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BRITISH ENTOMOLOGY

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PART 2.

A SYNOPSIS OF THE BRITISH
PSYCHODIDAE (DIPT.),
WITH DESCRIPTIONS OF NEW SPECIES.

By the late A. L. TONNOIR (Canberra).

Some years ago the Trustees of the British Museum (Natural History), through the agency of Dr. F. W. Edwards, had the great kindness to submit to me for revision the collection of Psychodidae formed by the late Rev. A. E. Eaton, and in this collection I found a number of undescribed species from various parts of the world, including Britain.¹ I had hoped before now to have been able to publish a general revision of the Palaearctic species of the family, but this work has been held up for various reasons, especially on account of other very large collections which have come into my hands quite recently and are not yet fully worked out.

In order that the British species may be included in a list of the British Diptera which is in preparation, I am giving descriptions of them here, and have added also descriptions of several further new species represented in British collections recently submitted to me. A check-list of all the British Psychodidae now known is appended to this paper.

Dr. Edwards suggested to me that British students would appreciate the provision of analytical keys. I have, therefore, added keys for the determination of all the British species. These

¹ Eaton's collection comprised a large number of pinned specimens and a series of balsam mounts of all the 103 species of Psychodidae recognised by him as represented in the collection; the whole material was bequeathed to the British Museum, together with Eaton's MS. notes, and was acquired by the Museum at the end of 1929. The series of numbered slides was referred to by Eaton when he described *Telmatoscopus rothschildi* in 1912, so that the slides were probably prepared by him between 1904 (when he published the first and only instalment of an abortive series of revisional papers on the European and Algerian Psychodidae) and 1912. The slides were evidently intended to be regarded as typical material of the species, but Eaton did not indicate holotypes; these have been selected where necessary or possible by Mr. Tonnoir.—F.W.E.

[March,

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Mon. Mag.,

keys, it must be understood, are decidedly artificial and refer only to the British fauna as at present known. They are of necessity based largely on microscopic details which can only be seen in slide mounts.

I now consider *Ulomyia* as only a subgenus of *Pericoma*, because the former was based only on a sexual character not found in other closely related species in which the females are almost indistinguishable from one another. The genera *Panimerus* and *Mormia* are treated as subgenera of *Telmatoscopus* for similar reasons. The monotypic genus *Logima*, which I reduced to the rank of a subgenus in 1922, is now dropped altogether, the subgeneric character (absence of erect hairs on R_3) being too trifling.

Certain pairs of supposed species in *Pericoma* (as for example *nubila-trivialis*, *canescens-neglecta*, *fusca-auriculata*) are perhaps only single species with dimorphic males. I have studied a long series of *nubila-trivialis* in Feuerborn's collection and find a good many intermediate males. Similar geminate species occur in Australia in various genera of Psychodidae.

In addition to the species discussed in more detail below, several others are now recorded as British for the first time.² The records of these are as follows:—

Pericoma diversa Tonn. Cole, Som.; Axmouth, Devon (Eaton); Kent Valley, Westmorland (Britten).

Telmatoscopus (Panimerus) goetghebueri Tonn. Slapton, Devon (Eaton).

T. (P.) albifacies Tonn. Three Bridges, Sussex (Verrall); Radwell, Herts., and Killarney, Kerry (Edwards); Cotterrill Clough, Cheshire (Britten).

T. (Telmatoscopus) angustipennis Tonn. One female on window at Letchworth, Herts., viii.1939 (Edwards).

T. (T.) tristis (Mg.) Tonn. Two males reared from moist débris taken from a large hollow beech in the New Forest, hatched vii.1939 (Collin).

T. (Mormia) palposus Tonn. Hale, Westmorland, vi.1929 (Britten and Edwards).

Psychoda surcoufi Tonn. A single male from Glasson, Lancs., on rotting pondweed from canal, 31.viii.1930 (Britten).

Ps. trinodulosa Tonn. Letchworth, Herts.; Salcombe, Devon; Windermere, Westmorland (Edwards).

Ps. pusilla Tonn. Letchworth, Herts. (Edwards).

² These have all been determined by Mr. Tonnoir with the exception of *T. angustipennis*, of which I have inserted the record; I have also added a few locality records for some of the other species.—F.W.E.

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[June,

KEY TO BRITISH SUBFAMILIES.

- Radial sector with only three branches, that is, one simple vein only between the two main forks TRICHOMYIINAE.
Radial sector with four branches, that is, two simple veins between the two main forks PSYCHODINAE.

KEYS TO BRITISH GENERA.³

TRICHOMYIINAE.

- Cu very short, covering of wing scanty SYCORAX Halid.
One species, *S. silacea* Curt.
Cu long, covering of wing dense TRICHOMYIA Halid.
One species, *T. urbica* Curt.

PSYCHODINAE.

1. Flagellar segments either cask-shaped or fusiform with the distal end sometimes thinner than the basal one but never with a distinct distal neck; antennae usually much shorter than the width of the wing 2.
— Flagellar segments provided with a more or less elongated distal neck; antennae usually longer than the width of wing 3.
2. First basal cell elongate, the distance between its apex and the origin of the stem of the anterior fork much longer than the width of this cell; R_4 ending at the tip of the wing, which is rather pointed. Antennae in male 15-segmented, in female 16-segmented; scape in male at least six times as long as wide, in female three times; third segment in male with an undulated pencil of hairs CLYTOCERUS Eat.
— Basal cell not elongate; distance between its apex and the origin of stem of anterior fork not usually longer than the width of basal cell. When R_4 ends at the tip of wing, this tip is rounded; antennae 16-segmented in both sexes, scape usually less than three times as long as wide PERICOMA Wlk.
3. Antennae 14- to 16-segmented, with the last few segments distinctly smaller than the others and without verticils; the 13th and following ones without neck; sometimes no suture between some or all of the diminutive terminal segments, also between the 13th and 14th. Wings always pointed at the tip where R_5 ends. Anterior fork always

³ For notation of veins see fig. 3a, which shows the basal cell longer than usual in *Pericoma*. The term 'scape' refers to the first antennal segment only. The 'ascoids' are the transparent sensory structures occurring on most of the segments of the antennal flagellum, usually Y-shaped in *Psychoda*, varying greatly in form according to species and sex in the other genera. — F.W.E.

more distal than the posterior one. Usually small unicolorous flies, almost always with wings disposed in a roof-like manner over the body PSYCHODA Lat.

- Antennae 16-segmented, quite exceptionally 15-segmented, with the last segments not diminutive and not devoid of verticils, if so, the ascoids are not Y-shaped; R_5 usually not ending at the wing-tip. Anterior fork either before or after the posterior one TELMATOSCOPIUS Eat.

KEY TO BRITISH SUBGENERA AND SPECIES.

Genus PERICOMA Wlk.

1. Wings similar in shape and venation in both sexes (subgenus *Pericoma*) 2.
 - Sexual dimorphism in wing shape or venation, but wings not covered with hairs or scales on their membrane, only on the veins. Male wings either with enlarged anal field or with emarginate costa or with a pouch in the disc 22.
2. Cu quite distinctly connected to M just at the forking of M at the base of the wing, so that three veins appear to issue from the same point 3.
 - Cu not distinctly connected with M or, if so, it is connected to it before the basal forking of M 12.
3. R_4 ending at tip of wing; usually pale species 4.
 - R_4 ending above tip of wing; usually dark species 8.
4. Anterior fork placed slightly before the posterior one; fairly large whitish species; male thorax with snow-white covering; legs yellowish-white, tips of tibiae black, last few tarsal segments black, last two in male, last three in female (easily confused with *gracilis*, see further) *P. palustris* (Meig.).
 - Anterior fork just above or past the posterior one 5.
5. Anterior fork past the posterior one and placed just above the level of the tip of Cu. Style of male hypopygium issuing from the base of basal bulb and devoid of spines either at tip or along its length *P. compta* Eat.
 - Anterior fork just above the posterior one 6.
6. Origin of stem of anterior fork placed exactly at apex of basal cell in male, a little before in female; a pale species with legs yellowish-white, with very distinct black marking at the base of the basitarsi and on the last three tarsal segments *P. mutua* Eat.
 - Origin of this stem well before apex of basal cell; coloration of legs not as above 7.

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 ... PSYCHODA Lat.
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 P. compta Eat.
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 ectly at apex of
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 ect black mark-
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 P. mutua Eat.
 cell; coloration
 7.

- 7. Origin of this stem placed at a distance from apex of anterior basal cell equal to twice the width of that cell; dark species; male hypopygium similar to that of *P. compta* (fig. 4) *P. pilularia* sp.n.
- Origin of this stem placed at a distance from apex of basal cell equal to the width of that cell; pale species; style of the hypopygium of the normal claw-like shape *P. extricata* Eat.
- 8. Vestiture of thorax mostly white, especially in male, also on wings and legs 9.
- Vestiture mostly dark, scarcely any white on legs 10.
- 9. Patagia present on pronotum of male, on which there are two long white pencils of hairs directed downwards alongside the head; tibiae without black markings at apex *P. cognata* Eat.
- No patagia on pronotum and consequently no tuft alongside the head; coloration of legs and all the rest of the body and wings as in *P. palustris* *P. gracilis* Eat.
- 10. Wing fringe scarcely white at apex of wing; large species 11.
- Wing fringe widely white at apex, down to the tip of M_1 or M_2 ; small species; legs with narrow white rings at apex of tibiae and the first tarsal segments ... *P. hibernica* sp.n.
- 11. A large tuft of hairs curved backwards on the frons of male, white above and black below; whitish scales on the base of the male antennae *P. nubila* (Meig.).
- No such large tuft on frons of male; a more greyish species; the females of this and the preceding species cannot be differentiated *P. trivialis* Eat.
- 12. A conspicuous spur of a vein at base of posterior fork, that is, vein M_2 prolonged backwards 13.
- No such spur at posterior fork 14.
- 13. Style of male hypopygium of the normal claw-like shape; a large brownish species with mottled wings, pale tufts at the tip of most of the veins *P. canescens* (Meig.).
- Style elongate, thin and undulated; coxites subspherical and with a flat internal process; the females of this and the preceding species cannot be differentiated ... *P. neglecta* Eat.
- 14. Wing fringe with one or more white spaces on posterior border of wing beside the one placed at apex 15.
- Wing fringe with no other white space than the one placed at apex of wing 18.
- 15. Wing fringe with only one white patch on posterior border between tips of M_3 and M_4 , white at apex from R_3 to just

- past M_1 , coloration of the anterior fringe variable, more or less extensively whitish. Posterior tibiae almost all dark, last three tarsal segments dark, the marking of legs not very pronounced *P. blandula* Eat.
- Wing fringe more extensively white on the posterior border and leg markings more pronounced 16.
16. Fringe of posterior border white between the tips of Cu and M_1 and also further towards the base, but not always distinctly; apical fringe with its extensive white portion narrowly interrupted by a very small black space between the tips of R_5 and M_1 so that the posterior border may present three white spaces in its fringe, the basal one not being very distinct; tips of tibiae black, last three tarsal segments also black; aedeagus asymmetrical
..... *P. pulchra* Eat.
- Wing fringe otherwise marked; only the last three tarsal segments black; aedeagus symmetrical 17.
17. Style of male hypopygium with a long curved seta just below its very fine tip; the white tufts at tip of most longitudinal veins, especially on the posterior border, not at all conspicuous *P. calcilega* Feuerb.
- Style of hypopygium without such seta; the white tufts at tip of most longitudinal veins most conspicuous
..... *P. trifasciata* (Meig.).
18. Basitarsi completely white or whitish 19.
- Only the base of the basitarsi whitish, the rest dark; hypopygium as in fig. 1, a-f *P. avicularia* sp.n.
19. Colouring of legs not boldly marked; tibiae darkish, first two tarsal segments whitish; whitish tufts at the tips of veins not distinct *P. fallax* Eat.
- Colouring of legs contrasted; whitish tufts at tip of most veins very conspicuous 20.
20. Vestiture of body and especially that of thorax greyish; all tibiae with an apical dark marking; style with curved tip 21.
- Vestiture of body and especially that of the thorax rufous; anterior tibiae without apical black marking; style with fine and straight tip *P. diversa* Tonn.
21. Style of male hypopygium almost spherical at base and with curved, thin and sharp beak *P. pseudexquisita* sp.n.
- Style with basal part not spherical or even bulbous
..... *P. exquisita* Eat.
22. Origin of stem of anterior fork past apex of basal cell; black species with dark tarsi in male, white in female 23.

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- Origin of that stem before the apex; male with a pouch in disc of wing, female with both forks very near base of wing (subgenus *Ulomyia*) *P. (U.) fuliginosa* (Meig.).
23. Male with last two veins covered with scales on underside of the wing, no scales on the other veins *P. fusca* Macq.
- Male without scales on these veins, which carry a row of long erect hairs; base of all the other veins with narrow scales nearly extending to their middle; the females of this and the preceding species cannot be differentiated *P. auriculata* (Wlk.).

Genus CLYTOCERUS Eat.

1. Basal cell elongate, distance between origin of stem of anterior fork and apex of that cell equal to about three times the width of the cell; brown species with very distinct ocellated spots on wings *C. ocellaris* (Meig.).
- Basal cell shorter, distance between origin of stem of anterior fork about twice width of cell; this stem less than half the length of R_2 ; no small white tufts at tips of R_4 , R_5 , M_1 , M_2 and M_3 ; paler and larger species *C. dalei* (Eat.).

Genus TELMATOSCOPIUS Eat.

1. Antennae of male with long scape and pyriform pedicel, last flagellar segments, in both sexes, almost without neck; these segments not conspicuously smaller than the preceding ones; R_5 always ending at apex of wing and the anterior fork always more distal than the posterior one Subgenus *Panimerus* Eat.
- Antennae of male with scape less than three times as long as wide; pedicel subspherical; R_5 usually not ending at the tip of wing 2.
2. Second antennal segment (pedicel) in male with a process covered with scales, or with some of the flagellar segments with port-hole like sensory organs, or with third antennal segment shorter than fourth; neck of the flagellar segments usually shorter than the basal bulb; origin of stem of anterior fork past the apex of basal cell; smallish black species with the vestiture of some of the appendages much developed in the male Subgenus *Mormia* End.
- All segments of male antennae not as above, normal, neck of the flagellar segments equal to or longer than the bulb, which is often eccentric; origin of stem of anterior fork usually before or at apex of basal cell
..... Subgenus *Telmatoscopus* Eaton.

Subgenus *Panimerus* Eat.MALES.⁴

1. Face and base of antennae with completely black vestiture in male; scales on veins not extending over the middle of wings on their underside; style eagle-beak-shaped
..... *T. (P.) notabilis* (Eat.).
- Some white hairs or scales on face and base of antennae in male; scales on veins extending well over the middle on underside of wing 2.
2. Conspicuous white scales on frons, face and base of antennae, scales of underside of wings extending on basal two-thirds, style eagle-beak shaped *T. (P.) albifacies* (Tonn.).
- Only scanty white hairs on face, frons and base of antennae; scales of underside of wing somewhat broader and extending almost up to the tip of wing; style falcate, regularly curved and with very fine point
.... *T. (P.) goetghebueri* (Tonn.).

Subgenus *Telmatoscopus* Eat.

1. Base of anterior fork (veins R_2 and R_3) distinctly proximal to that of posterior fork (veins M_1 and M_2) 2.
- Base of anterior fork nearly above or distal to that of posterior fork 5.
2. Origin of stem of anterior fork placed after apex of basal cell; antennae 15-segmented (σ ♀); uniformly brownish species with three tufts of blackish erect hairs on wing, one on middle of Cu, one below posterior fork, the third across middle of branches of posterior fork
..... *T. fraterculus* (Eat.).
- This origin before or almost at apex of basal cell 3.
3. Both main forks well past level of tip of Cu; brownish species with seven small black tufts of erect hairs on disc of wing *T. labeculosus* (Eat.).
- These forks before tip of Cu; stem of anterior fork equal to about half of R_2 ; tip of Rs at apex of wing 4.
4. Completely blackish brown; tuft on alula with whitish reflections; scales present on basal half of veins on underside of wing in male *T. tristis* (Mg.) Tonn.

⁴ Females of the three species cannot be differentiated from one another except perhaps that of *T. (P.) goetghebueri*, which is whiter than the others. They can be recognised as females of *Panimerus* on account of R_2 at wing tip, the two forks at same level and before tip of Cu, and the three white fasciae on the wing, the first one formed by basal erect white bristles, the second and third just past the two dark fasciae of erect bristles. — A.L.T.

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- Larger, bronzy-brown species; vestiture on body, wings and legs partly whitish; two white spaces on costal fringe; black tufts at tips of veins *T. rothschildi* Eat.
5. Forks at same level or almost 6.
— Anterior fork more distal 10.
6. Origin of stem of anterior fork before apex of basal cell .. 7.
— Origin of stem of anterior fork past apex of basal cell; small brownish species with numerous very small erect black tufts on disc of wing and a number of whitish spaces in fringe both on anterior and posterior borders *T. ustulatus* (Walk.).
7. Both forks distinctly before level of tip of Cu (last long vein); uniformly brown species without markings on legs and without darker tufts on wing; scales present on bases of all veins on underside of wing 8.
— Both forks almost immediately above tip of Cu 9.
8. Male hypopygium as in fig. 5, a, b *T. britteni* sp.n.
— Male hypopygium as in fig. 5, c, d *T. ambiguus* (Eat.).
9. Wing apex rather pointed and tip of R_4 ending in it; anterior fork very little past the posterior one; brownish species, anterior part of thorax and base of abdomen whitish; rows of erect bristly hairs on veins greyish with exception of black tufts in region of forks *T. advenus* (Eat.).
— Wing apex rounded, tip of R_4 placed a little above it; the two forks exactly at the same level; brownish-grey species; three black tufts in middle of wings at end of Cu and at forks; after these the rest of the rows of erect bristly hairs are black *T. morulus* (Eat.).
10. Wings very narrow and pointed, fringe extremely long; four white spaces in costal fringe and four in posterior fringe; legs with white markings; antennae 15-segmented *T. angustipennis* (Tonn.).
— Wings less narrow and fringe less long; dark species without white spaces in costal or posterior fringes, legs entirely dark 11.
11. Origin of stem of anterior fork well past apex of basal cell; brown species with white fringe at tip of wing; ends of rows of erect bristly hairs whitish in region of forks; scales present on bases of veins on underside of wing *T. incertus* (Eat.).
— Origin of stem of anterior fork at or before apex of basal cell 12.

12. Origin of this stem at apex of basal cell; uniformly brown species with small dark tufts of erect hairs on middle of wing at forks, another one at tip of Cu and a very small one at tip of Sc *T. consors* (Eat.).
 — Origin of this stem before apex of basal cell 13.
13. Tip of R_1 at about level of tip of M_3 , no dark tufts on wing; uniformly brown species without distinct scales at base of underside of wing; short black scales on the anterior part of thorax in male *T. decipiens* (Eat.).
 — Tip of R_1 well before level of tip of M_3 , almost in front of M_4 in male; small brownish species with two relatively large blackish tufts in middle of wings in region of forks; wings rather pointed *T. soleatus* (Walk.).

Subgenus *Mormia* End.

1. Anterior fork well beyond the posterior one and both forks well beyond the tip of Cu *T. (M.) revisendus* (Eat.).
 — Anterior fork a very little beyond or before the posterior one; both forks at or before level of tip of Cu 2.
2. Male with a scent-organ on thorax and with front tibia thickly covered with erect whitish scales; no port-hole organs on antenna *T. (M.) andrenipes* (Strobl).
 — Male without scent-organ on thorax, and with the scales on front tibia all dark and not unusually thick or erect 3.
3. Male antenna without port-hole organs or scapal process; ascoids forming peculiar transparent lamellae; anterior fork at level of tip of Cu *T. (M.) eatoni* sp.n.
 — Male antenna with port-hole organs on at least two segments; ascoids branched 4.
4. Anterior fork at or a little beyond level of tip of Cu; second antennal segment in male with a process carrying a very dense tuft of black scales; port-hole organs on segments 5-7 *T. (M.) caliginosus* (Eat.).
 — Both forks distinctly before tip of Cu 5.
5. Male antenna without process on second segment; port-hole organs on segments 5-8 *T. (M.) palposus* Tonn.
 — Male antenna with process on second segment; port-hole organs on segments 5 and 6 *T. (M.) furvus* sp.n.

Genus **PSYCHODA.**

MALES.

1. Cercopods almost equal in length to the 9th tergite, not bulbous at base, nor forficulate 2.

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- Cercopods noticeably longer than the 9th tergite, often bulbous at base and forficulate; in all cases with only one retinaculum on the cercopods 7.
2. Two or three retinacula 3.
- Only one retinaculum 4.
3. Three retinacula ... Subgenus THRETICUS, *Ps. lucifuga* Walk.
— Two retinacula Subgenus PHILOSEPEDON
..... *Ps. humeralis* (Meig.).
4. Antennae 16-segmented, the last three segments diminutive and without verticils or ascoids, subspherical, subequal and separated from each other by a suture 5.
- Antennae 15- or 16-segmented; in the latter case the last segments are not subequal to each other and are not distinctly separated by a suture, but a constriction is present between them 6.
5. Style of hypopygium not bulbous at base, suddenly narrowing towards its middle in a long, thin, slightly curved beak; internal lobes under the aedeagus fused into one median, flat, bare, squarish, rather strongly sclerotised plate *Ps. cinerea* Banks.
— Style distinctly bulbous at base, its beak curved and sharp; the two internal lobes fleshy and pubescent
..... *Ps. gemina* Eat.
6. Antennae 16-segmented *Ps. obscura* Tonn.
— Antennae 15-segmented *Ps. erminea* Eat.
7. Wings with the two main forks incomplete at base 8.
— The two main forks complete 10.
8. Antennae 14-segmented, the 12th and 13th segments without neck *Ps. brevicornis* sp.n.
— Antennae 15- or 16-segmented 9.
9. Antennae 15-segmented *Ps. setigera* Tonn.
— Antennae 16-segmented *Ps. trinodulosa* Tonn.
10. Antennae 15-segmented 11.
— Antennae 16-segmented 15.
11. Dark dots at end of most veins *Ps. alternata* Say.
— No dark dots 12.
12. Fourteenth segment of the antennae much smaller than the 15th 13.
— Fourteenth segment larger than the 15th 14.
13. Coxite of hypopygium almost four times as long as wide, subcylindrical, style with short sensory setae
..... *Ps. albipennis* Zett.

- Coxite hardly as long as wide, very much swollen on the side; whitish species with faint darkish fascia across the wing *Ps. surcoufi* Tonn.
- 14. Aedeagus very much swollen; coxites almost twice as thick at base as at tip (fig. 9) *Ps. crassipenis* sp.n.
- Aedeagus long but not swollen; coxites scarcely thicker at base than at tip *Ps. phalaenoides* L.
- 15. Ascoids with three anterior branches *Ps. pusilla* Tonn.
- Ascoids with only two anterior branches 16.
- 16. Style of hypopygium wedge-shaped in profile, not very sharp at tip; the last two antennal segments distinctly separated by a suture; no suture between the 15th and the 14th *Ps. grisescens* Tonn.
- Style suddenly tapering from the middle and ending in a sharp beak, parameres large and pubescent (fig. 11, c-f) *Ps. spreta* sp.n.

FEMALES.

- 1. Antennae 16-segmented 2.
- Antennae 15-segmented 12.
- Antennae 14-segmented 18.
- 2. Distinct sutures between all of the last four segments, the last three subequal 3.
- No suture between two or more of the last four segments; the last three sometimes of unequal size 6.
- 3. Ovipositor very much reduced, not longer than wide
Subgenus PHILOSEPEDON, *Ps. humeralis* Meig.
- Ovipositor normal, longer than wide at the base and pointed at tip 4.
- 4. Ascoids only with one anterior branch; third antennal segment amphora-shaped
Subgenus THRETICUS, *Ps. lucifuga* Wlk.
- Ascoids with at least two anterior branches; third segment of similar shape to that of the following ones 5.
- 5. Subgenital plate wider than long; its internal sensory organ long, thin and cylindrical *Ps. cinerea* Banks.
- This plate about as wide as long, with a median sclerotised embedded rod at base; internal sensory organ club-shaped *Ps. gemina* Eat.
- 6. Ascoids with two anterior branches 7.
- Ascoids with three anterior branches *Ps. pusilla* Tonn.

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swollen on the
fascia across the
surcoufi Tonn.
twice as thick
crassipennis sp.n.
scarcely thicker at
phalaenoides L.
pusilla Tonn.
16.
not very sharp
distinctly separated
and the 14th
griseus Tonn.
and ending in a
point (fig. 11, c-f)
Ps. spreata sp.n.
2.
12.
18.
four segments, the
3.
four segments;
6.
than wide
humeralis Meig.
base and pointed
4.
rd antennal seg-
lucifuga Wlk.
third segment
5.
sensory organ
cinerea Banks.
median sclero-
sensory organ club-
gemina Eat.
7.
pusilla Tonn.

7. No suture at all between any of the last four segments;
14th and 15th wider than long, the 16th much smaller
(fig. 11, f) *Ps. spreata* sp.n.
— At least one suture present between some of these last four
segments 8.
8. No suture between the 13th, 14th and 15th segments; a
suture between the 15th and 16th 9.
— Suture missing between two only of the terminal seg-
ments 12.
9. Subgenital plate much wider than long; its two lobes form-
ing together a heart-shaped median projection; 16th
antennal segments spherical, subequal to the two pre-
ceding ones (fig. 12, f) *Ps. lobata* sp.n.
— Subgenital plate not much, if at all, wider than long 10.
10. Both main forks of the wing incomplete at the base
..... *Ps. trinodulosa* Tonn.
— These forks complete 11.
11. Sides of the subgenital plate convex in profile, its distal
lobes little produced and separated by a shallow indenta-
tion *Ps. griseus* Tonn.
— Sides of the subgenital plate concave in profile; its distal
lobes large and separated by a deep indentation
..... *Ps. obscura* Tonn.
12. A suture between all the terminal segments of the antennae;
the last two segments subspherical and subequal 13.
— Suture absent at least between two of the terminal segments;
sometimes no suture at all 14.
13. Subgenital plate wider than long; internal sensory organ
club-shaped, about four times as long as wide
Ps. phalaenoides L., subsp. *elongata* n.
— Subgenital plate rather narrower; internal sensory organ
scarcely twice as long as wide (fig. 9, d)
Ps. phalaenoides L. s.str.; *Ps. crassipennis* sp.n.
14. The last three antennal segments without any suture between
them and the 14th never bare *Ps. setigera* Tonn.
— Only two of the terminal segments are without suture
between them; if the suture is absent between other seg-
ments as well, then the 14th is bare and smaller than the
last one 15.
15. Fourteenth segment distinctly smaller than 15th and never
pubescent, at most with only one sensory cone 16.
— Fourteenth segment subequal or larger than 15th 17.

16. Wings with faint transverse blackish median fascia; subgenital plate with two lobes separated from the basal plate by a strong constriction *Ps. surcoufi* Tonn.
 — Wings without fascia; lobes of subgenital plate small, no constriction between them and base of plate *Ps. albipennis* Zett.
17. Fifteenth segment much smaller than 14th, which is broadly united to the 13th; ascoids small; long and narrow lobes of subgenital plate separated from base of plate by a constriction; some dark tufts at tips of some veins *Ps. alternata* Say.
 — Fifteenth segment subequal to 14th; lobes of subgenital plate small; no marked constriction between them and the base *Ps. erminea* Eat.
18. Forks of the wing incomplete at the base; 12th antennal segment without a neck (fig. 10) *Ps. brevicornis* sp.n.
 — Forks complete; 12th segment with a neck, the 14th small, ovoid; no suture or rudiment of a segment between it and the 13th *Ps. severini parthenogenetica* subsp.n.

Genus PSYCHODA.

ALTERNATIVE PARTIAL KEY.⁵

(MALES AND FEMALES.)

1. Wings with small dark spots on the courses of the veins *Ps. erminea* Eat.
 — Wings with black dots at tips of veins ... *Ps. alternata* Say.
 — Wings quite unmarked, at most (*surcoufi*) with a faint dark band across the middle 2.
2. Wings with the two main forks incomplete at base (lower branch disconnected) 3.
 — Wings with the forks complete 4.
3. Twelfth antennal segment without neck *Ps. brevicornis* sp.n.
 — Twelfth antennal segment with long neck as usual
 Ps. setigera Tonn.
 Ps. trinodulosa Tonn.
4. Antenna with three small, subequal and subspherical segments at tip *Ps. cinerea* Banks.
 Ps. gemina Eat.
 Ps. lobata sp.n.
 Ps. (T.) lucifuga Walk.
 Ps. (Ph.) humeralis Meig.

⁵ *Ps. (Ph.) humeralis* and *Ps. (T.) lucifuga* may be distinguished in life from the other species by the fact that they hold their wings flat and divaricate instead of in the pent-roof position usual in this genus. — A.L.T.

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- Antenna with two such segments .. *Ps. phalaenoides* L.
Ps. crassipennis sp.n.
- Small terminal segments unequal, not all subspherical 5.
- 5. Three small terminal segments *Ps. obscura* Tonn.
Ps. griseescens Tonn.
Ps. spreta sp.n.
Ps. pusilla Tonn.
- One or two small terminal segments .. *Ps. albipennis* Zett.
Ps. severini Tonn.
Ps. surcoufi Tonn.

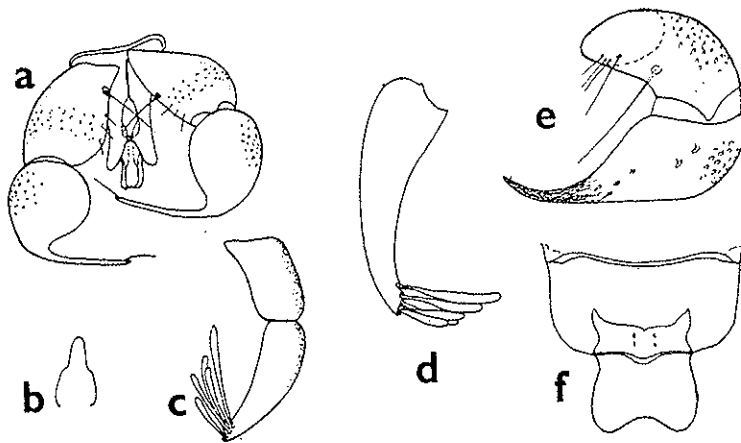


FIG. 1.
a—c, *Pericoma calcilega* Feuerborn. d—f, *P. avicularia* sp.n.
a, e, Coxites and styles. c, d, Cercopods. b, Valvula analis. f, Subgenital plate ♀, internal view.

Pericoma calcilega Feuerb.

This species has, so far, been described only from the larval stage (*Verhand. Intern. Ver. f. Limn.*, 1923, p. 196-7, figs. 4 & 5). Flies bred from these larvae were submitted to me by Dr. Feuerborn, and I recognized in them a species which I had already found in Eaton's collection mistakenly placed under the label of *P. pulchra* Eät.

Similar to *P. trifasciata* Mg., from which it differs distinctly only in the structure of the male hypopygium, the style being provided with a long seta just below its tip.

Male. The coloration of the vestiture of the body, wings and legs is as in *P. trifasciata*, but the small whitish tufts at the tip of R_2 and M_2 are decidedly less distinct.

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The incrassate basal part of the style of the hypopogium is bulbous, almost spherical, and its beak is very thin, almost straight, and carries at the tip a fairly long sensory seta inserted just below the apex (fig. 1 a). The cercopods are provided with five long retinacula (fig. 1 c). The valvula analis is more pointed than that of *P. trifasciata* (fig. 1 b).

Female. Similar to the male. It cannot be distinguished from the female of *trifasciata* except in the weaker whitish spots at the tip of R_2 and M_2 , and this can only be detected in absolutely perfect specimens; the subgenital plates in both species are identical.

One male from Bratton, near Wincanton; 10.vi.02 (*Eaton*). Many other specimens of both sexes in Feuerborn's collection from Bellinchen, Germany.

In a male from Arvavaralja (*Kertesz*) in coll. Hungarian Museum the lobes of the aedeagus are more divergent than in the British specimen and there are two long sensory setae on the coxites.

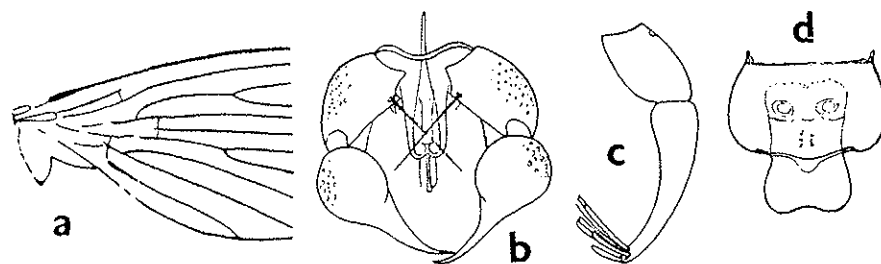


FIG. 2.

Pericoma pseudexquisita sp.n.

a, Base of wing. b, Coxites and styles with aedeagus. c, Cercopod. d, Subgenital plate of ♀ from inside.

***Pericoma pseudexquisita* sp.n.**

Very closely related to *P. exquisita* Eat., from which it differs in the more contrasty markings of the wing and the structure of the genitalia, especially the shape of the style of the male.

Male. The vestiture of the body and appendages corresponds in every point to that of *P. exquisita* Eat., which has been described in detail (*Eat.*, 1893, '94 and '96), so that it is not necessary to repeat it here. The venation is also identical (fig. 2 a); the base of Cu is distinctly connected with M.

Antennae as in *exquisita* but for the ascoids, which are short, nearly straight, and present in pairs on segments 6 to 13.

Palpal formula: 3·5-5-6-10.

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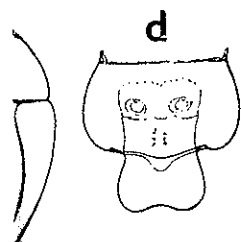


fig. c, Cercopod.

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Hypopogium: Coxites (fig. 2 b) short, strongly curved on the outside, with one long sensory seta at the base inside and several small ones below; styles globular at the base and suddenly tapering into a short, gently curved thin beak which is not much longer than the basal bulb, these styles are very characteristic of the species; aedeagus of the usual symmetrical types; cercopods nearly twice as long as the 9th tergite (fig. 2 c), curved, gradually tapering, its apex with 7 retinacula.

Wing length: 2.3 mm.

Female. Similar to male; the subgenital plate (fig. 2 d) is sufficiently characteristic; there are below it two groups of about five sensory setulae instead of the two pseudospiracular openings of *P. exquisita*.

Holotype: Auderghem (Brussels, Belgium), x.1920 (Tonnoir).

Allotype: With holotype.

Paratypes: Belgium, several males and females from Brussels (Tonnoir). Switzerland, Eauxchaudes (Eaton); Lufenburg (Eaton). Germany (Feuerborn). England, Skokholm Is., Pembrokeshire, 24.viii.34 (Edwards).

This is a common species on the continent, where it takes the place of *P. exquisita*, which has not been found there yet.

Pericoma avicularia sp.n.⁶

Species very similar to *P. exquisita* Eat., but the vestiture of the body much more brownish; basitarsi not completely white; dististyle in shape of a bird's head in profile.

Male. The vestiture of the body and specially that of the posterior part of the mesonotum distinctly more brownish than in the related species. The legs are also brownish with the extreme tip of the tibiae, basal half of the basitarsi and the dorsum of the second segment whitish.

Wing markings as in *P. exquisita*, the flaxen tufts at the end of the veins just as conspicuous. The vestiture of the wings in both sexes, is characterised by the denser brown erect hairs in the region of the forks; this gives to the wings the appearance of being spotted.

The antennae have a pair of almost straight ascoids on segments 6-13; palpi formula: 6-9-9-16.

Hypopogium: Coxites rather short, much curved on the outside; style longer, globular at base, but gradually tapering into a rather long curved fine beak provided near the tip with a per-

⁶ This name has been proposed by Eaton, but he gave a very sketchy description of the species in his MS. notes. — A.L.T.

pendicular sensory setula (fig. 1 e); it is very much as Eaton writes in his notes, 'Like a bird's head in profile with a falcate or decurved acuminate bill a little more than half the length of the whole head.' Cercopods as in fig. 1 a with five retinacula.

Wing length as in *P. exquisita*.

Female. Similar to male, but the legs are darker, the distal brown portion of the basitarsi being more extensive. The subgenital plate as in fig. 1 f.

Holotype: Slide 14 b, The Brue, Cole, Somerset; 2.ix.04 (Eaton).

Allotype: Bolton, Lancashire; 10.vi.22 (H. Britten).

Paratypes: Slide 14 a, Torc Wood, Killarney; 13.vi.02 (Eaton). Pinner 1 ♂, Torc Fall; 13.vi.02 (Eaton). 1 ♂, Valentia (Eire); 1.vii.02 (Eaton). 1 ♂, Colne, Lancashire; 31.v.30 (Britten).⁷

Two males on slides 11 h and 11 i both from Bône (Algeria), 9 and 25.iii.03, and labelled by Eaton as *P. exquisita*, may belong here; the styles are not sufficiently well displayed on the mounts to decide definitely on their identity; further, the cercopods have only four retinacula.

This species is very sketchily described in Eaton's MS., in which it is said to be very much like *P. trifasciata*; this is certainly a lapsus. Further, there is also in these notes the description of an unnumbered species of which no slides were to be found in the collection, but the localities of which corresponded to those of *P. avicularia*. All this shows that there was a great confusion in Eaton's mind as to the correct identity of these closely related species, the more so that the two pinned paratypes mentioned above were labelled by him as *P. exquisita*.

On account of the coloration of the legs, this species might be confused with *P. annulata* Tonn., in which, however, the venation differs in the position of the origin of Cu on the fork of M_3 , M_4 .

Pericoma pilularia sp.n.⁸

A fairly large brownish species with whitish fasciae on wing and small white tuft at end of all the longitudinal veins; superficially similar to *P. canescens* Mg., but otherwise more closely related to *P. compta* Eaton on account of structure of genitalia and the venation.

⁷ Also taken in numbers by Mr. H. Britten at Armfield, Cheshire, vi-viii. 1933.—F.W.E.

⁸ This name was found on Eaton's specimens, but no description was given in his manuscript notes.—A.L.T.

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Male. Antennae 16-segmented; 1st segment somewhat longer than wide, those of the flagellum elongate cask-shape, gradually diminishing in size towards the tip of the antennae; last segment bulbous with an apiculus a little longer than the basal bulb (fig. 3 b). Ascoids almost straight, in pairs on segments 4 to 13.

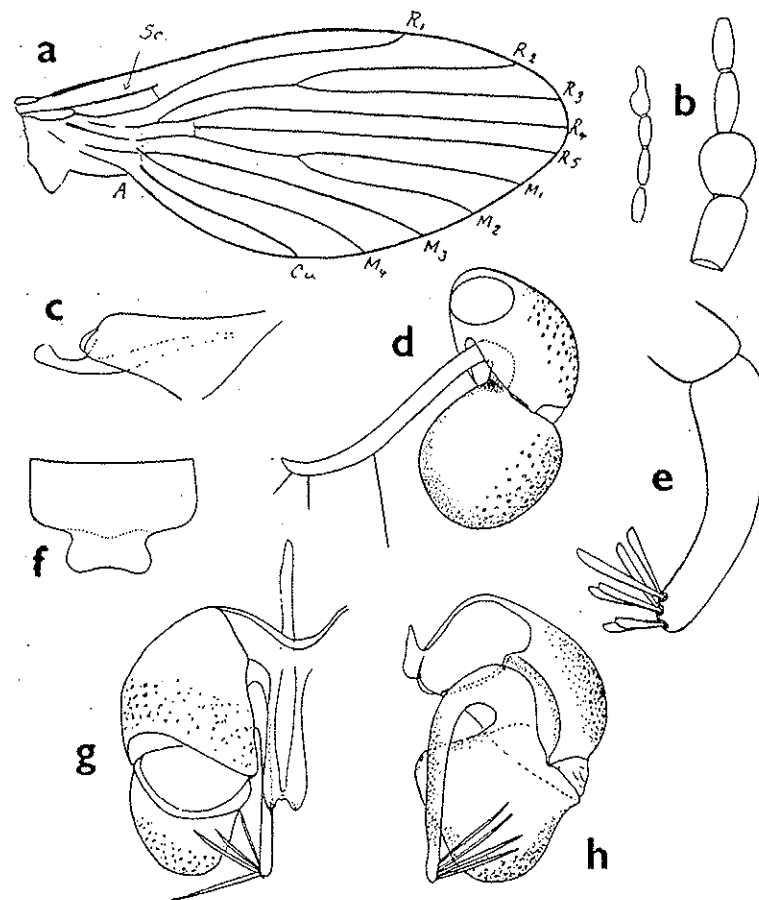


FIG. 3.

a-f, *Pericoma pilularia* sp.n. g, h, *P. compta* Eaton.

a, Venation. b, Base and tip of antenna. c, Aedeagus. d, Coxite and style, ventral. e, Cercopod. f, Subgenital plate. g, h, Coxite and style from above and below.

Palpi formula: 9-14-14-20.

Vestiture on the thorax greyish with admixture of a few brown hairs. No display organ on the thorax.

Wing elongate oval with the tip of R_4 placed at the apex, which is well rounded (fig. 3 a); both forks at the same level and at the level of the tip of Cu, origin of the stem of the anterior fork well before the apex of the anterior basal cell, that is, at a distance from it equal to twice the width of that cell, which is much longer than the posterior basal cell. Fork of M_3 , M_4 , placed at no appreciable distance further from the point where the base of Cu is connected with M_4 .

Vestiture brown with greyish-white markings as follows: a small white tuft at the tip of each longitudinal vein except R_4 and R_5 , a whitish fascia under the tip of R_1 and spreading on R_2 , R_3 and R_4 at the end of the rows of bristly erect hairs, another irregular pale fascia formed by the white hairs at the end of the rows of bristly erect hairs on M_1 , M_2 and M_3 ; a white space on the base and before the tip of Cu. Fringe brown with white space at apex between the tips of R_3 and R_5 .

Legs: Femora with greyish covering, tibiae pale at base, then brown, but with whitish ring at apex; distal half of basitarsi whitish, the rest of the tarsi brown.

Abdomen with covering similar to the thorax.

Hypopygium with short coxites rounded on the outside, styles spherical and provided at the base inside with a long thin process pointing backward and inward; it is sharply elbowed at the base, this elbow being lodged in a cavity of the internal side of the coxite, distal half of this process gently curved and carrying near its apex two long and thin spinules and a longer one somewhat more basally (fig. 3 a). Aedeagus similar to that of most species of this group, with two upper lobes (fig. 3 c). Cercopods subcylindrical, moderately curved (the undulation in the distal half shown in fig. 3 e may be due to the compression of the mount on the slide) with seven retinacula at apex.

Wing length: 2.7 to 3 mm.

Female. Similar to male, antennae relatively shorter; subgenital plate as in fig. 3 f.

Holotype: Slide 29 e (*Eaton*); Route de Stora, 24.ii.1903, Philippeville, Algeria. Algerian sp. iii.

Allotype: Slide 29 f (*Eaton*): Blackney Pilsdon, near Bridport, Dorset, 20.iv.1910.

Paratypes: Slide 29 b (*Eaton*); Fort National, La Kabylie, 3.xi.1902. Slide 29 c (dry) (*Eaton*); Combe, withy bed. Slide 29 d₁, Axmouth, Devon, 20.iv.1901 (*Eaton*). Slide 29 a, near Seaton, Devon, 25.ix.1902 (*Eaton*).

On account of its venation, in which the base of Cu is connected with the fork of M_3 , M_4 , this species belongs to the group

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of *P. trivialis*; its venation is almost identical with that of *P. mutua* Eat., in which the two forks are at the same level and the tip of R_4 at the apex of the wing; however in *P. pilularia* the base of the stem of the anterior fork is placed much before the apex of the anterior basal cell, in fact much more than in any other species of that group. On account of its colour pattern this species has a superficial resemblance to *P. canescens* Mg.; it may have been confused with it in the past since it has a similar geographical distribution. The venation of *canescens*, with a spur at the base of the posterior fork, and the genitalic structure are quite different, so that the two species are obviously not closely related.

The structure of the genitalia is similar to that of *P. compta* Eat. (in which the tip of R_4 is also placed at the apex of the wing), the rounded style of which is also provided with a long curved process. This structure is not easily made out, and the figure of Eaton (Pl. I, 4 a) is very misleading; I am giving here a new figure of the ♂ genitalia of that species (fig. 3 g, h).

I have seen three males from Germany, in the collection of Dr. J. Feuerborn, which I consider, for the time being, as belonging to *P. pilularia*, although there are some slight differences in the genitalia and in that the posterior fork is a little past the level of the anterior one. The three spinules on the long thin process of the style are differently spaced, the second one being nearer to the basal one than to the apical one and the third somewhat smaller and directed downwards. Further, the aedeagus is longer and without the two lobes above the median distal projection. These specimens may belong to a different species, subspecies or race; however, it is premature to make a decision yet since I have only seen so far spirit specimens of one sex only and completely devoid of vestiture. In case the latter were different from that of *P. pilularia* I would certainly consider them as belonging to a distinct species. The localities of these specimens are: Stolzenhagen, Uckermark, 28.iii.34 (*Peus*), 2 ♂, Feuerb. coll., No. 268, and Am Ritt., Burg, 9/4 (*Feuerborn*), 1 ♂.

***Pericoma hibernica* sp.n.⁹**

Medium sized species, similar to *P. fallax* Eat. and belonging to the group of *P. unispinosa* Tonn. on account of the reduced number of retinacula on the cercopods of the male hypopygium.

Male. Antennae with the first segment somewhat longer than broad, the second subspherical, first flagellar fusiform, the

⁹ This name was proposed by Eaton in his MS. notes, the parts of this description placed here between inverted commas are by him, suitable alterations to the wing venation nomenclature having been made. — A.L.T.

following ones cask-shaped, gradually diminishing in length, the last three still longer than broad, the last one with a thick apiculus placed on one side (fig. 2 f). Ascoids present in pairs on segments 5 to 13.

Palpi formula : 4-10-10-17.

Thorax and abdomen with greyish-white covering. Legs greyish, the tip of the tibiae more distinctly whitish, the tarsi dark with exception of the tip of the basitarsi.

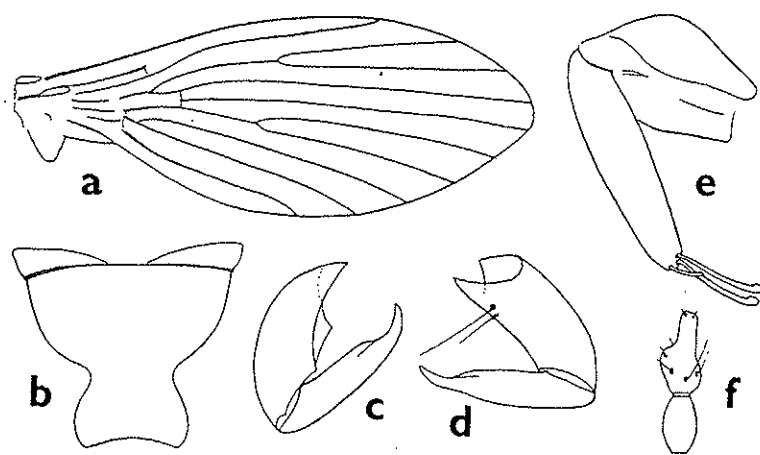


FIG. 4.

Pericoma hibernica sp.n.

a, Venation. b, Subgenital plate. c, d, Coxites and styles. e, Cercopod and tergite. f, Tip of antennae.

Note.—In fig. a veins M_3 and M_4 are shown with a short common stalk. This is an error due to faulty mounting of the first specimen examined; actually the last three veins arise from practically the same point.

Wing elongate with rounded apex (fig. 4 a) placed between the tips of R_1 and R_5 . Anterior fork a little past the posterior one and somewhat before the tip of Cu; origin of Cu just at the fork of M_3 , M_4 .

Wing marking of a similar general plan as in *P. fallax* Eat.; wing fringe around the tip glossed with whitish from the tip of R_2 to that of M_2 (which is a much greater distance than in any of the related species); the dark basal patch or fascia separate from the transfurcal, and both of them unbroken; the latter, connected by the cusp from its salient angle with the dark apical region, contains three darker spots—one of dense black bristling hairs at the anterior fork, subquadrate; another, less pronounced,

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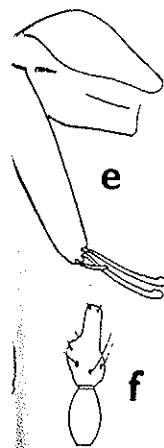
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by the posterior fork; and the third a small spot of dark hairs reclined outwards at the end of Cu and blended with the fascia. All of the veins from R_2 onwards end at the margin in dark reclined hair spots of this nature; and in a few specimens there are scanty traces of marginal flaxen hairs at the extremities of R_2 , M_3 , M_4 and Cu.

'Inferior genital appendages (cercopods) elongate, tapering only to a small degree from the base; retinacula 2 long, coequal, and one short setaceous rudiment, proportioned as 12 and 3 to 30 (fig. 4 e). Gonopods (forceps) moderately stout, basal joint (coxite) slightly arcuate, twice as long as broad (with two basal setae, one long and one short); second joint (style) narrow, claw-like, gently uncinat in its further half and acuminate (figs. 4 c, d).' The aedeagus is of the usual simple symmetrical shape.

Wing length: 2.5 to 2.7 mm.

Female. Similar to male, ovipositor normal, elongate, the subgenital plate as shown in fig. 4 b.

Holotype: Slide 7 b; Torc Falls, Killarney, Eire, 12.vi.1902 (Eaton).

Allotype: With the holotype; pinned specimen mounted on slide by A.L.T.

Paratypes: Slide 7 a, a male, same locality and date; slide 7 c, a female, same locality and date, as well as three other pinned specimens, one from Valentia (Eire), 12 to 15.vi.1902.

Telmatoscopus britteni sp.n.

A fairly large, uniformly dark species without any markings; closely related to *T. ambiguus*, from which it differs mainly by the much longer, thinner and undulate styles and shorter retinacula of the male hypopygium and the shape of the subgenital plate in the female.

Male. Eye bridges almost contiguous; antennae much longer than width of wing, verticils ample but formed only of two rows of bristles, which are brown. First segment obconical, a bit over twice as long as wide, this and the second segment covered with deep black scales; the first two of the flagellum without very distinct neck, all the following ones with gradually longer neck and more markedly eccentric bulb (fig. 5 b); tip of antenna missing in type. A pair of simple and moderately long ascoids on the produced part of the bulb, and 8-10 thin secondary ascoids round the base of the neck (fig. 5 d). Face and frons with dark tuft of hairs. Palpi not studied; their covering brown, not conspicuous.

Thorax with brown vestiture, a patch of wide, deep black scales on anepisterna, and a tuft of erect hairs on the pteropleura; knob of halteres deep black. Integument of the pleurae ochraceous. Wing elongate oval (fig. 5 a), apex rather round, R_5 ending very slightly below it. Both forks placed distinctly before the level of the tip of Cu, the anterior fork a little more basal than the posterior one. Origin of stem of anterior fork well before the apex of the anterior basal cell, this cell markedly longer than the posterior one.

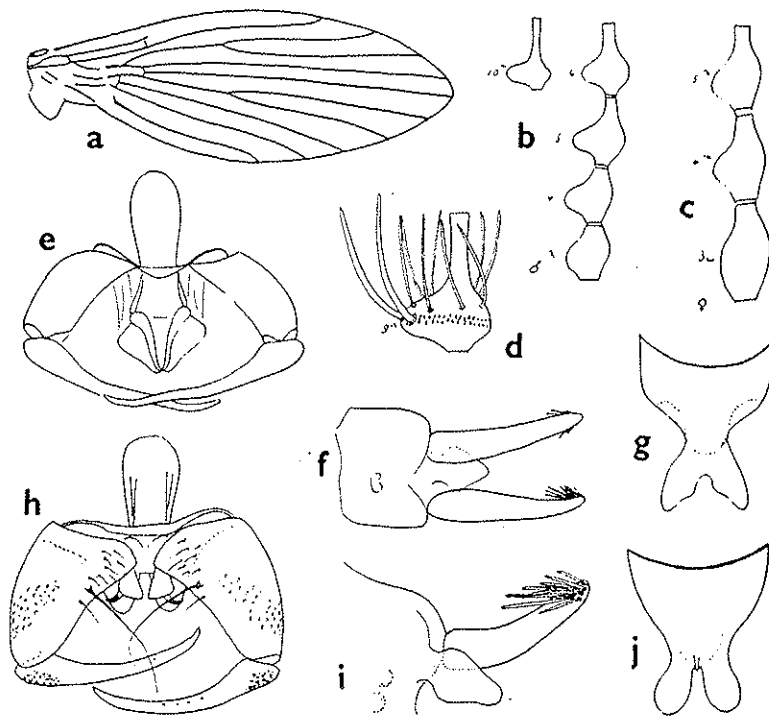


FIG. 5.

a—g, *Telmatoscopus britteni* sp.n. h—j, *T. ambiguus* Eat.

a, Venation. b, c, Outlines of antennal segments, ♂ and ♀. d, 9th antennal segment of ♂, showing ascoids. e, h, Coxites and styles with aedeagus. f, i, Cercopods. g, j, Subgenital plate.

Vestiture of wing uniformly brown, without any tuft on disc or margin. Rows of erect hairs absent on R_1 , R_5 and M_1 , extending almost to tips of other veins, except on M_2 , on which the row is shorter; veins covered with distinct scales on the underside of wing, at the base only; that is, up to the level of the tip of Sc.

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Hypopygium: Coxites about twice as long as wide, curved inwards (fig. 5e); style almost twice as long, very thin, and somewhat undulated past the middle; aedeagus symmetrical; cercopods distinctly shorter than the styles, each with eight short retinacula; pseudo-spiracles of 9th tergites fused (fig. 5d, f).

Wing length: 2.7 mm.

Female. Similar to male; no tuft on head or thorax, no scales on underside of wing. Antennae relatively shorter, bulbs of flagellum less eccentric (fig. 5c); ascoids in pairs, no secondary ascoids. Subgenital plate as in fig. 5g.

Holotype, ♂, allotype and 1 ♀, paratype, Madeley, Staffs., 16.vi.39 (*Britten*).

This species can easily be confused with *T. ambiguus* (Eat.), from which, beside the genitalic characters, it differs in the male only by the more ample verticils of the antennae (the ascoids are the same) and the presence of dark, dense scales on the anterior part of the thorax; the patch of scales on the anepisternum is also much more conspicuous: it may conceal a display organ. There is no difference in the females, except for the shape of the subgenital plate. On the whole, one can say that *T. britteni* is a somewhat larger and darker insect. The genitalia of both sexes of *T. ambiguus*, which have never been figured, are here illustrated for comparison. The long curved hair shown in the figure on the inner face of the coxite is not always present.

[Fig. 5h was presumably drawn from a Continental specimen, as Tonnoir reported that the hypopygium of the only male *T. ambiguus* I sent him from Eaton's collection was incomplete. However, in a male from Exwick, Devon (*Eaton*), which I have examined, the structure is practically the same as Tonnoir's figures. The cercopods carry about twelve retinacula, some of which are much longer than in *T. britteni*.—F.W.E.]

Telmatoscopus (Mormia) andrenipes (Strobl.).

Strobl, 1910, *Mitt. Naturwis. Ver. f. Steierm.*, 46 (1909): 270.

A species closely related to *T. revisendus* on account of its 15-segmented antennae; vestiture deep black, wing fringe narrowly white at apex, small white humeral tufts; anterior tibiae in male thickly covered with erect, broad, partly whitish scales, giving them a swollen appearance.

Male. Head and its appendages without tufts of thick broad scales; eye bridges three facets wide and separated from each other by a distance equal to about two facets. Antennae long (fig. 6d, e), 15-segmented, 1st segment twice as long as wide, 2nd almost square in outline, 4th rounded and smaller than the 3rd and 5th, the few following ones with very short neck, their

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bulb excentric; median segments up to the 13th more elongate, with a longer neck, 14th oval, 15th about as long but narrower, distinctly formed by the fusion of the 15th and 16th segments, its apiculus small. Ascoids (figs 6 f, g) in pairs on segments 4 to 13, each with two upwardly-directed, flat, darkish and striated branches, one wider than the other, especially at the base, sometimes both branches wide at base on the basal segments. Verticils thick but rather spreading.

Palpi (fig. 6i) formula: 6-8-8-11, the second and the third incrassate.

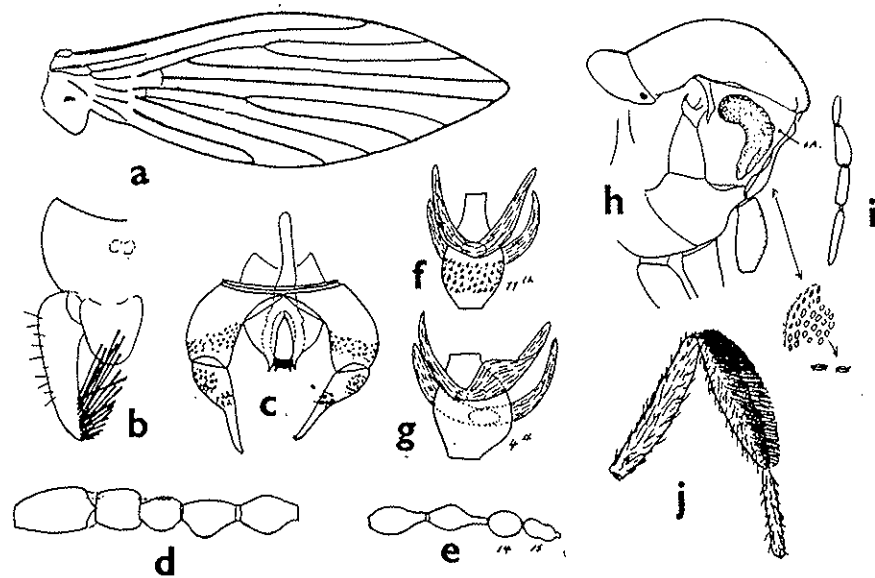


FIG. 6.

Telmatoscopus (Mormia) andrenipes Strobl. ♂.

a, Venation. b, Cercopod. c, Coxites and styles with aedeagus. d, e, Base and tip of antenna fig. Enlarged antennal segments (11th and 4th) showing ascoids. h, Thorax showing sensory organ. i, Palpus. j, Front leg showing tibial brush.

Thorax provided with a large scent organ in form of a vesicle (fig. 6 h) inserted well below the anterior spiracle, directed upwards and then curving backwards in the middle of its length. This vesicle stands some distance away from the pleura, which is completely membranous in this region; it is provided on the internal side—that is, the one turned towards the body—with numerous rounded papillae in shape of a bowl; the external side carries microscopical spinulae. On the whole the vesicle is rather rigid and probably preserves all the time the shape shown in fig. 6 h, which shows the organ after treatment by potash.

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more elongate,
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This is the first species of this subgenus which is found to possess a scent organ on the thorax.

Wing (fig. 6 a) narrow and pointed, its apex below the tip of R_4 ; anterior fork placed a little before the middle of the wing at the level of the tip of Cu and somewhat before the posterior fork, base of Cu unconnected. Vestiture uniformly black, except on a narrow extent of the fringe at the apex, where it is whitish. Rows of erect bristles extending up to the middle of the wing, that is, at some distance past the anterior fork, but they all stop before the level of the tip of M_4 ; no tufts on disc or at tips of veins.

Legs black with exception of the front tibiae, which have the distal two-thirds whitish-ochraceous; they appear much swollen on account of their dorsal covering of very dense flat and broad scales; however, the tibiae themselves are somewhat incrassate so as to allow them to carry such a thick covering (fig. 6 j).

Abdomen with completely dark covering, without large erect tuft at the tip.

Hypopygium (fig. 6 b, c): Coxite curved, twice as long as wide, the styles shorter, with basal half incrassate ending in an almost straight beak; aedeagus with two large triangular pieces above, ending in a somewhat curved sharp tooth; two further apical spines below on the main part of the aedeagus; cercopods half as long again as the ninth tergite, with about 18 retinacula on the distal third, the more proximal being the longest.

Length of wing: 2.4 mm.

Female. Unknown.

Two males, Cotterill Clough, Cheshire, 21.v.39 (H. Britten); one mounted on slide by me.

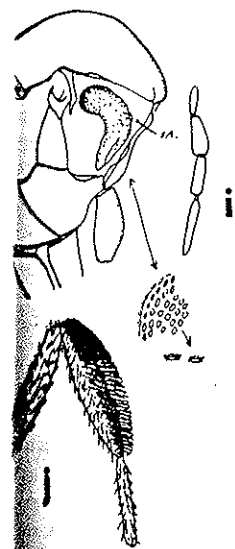
This species was described at some length thirty years ago by Strobl, from a single male collected at Admont (Styria), but unfortunately he missed most of the important points, so that the species would never have been recognized were it not for the very peculiar conformation of the anterior tibiae.

The unknown female would easily be confused with that of *T. revisendus*, which also has 15-segmented antennae, but it should be distinguished from it by the position of the anterior fork which is much less distal.

Telmatoscopus (Mormia) eatoni sp.n.

A medium-sized, completely brown species; male without process on scape or port-hole organs on flagellar segments; antennae with 16 segments, the last two distinctly smaller, the 15th without neck.

and the third



8. d, e, Base of flagellus. d, e, Base of flagellus (3rd and 4th) showing the shape of the flagellus. f, Front leg showing the shape of the tibiae.

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Male. Head without tufts; eye bridges almost touching; scape obconical, longer by one-half than wide, 3rd segment short, fusiform, without neck; the following ones with neck nearly as long as basal bulb, 14th with very short neck (fig. 7, f), 15th about half as big, subspherical, no trace of neck, 16th still a little smaller and provided with a long claviform apiculus. Ascoids in pairs on segments 4 to 14, in form of broad striated lamellae produced on one side in a pointed apex (fig. 7, e).

Palpi, formula: 10-19-17-24; vestiture scaly, but not conspicuous.

Wing (fig. 7, a) lanceolate, its apex between the tips of R_4 and R_5 ; R_s pectinate, anterior fork at level of tip of Cu , and just a little past the posterior one.

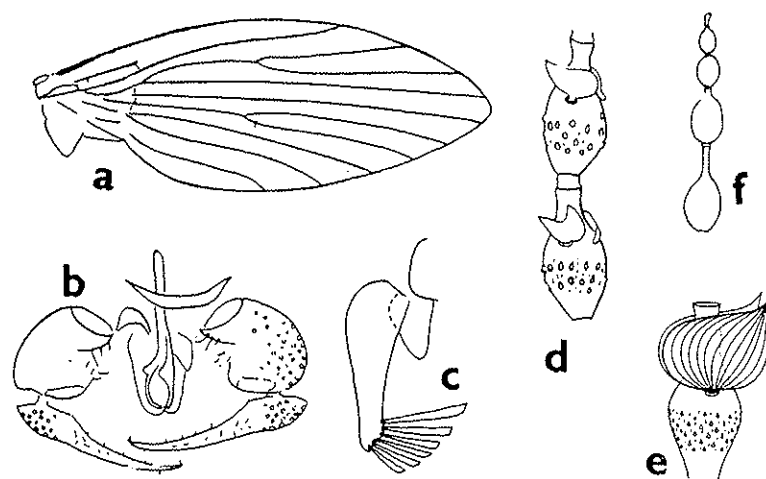


FIG. 7.

Telmatoscopus (Mormia) eatoni sp.n.

a, Venation. b, Coxites and styles with aedeagus. c, Cercopod. d, Fifth and sixth antennal segments of ♀. e, Ninth antenna segment of ♂. f, Tip of ♂ antenna.

Vestiture of wing uniformly brown, rows of erect bristly hairs extending only a little past the level of the two forks, and not forming any distinct tufts; the adpressed divaricate hairs somewhat denser after that, but not conspicuously.

Hypopygium: coxites about twice as long as wide, style falciform, longer than coxites (fig. 7, b), aedeagus as in fig. Cercopods not very much longer than the 9th tergite, and provided with six apical retinacula.

Wing length, 2.12 mm.

Female similar to male, antennae in allotype broken; ascoids much smaller, as in fig. 7, d.

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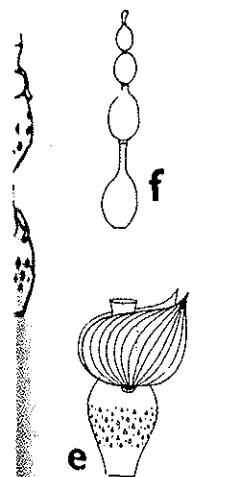
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Holotype: Mullet's Copse,¹⁰ Glanville's Wootton, Dorset, 17.vi.98 (Eaton). Allotype and paratypes (2 ♂ and 1 ♀), same locality, 13.vi.98. The specimens are all rather damaged, two of the males lacking the abdomen and two having broken antennae; the description is therefore partly compiled from all three.

Specimens of the same, or a closely similar species, are in Eaton's collection from Algeria under a manuscript name.

Telmatoscopus (Mormia) furvus sp.n.

A medium sized, completely dark species with deep black, dense and wide scales on the head, palpi and base of antennae in the male, which also exhibits an erect clump of elongate scales at the tip of the abdomen.

Male. Eye bridges contiguous; antennae (fig. 8, c) longer than width of wing, 1st segment three times as long as wide, 2nd subglobular with a long process, three times as long as wide on the internal side; these first two segments and the process are densely covered with deep black broad scales; the process appears to be dilatible, like so many of the thoracic vesicles of other species; 3rd segment fusiform, the other basal flagellar segments with scarcely indicated distal neck, the following ones with gradually more elongate neck, which is almost as long as the basal bulb in the last few segments; last segment with a long apiculus. Segments 5 and 6 with a large port-hole organ (fig. 8, g). Ascoids present on all flagellar segments, arranged in a semicircle of 20 to 24 branches on segments 3 to 7 and in two groups of 12 diminishing to 8 branches on segments 8 to 14, two or three only on segment 15 and only one on each side on segment 16.

Palpi densely covered with scales; the first three segments subequal in length but the 2nd and 3rd are dilated and the 3rd somewhat twisted, the 4th thin and about $2\frac{1}{2}$ times as long as the preceding one.

Vestiture of thorax and abdomen composed of long, erect brown scaly hairs; on the anepisternum there is a very dense tuft of shorter black scales similar to those of the head; the last two abdominal tergites each with two tufts of elongate hairs inserted on a small transversely elongate plate at the distal corner of the tergites.

Legs completely black.

Wings lanceolate (fig. 8, a), rather narrow, pointed at apex

¹⁰ Mullet's Copse is a local name for the very boggy northern corner of the wood to the south-west of Newlands Lane, Glanville's Wootton. I visited the locality in August, 1939, in the hope (unfulfilled) of re-discovering *T. (M.) eatoni* and another undescribed species of *Mormia* which is represented in Eaton's collection by a single female from the same locality.—F.W.E.

between the tips of R_4 and R_5 , the two forks placed distinctly before the middle of the wing and before the tip of Cu; radial sector pectinate. Vestiture completely blackish-brown but not of uniform density on the disc; the rows of erect bristly hairs being confined to the basal half of the wing and stopping at the level of the tip of Cu, just after that the divaricate adpressed hairs are denser on a short space; some scales at the base of the underside of the wing.

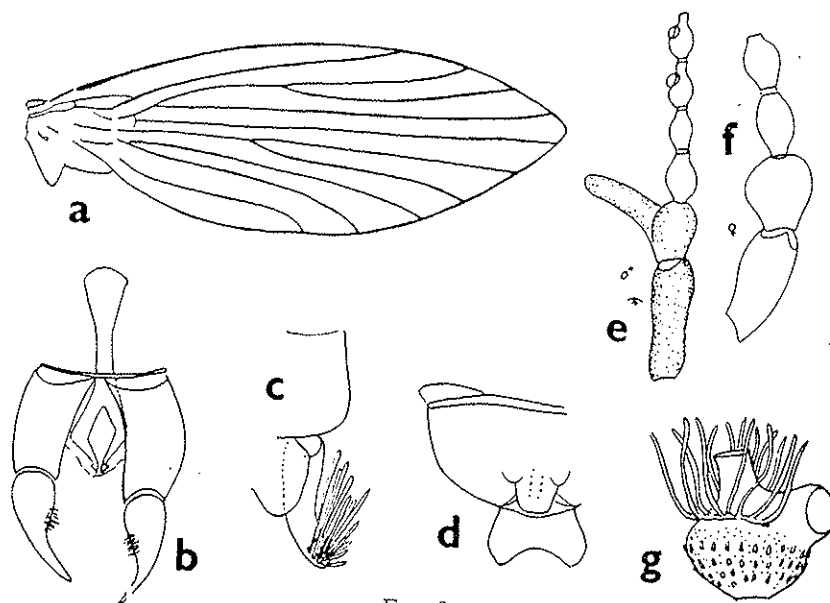


FIG. 8.

Telmatoscopus (Mormia) furvus sp.n.

a, Venation. b, Coxites and styles with aedeagus. c, Cercopod. d, Internal view of subgenital plate of ♀. e, Base of ♂ antenna. f, Base of ♀ antenna. g, Fifth segment of ♂ antenna showing ascoids and port-hole organ.

Hypopygium (fig. 8, b, c); coxites subcylindrical, more than twice as long as wide, styles not quite as long, incrassate on their basal half and ending in a gently inward curved pointed beak; some short bristles on the middle of the internal side of the styles. Aedeagus symmetrical, formed by two prongs elbowed towards each other and surrounded or embedded in a membrane. Cercopods short, subcylindrical, moderately curved upwards with about 12 retinacula of various lengths, the shorter being distal.

Wing length, 2.5 mm.

Female. Head with its appendages devoid of dense black scales. Antennae without process on the 2nd segment and without port-hole organs; ascoids present in pairs on segments 5 to

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14, forming 5- or 6-branched fans; subgenital plate (fig. 8, d) with a constriction between the basal part and the two terminal lobes.

Holotype: Falaën, Belgium, Prov. Namur, June, 1921 (Tonnoir).

Allotype: Auderghem, near Brussels, 7.v.18 (Tonnoir).

Paratypes: With types, Uccle, near Brussels, vi.18; Genval, 6.vii.17 (Tonnoir); Belgium, Houx (Eaton, slide 52a).

Letchworth, Herts, vi.37 (Edwards), 1 ♂ on window.

This is the species which I formerly recorded (1919) as *Pericomoma acuminata* Strobl. However, as I have not seen Strobl's specimens, and as there are several undescribed species from Europe which might just as well answer to his description, I prefer to consider the species just described as a new one; the name *fervus* was proposed by Eaton, his slide 52a being so labelled.

Psychoda phalaenoides L.

I propose to split this species into two sub-species, distinguishable as follows:—

Subsp. **phalaenoides** L. Internal sensory organ of subgenital plate of female not twice as long as wide and never club-shaped.

Subsp. **elongata** nov. Internal sensory organ of subgenital plate of female about four times as long as wide, often club-shaped, though sometimes cylindrical.

Of this new subspecies I have seen only females and therefore suspect it to be parthenogenetic. I have found it commonly in *Arum* spathes, and all specimens of *Ps. phalaenoides* submitted to me from *Arum* spathes in Britain are of this form.¹¹

¹¹ In the spring of 1939 Mr. R. L. Coe and I paid some attention to the insect fauna of *Arum* spathes and collected specimens of *Psychoda* from such sources in various parts of Britain (Herts, Surrey, Sussex, Devon). We found a very large majority of all insects collected to be *Ps. phalaenoides*, and all these were females; *Ps. grisescens* was a very poor second, with the two sexes in about equal numbers. The total number of specimens of *Psychoda* determined was as follows:—

	♂	♀
<i>Ps. phalaenoides</i> L.	0	158
<i>Ps. grisescens</i> Tonn.	14	19
<i>Ps. trinodulosa</i> Tonn.	0	2
<i>Ps. brevicornis</i> Tonn.	1	2
<i>Ps. setigera</i> Tonn.	0	1
<i>Ps. severini</i> Tonn.	0	1

Eaton (1898) remarks that 'The females of *Ps. phalaenoides* are common agents in the fertilisation of *Arum maculatum* L., creeping down into the spathes, often in considerable numbers, when the pollen ripens. Once at the bottom they have to remain until the sterile filaments wither and set them free . . .'. This last statement repeats a belief which seems to amount to an article of faith among botanists, but is not correct. The flies can come out, and do so when the growing plant is tapped, so that it seems more probable that intoxication may be the cause of many of them remaining below.—F.W.E.

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Psychoda crassipennis sp.n.

Species closely related to *Ps. phalaenoides* on account of the elongation of the coxites of the male hypopygium and the structure of the tip of the antennae; it differs from it mostly in the very large ampulla-like aedeagus and in the female in the structure of the subgenital plate.

Male. Eye bridges separated by a distance equal to the width of one facet; antennae 15-segmented; 1st segment about as long as wide, the 13th without a neck, the last two subequal, spherical, diminutive and well separated from each other (fig. 9, c), a small sensory cone on segments 13 and 14; ascoids of the usual type with two anterior and one posterior branches in pairs on segments 3 to 13.

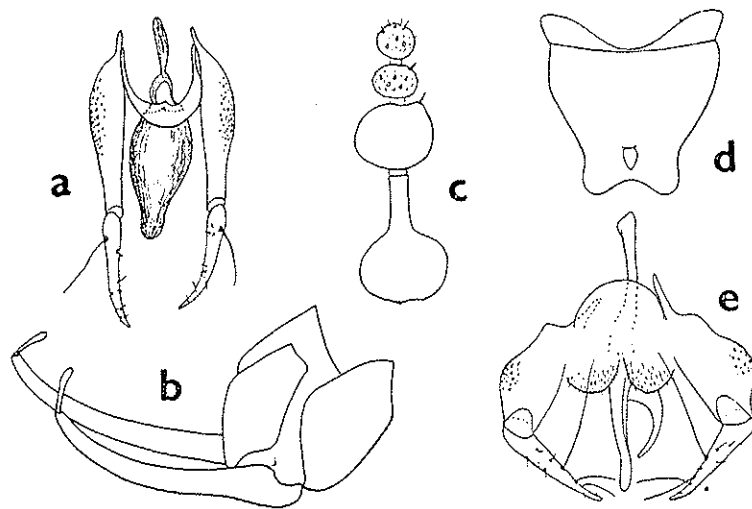


FIG. 9.

a—d, *Psychoda crassipennis* sp.n. e, *Ps. severini* Tonn.
a, e, Coxites and styles with aedeagus. b, Cercopods. c, Tip of antenna.
d, Subgenital plate.

Palpi formula: 4-3-3-4.

Vestiture of body and wings ochraceous greyish-brown.

Venation with the two forks complete and placed at the usual level; origin of the stem of the anterior fork at the top of the anterior basal cell.

Hypopygium. Ninth sternite horse-shoe shaped, relatively wide in the middle; coxite elongated (fig. 9, a), not conspicuously thicker at the base; style somewhat shorter, not swollen at base, gently curved and with numerous, rather short sensory setae and

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long sub-basal bristles. Aedeagus symmetrical and of simple structure; intromittent organ very large, swollen, ampulla-like and apparently hollow. Cercopods of the forficulate type (fig. 4, b), but little incrassate at the base and with one terminal retinaculum.

Wing length, 1.27 mm.

Female. Similar to male, the sensory cones on segments 13 and 14 less developed; subgenital plate (fig. 9, d) rather narrow, its internal sensory organ olive-shaped, only a little longer than wide. I have seen specimens of both sexes bred together by Feuerborn; the female of *Ps. crassipenis* can easily be distinguished from the related *Ps. phalaenoides*, as it is decidedly smaller and the subgenital plate is different in shape.

Holotype, allotype and several paratypes, ♂ and ♀, on slides and in spirit from Letchworth, Herts, on windows, 8.vi.28, and summer, 1935 (Edwards). Also from Germany (Feuerborn).

This species has probably been confused in the past with *Ps. phalaenoides* on account of the identical conformation of the tip of the antennae.

***Psychoda severini* Tonn.**

1922, *Ann. Soc. ent. Belg.*, 62: 78.

This species is very widely spread over all the temperate region of both hemispheres, breeding in great abundance in filter-beds of sewage disposal works. It has become a domestic species, but it is curious to note that it is much scarcer in Australia and New Zealand than it is in the old world and North America, although it does not seem to be replaced in the southern hemisphere by a competitive species of this family.

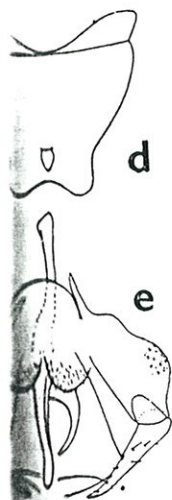
A much greater acquaintance with this species than at the time of writing my synopsis of the genus *Psychoda* (1922) has now allowed me to distinguish two subspecies; the typical one, *Ps. severini severini*, has so far been described in the male sex only (1922, p. 78); the female described there is that of the other subspecies, *Ps. severini parthenogenetica* subsp.n., which, as its name implies, reproduces by parthenogenesis.

The female of the bisexual subspecies has an identical subgenital plate to that figured by me (1922, p. 79, fig. 11g),¹² but the tip of its antenna is almost exactly like that of the male (*l.c.*, fig. 11, aa) and not like fig. 11, a, which is that of the parthenogenetic form. That is to say, that in the sexual form there is in both sexes a rudiment of a segment and a sensory cone at the

¹² The fine comb of setulae at the base of the internal sensory organ was not represented on this figure. — A.L.T.

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base of the 14th segment; this incomplete segment may at times be more developed in the female of *Ps. severini severini* than in the male, so that it could easily be mistaken for *Ps. albipennis*, were it not for the very characteristic subgenital plate.

So far only the subspecies *parthenogenetica* has been found in England; the other one is known from Belgium, Austria, Germany and Algeria (Bône, 9.iv.03, coll. Eaton).

In his revision of the North American species of *Psychoda*, Del Rosario (1936) has given a figure of the genitalia of what he takes to be the male of *Ps. severini*. This figure does not at all correspond to the genitalia of this species of which I give here a new figure (fig. 9, e) of this organ seen from below (9th tergite removed) and showing the characteristic fleshy and pubescent internal lobes of the aedeagus, which were not included in my fig. 11, cc. It is probable that *Ps. severini severini* does not occur in North America.

At one time I thought that by breeding *Ps. severini parthenogenetica* in an incubator working at a constant temperature of 70° F. I could obtain males, but I realised subsequently that my cultures had been contaminated by other species of the genus. Only a small part of the bred material had been preserved, and in it were only males of *Ps. cinerea*. The experiment repeated by Dr. Ll. Lloyd of Leeds failed to produce any males.

***Psychoda brevicornis* sp.n.**

A species with incomplete forks; antennae with the last segments as in *Ps. severini* but the 12th segment without neck; cercopods forficulate.

Male. Antennae 14-segmented, the first segment subcylindrical, about half as long again as wide, the neck of the flagellar segments not much longer than the bulb; the 12th subspherical without trace of a neck, the 13th of similar shape but somewhat smaller than the 12th, the 14th very small, ovoid and united to the 13th (fig. 10, f). Ascoids of the usual shape with two anterior and one posterior branches, the anterior ones more contorted than usual; these ascoids in pairs on segments 3 to 12, therefore absent on the penultimate segment, which is not the case in *Ps. severini*.

Palpi with the three basal segments subequal, the last one half as long again, not markedly thinner.

Vestiture on the body and wings ochraceous greyish-brown.

Wings rather broad (fig. 10, a), its venation with incomplete forks, the anterior one at the level of the tip of R_1 , the posterior

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one on the middle of the wing, origin of the stem of the anterior fork on the apex of the first basal cell.

Hypopygium. Coxite elongate (fig. 10, b), moderately incrassate basally, style as long as the coxite, very thin, its base little incrassate; aedeagus composed of two pieces as shown in fig. 5, c; cercopods long and forficulate, moderately bulbous at base, retinaculum small (fig. 10, d).

Wing length, 1.2 mm.

Female. Similar to male; subgenital plate as shown in fig. 10, e, internal sensory organ small, ovoid and with a few ventral papillae (fig. 10, e, small figure).

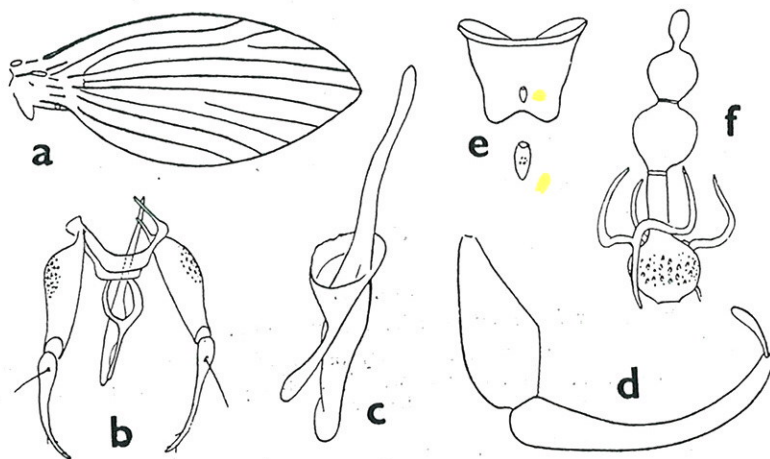


FIG. 10.

Psychoda brevicornis sp.n.

a, Venation. b, Coxites and styles with aedeagus. c, Aedeagus. d, Cercopod. e, Subgenital plate and internal sensory organ. f, Tip of antenna.

Holotype and allotype as well as a male and female paratypes from Letchworth, on window, vi.28 (Edwards). Also found in Germany (Feuerborn). [Also found in *Arum* spathes at Salcombe Devon (Edwards); Lewes, Sussex (Edelsten), and Selsdon, Surrey (Coe).—F.W.E.]

On account of its venation with incomplete forks, this species belongs to the same group as *Ps. setigera* and *Ps. trinodulosa*; it differs from these in the conformation of the antennae, which have only 14 segments, as in *Ps. severini*, but the 12th segment has no neck, whereas the 13th is somewhat smaller than the preceding one; a very distinct species.

***Psychoda setigera* Tonn.**1922, *Ann. Soc. ent. Belg.*, 62: 85.

Only the male of this species has been described by me. I have now found several females of this species in the material collected on windows by Dr. F. W. Edwards and of which I am giving here a description. I take this opportunity for correcting a few inaccuracies in the description of the male.

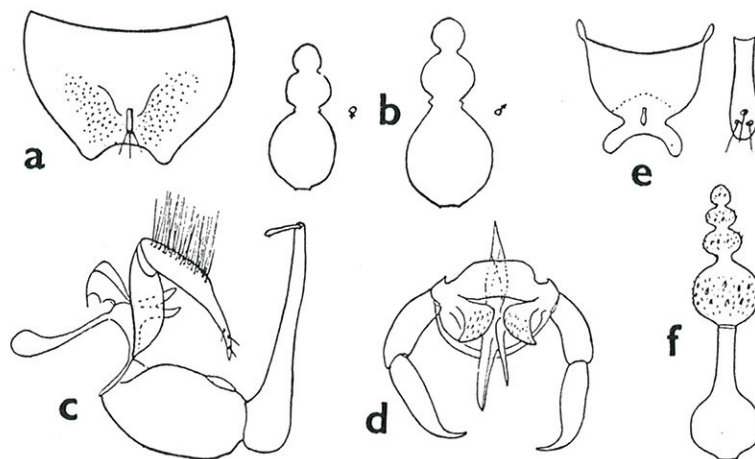


FIG. 11.

a, b, *Psychoda setigera* Tonn. c—f, *Ps. spreta* sp.n.

a, e, Subgenital plate; internal sensory organ of e enlarged. b, f, Tips of antennae. c, Hypopygium, side view. d, Coxites, styles and aedeagus from below.

Male. The antennae are not quite as represented by me (*l.c.*, fig. 14, a); the 13th and 14th segments are not separated, but they often appear to be so on account of a small circular edge between these segments. I give here a new figure (fig. 11, b) of the tip of the antenna of a paratype in which this organ is fully extended by KOH treatment; there is no actual suture between the 13th and 14th segments.

Female. Similar to male; the constriction between the last two antennal segments not so pronounced (fig. 11, b). Subgenital plate as in fig. 11, a, its sides very little sclerotised, almost transparent; the internal sensory organ with very distinct apical setulae.

Wing length, 1.5 mm.

Allotype: Letchworth, Herts., vi.28, on window (*Edwards*). Also Hoogstraten and Brussels (*Tonnoir*) and Germany (*Feuerborn*). [Also found in *Arum* spathes at Selsdon, Surrey (*Coe*).—F.W.E.]

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Psychoda grisescens Tonn.

1922, *Ann. Soc. ent. Belg.*, 62: 87.

The description of this species also requires some emendation as regards the structure of the tip of the antennae. In my fig. 16, a (1922) a distinct suture is shown between segments 13 and 14; this does not exist.

A good character of the male genitalia which I have omitted from my fig. 16, c is the fine serration existing at the corners of the squarish ninth sternite.

The internal sensory organ of the female subgenital plate, which is represented as almost rounded in my fig. 16, g, appears cylindrical and about three times as long as wide on a well flattened slide preparation.

This species has been found on windows at Letchworth by Dr. F. W. Edwards. [Also in *Arum* spathes at Letchworth and Salcombe (Edwards), Lewes (Edelsten) and Selsdon (Coe). It is doubtless one of the common species of the genus.—F.W.E.]

Psychoda spreta sp.n.¹³

Brownish species with complete forks on the wings; 16-segmented antennae, last four segments united.

Male. Eye-bridges not touching, separated by a distance equal to the width of one facet; length of antennae equal to twice the width of the wing, 16-segmented. First segment half as long as wide, 3rd with a neck shorter than the basal bulb, the necks gradually longer in distal segments, 13th without neck and united to the 14th, which is transverse, 15th united to the preceding one, also transverse but a little smaller, 16th smaller still, ovoid and not distinctly separated from the 15th (fig. 11, f), although in certain preparations it seems that there is a suture between the two. Ascoids of the Y-type, present on segments 3 to 13.

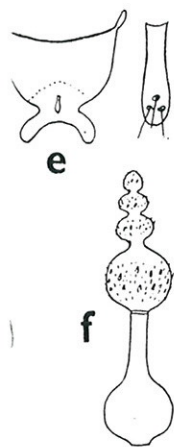
Palpi formula: 10-10-11-14, last segment not thinner.

Venation: forks complete, the anterior one a little before the level of the tip of Cu, stem of that fork starting at the apex of the anterior basal cell, both basal cells subequal.

Hypopygium (fig. 11, c) with the coxites much longer than wide, curved, not swollen on the outside; styles longer than the coxites, basal half subcylindrical, densely covered with long, erect setae, distal half tapering in a long, fine, slightly curved point carrying 3-4 sensory setulae; aedeagus asymmetrical with two median, almost straight processes of unequal length and with two subtriangular downward-curved pubescent internal lobes

¹³ This name was proposed by Eaton, but the species was not described by him.—A.L.T.

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(fig. 11, d); cercopods of the forficulate type, swollen at the base and provided with one terminal retinaculum.

Length of wing, 1.5 mm.

Female. Antennae and venation similar to male; length of wing, 1.9 to 2 mm. Subgenital plate with markedly diverging lobes forming a crescent with rounded points (fig. 11, e), internal sensory organ club-shaped and carrying three sensory setulae.

Holotype and allotype on slide, Letchworth, Herts., on window, vi.28 (*Edwards*).

Paratypes: several males and females with types; 2 ♂♂ on slide 71a, Eaton collection, from Woodland, Seaton, Devon, 22.ix.02, on window; Windermere, vi.29, farm cow-shed window (*Edwards*); Brussels (*Tonnoir*).

On account of the structure of the terminal segment of the antennae, this species comes near *Ps. grisescens* Tonn., but here there is no distinct suture between the last two segments.

This species could be confused with *Ps. setigera* Tonn. on account of the shape of the style of the hypopygium, but in *spretta* the two long sensory setae on the elbow of the style are missing; besides, the forks of the wings are complete and the antennae are 16-, not 15-segmented.

***Psychoda gemina* Eat.**

1904, *Ent. mon. Mag.*, 40: 57.

This species was rather sketchily described by Eaton and without figures, so that an examination of his types was absolutely necessary to remove all doubt as to the correct interpretation of it. The whole series of specimens under that label in the Eaton collection was most obligingly submitted to me by the British Museum.

To my surprise, I saw that the series of thirteen specimens contained six species¹⁴ among which were: *Ps. obscura* Tonn., *cinerea* Banks (= *compar* Eat.), *lobata* sp.n., *albipennis* Zett., *lucifuga* Wlk. and another species (1 ♂, 3 ♀), the male of which I had described in 1922 as *Ps. gemina* Eat.

The female I described there under that name did not belong to this species, but to *Ps. spreta* sp.n. The male was also somewhat inaccurately described in that paper, especially in what concerns the antennae; consequently I give here a redescription of both sexes based on the holotype and the allotype which I

¹⁴ Three of these species were represented among the five specimens mounted by Eaton on slides and thus regarded by him as typical representatives of *Ps. gemina*. These were *Ps. gemina* as here restricted (two ♀), *Ps. cinerea* Banks (one ♂, one ♀) and *Ps. lobata* sp.n. (one ♀).—A.L.T.

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selected in the Eaton collection, since he had not labelled any types as such.

Male. Antennae 16-segmented, the last three diminutive segments quite distinctly separated from one another and from the 13th (fig. 12 b); ascoids as usual with two anterior and one posterior branches.

Palpi measurement not available in type (10-15-15-18 in Belgian specimen).

Venation with complete forks, the anterior one at the level of the tip of Cu, the posterior one a little nearer to the basal cell than to the anterior fork, base of stem of the latter placed very distinctly after the apex of the anterior basal cell.

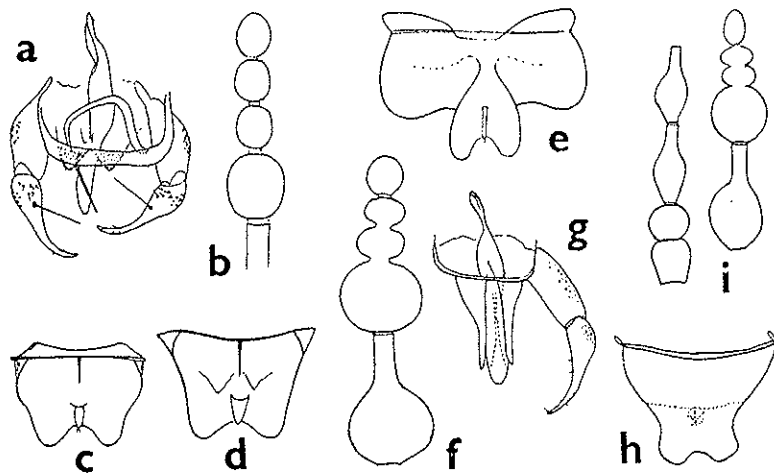


FIG. 12.

a—d, *Psychoda gemina* Eaton. e, f, *Ps. lobata* sp.n.
g—i, *Ps. obscura* Tonn.

a, g, Coxites and styles with aedeagus. b, f, Tips of antennae. c, d, e, h, Subgenital plate from below: c, paratype; d, allotype. i, Base and tip of antenna.

Hypopygium (fig. 12 a): Sternite fairly wide; coxite about twice as long as wide, slightly bulging on the side; style with a sub-bulbous base and ending in a fairly long, thin and curved beak, the style carries a conspicuous sensory seta towards the base and a number of smaller ones along the beak. Aedeagus composed of a median piece of irregular but simple shape, its apex blunt, and of a large and thin U-shaped piece ending in a very fine point; under the aedeagus two fleshy pubescent internal lobes. Cercopods somewhat longer than the ninth tergite, not conspicuously swollen at the base, its retinaculum fairly long.

Wing length: 1.75 mm.

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CHECK-LIST OF BRITISH PSYCHODIDAE

PSYCHODINAE.

Pericoma Walk.

Pericoma s.str.

1st Group.

1. trifasciata Mg.
2. calcilega Feuerb.
3. blandula Eat.
4. pulchra Eat.
5. exquisita Eat.
6. pseudexquisita **sp.n.**
7. diversa Tonn.
8. fallax Eat.
9. avicularia **sp.n.**

2nd Group.

10. nubila Eat.
11. trivialis Eat.
12. palustris Eat.
13. gracilis Eat.
14. mutua Eat.
15. cognata Eat.
16. compta Eat.
17. extricata Eat.
18. pilularia **sp.n.**
19. hibernica **sp.n.**
20. canescens Mg.
21. neglecta Eat.

3rd Group.

22. fusca Macq.
23. auriculata Walk.

Ulomyia Hal.

24. fuliginosa Mg.

Glytocybus Eat.

25. ocellaris Mg.
26. dalei Eat.

Telmatoscopus Eat.

Panimerus Eat.

27. goetghebueri Tonn.
28. notabilis Eat.
29. albifacies Tonn.

Telmatoscopus s.str.

30. rothschildi Eat.
31. advenus Eat.
32. angustipennis Tonn.
33. ustulatus Walk.
34. labeculosus Eat.
35. incertus Eat.
36. morulus Eat.
37. fraterculus Eat.
38. consors Eat.
39. decipiens Eat.
40. soleatus Walk.
41. tristis Mg.
42. ambiguus Eat.
43. britteni **sp.n.**

Mormia End.

44. revisendus Eat.
45. andrenipes Strobl
46. eatoni **sp.n.**
47. caliginosus Eat.
48. palposus Tonn.
49. furvus **sp.n.**

Psychoda Latr.

Psychoda s.str.

50. alternata Say
51. surcoufi Tonn.
52. phalaenoides L.
ss. phalaenoides L.
ss. elongata **n.**
53. crassipennis **sp.n.**
54. albipennis Zett.
55. severini Tonn.
ss. parthenogenetica **n.**
56. brevicornis **sp.n.**
57. setigera Tonn.
58. trinodulosa Tonn.
59. grisescens Tonn.
60. pusilla Tonn.
61. cinerea Banks
(compar Eat.)

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30: 22-28. 31:
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Psychoda. Phil. J. Sci.,

Psychodidae de Belgique.
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149-88. [Keys, de-

Psychodidae (Dip-
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British species.]

Psychoda s.str. (contd.)

62. *gemina* Eat.
 63. *lobata* sp.n.
 64. *obscura* Tonn.
 65. *erminea* Eat.

Philosepedon Eat.

66. *humeralis* Mg.

Threticus Eat.

67. *lucifuga* Walk.

Trichopsychoda Tonn.

68. *hirtella* Tonn.

TRICHOMYIINAE.

Trichomyia Hal.

69. *urbica* Curt.

Sycorax Hal.

70. *silacea* Curt.