.1 to 2.0 as long as wide. Areolet absent. Ovipositor sheath not wide and flattened	<i>Hemiphanes</i>
5.	Apex of first sternite in front of the middle of its tergite, the sternite not fused with its tergite. Glymma present (but shallow), except in <i>Hyperacmus</i>	6
–	Apex of first sternite at or behind the middle of its tergite, the sternite usually fused with its tergite. Glymma absent	15
6.	Epipleura of tergites 2 and 3 not separated by a crease	7
–	Epipleura of tergite 2, and usually of tergite 3, separated by a crease	8
7.	Arolet absent. Discoidella present and strong. Propodeum sculptured, with median and sublateral carinae present. Ovipositor not surpassing end of gaster	<i>Hyperacmus</i>
–	Arolet present	7 ^a
7 ^a .	Propodeum smooth, lacking median carinae and the sublateral carinae absent or present only near hind end of propodeum. Basal and apical transverse carinae absent .	<i>Aperileptus</i>
–	Propodeum not smooth. Median carinae present from apical transverse carina towards base of propodeum. Sublateral carinae present. Apical transverse carina present	<i>Plectiscidea</i>
8.	Arolet present (<i>Entypoma</i> will key through both halves of the couplet)	9
–	Arolet absent	10
9.	Clypeus about 2.3 as wide as long. Ovipositor with a subapical dorsal notch	<i>Kentrotryphon</i>
–	Clypeus about 1.3 to 1.7 as wide as long. Ovipositor with a faint subapical dorsal impression	<i>Entypoma</i>
10.	Portion of cubitus between intercubitus and second recurrent vein less than 0.3 as long as second recurrent vein	11
–	Portion of cubitus between intercubitus and second recurrent vein 0.5 to 0.7 as long as second recurrent vein	14
11.	Nervellus inclivous. Male flagellum with apex of third segment and base of fourth segment not notched on outer side	12
–	Nervellus vertical or reclivous. Male flagellum with apex of third segment and base of fourth segment roundly notched on outer side	13
12.	Clypeus 1.3 to 1.6 as wide as long. Tip of mandible moderately twisted	<i>Entypoma</i> (in part)

- Clypeus about 3.0 as wide as long. Tip of mandible hardly at all twisted *Allomacrus*
- 13. Occipital carina broadly interrupted dorsally. Tip of mandible strongly twisted so that lower tooth is obliquely behind upper tooth. Front wing 3.0 to 4.7 mm long. *Apoclima*
- Occipital carina complete dorsally. Tip of mandible not twisted. Front wing 6.5 to 7.9 mm long *Cylloceria*
- 14. Notaulus present, with a short vertical carina on its front side. First tergite 1.5 to 2.2 as long as wide. Discoidella present. Ovipositor sheath 1.4 to 2.6 as long as hind tibia *Aniseres*
- Notaulus present or absent, when present without a vertical carina on its front side. First tergite 1.9 to 3.6 as long as wide. Discoidella present or absent. Ovipositor sheath about 0.15 as long as hind tibia *Pantisarthrus*
- 15. Epipleura of tergites 2 and 3 not separated by a crease 16
- Epipleura of tergite 2, and usually also of tergite 3, separated by a crease 17
- 16. Petiolar area of propodeum about 1.25 as long as combined areola and basal area in male, about 1.8 as long in female. First tergite mat to subpolished, arched. Flagellar segments of female rather stout, the second flagellar segment about 4.0 as long as wide. Clypeus very narrow, its foveae large or very large *Dialipsis*
- Petiolar area of propodeum around 1.2 as long as combined areola and basal area. First tergite strongly mat, flat above to somewhat arched. Flagellar segments of female slender, the second flagellar segment 4.2 to 6.0 as long as wide. Clypeus of moderate width to narrow *Plectiscidea*
- 17. Tip of mandible as seen from outer side, very narrow and with a single point, the tip twisted by 80° to 90° so that lower tooth is inside, or the lower tooth sometimes lacking. Ovipositor sheath 0.4 to 2.5 as long as apical depth of gaster 18
- Tip of mandible, as seen from outer side, moderately narrow but with lower tooth visible, the tip not twisted or only moderately twisted. Ovipositor sheath at least 0.5 as long as apical depth of gaster 19
- 18. Discoidella entirely lacking. Scape not especially large. Ovipositor sheath 1.0 to 2.5 as long as apical depth of gaster *Eusterinx*
- Discoidella often present, at least as a trace, in those species with discoidella lacking the scape very large. Ovipositor sheath about 0.4 as long as apical depth of gaster *Helictes*
- 19. Areolet absent, the intercubitus short or obliterated by approximation or touching of radial and cubital veins. Tergites 1 and 2 polished and usually without wrinkles. Worldwide *Proditus*
- Areolet present, or if absent the intercubitus moderately long 20
- 20. Ovipositor upcurved. Flagellum without tyloids. Hind femur rather stout (about 3× as long as wide). Groove between face and clypeus often little developed. Clypeus rather flat. *Laepserus*
- Ovipositor straight. Flagellum often with tyloids. Hind femur not exceptionally stout .. 21
- 21. Maximum length of ovipositor 0.22–0.26 of length front wing 22
- Maximum length of ovipositor not beyond 0.16 of length front wing 23

- 22. Relatively large specimens. Front wing about 5.0 mm. Females with inner eye margins parallel. Postannellus very slender, 7.0–9.0 as long as wide. Mesoscutum with strong and deep notauli, meeting in centre. Hind tibia long and slender. First and second tergite with rough sculpture, following tergites gradually more smooth. Ovipositor 0.25 of length front wing. Western Palaearctic Region *Phosphorus*²⁾
 - Smaller specimens, front wing 3.3–3.5 mm. Postannellus not conspicuously slender. Tyloids on flagellar segments 6–8. Notauli rather obsolete. Hind tibia not slender. First tergite coriaceous, following tergites for the greater part polished or coriaceous. Ovipositor long, 0.24–0.26 of length front wing. Holarctic Region *Proelior* (page 152)
- 23. Claws of hind tarsus exceptionally large. Hind femur 3.5 as long as wide. Clypeus 1.6 as wide as long. Inner margins of eyes of both sexes converging to clypeus. *Catastenus*
 - Claws of hind tarsus normal 24
- 24. Flagellum without tyloids. Females with inner eye margins strongly converging to clypeus. Ovipositor concealed within subgenital plate, except *Symplecis invisitata* with long ovipositor (0.16 of length front wing). *Symplecis*
 - Flagellum with tyloids on segments 5–7, longitudinal carinae. Females with inner eye margins parallel. Ovipositor 0.1 of length front wing behind apex of gaster. *Plectiscidea*

Proelior, new genus

Characteristics of the type species: *Proelior proprius* nova species. Front wing 3.0–4.2 mm. The main character in which this genus differs from *Eusterinx* lies in the tip of the mandible which has the lower tooth visible, the tip not twisted, about half the length of upper tooth. In TOWNES' key (1971), page 183, this would lead to item 23 (*Blapticus*, *Symplecis* and *Catastenus*). We may conclude that the material concerned belongs to an undescribed genus and species.

Body moderately slender, the gaster depressed. Clypeus elliptical, basal margin convex, the rest weakly concave. Flagellum slender, tyloids on flagellar segments 6–8, somewhat flattened and polished areas. Epomia long. Notauli present, but rather faint. Scutellum without carina. Propodeum with all carinae, but without costula. Front wing with areolet. Second recurrent vein inclivous, with two bullae. Nervulus inclivous, meeting basal vein or slightly distally. Mediella strongly arched apically. Nervellus vertical, discoidella lacking. First tergite about 2.2 as long as wide, spiracles at 0.4 of length, coriaceous, median dorsal carinae present or obsolete, except for proximal part. Second tergite with coriaceous sculpture proximally, distally polished. Following tergites polished. Ovipositor straight. Two species are known from the Holarctic Region. The generic name is from the latin for warrior.

Characteristics of the holotype of *Proelior proprius* mihi: Labels: Messaure, Swed., VIII. 18. 1972, leg. Karl Müller (coll. Townes, Ann Arbor). Holotype label of the present author. Female. Front wing 3.5 mm. Palpi yellow, long and slender. Mandible yellow,

²⁾ See VAN ROSSEM, 1980. Spixiana (Suppl. 4) page 129.

lower tooth visible and shorter than upper tooth. Clypeus $2\times$ as wide as long, somewhat concave, upper margin convex, with a few long erect hairs. Face polished, weakly convex, with widely placed subadpressed and erect long hairs. Frons and vertex polished. Vertex deep, head square. Occipital carina closed. Gena polished and wide. Scapus subcylindrical, pedicel large. Pronotum polished, epomia long. Mesoscutum strongly convex, polished, with widely placed subadpressed hairs. Notauli present, but rather faint, not meeting. Propodeum dorsally coriaceous, no costula present. Front wing with areolet. Legs slender, yellowish brown, with long hairs. All coxae polished. Fringe on hind tibia present. Mesopleurum polished, prepectal carina to about lower 0.3 of hind margin pronotum, not reaching margin. First tergite coriaceous. Median dorsal carinae only proximally present. Spiracles at 0.45 of length, no glymma present. Second tergite with some coriaceous sculpture proximally, further polished. Epipleura of second and third tergite separated by a crease. Following tergites polished. Second and further tergites have a row of widely placed hairs in distal 0.3 part and some scattered hairs more proximally. Ovipositor 0.24 of length front wing beyond apex of gaster, with a weak concave impression dorsally behind the tip. The sheath with widely placed, long erect hairs.

Characteristics of the male. Most characters of the male agree with the female holotype and these are not recapitulated. Tyloids on flagellar segments 6–8. First tergite coriaceous, second and third tergite for the greater part coriaceous. Hairs on tergites more spread than in the female.

The trivial name *proprius* is the latin for „characteristic“.

Material examined. – Germany: 4♀, Nd Spessart, Lochmühle, 17.–22. IX. 1971, trap, leg. van Rossem (coll. van Rossem). Sverige: ♀, holotype, Messaure (Lapland), 18. VIII. 1972, leg. Karl Müller (coll. Townes); ♀♂, Messaure, 29. VIII. 1971, leg. K. Müller (coll. Townes); 2♀, Messaure, 12. IX. 1971, leg. K. Müller (coll. Townes); 2♀, Messaure, 9. X. 1971, leg. K. Müller (coll. Townes); ♀, Messaure, 18. VIII. 1972, leg. K. Müller (coll. Townes); 4♀, Messaure, 1. IX. 1972, leg. K. Müller (coll. Townes); 8♀, 1♂, Messaure, 7. IX. 1972, leg. K. Müller (coll. Townes); 2♀, Messaure, 22. IX. 1972, leg. K. Müller (coll. Townes); ♀, Messaure, 29. IX. 1972, leg. K. Müller (coll. Townes); 3♀, Messaure, 4. X. 1972, leg. K. Müller (coll. Townes). Except for the holotype, all specimens have been labelled paratype.

Proelicator captiosus, nova species

Characteristics of the holotype of *Proelicator captiosus* mihi: Labels: Mt. McKinley, 2500', 15. VIII. 1954, Alaska (U. S. A.), leg. David Townes (coll. Townes, Ann Arbor). Holotype label of the author. Female. Front wing 3.3 mm. Palpi and mandible white. Lower tooth of mandible visible, but very small, giving the impression of a single toothed mandible. Clypeus $2\times$ as wide as long, somewhat concave, upper margin convex, with some widely placed erect hairs. Malar space wide, anterior tentorial pits relatively large, open. Face polished, with widely placed hairs. Frons, vertex and gena polished. Vertex and gena wide. Head square. Occipital carina closed. Scapus subcylindrical, pedicel conspicuously large. Postannellus $4\times$ as long as wide. Pronotum polished, epomia present. Mesoscutum rather convex, polished, notauli present but rather obsolete. Propodeum with the petiolar area well defined, median longitudinal carinae not present proximally. Front wing with areolet, nervulus rather inclivous. Nervellus somewhat reclivous. Me-

sopleurum highly polished, prepectal carina short, not reaching margin. Legs slender, including coxae yellow. Hind coxae somewhat coriaceous. Last tarsal joint robust, claws strong. First tergite coriaceous, median dorsal carinae not present. Spiracles at 0.5 of length. Epipleura of second and third tergite separated by a crease. All following tergites brown and polished, with sparse, short, erect hairs. Ovipositor 0.26 of length front wing beyond apex of gaster. Sheath with long erect hairs.

Male. – Unknown.

The trivial name *captiosus* is the latin for deceptive.

Material examined. – U. S. A.: ♀, holotype, Mt. McKinley, 2500', 15. VIII. 1954, Alaska, leg. David Townes; ♀, paratype, Mt. McKinley, 2000', 14. VIII. 1954, Alaska, leg. David Townes; ♀, paratype, Mt. McKinley, 2500', 15. VIII. 1954, Alaska, leg. David Townes (all coll. Townes, Ann Arbor).

A revision of the genus *Eusterinx*

Key to *Eusterinx* females

The females of *Eusterinx minima* (Strobl) and *E. tartarea* nova species are unknown.

- | | | |
|----|---|---|
| 1. | Front wing without areolet | 2 |
| – | Front wing with areolet | 5 |
| 2. | Propodeum with apophyses | 3 |
| – | Propodeum without apophyses | 4 |
| 3. | Eyes conspicuously hairy and convergent towards clypeus. Tergites one, two and three coriaceous. Ovipositor 0.27 of length front wing beyond apex of gaster | |
| | <i>E. disparilis</i> nova species (page 159) | |
| – | Eyes not hairy or only very indistinctly, but they do converge towards clypeus. Tergites one and two finely striated, also tergite three may show vague striation. Ovipositor 0.2 of length front wing beyond apex of gaster | |
| | <i>E. alpigena</i> (Strobl) (VAN ROSSEM 1980) | |
| 4. | Eyes hairy, strongly convergent towards clypeus. Malar space absent, eye margin touching clypeal margin | |
| | <i>E. pusilla</i> (Zetterstedt) (page 159) | |
| – | Eyes without hairs and not convergent towards clypeus. Head square, vertex deep. Mandible turned inwards, with a sharp upper and lower tooth. Second tergite slightly striated or with some rough longitudinal sculpture or second tergite coriaceous or polished. Some specimens have conspicuous thyridia | |
| | Females of the <i>Oligomera Group</i> (page 162) | |
| 5. | Propodeum with apophyses | 6 |
| – | Propodeum without apophyses | 7 |
| 6. | Propodeum with strongly developed apophyses. Eyes convergent towards clypeus. Tergites one, two and three coriaceous. Tergite four proximally coriaceous. Ovipositor 0.14 of length front wing beyond apex of gaster | |
| | <i>E. circaea</i> nova species (page 157) | |
| – | Propodeum with weak apophyses brought on by the slightly lamelliform apical transverse carina. Eyes not convergent towards clypeus. Tergites one and two coriaceous. Tergite | |

- three only proximally somewhat coriaceous. Ovipositor 0.25 of length front wing beyond apex of gaster *E. refractaria* nova species (page 158)
- 7. Second and third tergite with different sculpture of proximal and distal half. These areas separated by a groove. *E. inaequalis* VAN ROSSEM, 1980
- Second and third tergite not so 8
- 8. Second tergite coriaceous and with longitudinal striation, thyridia strong, hind margin polished, yellow. Ovipositor slightly upcurved, about 0.23 of length front wing beyond apex of gaster *E. tenuicincta* (FÖRSTER) (page 160)
- Not this combination of characters 9
- 9. Inner margins of eyes not convergent towards clypeus. Front wing 3.0–4.2 mm long. Lower tooth of mandible visible, the tip not twisted. First tergite and the greater part of second tergite coriaceous. Ovipositor 0.2 of length front wing beyond apex of gaster *Proeliator proprius* nova species (page 152)
- Inner margins of eyes weakly convergent towards clypeus. Front wing about 3.0 mm long. Mandible turned inward, with sharp upper tooth. Proximal half of second tergite with very fine longitudinal striation, distal part polished. All following tergites polished. Ovipositor 0.14 of length front wing beyond apex of gaster *E. aquilonigena* nova species (page 156)

Key to Eusterinx males

Males of the *Oligomera* Group are included in this key. Males of *Eusterinx circaea*, nova species and *E. disparilis*, nova species are unknown.

- 1. Front wing without areolet 2
- Front wing with areolet 9
- 2. Propodeum with strong apophyses. First, second and third tergite striated. Six flagellar segment with a tyloid, a concave polished area . *E. alpigena* (STROBL) (VAN ROSSEM, 1980)
- Propodeum without apophyses 3
- 3. Second tergite with large thyridia. No tyloids present 4
- Second tergite without, or with weakly indicated thyridia 5
- 4. Postannellus 2× as long as wide, all following segments of flagellum of the same length. No tyloids present. Setae on flagellar segments erect. Thyridia in proximal corners of second tergite conspicuous, yellow in colour. Second tergite proximally with some coriaceous sculpture, all following tergites polished . *E. obscurella* FÖRSTER³) (page 167)
- Postannellus 3× as long as wide, following segments shorter. No tyloids present. Setae on flagellar segments erect. Thyridia on second tergite less conspicuous. Second tergite with longitudinal striation, distal margin and following tergites polished *E. subdola* FÖRSTER (page 165)
- 5. Antenna without tyloids 6
- Antenna with tyloids 8
- 6. Eyes hairy. Second tergite striated and with coriaceous sculpture. Hind femur notably slender, 7.4× as long as wide *E. pusilla* (ZETTERSTEDT) (page 159)

- Eyes not hairy. Hind femur not notably slender, about 4.2–4.3× as long as wide 7
- 7. Notauli strong, meeting in centre of mesoscutum. Second tergite with robust, coriaceous sculpture, except for polished apical margin *E. subdola* FÖRSTER (page 165)
- Notauli weakly indicated directly beyond mesoscutal margin. Second tergite polished, or with very weak coriaceous sculpture *E. pseudoligomera* GREGOR (page 168)
- 8. Antenna with tyloid on flagellar segment six. Second tergite polished or proximally somewhat coriaceous. In some specimens the second tergite is weakly striated *E. oligomera* FÖRSTER (page 163)
- Antenna with tyloids on flagellar segments six as well as on seven (the second tyloid is difficult to observe). There is an indication of a tyloid on segment eight of the flagellum. The flagellum is more robust than in *E. oligomera*. *E. argutula* FÖRSTER (page 164)
- 9. Second and third tergites with a transverse groove (groove less developed on fourth tergite). The proximal and distal areas of these tergites have a variation in sculpture *E. inaequalis* VAN ROSSEM, 1980
- Second and third tergites not so 10
- 10. Antenna without tyloids. Hind femur stout, 3.8× as long as wide. Apophyses rather strong. First and second tergite entirely coriaceous, third tergite proximally coriaceous *E. tartarea* nova species (page 159)
- Antenna with tyloids 11
- 11. Propodeum with weak apophyses brought on by the slightly lamelliform apical transverse carina. Flagellar segments six and seven with a tyloid, a longitudinal carina. First and second tergite and proximal half of third tergite coriaceous. Tergite two, three and four with narrow apical margin yellow. Hind femur stout *E. refractaria* nova species (page 158)
- Propodeum without apophyses 12
- 12. Tyloids on flagellar segments 6–11, a flattened zone without setae. Second tergite for the greater part with longitudinal striation. Third tergite with some striation *E. aquilonigena* nova species (page 156)
- Tyloids on flagellar segments 6–8 or 6–9 13
- 13. Second and third tergite with longitudinal striation. Tyloids on flagellar segments 6–9 *E. tenuicincta* (FÖRSTER) (page 160)
- Second and third tergite coriaceous. Tyloids on flagellar segments 6–9 *E. minima* (STROBL) (page 161)

Eusterinx aquilonigena, nova species

Characteristics of the holotype of *Eusterinx aquilonigena*: Labels: Sverige; Skåne, IX. 1969, trap 1, leg. Bo Svensson (coll. Townes, Ann Arbor). Holotype label of the author. Female. Front wing 3.0 mm. Palpi white. Mandible turned inward, with sharp upper tooth. Lower tooth rather long, about 0.5 of length upper tooth. Clypeus brown, 1.5 as wide as long, concave, apical margin with a close row of bristles. Upper margin convex, with widely spaced long hairs. Anterior tentorial pits open, comparatively large. Face po-

³⁾ This male is inserted tentatively. There is no male in FÖRSTER's Type material of *E. obscurella*.

lished, with a row of erect hairs along inner margins of eyes and two rows medially. Frons, vertex and gena polished. Gena with two rows of subadpressed hairs. Ocelli comparatively large. Scape sub-cylindrical, pedicel large. Pronotum polished, epomia present but weak. Mesoscutum polished, with subadpressed hairs. Notauli with a fine carina which runs from the front margin to upper level of mesoscutum. Propodeum with all carinae. Mesopleurum polished, prepectal carina to about the middle of pronotal margin, not reaching it. Front wing with areolet. Nervellus vertical. Legs slender, including coxae yellow. First gastral tergite coriaceous, median dorsal carinae developed to about the spiracles (at 0.4 of length), more distally partially present. The tergite medially rather convex. Ventrolateral and dorsolateral carinae defined. End of sternite at 0.5 of length. Second tergite with coriaceous, somewhat longitudinal striation on proximal half, distal part polished. Thyridia near basal margin, lying almost directly behind end of ventrolateral carina of first segment. All following tergites polished, brown. Ovipositor 0.19 of length front wing beyond apex of gaster.

Characteristics of the male paratype of *Eusterinx aquilonigena*: Labels: Sverige: Skåne, IX. 1969, trap 1, leg. Bo Svensson (coll. Townes). Paratype label of author. Male. Front wing 3.1 mm. Most of the characters of the male agree closely with the female. The following parts should be mentioned. Tyloids on flagellar segments 6–11, a flattened zone without hairs.⁴⁾ Second tergite for the greater part with longitudinal striation, slightly more rough than in female. Third tergite proximally with some longitudinal striation. Following tergites polished.

The trivial name *aquilonigena* is from the latin for “have origin from the north”.

Material examined. – Sverige: ♀, holotype, Skåne, IX. 1969, trap 1, leg. Bo Svensson; ♀, paratype, Skåne, VIII. 1969, trap 4, leg. Bo Svensson; ♀, paratype, Skåne, VIII. 1969, trap 4, leg. Bo Svensson; ♀, paratype, Skåne, VIII. 1969, trap 4, leg. Bo Svensson; ♀, paratype (bleached), Skåne, IX. 1969, trap 4, leg. Bo Svensson; ♀, paratype, Skåne, IX. 1969, trap 4, leg. Bo Svensson; ♂, paratype, Skåne, IX. 1969, trap 1, leg. Bo Svensson (all coll. H. Townes, Ann Arbor).

Eusterinx circaea, nova species

Characteristics of the holotype of *Eusterinx circaea*: Labels: Germany, Oberbayern, Hochstadt, 26. VIII. 1973, leg. Haeselbarth (coll. Haeselbarth). Holotype label of the author. Female. Front wing 5.2 mm. Palpi whitish. Mandible yellowish, the tip twisted, the upper tooth with a sharp point, the lower tooth inside and less than 0.3 as long. Clypeus convex, about as wide as long, rather strongly protruding, distally brown and apical margin medially curved inwards. Clypeus not distinctly separated from face by a groove. Malar space wide, about 0.5 the width of clypeus, with a strong groove between eye and clypeus. Face polished, with widely placed hairs. Inner eye margins converging towards clypeus. Frons polished, ocelli robust, OOL : POL = 6 : 4, rather closely arranged. Vertex narrow, occiput steeply sloping behind lateral ocelli. Occipital carina closed. Scape ovoid, antenna slender but short. Pronotum polished, almost without hairs, epomia present. Mesoscutum polished, with close, adpressed hairs. Notauli strong, with a sharp notch on mesoscutal margin. Scutellum and postscutellum rugulose. Scutellum without

⁴⁾ unfortunately most of the antennae of this single male specimen were lost.

carina. Propodeum laterally with conspicuous long hairs, all carinae present. The median longitudinal carinae around the area superomedia are very strongly developed. Area superomedia open posteriorly. Apophyses very robust. Mesopleurum polished, ventrolateral margin rugulose and with longitudinal striation. Front coxae yellow and for the greater part polished. Middle coxae yellow brown, with rather long hairs, dorsally polished, ventrally rugulose. Hind coxae fuscous, with long hairs, rugulose, dorsally with a polished concavity lying towards the articulation with the trochanter. Front and middle legs yellow and slender. Hind femur more robust, brown, with rugulose sculpture and subadpressed hairs. Hind tibia and tarsus slender. Claws of all legs comparatively small. Front wing with areolet. Nervellus almost vertical, no discoidella present. First gastral segment with a slender petiole. Spiracle at 0.5 of length. Hind end of first sternite at 0.7 of length. First tergite coriaceous with weak longitudinal striation. Second, third and fourth tergite coriaceous, with apical margins polished and yellow. Following tergites polished. Ovipositor 0.14 of length front wing beyond apex of gaster.

The trivial name *circaeus* is from the latin for “enchanted”.

Material examined. – Germany: ♀, holotype, Oberbayern, Hochstadt, 26. VIII. 1973, leg. and coll. Haeselbarth (München).

Eusterinx refractaria, nova species

Characteristics of the holotype of *Eusterinx refractaria*: Labels: Czecho-Slovakia: Kytin, Bohem. Czech. Jul. 1958, leg. J. Maček (coll. Townes). Holotype label of the author. Female. Front wing 2.9 mm. Clypeus rather convex, polished, 2× as wide as long. Face polished, with widely spread fine punctures. Malar space wide, about 0.4 of width face, with a distinct furrow. Frons vertex and gena polished. Antennae missing. Pronotum with distinct epomia. Mesoscutum with close, subadpressed hairs. Notauli strong, with a short carina from pronotal margin. Propodeum with all carinae, the apical transverse carina somewhat lamelliform and thus developing short apophyses. Mesopleurum polished, prepectal carina to about the middle of pronotal margin. Front wing with weakly indicated areolet. Nervellus vertical, not intercepted. Front and middle coxae yellow. Hind coxae coriaceous and brown. Hind femur stout. Claws of all legs strong. End of first sternite at 0.6 of length first tergite. First tergite with no dorsolateral and median dorsal carina. Second tergite and proximal part of third tergite coriaceous. Following tergites polished. All tergites with apical margin yellow. Ovipositor somewhat upcurved, 0.25 of length front wing beyond apex of gaster.

Characteristics of the male paratype: Labels: Sverige, Rostanga, Skåne, 3. VI. 1964, leg. M. Townes & C. West (coll. Townes). Tyloids on flagellar segments 6 and 7. Although this male is from a different locality, the agreement with the female is striking.

The trivial name *refractarius* is from the latin for “obstinate”.

Material examined. – Czecho-Slovakia: ♀ holotype, Kytin, Bohem. Czech. July, 1958, leg. J. Maček (coll. H. Townes, Ann Arbor). Sverige: ♂, Rostanga, Skåne, 3. VI. 1964, leg. M. Townes and C. West (coll. H. Townes, Ann Arbor).

Eusterinx disparilis, nova species

Characteristics of the holotype of *Eusterinx disparilis*: Labels: Sverige: Messaure, 6. VII. 1972, leg. Karl Müller (coll. H. Townes, Ann Arbor) Holotype label of the author. Female. Front wing 3.5 mm. Clypeus convex, about 2× as wide as long, with erect, rather long, widely placed setae. Malar space about 0.3 of width face. Face polished with erect, widely spaced setae. Eyes hairy, converging towards clypeus. Frons, vertex and gena polished, with occasional subadpressed setae. Pronotum with epomia. Mesoscutum with adpressed hairs. Notauli meeting, with weak carina from pronotal margin. Scutellum striated. Propodeum coriaceous, with all carinae except apical carina of areola. Apophyses somewhat developed. Mesopleurum polished, with prepectal carina. Front wing with areolet not closed. Nervellus vertical. Legs slender, hind femur 6.3× as long as wide. First, second, third and fourth tergite coriaceous. Second to fourth tergite with apical margin yellowish brown. Ovipositor 0.28 of length front wing beyond apex of gaster.

The trivial name *disparilis* is from the latin for unequal, different.

Material examined. – Sverige: ♀ holotype, Messaure, 6. VII. 1972, leg. Karl Müller (coll. H. Townes, Ann Arbor).

Eusterinx tartarea, nova species

Characteristics of the holotype of *Eusterinx tartarea*. Labels: Italia: St. Peter, Ahrntal, Südtirol, 1350 m, M. 28. VIII. 1967, leg. & coll. Haeselbarth. Holotype label of the author. Male. Front wing 3.8 mm. Clypeus somewhat convex, polished, 1.3× as wide as long. Face polished, with widely placed erect to suberect setae. Malar space wide, about 0.3 of width face, with a furrow. Frons, vertex and gena polished, with rather long subadpressed hairs. Antenna without tyloids. Pronotum polished, with epomia. Mesoscutum with close, adpressed, rather long hairs. Notauli rather strong, proximally with a short carina from pronotal margin. Apical half of scutellum striated. Propodeum with all carinae and rather conspicuous apophyses. Mesopleurum polished, with prepectal carina to the middle of pronotal margin. Front wing with areolet. Nervellus vertical. Hind coxae fuscous, with rather rough coriaceous sculpture. Hind femur stout. End of first sternite at 0.6 of length tergite. First tergite coriaceous, with no median dorsal carinae. Lateral dorsal carina indicated. Second tergite for the greater part, third tergite only proximally coriaceous. Second tergite with a carina from spiracle to proximal margin. Following tergites polished. All tergites with rather long adpressed hairs.

The trivial name *tartareus* is from the latin for “from the nether world”.

Material examined. – Italia: ♂ holotype, St. Peter, Ahrntal, Südtirol, 1350 m, M. 28. VIII. 1967, leg. & coll. Haeselbarth, München.

Eusterinx pusilla Zetterstedt

Tryphon pusillus Zetterstedt, 1838, Insecta Lapponica descripta, Sectio secunda. Hymenoptera. Lipsiae: 385, ♂ holotype.

Catomicrus trichops Thomson, 1888, Opusc. ent. 38 (Fasc. 12): 1291, ♀ lectotype.

Tryphon pusillus Horstmann, 1968, *Opuscula Entomologica* 33 (3): 317. Nomen oblitum.

Eusterinx pusilla: TOWNES, 1971, *The Genera of Ichneumonidae Part 4*: 203.

Characteristics of the holotype of *Tryphon pusillus*: Labels: Sverige: ♂, Björkv., leg. Zetterstedt (Entomological Museum, Lund). Holotype label of Horstmann, 1966. Male. Front wing 3.8 mm. Malar space narrow, 0.27 of width face. Face polished, with erect setae. Frons, vertex and gena polished. Antenna without tyloids. Eyes hairy and with inner margins parallel. Pronotum with strong epomia. Mesoscutum damaged, but with strong notauli and a carina along inner edge. Propodum without a distinct dorsal face. Apical transverse carina lying towards the distal edge of propodeum and with weak apophyses. Mesopleurum polished and with prepectal carina. Front wing with areolet not closed.⁵⁾ Nervellus vertical. Hind femur notably slender, 7.4× as long as wide. First tergite coriaceous, medially rather convex, median dorsal carinae indicated, but weak. Second tergite coriaceous and with weak striation. Third tergite proximally coriaceous.

Characteristics of the lectotype of *Caticrus trichops* Thomson, 1888. Labels: Lpl (Lapland). Lectotype label of Townes, 1958 (Entomological Museum, Lund). Female. Front wing 2.8 mm. Malar space absent, eye margin almost touching clypeal margin. Face narrow, polished, eyes strongly converging. Frons, vertex and gena polished. Antenna rather short and towards distal end gradually somewhat widening. Pronotum somewhat coriaceous, epomia distinct. Mesoscutum polished, rather damaged. Notauli present, with short carina on pronotal margin. Propodeum coriaceous, with all carinae. Mesopleurum somewhat coriaceous, prepectal carina not reaching the margin. Front wing with areolet not closed. Nervellus reclivus. Legs slender. Hind femur notably slender, 6.6× as long as wide, with rather close subadpressed hairs. First, second and third tergite coriaceous. Apical margins of tergites two, three and four yellow. Ovipositor 0.22 of length front wing beyond tip of gaster.

Material examined. – Sverige: ♂ holotype, Björkv., leg. Zetterstedt (Entomological Museum, Lund); ♀ lectotype of *Caticrus trichops*, Lpl, leg. Thomson (Entomological Museum, Lund).

Eusterinx tenuicincta (Förster)

Holomeristus tenuicinctus Förster, 1871, *Verh. naturh. Ver. preuss. Rheinl.* 28: 80–81, ♀.

Holomeristus tenuicinctus: THOMSON, 1888, *Opusc. ent.* 38 (Fasc. 12): 1296, ♀♂.

Holomeristus tenuicinctus: STROBL, 1903, *Mitt. Nat. Ver. f. Steierm.* 40: 118, ♀♂.

Holomeristus tenuicinctus: SCHMIEDEKNECHT, 1911, *Opusc. Ichneum.* 4 (Fasc. 28): 2192, ♀♂.

Holomeristus tenuicinctus: JUSSILA, 1965, *Ann. Univ. Turku., A, II*, 34: 105, ♀.

Holomeristus tenuicinctus: AUBERT, 1970, *Bull. Soc. Linn. Lyon* 39: 274, ♀.

Eusterinx tenuicincta: Townes, 1971, *The Genera of Ichneumonidae Part 4*: 202

Characteristics of the lectotype of *Holomeristus tenuicinctus* Förster: Labels: a white Förster label “Lousberg“ 31. X.; a box label of Förster “*tenuicinctus*”; lectotype label of Townes, 1969. Female. Front wing 3.5 mm. Palpi and mandibles yellow. Mandible with a single tooth. Clypeus yellow, flat, about 1.8× as wide as long. Face, frons and vertex polished. Malar space wide. Final joint of antenna rather swollen, giving antenna a somewhat club shaped appearance. Pronotum polished, entirely reddish brown, epomia

⁵⁾ Wings are so worn that the shape of areolet is almost invisible.

strong. Mesoscutum rather convex, polished, notauli strong. Propodeum dorsally polished, laterally somewhat sculptured, with all carinae. Front wing with areolet. Nervellus vertical, no discoidella present. Mesopleurum polished, prepectal carina reaching subangular ridge. Legs yellowish brown, including coxae, femora slender. First tergite coriaceous, spiracles about in the middle. Second tergite coriaceous and with longitudinal striation, thyridia strong, hind margin polished, yellow. Third tergite somewhat coriaceous towards polished, distal part yellowish. Ovipositor slightly upcurved, about the length of middle femur beyond apex of gaster.

Characteristics of the male: Labels: Ljungby, Sverige, 16. VIII. 1958, 150 m, leg. David Townes, coll. Townes Ann Arbor. Front wing 3.6 mm. Palpi white. Mandible with a single tooth. Clypeus rather depressed, $1.7\times$ as wide as long. Many characters agree with the female lectotype and these are not recapitulated. Tyloids on flagellar segments 6–9, laterally on one side concave and polished. Top of antenna not club shaped. Notauli strong, meeting in centre of mesoscutum. Legs, including coxae whitish yellow. First tergite coriaceous, with some longitudinal striation, spiracles at 0.4 of length. Second tergite with close longitudinal striation, thyridia present. Third tergite with longitudinal striation. Fourth tergite and following polished. Tergites 2–5 with hind margin yellow.

Material examined. – Great Britain: ♀, New Forest, 12. VII. 1964, leg. H. K. Townes (coll. Townes). Germany: ♀, Lousberg, 31. X., coll. Förster, lectotype label Townes (ZSM); ♀, Aachen, coll. Förster (ZSM). Japan: ♂, Kamikochi, 23. VII. 1954, leg. Townes family (coll. Townes). Sverige: ♀♂, Ljungby, 16. VIII. 1958, 150 m, leg. David Townes (coll. Townes). U. S. A., Alaska: ♂, Mt. McKinley 1600', 8. VIII. 1954, leg. David Townes; ♀, Mt. McKinley 2000', 15. VIII. 1954, leg. David Townes; ♂, McLean Res., Tompkins Co., N. Y., 29. V. 1937, leg. H. K. Townes; ♀, Pinkham Notch, White Mts. N. H., 21–22. VIII. 1945, leg. J. C. Bradley; ♀, Pinkham Notch, N. H., 23. VIII. 1951, leg. H. M. & D. Townes; ♂, Stoneham, P. Q., 21. VI. 1938, leg. H. & M. Townes (all coll. Townes, Ann Arbor).

Eusterinx minima (Strobl)

Holomeristus minimus Strobl, 1903, Mitt. Nat. Ver. f. Steierm. 40: 119, ♂.

Holomeristus minimus: SCHMIEDEKNECHT, 1911, Opusc. Ichneum. 4 (Fasc. 28): 2192, ♂.

Characteristics of the holotype of *Holomeristus minimus* Strobl: Labels: Styriae alp. Strobl, 26. VII. 1900 (Alpenwiesen des Natterriegel); holotype label Aubert, 1969. Male. Front wing 2.6 mm. Palpi and mandible yellow. Mandible with a single tooth. Clypeus brown, somewhat protruding, slightly convex, $1.5\times$ as wide as long. Anterior tentorial pits comparatively large. Malar space wide. Face, frons and vertex polished. Vertex deep, head square. Antenna with tyloids on flagellar segments 6–9, concave and polished. Pronotum polished. Mesoscutum polished, with fine erect hairs, notauli strong, meeting in centre. Scutellum rather convex. Propodeum with robust carinae, laterally with irregular sculpture. Front wing with areolet. Nervellus vertical. Legs very slender, with long hairs, yellowish brown, hind coxae coriaceous, brown. Mesopleurum polished, prepectal carina short, reaching to about 0.5 of hind margin pronotum. First gastral segment slender, tergite coriaceous, median dorsal carinae, dorsolateral carinae and ventrolateral carinae defined. Second and third tergite coriaceous, following tergites more polished. First ter-

gite with widely placed, long erect hairs laterally, second tergite with long hairs laterally and two rows in distal 0.3 part, following tergites also with widely placed long hairs.

Material examined. – Austria: ♂, holotype, Styriae alp. 26. VII. 1900 (Alpenwiesen des Natterriegel). Leg. Strobl. Holotype label Aubert, 1969. Strobl collection: Admont.

The Oligomera group

Front wing 1.7–3.0 mm. Males with one or two or without tyloids. Head square, vertex deep. Ratio width of gena: width of eye variable (7:4 to 1:1). Mesoscutum convex, notauli weakly to strongly defined. Propodeum with all carinae. In some specimens no costula is present. Front wing without areolet. Nervellus reclivous. First gastral segment slender, spiracles at about 0.5 of length. In *E. obscurella* Först. and *E. subdola* Först. the thyridia on the second tergite are conspicuous. In other species they are weak or absent. Tergite two in most species polished, occasionally somewhat coriaceous, not often striated. The ovipositor is relatively long, between 0.50 to 0.70 of length hind tibia, rather wide and somewhat club shaped and with long widely placed erect hairs.

The *Oligomera* Group includes five closely related species, viz. *Eusterinx oligomera* Förster, 1871; *E. obscurella* Förster, 1871; *E. subdola* Förster, 1871; *E. argutula* Förster, 1871 and *E. pseudoligomera* Gregor, 1941.

The distinction of males is possible with the help of the tyloids. Not with standing ample comparison I failed to separate the females of *E. oligomera*, *E. argutula* and *E. pseudoligomera*. It appeared that the following characters are not reliable and do not lead to definite distinction: length of postannellus, ratio width of gena : width of eye and ratio length of ovipositor : length of hind tibia.

The males are inserted into the general key to the males of *Eusterinx*. The females are placed in the following tentative key.

Tentative key to the females of the Oligomera group

1. Second tergite with conspicuous thyridia in proximal corners 2
- Second tergite without, or with weakly defined thyridia 3
2. Ratio width gena : width of eye = 7:5; 7:6. Second tergite polished or with some coriaceous sculpture. Postannellus 3× as long as wide
..... *E. obscurella* FÖRSTER (page 167)
- Ratio width gena : width of eye = 1:1. Eye wider. Second tergite striated or weakly striated and somewhat coriaceous *E. subdola* FÖRSTER (page 165)
3. Notauli defined only directly beyond mesoscutal margin
..... *E. pseudoligomera* GREGOR (page 168)
- Notauli stronger and running more towards centre of mesoscutum
..... *E. oligomera* FÖRSTER and *E. argutula* FÖRSTER (pages 163 and 164)

Eusterinx oligomera Förster

Eusterinx oligomera Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 109, ♀ lectotype, ♂.

Eusterinx oligomera: THOMSON, 1888, Opusc. ent. 38 (Fasc. 12): 1295

Eusterinx oligomera: AUBERT, 1968, Bull. Soc. Ent. de Mulhouse (mai-juin) : 40 (= *fulvicornis* Först. = *moesta* Först. = *fulvicincta* Först. = *tenuis* Först.).

Eusterinx oligomera: TOWNES, 1971, The Genera of Ichneumonidae Part 4: 202

Eusterinx oreophila Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂ lectotype. New synonym.

Eusterinx fulvicornis Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 109, ♀ holotype.

Eusterinx speculifera Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 109, ♀ lectotype (right specim.).

Eusterinx moesta Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 109, ♀ lectotype.

Eusterinx fulvicincta Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 109, ♀ lectotype.

Eusterinx tenuis Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 109, ♀ lectotype.

Characteristics of the lectotype of *Eusterinx oligomera* Förster. Labels: a white Förster label "Aachen, ♀ 17 gl", a box label of Förster "*oligomera*". Lectotype label Aubert, 1967. As two females are jointly mounted, I regard the left specimen as the lectotype. Front wing 1.7 mm. Lower tooth of mandible not visible. Clypeus flat, 2× as wide as long. Malar space wide, about 0.3 of width face, somewhat coriaceous. Face slightly convex, coriaceous, with widely placed long hairs. Eyes small, broadly elliptic. Ratio width of gena : width of eye = 7 : 4. Head square, frons and vertex about 0.5 deeper than wide. Frons vaguely coriaceous, vertex polished. Occipital carina closed. Antenna with close erect hairs. Postannellus 3.3 as long as wide. Apical joint of antenna somewhat swollen. Mesoscutum polished, notauli present. Propodeum coriaceous, with all carinae. Nervulus distad of basal vein. Areolet absent. Nervellus reclivous. Lower half of mesopleurum coriaceous. Legs, including coxae, yellowish brown. Middle and hind legs with close, long, subadpressed hairs, especially the tarsi. First tergite coriaceous, following tergites polished. Spiracles of first segment at about 0.4 of length. Apex of first sternite at about 0.56 of length tergite. Ovipositor club shaped, about the length of first gastral segment, with long, erect hairs.

Characteristics of a lectoparatype of *E. oligomera*. Labels: a white Förster label "♂ 17 gl Soers 29. VII.". An Aubert label *Eusterinx obscurella* Först. ♂. Tyloid on sixth flagellar segment. Second tergite proximally somewhat coriaceous.

Characteristics of a lectoparatype of *E. tenuis* Förster (sensus AUBERT). Labels: a white Förster label "Aachen, ♂ 18 gl". An Aubert label: ♂ *Eusterinx oligomera* Först. Front wing 1.7 mm. Head square, polished. Frons and vertex about 0.53 deeper than wide. Gena and temple wide. Antenna not club shaped, with close, erect, long hairs. Postannellus 5.0 as long as wide. Sixth flagellar segment laterally (on one side) somewhat flattened and polished. Pronotum polished, epomia weak. Mesoscutum polished, with notauli defined. Propodeum weakly coriaceous, with all carinae, except for the costula. Front wing without areolet. Nervellus reclivous. Legs brown, with close, long hairs. Gaster brown, second and following tergites polished.

Characteristics of the lectotype of *E. oreophila* Förster. Labels: a white Förster label "♂, 19 gl, Pontresina", a box label of Förster "*oreophila*". Lectotype label Aubert, 1967. Sixth flagellar segment with tyloid. Second tergite with some weak sculpture.

Characteristics of a lectoparatype of *E. oreophila* Förster. Labels: a white Förster label

“♂, 19 gl, Alp Nuova”. An Aubert label *Eusterinx oreophila* Först. Sixth flagellar segment with tyloid. Second tergite with longitudinal striation.

Remark. – It appears that there is a certain variation in the sculpture of the second tergite. Specimens are found with the second tergite either polished or with a coriaceous sculpture (see also JUSSILA, 1965) which sometimes occurs as striation. Striated sculpture is present in the type material of *E. oreophila* Förster which I nevertheless regard as specimens of *E. oligomera*.

Material examined. – The following specimens are all from the Förster collection München. ♀, Aachen, 17 gl, lectotype Aubert *E. oligomera*; ♂, Aachen, 18 gl, label Aubert *E. oligomera*; ♂, Soers, 29. VII., 17 gl, label Aubert *E. ? obscura*; ♀, Lousberg, 19. VI., label Aubert *E. oligomera*; ♀, Nirm, 5. VI., label Aubert *E. oligomera*; ♂, Pontresina, 19 gl, lectotype label Aubert *E. oreophila*; ♂, Alp Nuova, 19 gl, label Aubert *E. oreophila*; ♀, Aachen, 18 gl, holotype label Aubert *E. fulvicornis*; 2♀, Lousberg, 13. IX., lectotype label Aubert *E. speculifera*; 2♀, Lousberg, 13. IX., box label Förster “*speculifera*”, right specimen *E. oligomera*;⁶⁾ ♀, Soers, 29. VII., 18 gl, lectotype label Aubert *E. moesta*; ♀, box label Förster “*moesta*”, label Aubert *E. oligomera*; ♀, Veen, 18 gl, ? Günlän, Rügw, lectotype label Aubert *E. fulvicincta*; 2♀, Aachen, 18 gl, lectotype label Aubert *E. tenuis*; ♀, Nirm, 5. VI., box label Förster “*tenuis*”, label Aubert *E. oligomera*; 2♀, no labels, label Aubert *E. oligomera*; ♀, Lousberg, 24. V., label Aubert *E. oligomera*.

The remaining specimens, all males, are from other localities. Females are not enumerated since they could not be definitely identified. Austria: 5♂, Salzburg, Pass Turn, 1200 m, 8. IX. 1968; 1♂, T. Fernpass, Galtbergalm, 1800 m, 3. VII. 1973. Germany: 1♂, Niedersachsen, Wiershausen, D. 18. VI. 1966; 1♂, Spessart, Wiesen, 7. VIII. 1960; 1♂, Allershausen bei München, 21. VI. 1969; 1♂, Oberbayern, Umg. Gauting, 3. VI. 1972, Heidelbeere; 1♂, Bayern, Herrsching, Widdersberg, Sumpfiges Tal, 22. VI. 1974. Italy: 19♂, St. Peter, Ahrntal, Südtirol, 1275–1300 m, 31. VII. 1966; 10♂, St. Peter, Ahrntal, Südtirol, 1300 m, 27–28. VIII. 1967; 1♂, Südtirol, Campenjoch, 1350 m, 3. IX. 1967. All specimens are from the Haeselbarth collection.

Eusterinx argutula Förster

Eusterinx argutula Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂ holotype.
Eusterinx scitula Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂ holotype.
Eusterinx ambigua Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♀ lectotype.
Eusterinx divulgata Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♀ lectotype.
Eusterinx intermedia Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♀ holotype.
Eusterinx subcincta Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♀ lectotype.
Polyaulon compressum Cushman, 1922, U.S. Natl. Mus. Proc. 61 (8): 24, ♀.

Characteristics of the holotype. Labels: a white Förster label “Aachen, 21 gl”, a box label of Förster “*argutula*”. Holotype label Aubert, 1967 *Eusterinx argutula* Förster. Front wing 2.6 mm. Palpi and mandibles yellowish. Clypeus brown, polished, with some erect hairs, as wide as long. Anterior tentorial pits large. Malar space wide, with some coriaceous sculpture. Face polished, with widely placed erect hairs. Frons and vertex polished, vertex deep, head square. Occipital carina closed. Gena polished. Postanellus 3.5 as long as wide. Sixth flagellar segment on one side flattened. Seventh segment slightly flattened and here the glumes (microscopic longitudinal ridges) absent. Pronotum polished, epomia weak. Mesoscutum rather strongly convex, polished, notauli pre-

⁶⁾ In the collection this pin is placed under *E. argutula*.

sent but faint. Scutellum and propodeum polished, all propodeal carinae present. Mesopleurum polished. Legs yellowish. First tergite with median dorsal carinae and dorsolateral carina. Spiracles at 0.47 of length. Second tergite vaguely coriaceous, following tergites polished.

Characteristics of the holotype of *E. scitula* Förster. Labels: a white Förster label "Aachen ♂". Holotype label Aubert, 1967, *Eusterinx scitula* Förster. Tyloids on sixth flagellar segment and on seventh segment indicated by the absence of glumes.

Characteristics of a Förster lectoparatype of *E. ambigua*. Labels: no Förster labels. Label of Aubert: *Eusterinx ambigua* Först. Two males are mounted. The right specimen has tyloids on sixth and seventh flagellar segments.

Characteristics of two Förster lectoparatypes of *E. divulgata*. Labels: no Förster labels. Label of Aubert: *Eusterinx divulgata* Förster. Two males are mounted, both have tyloids on sixth and seventh flagellar segments.

Characteristics of a Förster lectoparatype of *E. basalis*. Labels: a white Förster label "Aachen, 20 gl". Label Aubert *E. basalis* Förster. Two specimens are mounted. The right specimen has tyloids on sixth and seventh flagellar segments and consequently belongs to *E. argutula*. Viz. the lectotype of *E. basalis* is a specimen of *E. subdola*.

Characteristics of the female of *E. argutula*. There is no female in the type material of Förster. I take the view that it is defined by the following main features. Front wing 2.5–3.0 mm. Ratio width of gena : width of eye = 1 : 1 (or 8 : 7). No thyridia present on second tergite. All tergites polished. Gaster distally not compressed.

Material examined. – The following specimens are all from the Förster collection München. ♂, Aachen, 21 gl, box label Förster, holotype label Aubert *E. argutula*; ♂, Aachen, box label Förster "scitula", holotype label Aubert *E. scitula*; 2♂, Aachen, 20 gl, label Aubert *E. basalis*; ♀, Aachen, 20 gl, lectotype label Aubert *E. ambigua*; 2♂, no Förster label, label Aubert *E. ambigua*; 2♂, box label Förster "ambigua"; ♀, Lousberg, 11. IX., lectotype label Aubert *E. divulgata*; 2♂, no Förster label, label Aubert *E. divulgata*; ♂, no Förster label, label Aubert *E. divulgata*; ♀, Aachen, 19 gl, box label Förster "intermedia", holotype label Aubert *E. intermedia*; 2♀, Aachen, 19 gl, box label Förster "subcincta", lectotype label Aubert *E. subcincta*; ♀, Lousberg, 13. IX., box label Förster "speculifera", left specimen *E. argutula*; 2♀, no Förster labels, label Aubert *E. ambigua*.

Some remaining male specimen are from other localities. Females can not be distinguished with any certainty. Germany: 6♂, Niedersachsen, Wiershausen, 18. VI. 1966. Italy: 1♂, St. Peter, Ahrntal, Südtirol, 1300 m, 13. VII. 1966; 1♂, St. Peter, Ahrntal, Südtirol, 1300 m, 28. VIII. 1967; 1♂, Tremalzo, Judikari Alpen, 1720 m, 4. VII. 1966. All specimens are from the Haeselbarth collection.

Eusterinx subdola Förster

Eusterinx subdola Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂, lectotype.

Eusterinx subdola: AUBERT, 1968, Bull. Soc. Ent. de Mulhouse (mai-juin): 39.

Eusterinx vigil Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂, right specimen, not the type; ♀, lectotype.

Eusterinx vigil: AUBERT, 1968, Bull. Soc. Ent. de Mulhouse (mai-juin): 39.

Eusterinx basalis Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♀, lectotype.

Eusterinx basalis: AUBERT, 1968, Bull. Soc. Ent. de Mulhouse (mai-juin): 39.

Characteristics of the lectotype of *Eusterinx subdola* Förster. Labels: a white Förster label "Lousberg, 16. VI. ♂ 22 gl". Lectotype label Aubert, 1967. Male. Front wing 3.0 mm. Palpi yellow. Mandible with lower tooth turned inwards, yellow brown. Clypeus about 2× as wide as long, with some rows of erect hairs. Epistomal suture deeply impressed, anterior tentorial pits relatively large. Face coriaceous, with widely placed erect hairs. Malar space narrower than in the two related species. Frons, vertex and gena polished. Vertex deep, gena wide, head square. Postannellus 3.3× as long as wide. Antenna without tyloids. Pronotum polished, epomia present. Mesoscutum convex, polished, notauli well defined, meeting in centre. Propodeum with some irregular sculpture and all carinae present. Areolet absent. Radius straight, radial cell longer than in related species. Nervellus reclivous. Mesopleurum polished. Legs yellow, including coxae. Femora rather stout, hind femur about 4.3 as long as wide. First gastral tergite with some longitudinal sculpture, median dorsal carinae absent. Dorsolateral carina present with an interruption. Spiracles at 0.5 of length tergite. Second tergite with large thyridia and longitudinal sculpture, hind margin polished and yellow brown. Following tergites polished, with apical margins yellow and rather long adpressed hairs.

Characteristics of a syntype of *E. vigil* Förster. Labels: a box label of Förster "*vigil*". Two labels of Aubert: the right specimen *Eusterinx vigil* (= *basalis*); the left specimen *E. ambigua*. Two specimens are mounted, the right specimen is *E. subdola*. No tyloids present. Second tergite with longitudinal striation. The left specimen is *E. argutula*.

Characteristics of the lectotype of *Eusterinx vigil* Förster. Labels: a white Förster label "Aachen, 21 gl". Lectotype label Aubert, 1967. Female. Front wing 2.6 mm. Palpi and mandibles yellow. Clypeus 1.7 as wide as long, with some rows of erect hairs. Many characters agree with the male lectotype of *E. subdola*. These are not recapitulated. Postannellus 4.5× as long as wide. Areolet absent. First gastral tergite coriaceous, median dorsal carinae defined. Dorsolateral carina present, but interrupted. Spiracles at 0.5 of length first tergite. Second tergite with weak striation. Ovipositor about 0.2 of length front wing.

Material examined. – The following specimens are from the Förster collection München: ♂, Lousberg, 6. VI. 22 gl, lectotype label Aubert *E. subdola*; 2♂, box label of Förster, both specimens are *E. subdola*; 2♂, box label "*vigil*", the right specimen is *E. subdola*; ♀, 21 gl, Aachen, lectotype label Aubert *E. vigil*; ♀, 19 gl, Aachen, box label "*laevipleuris*" (only a male was described by FÖRSTER), label Aubert *E. vigil* ♀; 2♀ box label "*basalis*", label Aubert *E. vigil*; ♀, 20 gl, Aachen, lectotype label Aubert *E. basalis*.

Austria: ♀, Tirol, Aschbach, 1400 m, 16. VIII. 1975, leg. Zwakhals. Germany: ♂, Oberbayern, Andechs, 16. VI. 1973, leg. Haeselbarth. Italy: ♂, Bolzano, Sarntal, 1250 m, 22. VI. 1976, leg. Zwakhals; ♀ (dubious specimen), Bolzano, Sarntal, 1250 m, 26. VI. 1976, leg. Zwakhals; ♂, Riva S. Garda, 500 m, D/3. VII. 1966, leg. Haeselbarth; ♂, Naturns, 1000 m, 14. VII. 1958, leg. David Townes (coll. Townes); ♀, Pizzighettone, 30. V. 1973, leg. Franco Frilli (coll. Townes). Netherlands: ♂, Asperen, 30. V. 1972, leg. Zwakhals; ♂, Asperen, 3. VI. 1972, leg. Zwakhals; ♂, Asperen, 5. VI. 1973, leg. Zwakhals; ♂, Asperen, 8. VI. 1973, leg. Zwakhals; ♀♂, Asperen, 20. VI. 1973, leg. Zwakhals. Sweden: ♂, Skåne, VI. 1969, trap 4, leg. Bo Svensson (coll. Townes); ♀ (dubious specimen), Messaure, 6. VII. 1972, leg. Karl Müller (coll. Townes). Czechoslovakia: ♂, near Prague, 12. VI. 1954, leg. Jan Maček; ♂, near Prague, 12. VI. 1954, leg. Jan Maček; ♂, Bohemia, VII. 1955, leg. Jan Maček; ♂ (no antennae), 12. VI. 1954, near Prague, leg. Jan Maček (all Czechoslovakian material coll. Townes).

Eusterinx obscurella Förster

Eusterinx obscurella Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♀.

Eusterinx obscurella: AUBERT, 1968, Bull. Soc. Ent. de Mulhouse (mai-juin): 39.

Characteristics of the lectotype of *Eusterinx obscurella* Förster. Labels: box label of Förster "*obscurella*"; a white Förster label "♀, 18 gl, Aachen, 7. V. Lectotype label Aubert, 1967. Female. Front wing 2.5 mm. Palpi brown. Mandible brown, lower tooth turned inwards. Clypeus brown, polished. Malar space wide. Face somewhat convex, polished, with some widely placed erect hairs. Frons and vertex polished. Vertex deep, head square. Occipital carina closed. Gena wide, ratio width gena : width eye = 7:6. Antenna robust, with close erect hairs. Postannellus 3× as long as wide. Pedicel proportionally large. Pronotum polished, epomia present. Mesoscutum convex, polished, with short erect hairs. Notauli short. Propodeum polished, with all carinae. Front wing without areolet. Radius slightly curved. Nervellus reclivous. Mesopleurum polished. Legs brown, hind coxae coriaceous. First gastral tergite fuscous, median dorsal carinae somewhat obsolete, more defined on postpetiole, dorsolateral carina strong. Spiracles at 0.47 of length. Following tergites brown to fuscous, polished. Thyridia on second tergite large, lying in proximal corners. Ovipositor 0.15–0.22 of length front wing, with long erect hairs.

Characteristics of a lectoparatype of *E. obscurella* Förster. Labels: a white Förster label "♀, 19 gl, Aachen". An Aubert label "*Eusterinx obscurella* Först. ♀". Front wing 2.5 mm. Identical with the lectotype. Thyridia on second tergite more outlined by their colour.

Characteristics of the male (up to date undescribed). Labels: Italia, TN, M. Bondone Cornetto, 1900–2100 m, 16. VI. 1976, Alpenwiesen, leg. & coll. Haeselbarth. Length front wing 1.9 mm. Palpi light brown, with short segments. Mandible with lower tooth turned inwards. Clypeus 0.57 as long as wide, brownish, not convex, truncate. Anterior tentorial pits small, open. Malar space about as wide as length postannellus. Face rather convex, finely coriaceous. Frons polished, with weak coriaceous sculpture. Vertex more polished, wide, head square. Occipital carina closed. Gena wide, polished, ratio width gena : width eye = 6:4. Eyes comparatively small, roundish. Scape ovoid, the hind edge of apical truncation membranous. Pedicel proportionally large, slightly shorter than postannellus. The following segments of the antenna are all about of the same length, with short, erect hairs. No tyloids are present. Pronotum polished, epomia weak. Mesoscutum polished, notauli short, margined by a carina. Apex of scutellum with rough sculpture. Propodeum coriaceous, basal transverse carina absent. Apical transverse carina present. Median longitudinal carina weak. Costula absent. Mesopleurum polished, prepectal carina reaching to lower 0.3 of pronotal margin. Front wing without areolet, the intercutibitus short. Nervellus not intercepted, reclivous. Discoidella absent. Legs including coxae yellowish brown. Middle and hind coxae coriaceous. Tibiae with close subadpressed hairs. First tergite with longitudinal striation. Spiracles at 0.5 of length. End of first sternite at 0.6 of length first tergite. Large thyridia in proximal corners of second tergite, some coriaceous sculpture between them, rest of tergite and all further tergites fuscous and polished. The apical four sternites sclerotized, in contrast with proximal sternites.

Material examined. – Germany: ♀, lectotype (label Aubert), Aachen, 7. V. ♀, coll. Förster München; ♀, lectoparatype *E. obscurella*, Aachen, ♀, coll. Förster München. Italia: ♂, Trento,

M. Bondone Cornetto, 1900–2100 m, 16. VI. 1976, leg. & coll. Haeselbarth; 9♂, Trento, M. Bondone Cornetto, 1900–2100 m, 16. VI. 1976, leg. & coll. Haeselbarth.

Eusterinx pseudoligomera Gregor

Eusterinx pseudoligomera Gregor, 1941, Entomologické listy (Folia entomologica) 4: 8, ♀♂.

Fr. GREGOR is the only European author who described two *Eusterinx* species since FORSTER. The type material of *E. pseudoligomera* Gregor was kindly sent to me by Dr. L. Hoberlandt of the Prague Museum. It is noteworthy to ascertain that between these specimens it is difficult to determine the true lectotype as the author only published exact dates of two specimens which are not between the Prague material. As the specimens are undoubtedly the original GREGOR ones, I decided to label the series as lectoparatypes.

Characteristics of a lectoparatype. Labels: Ubušín, 29. VIII. 1936, leg. Gregor; a white label “♂”; *Eusterinx pseudoligomera* m, det. Fr. Gregor ♀♂ (♂ symbol in pencil, not original?); a red label “Typus”. Male. Length front wing 1.9 mm. Palpi brown, short (broken?). Mandible with a sharp upper tooth, lower tooth invisible. Clypeus 0.5 as long as wide, polished, fuscous. Anterior tentorial pits small, open. Face fuscous, somewhat coriaceous. Frons and vertex polished. Vertex deep, head square. Gena wide, polished. Ratio width gena : width of eye = 1 : 1. Malar space wide. Antenna without tyloids (tips broken off). Pronotum for the greater part invisible by mounting. Mesoscutum polished, notauli short. Propodeum somewhat coriaceous, all carinae present, except for costula. Upper half of mesopleurum polished, lower half somewhat coriaceous. Prepectal carina present (difficult to see). Legs slender, yellowish brown. First tergite coriaceous, median dorsal carinae almost obsolete, spiracles at 0.5 of length. End of first sternite at 0.7 of length tergite. Following tergites polished, fuscous. Gaster rather depressed.

Characteristics of the female. Labels: Ubušín, 29. VIII. 1936, Gregor. Length front wing 1.9 mm. Upper tooth sharp, lower tooth invisible (specimen glued on card board). Clypeus about 0.5 as long as wide. Face fuscous. Frons and vertex fuscous, polished. Vertex deep, head square. Gena polished. Ratio width of gena : width of eye = 1 : 1. Malar space wide. Both antennae broken off beyond pedicel. Pronotum coriaceous, epomia present. Mesoscutum polished, notauli almost obsolete. Propodeum with all carinae. Mesopleurum coriaceous, prepectal carina not reaching the margin. Legs yellow. First gastral tergite coriaceous, median dorsal carinae present. End of first sternite at 0.69 of length tergite. Second tergite with weak indication of thyridia, polished. Ovipositor 0.21 of length front wing.

Discussion. – The recognition of the male is in a certain sense possible since the antenna shows no tyloids and the thyridia are only vaguely indicated. In the key to the males I have placed this species in the group without or with indistinct thyridia. Recognition of the female is far more difficult as in fresh specimens the small thyridia may mislead the user to the group with thyridia.

Material examined. – Austria: ♂, Salzburg, Reiter Alpe, 1600 m, Heidelberg, 4. VIII. 1970; 11♂, Reiter Alpe, 1600 m, Heidelberg, 4. VIII. 1970; 6♀, 3♂, St., Haus, Heidelberg, 1200 m, 9. VI. 1972; ♀, St., Haus, Kemeterhof, Waldwiese, 1200 m, 10. VI. 1972. All leg. and coll. Haeselbarth. Czecho-Slovakia: 1♀, 2♂, ČSR, Moravia, Ubušín, 29. VIII. 1936, leg. Fr. Gregor; ♀, ČSR,

Moravia, 28. VIII. 1936, Ubušín, leg. Fr. Gregor; ♀, ČSR, Moravia, leg. Fr. Gregor; ♀, ČSR, Moravia, Veverí, leg. Fr. Gregor; ♀, ČSR, Moravia, Ubušín, 19. VIII. 1939, leg. Fr. Gregor (National Museum of Natural History, Praha). Germany: 2♂, Lippoldshausen, F, 1. VII. 1967, leg. & coll. Haeselbarth. No locality: ♂, 5. VII. A, coll. Förster, München.

Species inquirendae

Eusterinx hirticornis Strobl

Eusterinx hirticornis Strobl, 1903, Mitt. Nat. Ver. f. Steierm. 40: 117–118, ♂.

Eusterinx hirticornis: SCHMIEDEKNECHT, 1911, Opusc. Ichneum. 4 (Fasc. 28): 2190–2191

Polyaulon isomorphus: AUBERT, 1969, on label.

The holotype of this species is still extant (CD CS) and it was identified by AUBERT as *Polyaulon*. As far as I can determine, the specimen is an Oxytorine, not *Eusterinx*, as the tip of the mandible has the lower tooth clearly visible. Clypeus *not* concave and sclerotised as face. Front wing without areolet.

In the key of TOWNES (1971) the characters would more or less lead to *Proclitus*, but the apical 0.4 of mediella is *not* strongly arched and the propodeal carinae are neither agreeing with *Proclitus*.

The description of a new genus grounded on a single, incomplete male is not desirable. I have placed the specimen as a species inquirenda.

Eusterinx diversa Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂ (Type lost, nomen dubium).

Eusterinx laevipleuris Förster, 1871, Verh. naturh. Ver. preuss. Rheinl. 28: 108, ♂ (Type lost, nomen dubium).

Genus *Plectiscidea*

Plectiscidea Viereck, 1914, U. S. Nat. Mus. Bul. 83: 118

Type species: *Plectiscus collaris* Gravenhorst. Original designation.

Ephalmator van Rossem, 1980, Spixiana (Suppl. 4): 121–123

Type species: *Ephalmator subsimilis* van Rossem. Monobasic. New synonym.

The type specimens of *Ephalmator*, viz. *E. subsimilis* were determined by TOWNES to belong to the genus *Plectiscidea*.

The character, tergites 2 and 3 not separated by a crease is not clearly present in the type material. For that reason I replaced *Plectiscidea* in the key to the genera also in the alternative of item 15.

Closing remark

Species inquirenda

Dicolus hirticornis Strobl

Dicolus hirticornis Strobl, 1903, Mitt. Nat. Ver. f. Steierm. 40: 141–142, ♀.

Dicolus hirticornis: SCHMIEDEKNECHT, 1911, Opusc. Ichneum. 4 (Fasc. 29): 2261–2262, ♀.

Megastylus (Dicolus) hirticornis: VAN ROSSEM, 1974, Tijdschr. Ent. 117: 284

Characteristics of the holotype of *Dicolus hirticornis* Strobl: Labels: Admont, 24. VIII. coll. Strobl (CDCS). Holotype label of Aubert. The specimen is indeterminate. The head, the right hind leg and the left hind tibia are missing.

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