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**SOME FUNGUS GNATS OF THE TRIBE EXECHIINI
(DIPT., MYCETOPHILIDAE) NEW TO THE BRITISH ISLES**

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Five species, one of them described as new, are added to the British list. The previously unrecognised female of *Exechiopsis dumitrescae* (Burghel-Balacesco) is also described and compared with related species. A nomenclatural correction is made to the British species of *Anatella*.

The predominantly Holarctic tribe Exechiini is currently providing most additions to the British Mycetophilid list (see also Chandler 1975, 1977 and in press). As additions, including those made here, are often based on single specimens, it appears probable that more can be expected. It is hoped that additional material of these and many other little known fungus gnats will soon become available so that knowledge of their distribution and habits may be extended. The generic arrangement follows Tuomikoski (1966).

Anatella pseudogibba Plassmann

Anatella pseudogibba Plassmann 1977a, 13, figs. 3a-b.

Anatella gibba Winnertz; Chandler 1977, 70, figs. 2, 11-12.

My recent record of *gibba* as British is incorrect as it evidently refers to this species, described by Plassmann from 18 ♂ collected in the Allgäu on the German/Austrian border. As I mentioned when introducing this species, I was in some doubt in applying the name *gibba* but had no material of *gibba* for comparison. Plassmann (1977b) has, however, examined 15 species of *Anatella* from the Allgäu, including the true *gibba*.

Rymosia armata Lackschewitz

Rymosia armata Lackschewitz 1937, 33, figs. 16a-c.

One male from northern Scotland has genital structure agreeing well with Lackschewitz' figures. The body colouration is a little darker than described for the type (from the Baltic States), which had yellow shoulders and triangular yellow spots on the fore margins of the tergites but colour variation is not unusual in the Exechiini.

Male. Body mainly dark grey dusted, 4 mm. long. Wing length 3 mm. Head grey dusted. Antennae yellow basally; flagellar segments at least twice as long as broad. Palpi yellow.

Mesoscutum dark grey dusted, clothed with black setulae; strong bristles mostly near side margins; dc rows weakly indicated but one pair of long prescutellars; one pair of strong scutellars. Prothorax, pleura and meta-thorax greyish brown; one strong prepleural with a shorter one behind it. A few bristles on anepisternite. Halteres yellow.

Legs simple, dusky yellow; brown patch at base of mid coxa, dark patches beneath bases of mid and hind femora; tibiae and tarsi progressively darker. All leg bristles and setulae dark. Mid tibia with 18 short a, 2-3 p-d, 2 p, 2 v (all short and weak). Hind tibia with 5 short a, 1-2 d, 3-4 p near tip, 1 p-v. Fore mt slightly longer than tibia.

Wings grey brown tinged, darker towards costa. Sc short, ending free close to R; r-m nearly 2X m-stalk. Cubital fork long, beginning at level of length of m-stalk before base of r-m. An strong.

Abdomen mainly slightly shining grey brown with indistinct yellowish markings on side margin of tergite 2, basal patches on 3-4; 5-6 dark brown. Hypopygium small, brownish yellow, figs. 1-2.

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MATERIAL EXAMINED

ROSS: Pitmaduthy Moss, pinewood bordering bog, 16.vi.76, 1 ♂ (Chandler).

Since it is without armature on the legs, has a long cross-vein r-m and lacks complete abdominal bands, *R. armata* runs in Edwards' (1925) key to *britteni* Edwards, which it resembles in the genital characters, but *britteni* has a much smaller ventral stylomere and relatively much longer internal process of the dorsal stylomere.

Exechiopsis Tuomikoski

Having recently added *E. dumitrescae* to the British list (Chandler, 1977) I can now add two others, one previously undescribed, while I have now also been able to recognise the female of *dumitrescae*.

Exechiopsis (*E.*) *pseudindecisa* Lastovka & Matile

Exechiopsis (*E.*) *pseudindecisa* Lastovka & Matile 1974, 113, figs. 35, 37.

This was described from French and Mongolian types; it was considered that it had been confused with *indecisa* (Walker) and was probably sympatric throughout its range. I found a male in the Cambridge University Museum series of *indecisa* but have seen no other examples, while *indecisa* appears frequent throughout Britain. The genitalia differ most obviously in the broader sternal process and the longer and more slender internal process of the dorsal stylomere; *E. indecisa* is figured here for comparison. Since *pseudindecisa* has a single propleural, it runs in Edwards (1925) key to the *clypeata* (Lundström) group to which it bears no resemblance in genital structure. The external characters are summarised as follows (the type material was said to be variable in colour).

Male. Head grey dusted on occiput, clypeus brownish yellow; base of antennae and palpi yellow. Mesoscutum yellow with three slightly shining grey brown stripes, very narrowly separated by the dc rows, not reaching scutellum which is brownish yellow; median reaching fore margin, laterals short. Prothorax brownish yellow; rest of pleura and metathorax brown with grey frosting; 1 strong propleural; 1 pair of scutellars. Legs yellow, tarsi darker; fore mt=1.2 X tibia. Halteres yellow. Wings yellowish; Sc short ending in R; R5 downcurved at tip, m-stalk 0.8 X long as r-m; base of Cu-fork only a little beyond base of m-fork. Abdomen brown, tergites 1-4 with narrow yellow apical band (broadest on 2). Hypopygium brownish yellow. figs. 3-4.

MATERIAL EXAMINED

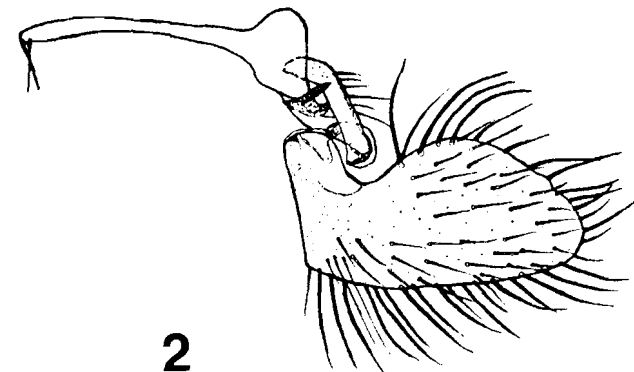
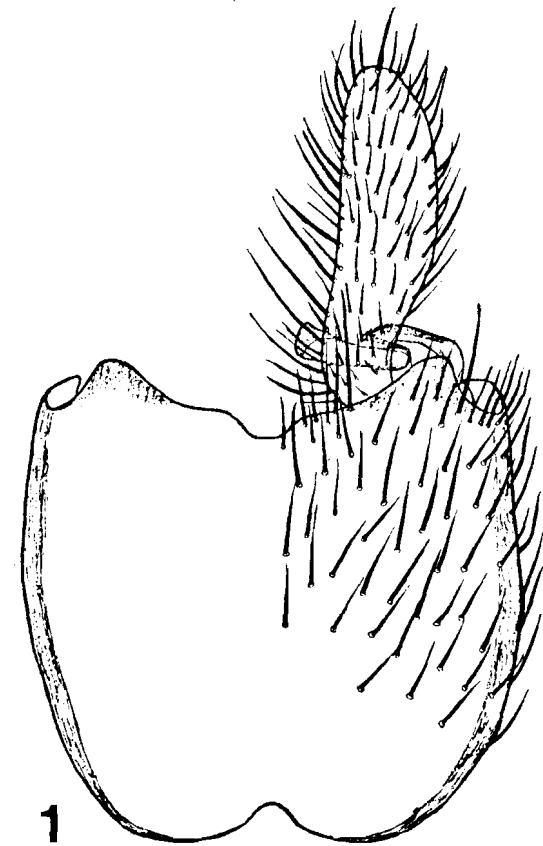
SUSSEX: Crowborough, 7.ix.1915, 1 ♂ (F. Jenkinson, Cambridge Univ. Mus.).

Exechiopsis (*E.*) *dryaspagensis* sp. n.

Male. Body mainly dark grey dusted, 5 mm. long. Wing length 3.7 mm. Antennae yellow basally (scape, pedicel and base of first flagellar segment), rest grey. Flagellar segments more than 2 X long as broad. Palpi long, slender, yellowish brown.

Mesoscutum entirely dark grey but narrowly lighter at sides; bearing decumbent dark hair; long bristles confined to side margins and dc rows; 1 pair of scutellars. Prothorax brownish yellow, 2 bristles on pronotal lobe, 1 long fine propleural; several long bristles on pleurotergites. Halteres with yellow stalk, dark grey club.

Legs long, slender, dusky yellow, a dark shade externally on mid and hind coxae and beneath bases of femora. Fore metatarsus 1.2 X tibia. All



Figs. 1-2. *Rymosia armata* Lackschewitz, male genitalia. ventral view and internal view of right claspers.

leg bristles and setulae dark. Mid tibia with 27-32 close set a, 5-6 longer p-d, 12 p, 3 v. Hind tibia with 7-8 a-d, 7 p-d, 6 short p near tip. Tibial spurs dusky yellow, anterior and posterior spurs of 2-3 subequal.

Wings grey, more intensely in costal cell and anterior part of cell R1. Sc short, ending in R; R5 strongly downcurved at tip, ratio of costal sectors between R1 and M1 1.65:1; costa not produced beyond R5; r-m 1.5 X m-stalk. Cubital fork beginning at length of m-stalk beyond base of m-fork. An just exceeding level of base of r-m.

Abdomen long and slender, clothed with dark hair. Hypopygium brownish yellow, figs. 7-8.

MATERIAL EXAMINED

DENBIGHSHIRE (Clwyd): Llangollen, 14.x.1972, 1 ♂ in woods at foot of Eglwysseg mountain (A. E. Stubbs).

This species runs in Edwards' (1925) key to *E. (Xenexechia) pollicata* Edwards from which it differs in genital structure, entirely dark body colouration (conspicuous yellow triangles are present on tergites 2-4 of *pollicata*) and in the sub-generic character of the smaller dorsal cleft and less oblique posterior margin of the tip of tibia III; vein R5 is only slightly less downcurved in *pollicata* and this cannot be considered a sub-generic character of *Xenexechia* Tuomikoski.

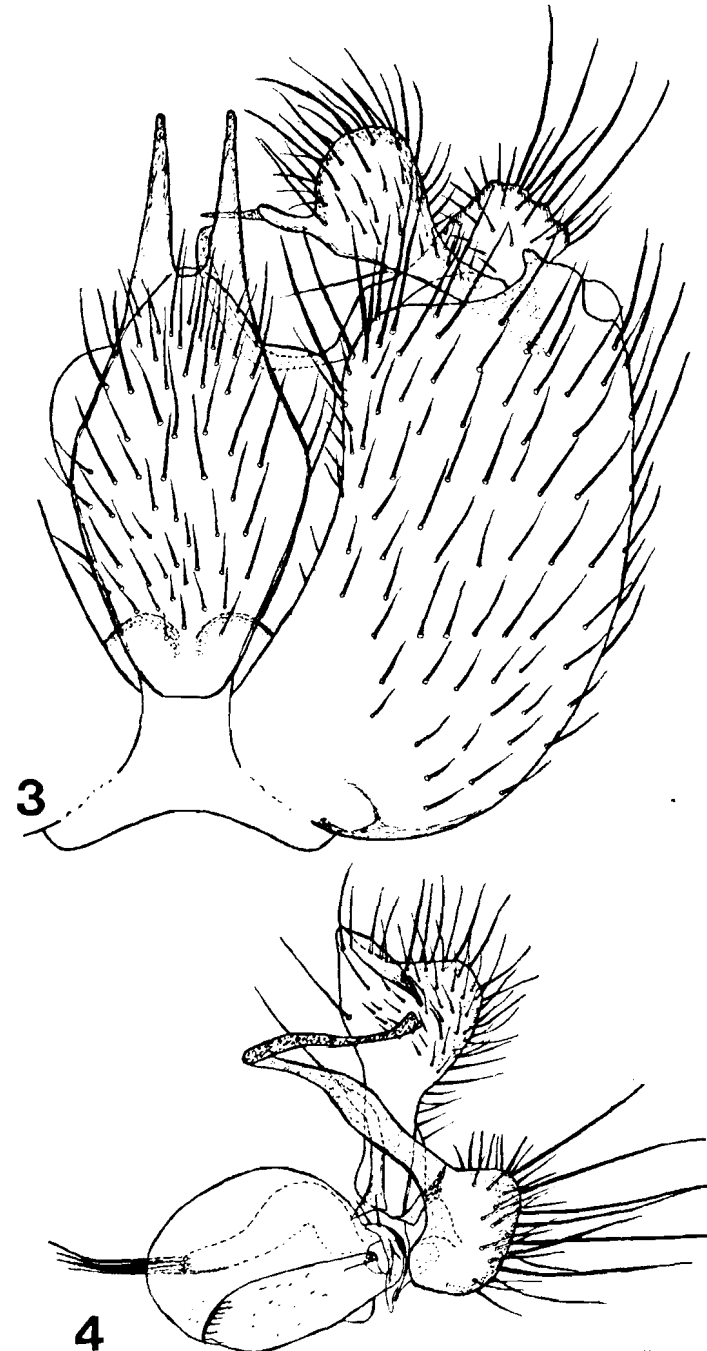
E. dryaspagensis belongs to the group of species including *furcata* (Lundström, 1912), *distendens* (Lackschewitz, 1937) *triseita* (Tollet, 1955), *oltenica* (Burghel-Balacesco, 1965) and *vizzavonensis* (Edwards, 1928) of which only the first is known to be British. Of these it is structurally nearest to *vizzavonensis*, described from a Corsican type and subsequently recorded from Rumania (Tollet, 1955), Bulgaria (Burghel-Balacesco, 1966a.) France, Spain and Algeria (Burghel-Balacesco, 1966b). The lower stylo-mere is very like that of *vizzavonensis* but the dorsal stylo-mere has the internal process more strongly developed and more posteriorly directed and the sternal process of the genital capsule is longer and not distinctly cleft apically: *vizzavonensis* is also said to have yellow shoulders.

E. furcata, added to the British list by Edwards (1941) on a single male from Scotland, is also mainly dark grey but has a larger hypopygium with more elongate appendages, a second weaker propleural and entirely yellow halteres. The only more recent British record known to me is one male I collected at Prosen Glen, ANGUS, 30.v.1973, by a thinly wooded stream.

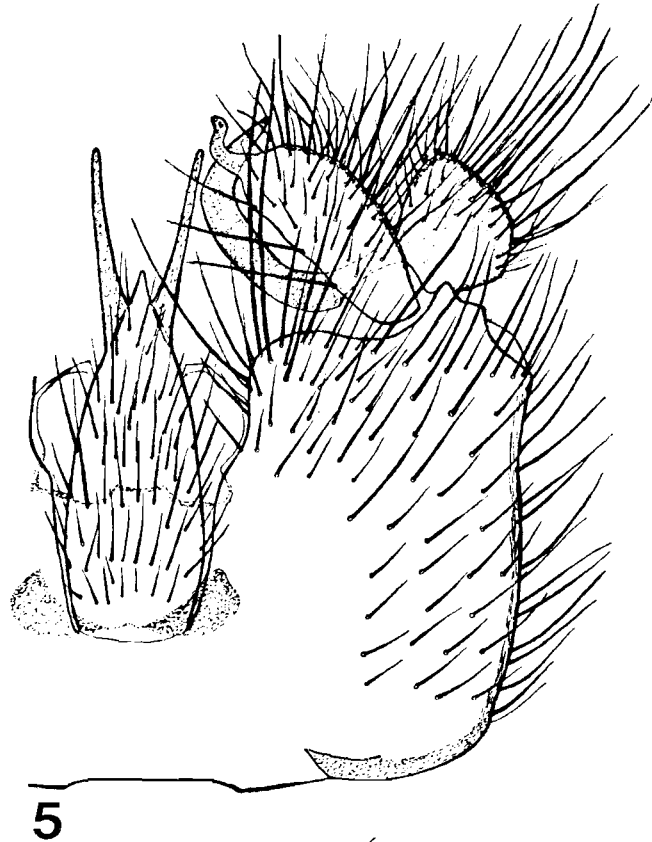
Exechiopsis (E.) dimitrescae (Burghel-Balacesco)

I recently added this to the British list (Chandler, 1977) on males collected at Monk's Wood, Hunts. The female was unrecognised but I subsequently received two females from Mr. J. H. Cole which probably belong to *dimitrescae*. The structure of the ovipositor is similar in a Scottish specimen in my collection, which I consider also to belong here.

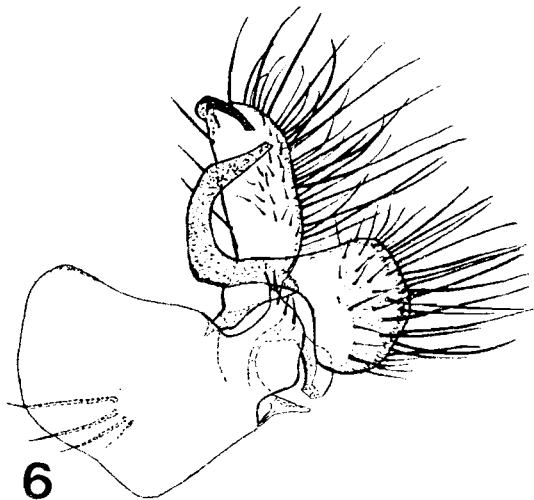
In the broadly separated brown thoracic stripes, *dimitrescae* agrees only with *intersecta* (Meigen) and *magnicauda* (Lundström) among British species. These females (body 6 mm., wing 4.4-2 mm.) resemble the male closely in colouration, yellow apical bands being present on all abdominal tergites but reaching the fore margin laterally only on 1-2 and becoming progressively narrower on subsequent tergites. The fore metatarsus is 1.2-1.25 X length of its tibia and a second short hair-like propleural is present behind the strong one (as described for the type material) — the male I described was damaged and the stronger propleurals had been broken off, so this character is probably normal. On the propleural character then, *dimitrescae* runs in Edwards' (1925) key to *indecisa* (Walker) which, however, has the meso-notal stripes at the most very narrowly separated.



Figs. 3-4. *Exechiopsis pseudindecisa* Lastovka & Matile, male genitalia, ventral view and internal view of left claspers.



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Figs. 5-6. *Exechiopsis indecisa* Walker (ventral view and internal view of left clasper).



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Figs. 7-8. *Exechiopsis dryaspagensis* sp.n., male genitalia, ventral view and internal view of right claspers.

The ovipositors of *intersecta* and *magnicauda* are figured here for comparison with *dumitrescae* (figs. 9-11). That of *intersecta* has been figured previously by Burghiele-Balascresco (1966b), while that of *magnicauda* was figured by Landrock (1912) in dorsal and ventral aspects, which does not allow easy comparison with other species. *E. intersecta* is relatively frequent throughout Britain but the only records of *magnicauda* known to me are those quoted by Edwards (1913) from Stokenchurch, Oxon and Kidd (1959) from Rostherne and Cotterill Clough, Cheshire, both in x.1941. The Stokenchurch capture included 1 ♂, 1 ♀, 15.viii.1907 (G. H. Verrall, Hope Dept.) and the figure given here is based on the female specimen.

Material examined of female *dumitrescae*

HUNTS: Monk's Wood, 28.vi.71, 1 ♀; 5.vi.72, 1 ♀, both ex suction trap (J. H. Cole). ARGYLLSHIRE: Glasdrum N.N.R., 7.vii.74, 1 ♀ (Chandler).

Brevicornu Marshall (sensu stricto)

This is a relatively large group of small brownish to greyish gnats, only reliably separated on genital characters. Most species are little known and further additions to the British list are expected. I recently added *B. serenum* (Winnertz) (Chandler, 1975) and can now add two more to bring the list to 16. One of these was mentioned as unidentified in my list of the Irish species (Chandler, 1976). Certain identification in both cases has been difficult as the specific distinctions are small and not often clearly indicated in the original figures but the names used here are considered most likely to be correct.

Brevicornu (*B.*) *fennicum* (Landrock) **comb. n.**

Brachycampta bicolor (Macquart) Lundström 1906, 22; 1909, 24, figs. 23-5.
Allodia fennica Landrock 1927, 121, n. n. for *bicolor* Lundström 1906 nec Macquart 1834, 131.

The single male described here runs in Edwards' (1925) key to *proximum* (Staeger) because of the long cubital fork, but its flagellar segments are distinctly longer than broad. The genitalia bear some resemblance to *B. foliatum* (Edwards) but lack the hairy internal lobe of the dorsal stylomere.

Male. Body 3.6 mm. Wing 3 mm. Head grey dusted, frons and clypeus yellow haired, a row of black bristles above the eyes. Antennae broadly yellow at base, extending on to second flagellar segment, otherwise grey. Palpi yellow.

Mesoscutum mainly grey dusted except small yellow humeral patch and narrow side margins; clothed with yellow setulae and evenly dispersed decumbent black discal bristles. Prothorax yellow, also with yellow hair; 5 long bristles on pronotal lobe and 3 propleurals. A patch of long pleurotergal bristles; metepisternum mainly yellowish, with short pale hairs. Scutellum grey dusted; 2 pairs of scutellars, inner strong, the outers half their length. Halteres yellow.

Legs entirely pale yellow, except small dark spots under trochanters; setulae mostly yellow to brown on mid and hind tibiae and tarsi. Mid tibia with 10 a, 4 p-d, 6 p; hind tibia with 8 a-d, 5 p-d, 5-6 p.

Wings light yellowish. Cross-vein r-m nearly as long as m-stalk. Cu-fork begins shortly before level of base of m-stalk.

Abdomen mainly dark brown, with tergites 2-3 broadly yellow on sides, extending narrowly on to apical margins; extreme side margin of 4 and venter of 1-4 also yellow. Hypopygium large, yellow, figs. 14-15.

ROSS: Bellmaduthy, Braelangwell S.S.S.I., 24.ix.76, 1 ♂ (A. E. Stubbs).

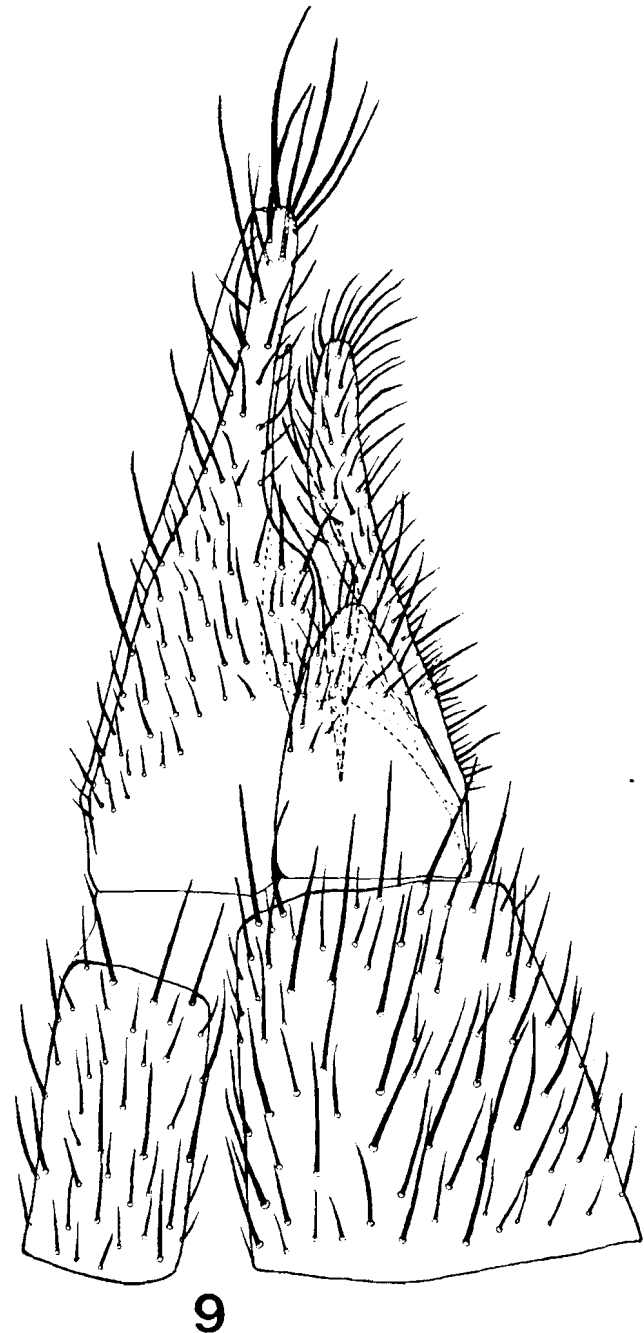


Fig. 9. *E. magnicauda* (Lundström), ovipositor.

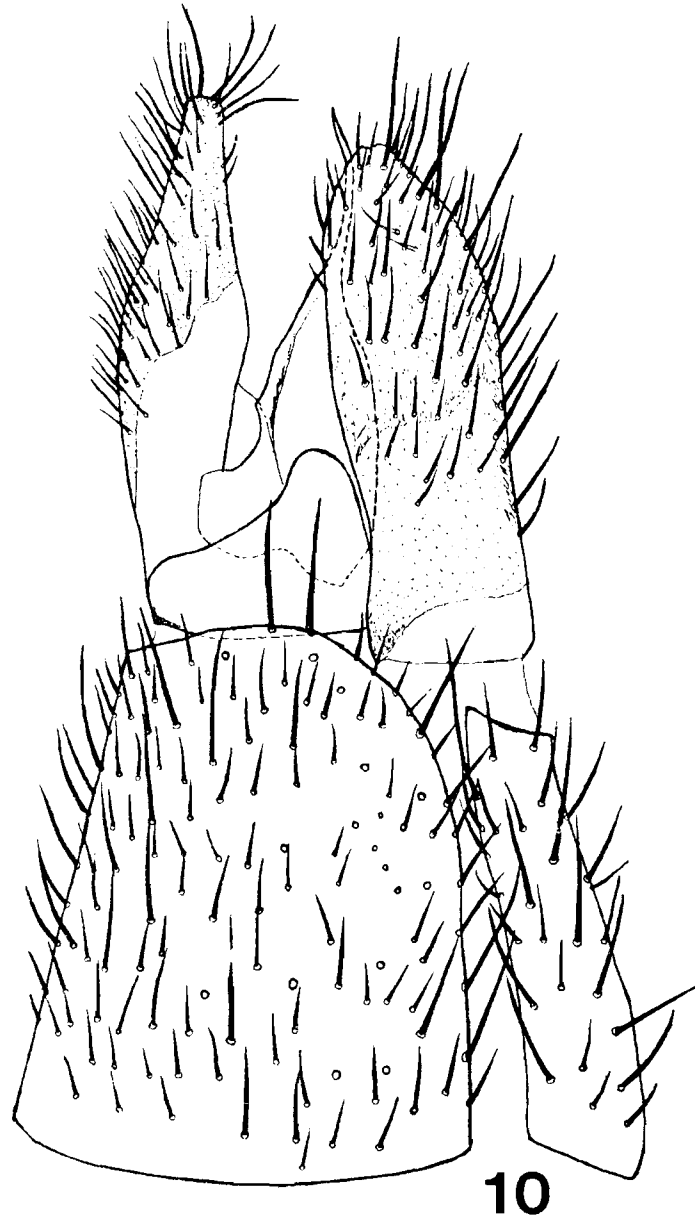


Fig. 10. *E. dumitrescui* (Burghel-Balacescu), ovipositor.

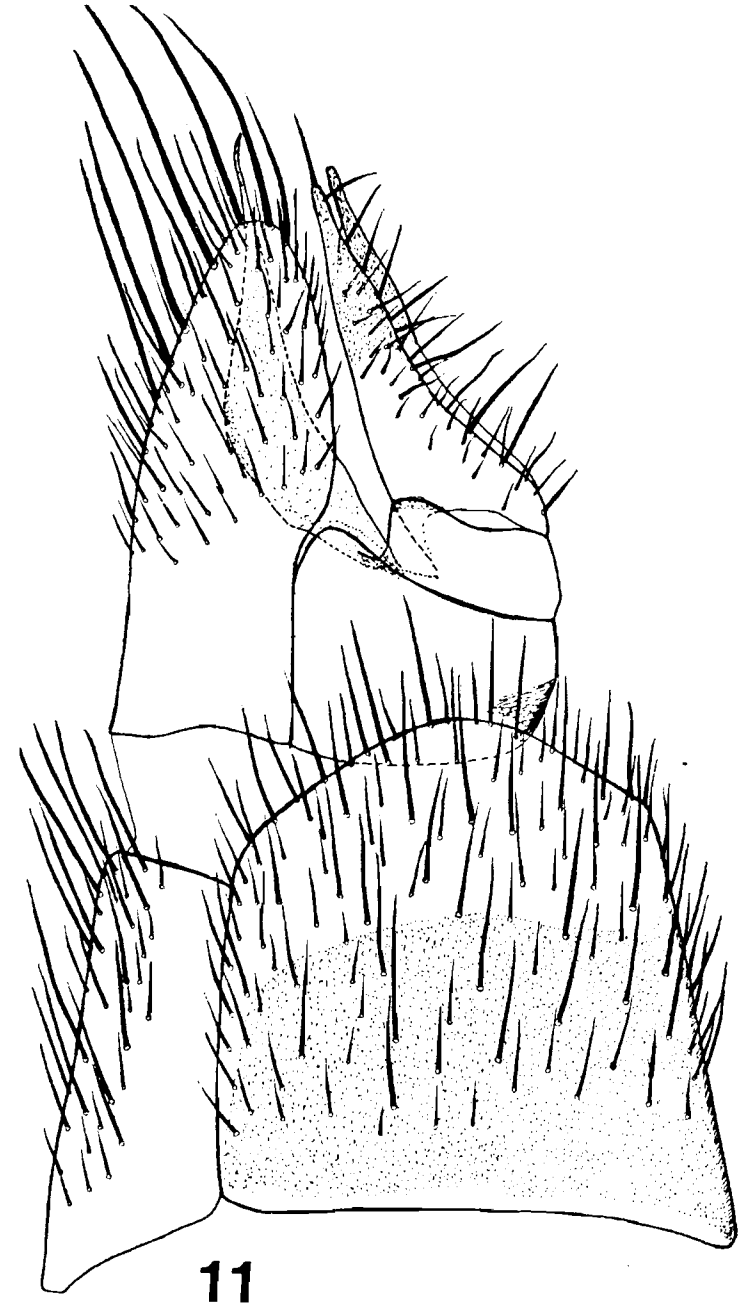
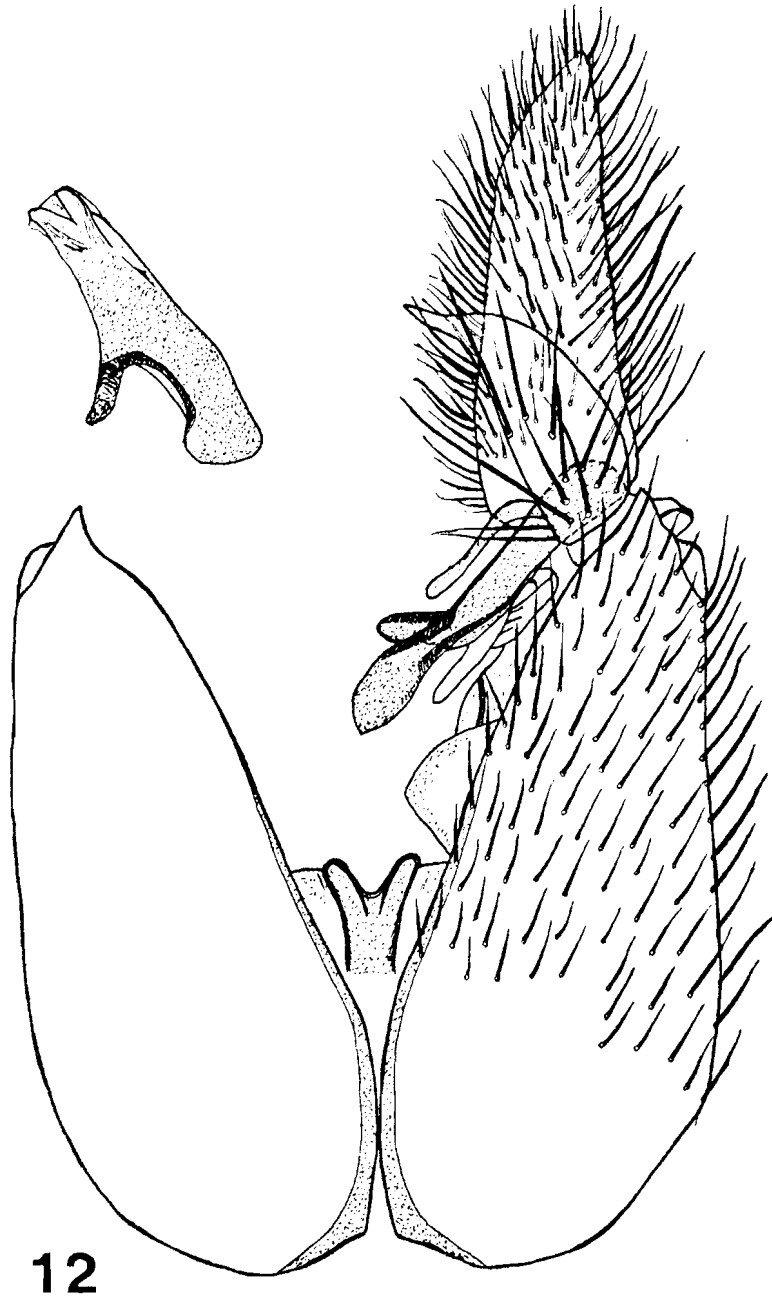
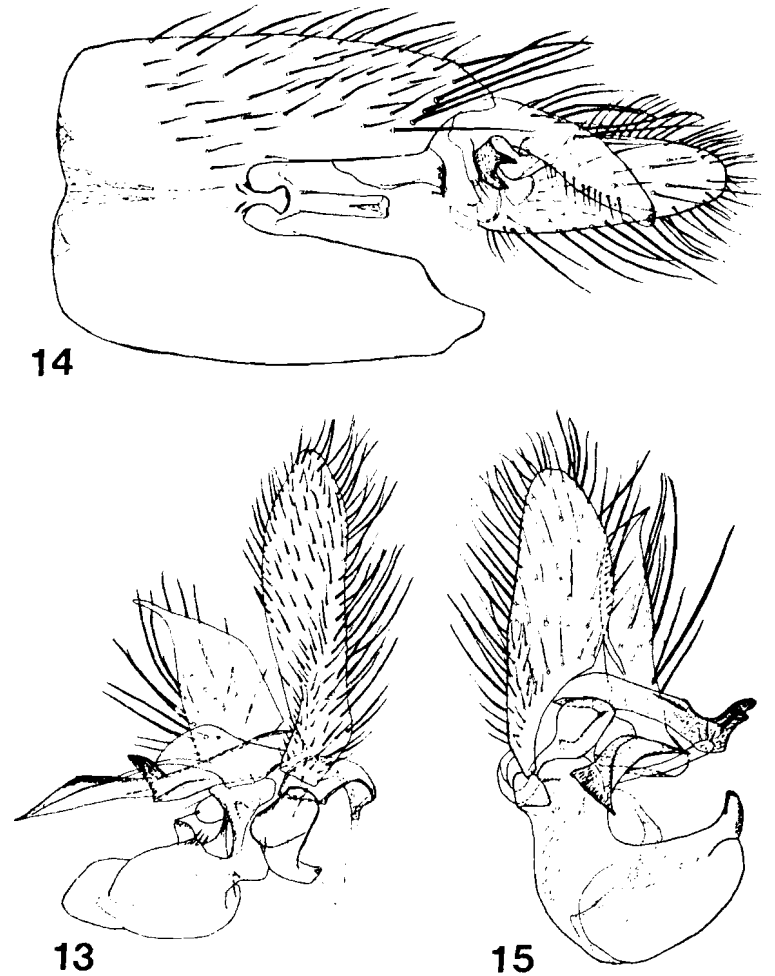


Fig. 11. *E. intersecta* (Meigen), ovipositor.



Figs. 12-13. *Brevicornu arcticum* (Lundström), male genitalia; ventral view and internal face of left claspers; 14-15, *B. fennicum* (Landrock), ventral view and internal face of right claspers.



B. fennicum was not described by Lundström and Landrock based the name on Lundström's genitalia figures which differed from Dziedzicki's (1915) portrayal of Winnertz' *Allodia bicolor* Macquart to which he restricted the name. *B. fennicum* has only been recorded from Finland (Lundström, *op. cit.*) and Sweden (Plassmann, 1976).

Brevicornu (B.) arcticum (Lundström) comb. n.

Brachycampta arctica Lundström in Lundström & Frey 1913, 4, figs. 1-3.
Allodia arctica (Lundström); Landrock 1927, 119.

The single Irish male runs in Edwards' key to the couplet including *B. boreale* (Lundström) and *B. fuscipenne* (Staeger). Its genital structure is nearest to *boreale* but clearly different in the shape and proportion of the parts. Lundström's figures of *arcticum*, described from northern Russia, agree essentially but *karpathicum* (Landrock, 1928) is near and *fennicum* dealt with above is also similar in the form of the claspers. The brief description concentrates on differences from *fennicum*.

Male. Body 3.7 mm. Wing 2.9 mm. Body mainly dark brown, grey dusted on head and mesoscutum. Palpi, antennal scape and pedicel orange brown; flagellum entirely dark grey. Chaetotaxy similar except that outer scutellars are distinctly more than half as long as inner pair.

Legs orange yellow except dark spots under trochanters; all setulae dark except on fore coxae. Mid tibia with 6 a, 3 p-d, 7 p; hind tibia with 7 a-d, 3 p-d, 8 p.

Wings light yellowish; r-m 1.3 X m-stalk; Cu-fork beginning only a little before level of base of m-fork.

Abdomen dark brown with obscure yellow patch on side of tergite 2; hypopygium large, brownish yellow, figs. 12-13.

MATERIAL EXAMINED

WICKLOW: Powerscourt Deer Park, 10.vii.71, 1 ♂ by shaded stream (P. J. Chandler).

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