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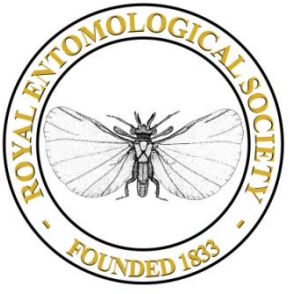

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Handbooks for the Identification of British Insects
Vol. VIII, Part 3(di)

DIAPRIIDAE

(DIAPRIINAE)

HYMENOPTERA, PROCTOTRUPOIDEA

G. E. J. Nixon

ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

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Editor: M. G. Fitton

DIAPRIIDAE
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By

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1980

ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

The aim of the *Handbooks* is to provide illustrated identification keys to the insects of Britain, together with concise morphological, biological and distributional information. The series also includes a *Check list of British Insects.*

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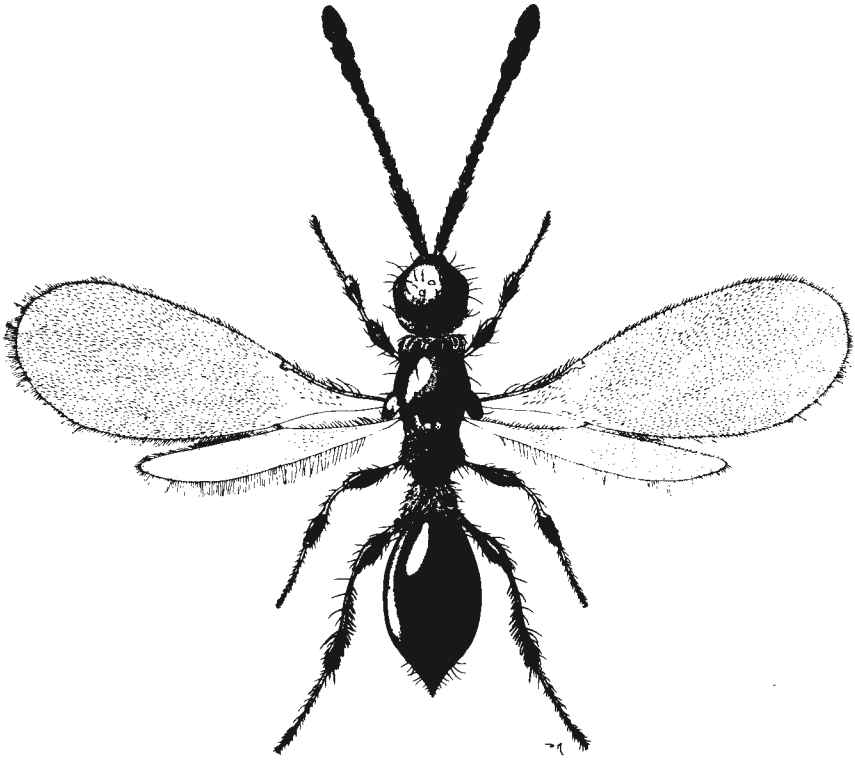
Contents

Introduction

In presenting this handbook on the subfamily Diapriinae I have now dealt with all the British species of Diapriidae. My 1957 handbook covered the Belytinae; it set a precedent through its inclusion of a few new species and some others not recorded from the British Isles. That precedent is followed here, though to a much smaller extent. It should be pointed out that the introduction of twenty-four new species is not based on any conviction of their being hitherto unknown to science but simply because no names were readily available for them. Some at least are likely to be among the numerous species described by J. J. Kieffer. Unfortunately, the identity of many of these Kieffer species can only be guessed at and the location of their types is unknown. The three non-British species are included because I was fortunate enough to see their types and felt the chance ought not to be missed of setting them in a context of related species.

It would be foolish to assert that the results of this taxonomic exercise should be accepted as final. My aim has been merely to give some accessibility to a little known, but attractive and interesting group of insects. There are still taxonomic problems of course, chiefly among the males of such genera as *Basalys* and *Trichopria,* where I have found it difficult to decide what group of individuals

constitutes a species and at what point the observed differences fall outside the range of specific variation; or, in other words, to perceive the fine dividing line where differences begin to obscure the significance of resemblances. But if such areas of uncertainty remain, inherent, in my experience, in the practice of taxonomy, then at least they can encourage other entomologists to seek out the information necessary to clarify them.



Trichopria aequata, ♀.

Material and acknowledgements

This work is based mainly on a large and fairly rich collection of Diapriinae, now in the British Museum, that I made in the late twenties and early thirties. Since then, over the years, there has been a steady trickle of material into the BMNH and of this I have made the fullest use. I have also seen material from various outside sources and am deeply grateful to the following persons who have made this possible:

Dr V. Chambers for the loan of a large and very useful collection of Diapriinae.

Dr Roy Danielsson for the loan of material from the Thomson collection in Lund.

Dr Max Fischer, Naturhistorisches Museum, Vienna, for the loan of specimens.

Dr Johan Hedqvist for the loan of the Thomson material from the Boheman collection in the Riksmuseum, Stockholm.

Dr C. F. W. Muesebeck for arranging the loan of the large collection of Diapriinae made by the late A. W. Stelfox in Ireland and now in the U.S. National Museum.

Dr J. Papp, Hungarian National Museum; Dr Stehlik, Moravsky Museum, Brno, Czechoslovakia and Prof. George Varley, Hope Department, Oxford, for the loan of types or type-material.

Dr Ingmar Wall, Stockach, W. Germany, for the loan of specimens belonging to his own species.

I am also grateful to Nigel Fergusson for many useful discussions on questions of synonymy and for allowing me to consult the check list he has prepared for the new edition of Kloet and Hincks (Fergusson, 1978).

And lastly I express my indebtedness to Prof. O. W. Richards for negotiating with the Royal Society for a grant of money that has eased what otherwise would have been an unacceptable financial burden. To the Royal Society itself I offer my thanks and gratitude.

Check list and nomenclature

Below is a check list of all the names appearing in this handbook. It does not correspond to the check list in the new edition of Kloet and Hincks (Fergusson, 1978), which contains many species names that are likely to be misidentifications or at any rate require prolonged investigation. The Kloet and Hincks list also contains much generic synonymy, some of which may need to be rejected and, in any case would be out of place in a handbook of this scope.

The list below comprises fourteen genera including 109 species, of which three are not British. The species of which I have examined the types are marked with an asterisk. Further details of the new species, lectotype designations and some of the new synonymies are given at the appropriate points in the keys.

DIAPRIIDAE

DIAPRIINAE

ANEURHYNCHUS Westwood, 1832
ariadne **sp.n.**
coryphe **sp.n.**
depressus Wall, 1971
fragilis **sp.n.**
galesiformis Westwood, 1832
gracilicornis Wall, 1971
**longicornis* Thomson, 1858
  brevigaster Wall, 1971 **syn.n.**
  denticornis Wall, 1971 **syn.n.**
mese **sp.n.**
nodicornis Marshall, 1867
  cuneiformis Wall, 1971 **syn.n.**
**obliquus*, Kieffer, 1911
**oviventris* Thomson, 1858
pentatomus Thomson, 1858
**ruficornis* Thomson, 1858
  clavicornis Wall, 1971 **syn.n.**

BASALYS Westwood, 1833
**abrupta* Thomson, 1858
  convexa (Kieffer, 1911) **syn.n.**
**bifoveata* (Kieffer, 1911)
  unifoveata* (Kieffer, 1911) **syn.n.
**ciliata* (Kieffer, 1911)
**collaris* Kieffer, 1911
crassiceps (Kieffer, 1911)
cymocles **sp.n.**
erythropus Kieffer, 1911
euterpe **sp.n.**
**exigua* (Marshall, 1868)
formicarum (Kieffer, 1911)
  mullensis* Masner, 1965 **syn.n.
**fumipennis* Westwood 1833
  atricrus* (Kieffer, 1911) **syn.n.
helicicola (Kieffer, 1911)
insignificans **sp.n.**
iphicla **sp.n.**
**longipennis* (Kieffer, 1911)
**luctuosa* (Kieffer, 1911)

**macroptera* (Kieffer, 1911)
sulcata* (Kieffer, 1911) **syn.n.
orion **sp.n.**
**parva* Thomson, 1858
pedestris* (Kieffer, 1907) **syn.n.
cursitans* (Kieffer, 1911) **syn.n.
pedisequa (Kieffer, 1911)
fuliginosi* (Box, 1921) **syn.n.
rufocincta (Kieffer, 1911)
**scotica* (Kieffer, 1911)
semele **sp.n.**
singularis **sp.n.**
**tripartita* (Marshall, 1868)
**tritoma* Thomson, 1858
plannifrons* (Tomsik, 1948) **syn.n.
tuberculatus (Kieffer, 1911)

CORYNOPRIA Haliday, 1857
aphrodite **sp.n.**
cincta Haliday, 1857
solida Thomson, 1858
pleuralis* (Kieffer, 1910) **syn.n.
nigra* (Whittaker, 1930) **syn.n.

DIAPRIA Latreille, 1796
conica (Fabricius, 1775)
nigricornis Thomson, 1858 **comb. rev.**

ENTOMACIS Förster, 1856
bipunctata (Kieffer, 1911)
laertes **sp.n.**
penelope **sp.n.**
perplexa (Haliday, 1857)
platyptera (Haliday, 1857)

IDIOTYPA Förster, 1856
**nigriceps* Kieffer, 1911

LABOLIPS Haliday, 1857
innupta Haliday, 1857

PARAMESIUS Westwood, 1832
brachypterus Thomson, 1858
crassicornis Thomson, 1858
elongatus Thomson, 1858
**dentatus* Kieffer, 1911
inchoatus* Kieffer, 1911 **syn.n.
Lectotype herein designated
minor* (Kieffer, 1911) **syn.n.
nigricornis* Kieffer, 1911 **syn.n.
subinermis* Kieffer, 1911 **syn.n.
Lectotype herein designated
westwoodi Fergusson, 1977
rufipes Westwood, 1832 preocc.

PHAENOPRIA Ashmead, 1893
cameroni Kieffer, 1911
incrassata Jansson, 1955
miron **sp.n.**

PLATYMISCHUS Westwood, 1832
dilatatus Westwood, 1832

PSILUS Panzer, 1801
**acutangulus* (Jansson, 1942) not British
caecutiens (Marshall, 1867)
cornutus Panzer, 1801
gracilipes (Kieffer, 1907) **syn.n.**
frontalis (Thomson, 1858)
**fuscipennis* (Curtis, 1831)
filicornis (Thomson, 1858) **syn.n.**
cameroni* (Kieffer, 1911) **syn.n.
bispinosus* (Kieffer, 1911) **syn.n.
inaequalifrons (Jansson, 1942)
**parvulus* (Kieffer, 1911)
rufipes (Thomson, 1858)
submonilis (Kieffer, 1911)

SPILOMICRUS Westwood, 1832
abnormis Marshall, 1868
minimus* Kieffer, 1911 **syn.n.
**annulicornis* Kieffer, 1911
bipunctatus Kieffer, 1911
compressus Thomson, 1858
flavipes Thomson, 1858
formosus Jansson, 1942
hemipterus Marshall, 1868
pedisequus Kieffer, 1911 **syn.n.**
integer Thomson, 1858
crassiclavis* Kieffer, 1911 **syn.n.
integer*, var. *variicornis* Kieffer, 1911 **syn.n.
**modestus* Tomsik, 1947 not British
pelion **sp.n.**
rufitarsis Kieffer, 1911
**simplex* Tomsik, 1947 not British
**stigmaticalis* Westwood, 1832
nigripes Thomson, 1858 **syn.n.**
tripartitus* Kieffer, 1911 **syn.n.

TETRAMOPRIA Wasmann, 1899
donisthorpei Kieffer, 1911

TRICHOPRIA Ashmead, 1893
**aequata* (Thomson, 1858)
inaequalis* (Kieffer, 1911) **syn.n.
** variipes* (Kieffer, 1911) **syn.n.**
alifera **sp.n.**
**atricornis* Kieffer, 1911
morleii* (Morley, 1931) **syn.n.
**bifoveata* Kieffer, 1911
**ciliaris* Kieffer, 1911
**clavatipes* (Kieffer, 1911)
crassifemur **sp.n.**

credne **sp.n.**
evanescens (Kieffer, 1911)
**halterata* (Kieffer, 1909)
**inermis* (Kieffer, 1909)
    fimbriata* Kieffer, 1911 **syn.n.
isis **sp.n.**
**longicornis* (Thomson, 1858)
    sociata (Kieffer, 1905) **syn.n.**
**melanopa* (Kieffer, 1911)
    subimpressa* (Kieffer, 1911) **syn.n.
nana **sp.n.**
nigricornis (Marshall, 1868) **comb. n.**
    nigricornis* var. *subterranea* (Kieffer, 1911) **syn.n.
    donisthorpei* (Kieffer, 1913) **syn.n.
**nigripes* (Thomson, 1858)
**oogaster* (Thomson, 1858)
    nocticolor* (Kieffer, 1911) **syn.n.
oxygaster Masner, 1965
    **tetratoma* Kieffer, 1911 preocc.
prema **sp.n.**
sequester **sp.n.**
sociabilis Masner, 1965
    **formicaria* Kieffer, 1911 preocc.
stelenes **sp.n.**
**tenuicornis* (Thomson, 1858)
verticillata (Latreille, 1805)
wasmanni (Kieffer, 1911)

Terminology

General terminology not dealt with below will be found in Richards' introductory handbook to the Hymenoptera (1977).

The nomenclature of the wing-venation is similar to that used by me in the Belytinae handbook (Nixon, 1957) and follows that adopted by Kieffer in his monograph of the Diapriidae (1916). In many genera, such as *Trichopria* and *Basalys*, the venation is much reduced, being represented by a subcostalis that lies along the edge of the wing and ends distally in a wedge-shaped thickening (fig. 105); this thickening may be composed of a vestigial marginalis plus a vestigial stigmalis. In other genera, the subcostalis is separated from the edge of the wing for its whole length, ending distally in a short marginalis with well developed stigmalis, as in *Entomacis* (fig. 16). Sometimes, as in *Idiotypa*, a short postmarginalis and a basalis are present (fig. 5).

The structure of the propodeum is important; this, in a typical *Trichopria*, is divided into two areas by a median, longitudinal keel. This keel, in lateral view, is triangularly raised in front. The two halves of the dorsal surface of the propodeum are referred to as the dorsal areas of the propodeum. In species of *Basalys*, they tend to be short from back to front (figs. 85–87) and usually show an oblique orientation. In *Trichopria*, these areas may be either bare and polished or covered with a fine pubescence. Failure to appreciate this difference will certainly lead to misidentification of species.

The antenna (Richards, 1977) is composed of three parts: a basal scape, followed by a well differentiated pedicel and distal to this a multi-segmented flagellum.

I refer to the whole of the abdomen posterior to the propodeum as the gaster. A sharply differentiated petiole is always present and readily visible. It is followed by a very large segment (the 2nd gastral) which I refer to as the 'large tergite'. Almost coextensive with it below is the 'large sternite'.

Biology

Information about the biology of the Diapriinae and their host-preferences is meagre in the extreme but nevertheless indicates that the species develop as internal parasites in the puparia of Diptera (Clausen, 1940). *Trichopria* and *Diapria* are gregarious but *Psilus* and *Aneurhynchus* appear to be solitary. The life-history of *Diapria conica*, which parasitises the larvae of *Eristalis tenax*, has

been worked out by Sanders (1911). According to this author an average of 35 individuals emerges from each puparium and many more females are produced than males. *Trichopria hirticollis* Ashmead has been bred in the U.S.A. by Roberts (1935) several times from the puparia of *Sarcophaga* (now *Blaesoxipha*) *plinthopyga* Wiedemann. The developmental period is 25 to 30 days and as many as 32 parasites have been obtained by Roberts from one puparium.

From the evidence available, it seems that the females of some species may hibernate as adults; *Corynopria cincta*, *Paramesius brachypterus* and *Trichopria inermis* are three such examples.

Although the known hosts are believed to be all Diptera, I record one instance of a coleopteron being the host. The list of host records below is based on specimens I have personally examined.

Host	Parasite
DIPTERA	
Brachycoma devia Fallén (Calliphoridae)	*Trichopria inermis* Kieffer
Digonochaeta (now *Triarthria*) *setipennis* Fallén (Tachinidae)	*Trichopria sociabilis* Masner
Fannia sp. (Muscidae)	*Aneurhynchus galesiformis* Westwood
Forcipomyia picea Winnertz (Ceratopogonidae)	*Entomacis perplexa* (Haliday)
Lucilia sericata Meigen (Calliphoridae)	*Trichopria inermis* Kieffer
Lonchaea cariecola Czerny (Lonchaeidae)	*Psilus inaequalifrons* (Jansson)
Mesembrina meridiana L. (Muscidae)	*Trichopria inermis* Kieffer
Orygma luctuosa Meigen (Sepsidae)	*Platymischus dilatatus* Westwood
Oscinella frit L. (Chloropidae)	*Basalys tritoma* Thomson
?*Phaonia* sp. (Muscidae)	*Psilus cornutus* (Panzer)
Platypeza fasciata Meigen (Platypezidae)	*Aneurhynchus ruficornis* Thomson
Sargus iridatus Scopoli (Stratiomyidae)	*Trichopria clavatipes* Kieffer
Syritta pipiens L. (Syrphidae)	*Trichopria clavatipes* Kieffer
COLEOPTERA	
Quedius sp. or *Philonthus* sp. (Staphylinidae)	*Spilomicrus stigmaticalis* Westwood

Collection and preservation

The Diapriinae are feeble flying insects and I have always found them to be most easily obtained in dampish, sheltered situations with plenty of rotting or decayed vegetation offering the moist conditions necessary for the development of their dipterous hosts. Malaise traps, specially adapted for the capture of very small insects, would probably produce species of Diapriinae in plenty.

Concerning the mounting of these small insects, there is a difference of opinion. I prefer to have them stuck on the tip of a narrow, triangular piece of thin card (about 3.0 mm × 10.0 mm) with just enough adhesive to secure them firmly. Thus mounted, they offer the largest possible surface area for examination.

Notes on the keys

In most cases separate keys are given for males and females. Males have antennae with 13 or 14 segments, the flagellum is approximately cylindrical and almost always has the second segment modified. The antennae of females have 12 or 13 segments and the flagellum is thickened towards the apex, usually

forming a club. With a little practice the sexes can be easily recognized from their general appearance.

A binocular microscope giving a magnification of at least 60× is necessary to observe many of the characters used in the keys.

Brief details of distribution, months of collection of adults (indicated by Roman numerals), host records, numbers of specimens examined, and distinctive features are given for each species. These details are given separately for males and females because of the problems of associating the sexes.

Diapriidae

Until recently this family has comprised two subfamilies, the Belytinae and the Diapriinae. Two further subfamilies are now accepted (Masner, 1976); one of these, the Ambositrinae, is tropical and subtropical and does not concern us here; the other, the Ismarinae, based on the single genus *Ismarus*, was included in the Belytinae by Kieffer in his monograph of 1916. In my handbook of 1957 I revised the Belytinae, including *Ismarus*. In a recent revision of the New World Ismarinae, Masner (1976) has shown that they possess a number of peculiar features that isolate them conclusively from the Belytinae. In view of this change I have modified my original key to subfamilies as follows:

Key to subfamilies (females and males)

1 Antenna of female with 14–15 segments but nearly always with 15; rarely with 12 segments (*Synacra*) and then the gaster beyond the large tergite with 4 ring segments; antenna of male with 14 segments; sexual modification of the male flagellum on 1st segment, except in the Ismarinae but in this subfamily always a completely closed radial cell present. (Hind wing usually with closed basal cell) 2

– Antenna of female with 12–13 segments; when 12 present then either 3 ring segments beyond the large tergite (*Diapria* and related genera) or the frons ornamented with projections (*Psilus*) or the distal end of the subcostalis remote from the edge of the wing (*Aneurhynchus*); antenna of male with 13–14 segments; sexual modification of the flagellum on 2nd segment; rarely this modification virtually absent (*Corynopria*) but never a closed radial cell present. (Hind wing without a closed basal cell; species mostly highly polished, unsculptured and with woolly pronotal collar.) . . . **Diapriinae**

2 Notaulices deeply impressed throughout (except in *Synacra* and *Anommatium*); antennae inserted on a frontal prominence; sexual modification of male flagellum on 1st segment. . . . . **Belytinae**

– Notaulices absent; antenna not inserted on a frontal prominence, the head in profile being more or less evenly convex in front; sexual modification of the male flagellum on the 2nd segment. . . . . **Ismarinae**

Key to genera (females)

1 Antenna with 12 segments. 2

– Antenna with 13 segments. 15

2 Wings vestigial or shortened and not reaching beyond apex of gaster. 3

– Wings fully developed 7

3 Mandibles long, in the closed position forming a backwards directed beak; frons on each side in form of a margined platform. (Notaulices distinct throughout; large tergite with deep, mid-basal furrow.) . . . . . **Psilus (p. 19)**

– Mandibles neither long nor forming a beak; frons unmodified 4

4 Notaulices complete throughout; large tergite with deep, mid-basal furrow **Aneurhynchus** (p. 22)

– Notaulices absent; large tergite without trace of mid-basal furrow. (Pronotum usually with thick woolly collar.) 5

5 Flagellum with very sharply differentiated club, the 1st segment of which is virtually identical with the 2nd and extremely sharply contrasted in size with the segment preceding it. (Antennal club 3- or 4-segmented.) . . . . . **Basalys** (p. 26)

– Flagellum with much less sharply differentiated club, the last segment of which whether the club be reckoned as 3-, 4- or 5-segmented, tends to be smaller than the 2nd and is not sharply contrasted with the segment preceding it 6

6 Scutellum with a fovea in front; head from above distinctly a little transverse **Trichopria** (p. 32)

– Scutellum without trace of a fovea in front; head from above distinctly longer than wide, 7:6. (Propodeum short, densely pubescent and lying in same plane as scutellum.) **Platymischus** (p. 25)

7 Subcostalis either distinct only at base and with no trace either of marginalis or stigmalis, or, if distinct throughout, then its distal end remote from edge of wing (fig. 23). (Notaulices complete throughout.) 8

– Subcostalis distinct throughout and ending distally in a short marginalis lying along edge of wing or merely with a wedge-shaped distal thickening 10

8 Mandibles long and, in the closed position, forming a backwards directed beak; frons with a conspicuous, lamelliform projection on each side. . . . . **Psilus** (p. 19)

– Mandibles not long and, in the closed position, not forming a beak; frons unmodified. . 9

9 Subcostalis distinct throughout but weakly pigmented, ending distally in a punctiform marginalis remote from edge of wing (fig. 65); basal margin of large tergite with three, deep, basal clefts; axilla of scutellum with strong, backwards directed hook; length not less than 2.8 mm . . . . . **Aneurhynchus** (p. 22)

– Subcostalis distinct for a length about equal to that of scutellum; venation otherwise appearing to be absent (fig. 12); basal margin of large tergite deeply hollowed out medially to accomodate apex of petiole (fig. 11); axilla without such a hook; length about 1.8 mm . . . . . **Labolips** (p. 14)

10 Notaulices distinct throughout; forewing with distinct but short stigmalis; subcostalis widely separated from edge of wing (fig. 5) . . . . . **Idiotypa** (p. 14)

– Notaulices absent; forewing without a stigmalis; subcostalis lying along edge of wing and ending distally in a wedge-shaped thickening. (Pronotum with thick woolly collar.) . 11

11 Basal margin of large tergite with short, medial excision (fig. 71). . . . . **Diapria** (p. 32)

– Basal margin of large tergite entire 12

12 Pubescence bordering back of head reddish-golden; anterior furrow of scutellum vaguely, longitudinally costate and hence divided into 4–5 small foveae. (Antennal club 5-segmented.) . . . . . **Tetramopria** (p. 40)

– Pubescence bordering back of head greyish or whitish; anterior furrow of scutellum, if present, simple or at most divided by single keel into two fovea 13

13 Antenna with sharply differentiated club, the 1st segment of which is virtually identical with the 2nd and extremely sharply contrasted in size with the segment preceding it (figs 112–114); a distinct basal vein present (fig. 115). (Club 3- or 4-segmented.) **Basalys** (p. 26)

– Antenna with much less sharply differentiated club, the 1st segment of which (whether the club is reckoned as 3-, 4- or 5-segmented) tending to be smaller than the 2nd and less sharply contrasted with the segment preceding it; no basal vein present. (Mesoscutum with at most 3 pairs of bristles (fig. 90).) 14

14 Scutellum in front without trace of a furrow. (Basal third of forewing with oblique row of thickened setae (fig. 8).) . . . . . **Phaenopria** (p. 39)

– Scutellum in front with at least a shallow furrow or fovea. . . . . **Trichopria** (p. 32)

15 Wings shortened. 16

– Wings fully developed 17

16 Base of large tergite fitting loosely over apex of petiole and more or less hiding it. (See couplet 19 for further characters.) . . . . . **Spilomicrus** (p. 14)

– Base of large tergite fitting closely to apex of petiole and forming an even continuation of it. (See couplet 19 for further characters.) . . . . . **Paramesius** (p. 18)

17 Scutellum without trace of an anterior fovea; apical segment of the flagellum enormously enlarged, at least as long as the three preceding segements together and itself forming a club (fig. 19); basal margin of large tergite with ring of pubescence, the hairs sometimes scale-like. (Basal third of forewing with evenly distributed setae.)

Corynopria (p. 31)

– Scutellum always with anterior fovea or furrow; apical segment of flagellum never thus enlarged; a club if present consisting of several segments; basal margin of large tergite without ring of pubescence 18

18 A well developed stigmalis present, distinctly longer than the marginalis (figs 14 & 16); flagellum feebly thickened towards apex but no differentiated club; large tergite with mid-basal furrow or at least small cleft. (Forewing sometimes truncate at apex or even deeply emarginate.) . . . . . **Entomacis** (p. 12)

– No stigmalis present or if indicated, then it is not longer than the marginalis; flagellum almost always strongly thickened towards apex and with a more or less differentiated club; large tergite at most with an elongated fovea at base. (Notaulices usually present, at least posteriorly.) 19

19 Marginalis at least two and a half times longer than wide (fig. 49); lateral surface of pronotum with row of foveae extending along almost its entire posterior margin (fig. 46); base of large tergite fitting closely to apex of petiole and forming an even continuation of this; basal margin of large tergite at middle with more or less distinct fovea, sometimes elongate; gaster sharply pointed at apex with tergite 5 about as long as 3 and 4 together . . . . . **Paramesius** (p. 18)

– Marginalis not more than one and a half times longer than wide (fig. 50); lateral surface of pronotum without such a row of foveae; base of large tergite fitting loosely over apex of petiole and more or less hiding it; basal margin of large tergite entire; gaster much less sharply pointed at apex or even somewhat rounded here; tergite 5 shorter than 3 and 4 together. (Scutellum always with row of foveae across basal margin.)

Spilomicrus (p. 14)

Key to genera (males)

1 Antenna with 13 segments 2

– Antenna with 14 segments 5

2 Forewing varying from truncate to deeply excised at apex. (Notaulices absent or present but weak; stigmalis longer than marginalis; basal margin of large tergite somewhat raised and keel-like in transverse direction, medially with short, deep furrow – weakest in *platyptera* but this species has the apex of the forewing deeply excised.)

Entomacis (p. 12)

– Forewing rounded at apex 3

3 Basal margin of large tergite with very short, deep, medial furrow and a short, shallower furrow on each side of it. (Notaulices deeply impressed throughout; forewing with well defined basal vein; 1st segment of the flagellum hardly shorter than the 2nd.)

Idiotypa (p. 14)

– Basal margin of large tergite at most with an elongate pit at middle and then the 1st segment of the flagellum is much shorter than the 2nd 4

4 Base of large tergite fitting closely around the apex of the petiole so that it appears to be a gradual continuation of this; pronotum laterally with a row of foveae extending along almost its entire posterior margin (fig. 46); 2nd flagellar segment more than twice as long as 1st . . . . . **Paramesius** (p. 18)

– Base of large tergite fitting loosely and freely around apex of petiole so that it does not appear to be a continuation of this; pronotum laterally without such a row of foveae; 2nd flagellar segment at most about one and a third times longer than 1st

Spilomicrus (p. 14)

5 Wings absent or vestigial 6
– Wings fully developed 7
6 Scape enormously expanded, bent and weakly hollowed out beneath (fig. 4); scutellum without basal fovea . . . . . **Platymischus** (p. 25)
– Scape of ordinary form; scutellum with basal fovea . . . . . **Trichopria** (p. 32)
7 Scutellum with no trace of basal fovea 8
– Scutellum with distinct basal fovea 9
8 2nd flagellar segment without an emargination and virtually not widened towards apex; basal margin of large tergite with ring of fine pubescence . . . . . **Corynopria** (p. 31)
– 2nd flagellar segment with a distinct emargination and clearly widened towards apex; basal margin of large tergite without ring of pubescence . . . . . **Phaenopria** (p. 39)
9 Notaulices present; marginalis-stigmalis complex of veins remote from wing-edge (figs 23, 65) 10
– Notaulices absent; marginalis-stigmalis complex of veins situated along wing-edge or represented by a distal thickening of the subcostalis 11
10 Mandibles in closed position forming a beak and directed backwards; frons with a pair of lamelliform projections on each side . . . . . **Psilus** (p. 19)
– Mandibles in closed position not forming a beak and not directed backwards; frons without projections . . . . . **Aneurhynchus** (p. 22)
11 Basal margin of large tergite with small excision at middle . . . . . **Diapria** (p. 32)
– Basal margin of large tergite entire 12
12 Forewing with distinct basal vein (fig. 115). (Hairs of flagellar segments always short.) **Basalys** (p. 26)
– Forewing without a basal vein 13
13 3rd segment of flagellum about four times as long as 4th; antenna uniformly yellow or yellowish . . . . . **Tetramopria** (p. 40)
– 3rd segment of flagellum at most about twice as long as 4th; antenna with segments darkened at least in part. (Flagellar segments often with conspicuous whorls of hairs.) **Trichopria** (p. 32)

Genus Entomacis

An isolated genus with no close relatives in the British Isles. The genus itself is easy to recognize but the species, though very few in number, are sometimes difficult to separate. The females are much more commonly taken than the males. Size varies from 1.2–1.8 mm.

Key to species of *Entomacis* (females)

1 Forewing with deep apical emargination (fig. 14). (Flagellum very thin in proximal half, its 5th segment about twice as long as wide (fig. 15); notaulices complete throughout; dorsal areas of propodeum with fine pubescence; petiole in dorsal view about one and a half times longer than wide; large tergite with hardly noticeable, mid basal excision; side of thorax between propodeal spiracle and hind wing base filled with pubescence; very small, delicately built species, about 1.2 mm.) . . . . . **platyptera**
Evidently not common. England: Hants, Brockenhurst, vi & viii. 10♀. Ireland. Sweden.
– Forewing at most truncate at apex or with merest trace of an emargination 2
2 Dorsal areas of propodeum with fine pubescence. (Notaulices completely wanting; sunken area between propodeal spiracle and base of hind wing with somewhat sparse pubescence; stouter than *platyptera*: antenna similar but four preapical segments slightly thicker, length: 1.5 mm.) . . . . . **penelope** sp.n.
Holotype ♀. *Ireland: Sligo, Bundoran, vii.1933 (G. E. J. Nixon), in BMNH.*
– Dorsal areas of propodeum bare 3

3 Notaulices complete throughout. (Pale species with still paler propodeum and petiole; petiole about twice as long as wide; large tergite strongly, evenly narrowed to base with somewhat inconspicuous basal excision as compared with *bipunctata*.) . . .laertes sp.n.

Holotype ♀. *Sweden: Skåne, Ring Sjö, 27.vi.1938, (D. M. S. & J. F. Perkins), in BMNH. Paratypes. Same data, 3*♀. *Sweden: Skåne, Röstanga, 6.vii.1938, 1*♀, *Fjellfota Sjö, 31.vii.1938, 1*♀ *(D.M.S. & J.F.P). Nonparatypic material. England: Bucks, Burnham Beeches, 14.ix.1974, 2*♀. *Italy: Torino, Superga, 16.ix.1969, 1*♀ *(Z.Bouček). All in BMNH.*

– Notaulices at most showing as short grooves, not longer than the pedicel 4

4 Notaulices showing as short grooves which are nearly as long as the pedicel; flagellum slightly less thickened (fig. 17); lateral, posterior projection of the propodeum less prominent length: about 1.5 mm . . . . . perplexa

Commonest species. Widespread. 29♀.

– Notaulices usually completely absent, at most represented by a small pit; flagellum slightly more thickened; lateral posterior projection of propodeum (thorax in profile and seen slightly from behind) much better developed. (More stoutly built than *perplexa*; darker in colour, the mesoscutum always dark brown; flagellum slightly shorter than in *perplexa*; forewing (fig. 16).) . . . . . bipunctata

England: Bedfordshire; Bucks; Herts; Hants; Sweden. 5♀. *The dorsal areas of the propodeum appear slightly transverse; cf.* laertes *in which these areas are distinctly longer than wide;* perplexa *shows a more or less intermediate condition.*

Key to species of *Entomacis* (males)

(The male of *penelope* is unknown)

1 Forewing with deep, apical emargination (fig. 14); dorsal areas of propodeum with sparse pubescence; 2nd flagellar segment without an emargination. (Flagellum extremely thin, threadlike, its preapical segment about four times longer than wide; 2nd flagellar segment with fine keel extending its full length, visible at ×60; notaulices complete throughout; length: about 1.2 mm.) . . . . . platyptera

England: Hants, Brockenhurst, viii. 3♂. *Sweden: Skåne, 1*♂.

– Forewing at most with apical truncation or the faintest trace of emargination; dorsal areas of propodeum without pubescence; 2nd flagellar segment with very distinct emargination 2

2 Preapical segment of the antenna not or hardly longer than wide, virtually moniliform; mesoscutum dark brown; notaulices usually absent, at most in form of small, oval pit; (Flagellum shorter, thicker and darker than in the other species; its 2nd segment more thickened and more widened apically.) . . . . . bipunctata

England. Germany. Ireland. 5♂

– Preapical segment of the antenna at least very distinctly longer than wide, subcylindrical; mesoscutum usually much paler and notaulices indicated, at least posteriorly, by short furrows that extend forwards as dark lines showing through the pale integument . . . 3

3 Preapical segment of the flagellum three times as long as wide; 1st segment of the flagellum considerably longer than 2nd, 8:5; notaulices distinct as grooves throughout; scape shorter in proportion to pedicel plus 1st flagellar segment, 8:10; forewing weakly truncate at apex. (Petiole bright reddish-yellow and, seen from above, about twice as long as wide.) . . . . . .laertes sp.n.

(See key to females)

Sweden: Skåne, Fjellfota sjö, 31.vii.1938, 1♂ *(J. F. Perkins). Not a paratype.*

– Preapical segment of the flagellum from one and a half times to twice as long as wide; 1st segment of the flagellum about as long as the 2nd; notaulices showing as short furrows, sometimes as mere pits; scape longer in proportion to pedicel plus 1st flagellar segment, 9:10; forewing rounded at apex. (Dorsal areas of propodeum slightly transverse; in *laertes* these areas are slightly elongate; petiole as long and as brightly coloured as in *laertes*.) . . . . . perplexa

England: Cheshire, 1 ♂ *bred with 1* ♀ *from* Forcipomyia picea (*Ceratopogonidae*). *Sweden. 4*♂.

Genus **Idiotypa**

This genus is easily recognized on venation alone; the combination of a distinct stigmalis and basal vein is not found in any other genus from the region (fig. 5). The dorsal areas of the propodeum are transverse; the usual, medial diapriine keel takes the form of an angular projection, or more rarely, blunt spine, as seen from the side.

♀. Antenna yellow to reddish-yellow except for blackened 5-segmented club; head darker than the usually entirely fulvous thorax and gaster; rarely thorax as dark as head.

♂. Colour as in ♀; 1st segment of the flagellum fully as long as 2nd . . . . . **nigriceps**

Widespread but evidently not common. 12♀, 3♂.

Genus **Labolips**

The single species is a remarkable insect and has no close relatives known to me. It has been included in the tribe Psilini, comprising also *Psilus* and *Aneurhynchus*, but I think that further investigation of its peculiarities might show it to be misplaced here. At first sight, the forewing appears to have no venation, a pigmented subcostalis being present only at base (fig. 12); the dorsal surface of the propodeum is not divided by a medial keel into two areas but is shiny, bare and covered with irregularly shaped pits; posterior margin of the scutellum without trace of foveae; large tergite deeply hollowed out at base to receive the apex of the petiole; with rounded anterior corners (shoulders) each with a trace of striation on the inside (fig. 11). Male unknown.

♀. Antenna short, rather thick, thickened towards apex but without a differentiated club; flagellum, except 1st and apical segment, with submoniliform segments (fig. 13). **innupta**

England: Hants, Surrey, 2♀. Ireland: Sligo, 2♀.

Genus **Spilomicrus**

The very short marginalis and virtual absence of postmarginalis and stigmalis in combination with the unmodified basal margin of the large tergite mainly characterise this genus. Confusion with any other genus in the British Isles is unlikely since *Spilomicrus* is isolated within our fauna though otherwise representing a genus-group of worldwide distribution. There is a wide range of structure within the British species such as, for example, between *compressus* with its curiously modified tibiae and *formosus* with its short, high thorax and strongly transverse head.

Sharp definition of the notaulices is not a feature of *Spilomicrus* as it is, for example, in the distantly related *Aneurhynchus*. Some specimens of the same species will have them better defined than others. In *integer* they are completely absent while in *bipunctatus* they are represented by two small pits. I am regarding these two groups of specimens as two species but I am not at all sure they may not be variants of one.

Another feature that sometimes makes the range of specific variation difficult to assess is the presence within a species of both fully winged and brachypterous females with its attendant change in the structure of the thorax. On the whole, however, the few species are easy to recognize. They are among our largest Diapriinae, averaging 3.0 mm in length. The males of the largest of them – *annulicornis* – are common insects and are frequently swept in May and June.

Key to species of *Spilomicrus* (females)

(The females of *pelion* and *simplex* are unknown)

1 Notaulices absent 2

– Notaulices represented by at least two small pits; these sometimes almost absent in *minimus* but this species has the antennal club sub-5-segmented with the apical segment markedly smaller than the preapical 3

2 Antennal club more or less 6-segmented; tergites 5 and 6 with fine punctation; pubescence of pronotum dense enough to form a thick, furry collar; gaster in profile almost truncate at apex; much larger species, 2.5–3.0 mm. (Legs, on the whole, bright reddish-yellow; segment 7 of the flagellum nearer in size to 8 than to 6; hairy part of petiole distinctly transverse when gaster in line with rest of body.) . . . . . integer

Generally distributed. v–vi. Males taken ix–x. Female probably hibernates.

– Antennal club more or less 7-segmented; tergites 5 and 6 smooth, shining; pubescence of pronotum very thin, hardly forming a collar; gaster in profile almost evenly pointed to apex; very small species, about 1.4 mm. (Hind wing narrow; at its widest about two and a half times length of fringe at same point; petiole when gaster in line with rest of body strongly transverse.) . . . . . modestus

Not British. Czechoslovakia: Moravia, 1♀.

3 Basal half of upper surface of middle and hind tibia compressed laterally to form a knife-like edge. (Antenna short; club indistinct, sub-5-segmented, with apical segment smaller than preapical; notaulices complete at least to middle of disc; hind femur longitudinally hollowed out for reception of tibia.) . . . . . compressus

Generally distributed. I have seen several specimens from Czechoslovakia, Moravia with wings apparently bitten off, so that they appear to be micropterous.

– Middle and hind tibia not thus modified 4

4 Brachypterous species with wings not reaching apex of gaster 5

– Fully winged species 7

5 Scape strikingly bicoloured, dark on basal half, reddish-yellow, like basal flagellar segments, on apical half. (Club more or less 6-segmented but only distal 5 segments dark; apical segment neither thinner nor smaller than preapical (fig. 25) (cf. *hemipterus*, fig. 27); propodeum at base of keel with rather deep, almost transverse excavation.) flavipes

Ireland: Wicklow, 1♀. England: Cumberland, 1♀. Germany: Harz Mts., 1♀. See also couplet 8.

– Scape entirely dark or at most faintly paler at apex 6

6 Club more or less 5-segmented, with at most 5 black segments; segment of flagellum nearer in size to 5 than to 7; apical segment smaller and narrower than preapical (fig. 27); mesoscutum with distinct bronzy shimmer; propodeum on each side of keel smooth, deeply emarginate behind (fig. 52); forewing not reaching beyond middle of large tergite; notaulices deep, linear posteriorly, extending forwards as weak impressions as far as pronotum. (Club markedly fusiform) . . . . . hemipterus

England: Herts. Kent. Surrey, Horsley, 3♀♀, swept end v. See also couplet 10.

– Club more or less 6-segmented, with at least 6 black segments; flagellar segment 6 clearly nearer in size to 7 than to 5; apical segment neither narrower nor thinner than the preapical; mesoscutum without bronzy shimmer; propodeum on each side of keel coarsely rugose and behind not deeply emarginate; forewing reaching apex of large tergite; notaulices sharply defined to middle and then completely absent. (Flagellar segments 1–5 reddish-yellow, with segments 2–3 distinctly longer than wide.) annulicornis

Ireland: 2♀. Scotland: 2♀. See also couplet 13.

7 Club sharply 7-segmented; scape shining, almost smooth; head strongly transverse (fig. 30); apical margin of clypeus conspicuously toothed at middle and deeply emarginate on each side of tooth. (Mesoscutum strongly convex; notaulices hardly reaching middle of disc; mesopleurum below margined by a keel; propodeum short, not projecting backwards at sides (fig. 31) and with much coarse rugosity; scape reddish-yellow but

sharply darkened on about basal third.) . . . . . formosus

Scotland: Mugdock, 1♀, ex Cameron Coll., in BMNH. Club with 7 black segments. Unlike the male, the eyes of the single female have a few hairs. Highly aberrant species because of the short, high thorax.

– Club less than 7-segmented or if sub-7-segmented, then only six distal segments black; head much less transverse; apical margin of clypeus rounded; scape dull, with mostly a fine, aciculate sculpture 8

8 Scape sharply bicoloured; dark on basal half and reddish-yellow, like flagellar segments, on distal half. (Club more or less 6-segmented, with 5 blackened segments; apical segment of flagellum as wide as, and longer than, preceding segment (fig. 25); apex of propodeal keel showing as a somewhat flattened, rugose knob; mesopleurum with 2–3 longitudinal ridges below; pores of 6th segment of gaster much further apart than those of 7th (fig. 29); apical tergites without punctation; hypopygium smooth, shining, impunctate; hairy part of petiole distinctly longer than wide.) . . . . . flavipes

Ireland: Sligo, vii. 4♀; Wicklow, viii. 1♀. See also couplet 5.

– Scape not bicoloured, at most faintly paler at apex 9

9 Antennal club more or less 5-segmented. (Apical segment of flagellum smaller than the preapical; 7th segment of flagellum considerably smaller than the 8th, the club in consequence weakly fusiform.) 10

– Antennal club more or less 6-segmented. (Apical segment of flagellum not or less obviously smaller than the preapical; 7th flagellar segment hardly different in appearance from the 8th.) 11

10 Notaulices linear, reaching almost to middle of disc; thorax with distinct bronzy shimmer; propodeum longer, its posterior corners more strongly projecting backwards; legs bright reddish-yellow; larger, about 2.5 mm; extreme base of large tergite without cluster of hairs on each side . . . . . hemipterus

England: Surrey, 2♀. Ireland: 3♀. See also couplet 6.

– Notaulices reduced to two small, oval pits, rarely extended forwards a little as very weak impressions; thorax without bronzy shimmer; propodeum shorter, its posterior corners less produced; legs with at least femora darkened; smaller, about 1.5 mm; extreme base of large tergite with small inconspicuous cluster of hairs on each side. (The pedicel is somewhat characteristically larger and distinctly longer than 1st flagellar segment; 6–7 basal segments of flagellum obscurely yellow.) . . . . . abnormis

Widely distributed in England and Ireland but evidently not common.

11 All femora, especially the hind pair, much thickened; hind femur almost without basal stalk (fig. 32); gaster (for genus) narrowly pointed at apex (fig. 34). (Dark-legged species; flagellum short; club not sharply defined, with at least 6 segments; flagellar segments 2–4 not longer than wide (fig. 28); hypopygium finely punctate; notaulices deep posteriorly but becoming only weakly indicated towards front.) . . . . . rufitarsis

England: Sussex, vii. 1♀. Ireland: Dublin, iii., 1♀. Evidently a rare species. Very distinctive on shape of the apex of the gaster.

– Femora not thus thickened; hind femur distinctly stalked at base; gaster not thus pointed at apex 12

12 Notaulices reduced to small, sharply defined, oval pits. (Antennal club more or less 5-segmented; 6th flagellar segment considerably smaller than the 7th.) . . . . bipunctatus

Widely distributed in S. England. Extremely like integer *and perhaps only a variety of it.*

– Notaulices in form of linear furrows that extend at least to middle of disc 13

13 Notaulices distinct to just beyond middle of disc, thence fading out completely; flagellum with 6 black apical segments and 5 red basal segments; club with at least 6 segments; propodeum from above only weakly emarginate behind; with much coarse rugosity and with deep excavation on each side of medial keel; petiole shorter than in *stigmaticalis* . . . . . annulicornis

England: 1♀. Scotland: 1♀. See also couplet 6.

– Notaulices deepened at least to middle of disc, rarely throughout but in any case continued as far as the anterior margin of the mesoscutum as faint impressions; flagellum

blackened virtually throughout; propodeum more deeply emarginate behind, less rugose and with a less evident basal excavation on each side of the medial keel. (Legs mainly dark with hind coxa reddened; 1st segment of flagellum shorter in relation to length of pedicel than in *annulicornis* (fig. 26); petiole long, its hairy surface, as seen from above, about twice as long as wide; wings always fully developed and more ample than in the two macropterous females of *annulicornis*.) . . . . . **stigmaticalis**

Widely distributed and evidently common. There is a female in BMNH bred from a beetle pupa, either Quedius *or* Philonthus.

Key to species of *Spilomicrus* (males)

(The males of *bipunctatus* and *flavipes* are unknown)

1 Notaulices absent 2
– Notaulices represented by at least two small pits 4
2 1st flagellar segment very distinctly longer than 2nd (fig. 41). (Emargination of 2nd flagellar segment very shallow, the keel terminating at extreme apex of segment; legs, including coxae, bright reddish-yellow.) . . . . . **integer**
– 1st flagellar segment not longer than 2nd 3
3 Antenna very short, with flagellar segments 3–11 submoniliform; 1st flagellar segment hardly shorter than 2nd; hind wing narrow, its greatest width about two and a half times length of fringe at same point; very small species, about 1.5 mm . . . . **modestus**

Not British. Sweden: 3♂. Czechoslovakia: Moravia, 9♂; some in BMNH.

– Antenna longer; 1st flagellar segment very distinctly shorter than 2nd; flagellar segments 3–11 about one and a half times longer than wide; hind wing much broader, its greatest width about four times length of fringe at same point; much larger species, 2.3–2.5 mm. (Legs dark; 2nd flagellar segment virtually not emarginate, its keel hardly noticeable (fig. 40); apical segment of antenna a little shorter and a little thinner than the preapical segment; clypeus in facial view produced to form a sharp point (fig. 33); dorsal, hairy part of petiole distinctly longer than wide.) . . . . . **pelion sp.n.**

Holotype ♂: England: Surrey, Horsley, 14.vi.1930 (G. E. J. Nixon), in BMNH. Paratype. England: Kent, Eynsford, 17.vi.1930, 1♂ (G.E.J.N.), in BMNH. Related to formosus, *the only other species from the region with toothed clypeus.*

4 1st flagellar segment not longer than 2nd 5
– 1st flagellar segment distinctly longer than 2nd 9
5 2nd flagellar segment virtually without trace of an emargination and at most with merest trace of a keel 6
– 2nd flagellar segment with well developed emargination that is keeled thoughout 9
6 Large species, about 2.5 mm; apical margin of clypeus sharply pointed at middle; antennal scape almost everywhere smooth and polished. (Head very strongly transverse (fig. 30, ♀), sometimes very slightly widened behind the eyes; scape varying from entirely dark to dark with reddened apex; eyes bare; middle flagellar segments markedly cylindrical; propodeum in dorsal view short, without a clearly defined medial keel, its surface dull-looking and with much coarse rugosity; posteriorly the propodeum is hardly emarginate (fig. 31, ♀.) . . . . . **formosus**

England: Surrey, Oxshott, viii. 1♂. Germany: Bavaria, Oberstdorf, viii. 3♂. Highly aberrant species, easily recognized by narrow, very elongate flagellar segments (fig. 37) and strongly transverse head.

– Small species, about 1.5 mm; apical margin of clypeus rounded; scape of antenna lacking this highly polished appearance. (Dark-legged species with 1st flagellar segment distinctly shorter than 2nd; notaulices distinct virtually throughout; middle flagellar segments subfusiform.) . . . . . **simplex**

Not British. Czechoslovakia. 3♂ in BMNH. Except on structure of 2nd flagellar segment, hardly distinguishable from abnormis.

7 Venation not reaching beyond basal third of forewing (fig. 51); pedicel very distinctly longer than half 1st flagellar segment; 2nd flagellar segment with an emargination that

results in its being strongly narrowed basally (fig. 35), its keel reaching hardly beyond middle of segment; small species, 1.5–2.0 mm. (Dark-legged species with notaulices fine and reaching to about middle of disc.) . . . . . abnormis

Widespread in England. Ireland. Sweden. 19♂.

– Venation reaching to nearly middle of forewing; pedicel much less than half length of 1st flagellar segment; 2nd flagellar segment with more sharply defined emargination that does not result in the gradual proximal narrowing seen in *minimus*; keel of emargination reaching well beyond middle of segment; much larger species, 3.0–5.0 mm. . . . 8

8 Emargination of 2nd flagellar segment less sharply defined; setae of flagellar segments thinner, denser, more closely adpressed; head above with longer, more numerous hairs (Largest species of genus, about 5 mm. more uniform in size than *stigmaticalis*.) **annulicornis**

Widespread and common, v–vi.

– Emargination of 2nd flagellar segment deeper, altogether better defined (fig. 36); setae of flagellar segments less dense, thicker and more upstanding; head above with shorter, less numerous hairs. (Nearly as common as *annulicornis* but smaller and very variable in size, 3.0–4.5 mm. The flagellum appears bristly in comparison with that of *annulicornis*.) . . . . . stigmaticalis

9 2nd flagellar segment more or less evenly cylindrical, virtually without trace of a keel. (Propodeum in profile with strong, angularly raised keel.). . . . . hemipterus

Switzerland. 7♂. I have found no British male of hemipterus.

– 2nd flagellar segment distinctly widened towards apex and with straight keel, covering about three-quarters length of segment. (2nd flagellar segment measured at its widest about one and two-thirds longer than wide.) 10

10 Flagellar segments 3–10 fully one and a half times longer than wide (fig. 38); femur less swollen and more gradually narrowed to base; flagellum brown, usually paler than scape; keel of propodeum not or hardly angularly raised in front. . . . . compressus

Males do not show lateral compression of hind tibia characteristic of female but this is present in one male from Ireland: Wicklow, Drumgodd, 10.x.1942 (A. W. Stelfox). in USNM.

– Flagellar segments 3–10 hardly one and a third times longer than wide (fig. 39); hind femur strongly swollen and abruptly narrowed at base; flagellum blackish; keel of propodeum sharper and in front tending to be angularly raised. (Legs much darker than in *compressus* and dorsal areas of propodeum almost smooth-looking compared with the coarse rugosity of these parts in *compressus*.) . . . . . rufitarsis

England: 3♂. Ireland: 4♂.

Genus **Paramesius**

This genus is easily recognized by the form of the articulation between the petiole and the second (large) tergite and is isolated within the British fauna. The species are easy enough to separate but *elongatus* Thomson may be an aggregate since it shows much variation in the definition of the notaulices.

Key to species of *Paramesius* (females)

1 Wings shortened, not, or hardly, reaching beyond middle of gaster; 3 tergites posterior to large tergite with very fine, dense punctation; petiole beneath so densely clothed with woolly pubescence that its lower margin, in profile, is completely hidden. (Flagellum decidedly thin; apical 5 segments of antenna darkened but first of these less so than segment distal to it; propodeum (fig. 48).) . . . . . brachypterus

Generally distributed. England. France. Ireland. Sweden. Scotland. 22♀. Evidently hibernates, 1♀ having been taken in October, 2♀ in March, from leaf bases of Carex pendula.

– Wings normal; if obviously shortened, (some examples of *westwoodi*), then 3 tergites posterior to large tergite smooth, shining, (at most merest trace of punctation); petiole beneath less pubescent, its lower margin, in profile, clearly visible 2

2 Pronotum above, at base of declivity, clothed with adpressed hairs, as well as some longer ones. (Flagellum considerably thicker than in *brachypterus* and with 5–6 blackened segments at apex; dorsal areas of propodeum transverse, narrow.)
westwoodi

Generally distributed and fairly common. Largest species, 4.2–4.8 mm. Fully winged females, v–viii; two females with shortened wings taken in February (Scotland, Aviemore) suggest hibernation and two generations with short-winged females in autumn.

– Pronotum above, at base of declivity, bare or at most with a few long hairs. (Conformation of dorsal areas of propodeum different from that seen in *brachypterus* and *westwoodi.*) 3

3 Only apical 2–3 antennal segments blackened, flagellar segment 8 being merely somewhat darkened; rest of antenna bright reddish-yellow; flagellum more abruptly thickened to apex with apical segment relatively thicker and less sharply pointed; tergites 6–7 more elongate and usually brightly yellowish; propodeum (fig. 47) . . . . . crassicornis

Widely distributed but evidently not common. England: Bucks. Devon. Hants. Ireland: Dublin. 8♀.

– At least apical 6 segments darkened; rest of antenna never bright reddish-yellow and scape usually markedly darkened in apical half; flagellum less thickened towards apex and with apical segment relatively thinner and more sharply pointed; tergites 6–7 shorter and much less contrastingly paler than rest of gaster . . . . . elongatus

P.inchoatus *Kieffer, ♀; Scotland; in BMNH;* Lectotype *here designated;* Syn.n. Spilomicrus minor *Kieffer;* Syn.n. *Commonest species and smallest, 2.5–2.8 mm. Very variable in respect of definition of notaulices; these often faint to completely absent on anterior half of mesoscutum* (inchoatus).

Key to species of *Paramesius* (males)

1 Emargination of 2nd flagellar segment shallow and not extending as far as middle of segment; pronotum above with some adpressed hairs as well as long, upstanding ones . 2

– Emargination of 2nd flagellar segment deep, conspicuous, extending fully to middle of segment; pronotum above without or with only long, upstanding hairs 3

2 1st segment of flagellum clearly shorter than emargination of 2nd segment (fig. 42); pubescence of flagellum short, with very few long hairs surpassing general level of pubescence; underside of petiole with long, but not woolly pubescence. (Largest species 3.8–4.5 mm with long, rather thick antenna.) . . . . . westwoodi

– 1st segment of flagellum fully as long as emargination of 2nd segment (fig. 43) pubescence of flagellum appearing less even because of numerous long hairs surpassing its general level; underside of petiole with dense, woolly pubescence. (Smaller than most examples of *westwoodi* with antenna slightly thinner and relatively shorter; length about 4 mm.)
brachypterus

3 Emargination of 2nd flagellar segment extending a little beyond middle of segment (fig. 44); pedicel and 1st flagellar segment slightly longer; flagellum almost yellow.
crassicornis

– Emargination of 2nd flagellar segment not extending beyond middle of segment; pedicel and 1st flagellar segment slightly shorter; flagellum brownish . . . . . elongatus

P.subinermis *Kieffer, ♂. Scotland. In BMNH.* Lectotype *here designated.* Syn.n.

Genus **Psilus**

Psilus is abundantly distinct and has no generic relatives amongst the British Diapriinae. Particularly characteristic are its long mandibles that together form a

beak directed downwards and backwards and the curious lamelliform outgrowths of the frons.

The species are far from easy to separate and offer scope for further taxonomic investigation.

Key to species of *Psilus* (females)

(The female of *acutangulus* is unknown)

1 Forewing with short, apical excision and folded longitudinally along the line of this excision; occiput margined; frons between the inner lamellae margined right across; anterior ocellus separated from this margin by fully its own diameter; antenna thin, the preapical segment almost square in outline. (Furrow of large tergite extending slightly beyond middle.) . . . . . inaequalifrons

Sweden: type loc. England: Berks, Wytham Wood, 1♂, 1♀, bred 10–12.viii.1962, ex Lonchaea cariecola *under Elm bark* (Ulmus), *Newbury, 1.ix.1975, 1♂ (N. Fergusson).*

– Forewing without apical excision; occiput not margined; frons between inner lamellae not margined right across, the anterior ocellus being situated midway between them; antenna thicker, the preapical segment always distinctly transverse 2

2 Ocellar region between the two inner lamellae of the frons densely scaly-reticulate. (Species either micropterous, with wings reaching to about middle of petiole or fully winged; head longer than wide (fig. 21); petiole strongly swollen medially and without clearly defined, longitudinal keels.) . . . . . caecutiens

Scotland: Aberdeen, 1♀; Edinburgh, 2♀, 2♂, bred doubtfully from puparia of Psila bicolor. *Czechoslovakia, 2♀.*

– Ocellar region smooth, shining, except for occasional rugosities. (Fully winged species.) 3

3 Legs bright reddish-yellow . . . . . rufipes

British Is., Morley Coll., in BMNH.

– Legs with at least the femora blackish or brownish 4

4 Smaller species, about 2.8 mm 5

– Larger species, not less than 4.0 mm 6

5 Head from above markedly elongate (fig. 20); flagellum more gradually widened towards apex; penultimate segment about one and a half times wider than 1st flagellar segment; ocelli in lower triangle; hind femur twice as long as wide . . . . . submonilis

England: Devon; Surrey. Ireland. Czechoslovakia. 5♀.

– Head from above hardly elongate (fig. 22); flagellum more strongly widened towards apex; penultimate segment about twice as long as 1st segment of flagellum; ocelli in slightly higher triangle; hind femur a little more than twice as long as wide. (Petiole virtually not swollen at middle and with its 3 dorsal keels distinct; base of large tergite with a more or less broad furrow on each side of the medial furrow, these secondary furrows virtually absent in *submonilis*.) . . . . . parvulus

England. Ireland. 6♀.

6 Apical half of large tergite with only sparse, relatively inconspicuous hairs; frontal projection with weak, medial excision. (Head without the punctures so often noticeable in *fuscipennis*; scutellar foveae obliquely placed as in *fuscipennis*; basal margin of large tergite much as in *fuscipennis* (cf. fig. 18).) . . . . . frontalis

Ireland: Dublin, 1♀, in BMNH. Czechoslovakia: Javorna, 1♀, in Coll. Masner, Canada.

– Apical half of large tergite thickly hairy, especially along sides; frontal projection entire at middle or virtually so 7

7 Basal margin of large tergite on each side of medial furrow showing a short, straight edge before sinking away in a curve to meet the anterior, lateral corner (fig. 18); cheek with a fine, often very weak, keel extending from base of mandible to nearest point of eye; sometimes the position of this keel is marked by a trace of rugosity or a few punctures; posterior half of propodeum frequently with much coarse rugosity; scutellar foveae

more obliquely placed; flagellum slightly less thickened towards apex, the preapical segment less transverse. (Head above often with a few, widely scattered punctures.) **fuscipennis**

Widely distributed and often common.

– Basal margin of large tergite on each side of medial furrow sinking away immediately in a wide sweep before rising to meet the anterior, lateral corner of the tergite (fig. 19); cheek highly polished and with no trace of a keel; scutellar foveae abutting more widely onto the mesoscutum and hence less obliquely placed; propodeum a little longer, with more prominent posterior corners, its dorsal areas predominantly smooth and highly polished; flagellum slightly more thickened towards apex, its preapical segment slightly more transverse. (Head above with no such punctures.) . . . **cornutus**

Widely distributed. England: Kent, Wye, 1♂, 1♀, bred possibly from Phaonia *sp. among* Chortophila brassicae, *9.xii.1949. This species and* fuscipennis *are the two most commonly taken members of the genus. Considerable care in appreciating the characters given is needed in order always to separate the two species.*

Key to species of *Psilus* (males)

1 Forewing with short, apical excision; occiput margined, the margin bordered anteriorly with large foveae; 1st segment of flagellum fully as long as the 2nd; frons between the inner lamellae margined right across; anterior ocellus remote from this margin. **inaequalifrons**

– Forewing without apical excision; occiput not margined; 1st segment of the flagellum much shorter than the 2nd; frons between the inner lamellae not margined right across, the anterior ocellus being situated midway between them 2

2 Frontal projection seen from above sharply angled laterally. (Preapical segment of the flagellum about one and a half times longer than wide.) . . . . . **.acutangulus**

Not British. Sweden only.

– Frontal projection, seen from above, rounded laterally 3

3 Usually most of ocellar region but at least the area within the lateral frontal lamellae with fine scaly-reticulation. (Head strongly widened behind.) . . . . . **caecutiens**

– Ocellar region more or less, and area within the lateral, frontal lamellae, smooth, shining 4

4 Legs bright reddish-yellow. (Preapical segment of the antenna one and a half times longer than wide.) . . . . . **rufipes**

– Legs with at least the hind femora blackish or brownish 5

5 Larger species, 5.0–5.6 mm 6

– Smaller species, 2.5–3.0 mm. (2nd segment of flagellum at most about one and three quarter times longer than 1st.) 8

6 1st segment of flagellum more than half as long as 2nd; apical half of large tergite with only sparse, relatively inconspicuous hairs; frontal projection with small emargination at middle. . . . . **.frontalis**

– 1st segment of flagellum less than half as long as 2nd; apical half of large tergite with dense, conspicuous hairs; frontal projection entire 7

7 Cheek with ill defined keel extending from base of mandible to nearest point of eye; basal margin of large tergite on each side of medial furrow showing a short, straight edge before sinking away in a curve to meet the anterior, lateral corner of the tergite; 2nd flagellar segment with very weak basal emargination beset distally with more or less distinct cluster of about 6 short, stiff hairs (fig. 24); middle of excavate area with one thick or two thinner erect bristles; preapical segment of maxillary palpus much more dilated apically . . . . . **fuscipennis**

The most commonly taken male of the genus.

– Cheek with no trace of a keel here, the surface being smooth and highly polished; posterior margin of large tergite on each side of medial furrow sinking away immediately in wide sweep before reaching anterior, lateral corner of tergite; 2nd flagellar segment with at most merest trace of an emargination and this not distally beset with cluster

of hairs; middle of excavate area without such bristles; preapical segment of maxillary palpus much less dilated apically . . . . . cornutus

8 Antenna shorter; preapical segment about one and a half times longer than wide; head slightly longer; frontal lamellae, seen from above, virtually parallel with long axis of head . . . . . submonilis

– Antenna longer; preapical segment about twice as long as wide; head slightly shorter; frontal lamellae, seen from above, slightly divergent . . . . . .parvulus

Easily confused with submonilis *and like that species not taken at all commonly.*

Genus **Aneurhynchus**

This genus is very easy to recognize on venation alone (fig. 65); there is no other in the British fauna with which, in my opinion, it shares any special affinity, though Hellén (1963) includes it, together with *Psilus* and *Labolips*, in a tribe Psilini. Ease of recognition, however, is not a feature of the species of *Aneurhynchus*, at least of their females. For one thing, these are taken much less commonly than the males so that long series of most of the species have not been available for examination and the range of specific variation in consequence more difficult to assess.

Since species of *Aneurhynchus* are distinguished mainly on the secondary sexual characters provided by the antenna, I have been able to establish with certainty the association of the sexes only for two species. Both of these I was lucky enough to breed in large numbers many years ago. One of them – *ruficornis* Thomson – has puzzled me because it produces not only micropterous and macropterous females, with all the usual attendant structural modifications, but also a dimorphic male in which the differences are confined to the appearance of the basal segments of the flagellum. Several generations of this species, with its four forms, were bred abundantly between the autumn of 1932 and the spring of 1933 from a large culture of the fly, *Platypeza fasciata* Meigen which I found feeding on a decaying fungus at the foot of a plum tree (*Prunus*).

Aneurhynchus is peculiar and different from all the other genera in this review in that the axillae of the scutellum are each armed with a strong hook, directed backwards. A similar hook occurs in *Oxylabis* of the subfamily Belytinae (see Nixon, 1957) but the two genera are totally unrelated. Almost all the characters that, in my opinion, distinguish the species are to be found in the shape and size of the antennal segments. I have found little else in their structure of taxonomic value.

Key to species of *Aneurhynchus* (females)

(The females of *coryphe, depressus, gracilicornis, obliquus* and *nodicornis* are unknown.)

1 Micropterous 2

– Macropterous 3

2 Forewing reaching a little beyond the apex of the petiole; flagellum longer, with segments 4–5 only weakly transverse (fig. 63); gaster longer; petiole slightly longer than wide . . . . . .pentatomus

England. Ireland. 14♀.

– Forewing hardly reaching middle of propodeum; flagellum very short and much thickened towards apex; segments 4–5 of flagellum strongly transverse; gaster shorter; petiole slightly transverse . . . . . .ruficornis

England. Host: Platypeza fasciata. *See also couplet 8.*

3 Flagellum slender with the preapical segment very distinctly longer than wide (fig. 60); gaster markedly flattened in apical half. (First 7 segments of antenna yellow; notaulices widest at extreme posterior end and here separated by hardly more than their width; mesoscutum extremely sparsely hairy; scutellum margined on each side by sharp keel.) **fragilis** sp.n.

Holotype ♀. *England: Gloucester, Badgeworth, 18.ix.1963, labelled "field mushroom", in BMNH.*

– Antenna less slender, with the preapical segment at least very slightly transverse; gaster not at all flattened in apical half 4

4 5th segment of the flagellum distinctly longer than wide. first 7 segments of the flagellum bright, clear yellow; gutter between occipital margin and occiput completely smooth; lateral bordering keel of scutellum replaced by a row of large, irregularly shaped pits (fig. 67); the two rows of pits strongly convergent posteriorly; forewing with a dark stain beneath the stigmalis. (Antennal scape highly polished with only fine, indistinct pubescence; shoulders of pronotum with at least a row of punctures against the mesoscutal margin or more often (3 out of 4 specimens) rugose-punctate all over; head less narrowed behind the eyes than in *longicornis.)* . . . . . **ariadne** sp.n.

Holotype ♀. *France: Fl., Morlaix, 10.vi.1954 (J. F. Perkins), BMNH. Paratypes. England: Herts, Brickett Wood, 23.v.1938, 1*♀ *(R. B. Benson); Northants, Spratton, vii.1975, 1*♀ *(I. and P. Gauld): (in this* ♀, *the pale parts of the antenna and legs are yellowish-red rather than yellow). Ireland: Dublin or Wicklow, 12.vii.1931, 1*♀ *(A. W. Stelfox). All in BMNH. In this species, the claws are somewhat characteristically long and strongly curved.*

– 5th segment of the flagellum not longer than wide; first 7 segments of the antenna, if pale, then dull reddish-yellow; gutter between occipital margin and occiput with at least a trace of foveae; lateral, bordering keels of scutellum distinct as such, their outline broken at most posteriorly and usually by one large pit; forewing without a dark stain beneath the stigmalis 5

5 Notaulices much widened behind, the shortest distance between them here hardly more than their greatest width; first 7 segments of the antenna much darkened, often almost black. (Flagellum with no trace of a differentiated club; flagellar segments 4–5 moniliform; anterior margin of postscutellum raised at middle to form a transverse lamella; behind this lamella is a deep, transverse pocket.) . . . . . **galesiformis**

Widely distributed. The most commonly taken species. England: S.E. London, Norwood, very large series, containing both sexes, bred i.1933, from puparia of Fannia *sp. living in wet detritus beneath nest of* Vespa crabro *brought from Middlesex, Staines, viii.1932. A second generation was bred indoors iv. 1933 from the same batch of puparia.*

– Notaulices less widened behind, the shortest distances between them here being at least twice their width; first 7 segments of the antenna more or less reddish-yellow, if darkened, then at least 5th segment of flagellum strongly transverse 6

6 First 6–7 segments of the antenna dusky, not contrastingly paler than the apical segments; scutellar hollows oblong and obliquely placed. (Five preapical segments of the flagellum strongly transverse; anterior margin of the postscutellum without a raised lamelliform margin; head large, hardly narrowed behind the eyes (fig. 70); gaster markedly elongate, about twice as long as wide distal to petiole.) . . . . . **mese** sp.n.

Holotype ♀. *England: Northants, Spratton, viii.1975 (I. and P. Gauld), in BMNH. Paratypes. Same data, 1*♀. *England: Hunts, Wood Walton Fen, 1*♀, *vii.1942 (H. M. Edelsten); Herts, Harpenden, 1*♀, *28.vi.1930 (G. Salt). All in BMNH. This is perhaps merely a fully winged form of* pentatomus.

– First 6–7 segments of antenna reddish-yellow; if this is not at once obvious, then the first 5 preapical segments of the flagellum much less transverse; scutellar foveae more or less circular and abutting widely on to the meso-scutellar suture 7

7 3rd flagellar segment almost one and a half times longer than wide; head very strongly narrowed behind the eyes (fig. 68, ♂). (Three preapical segments of the flagellum not or only weakly transverse (fig. 61).) . . . . . **longicornis**

England: Herts, Brickett Wood, vi. 1♀; Northants, Spratton, vii. 1♀; Oxfordshire, Goring Heath, viii, 1♀. Sweden: Skåne, Skäralid, 1♀. Distinct on head-shape and length of flagellar segments.

– 3rd flagellar segment hardly longer than wide; head much less narrowed behind the eyes. 8

8 Three preapical segments of the flagellum more transverse (fig. 64); pronotal shoulder on the whole smooth or with only weak trace of punctation along posterior margin. oviventris

S.E. England. France. Sweden.

– Three preapical segments of the flagellum less transverse (fig. 62); pronotal shoulder on the whole rugose-punctate all over. (Antenna slightly shorter than that of *oviventris*; seen from behind, the 6th tergite usually shows on each side a dense fringe of hairs; this appears to be absent in the specimens of *oviventris* examined.) . . . . . ruficornis

England: S.E. London. Very large series of males and females bred from puparia of Platypeza fasciata *ix–x.1932. From this generation of fully winged females there emerged, in a domestic cellar where the host puparia were being kept, two generations (i and iv. 1922) of wingless females with males markedly different in antennal structure from the males bred with the fully winged females in the autumn of 1932. This seems to be a case where a species produces dimorphic males as well as females. See also couplet 2.*

Key to the species of *Aneurhynchus* (males)

(The males of *fragilis, mese, oviventris* and *pentatomus* are unknown)

1 2nd flagellar segment, seen at its widest, triangularly dilated; width to length as 5:4 (fig. 59); flagellar segments 3–11 more or less moniliform . . . . . nodicornis

Generally distributed and easily recognized on antennal structure. So far I have found no female that I could, with confidence, associate with this species.

– 2nd flagellar segment, seen at its widest, at most slightly produced below and then the following segments are all much longer than wide 2

2 1st flagellar segment only a little longer than the pedicel, 9:7; modification of 2nd segment of flagellum in form of a straight ridge extending almost to middle of segment (fig. 57) (Flagellum yellowish throughout.) . . . . . ruficornis

Late autumn and winter generations. See also couplet 7.

– 1st flagellar segment very distinctly longer than the pedicel, at least about twice as long . . 3

3 2nd flagellar segment somewhat triangularly dilated, about two-thirds as wide as long (fig. 56). (1st segment of the flagellum about three-fifths as long as 2nd (fig. 56).) depressus

England: Cambridge; Hunts; Kent; S. E. London. 28♂. All taken viii–x.

– 2nd flagellar segment not dilated or produced below, almost always with a short, oblique, basal truncation or weak basal emargination (the segment sometimes appears a little widened at the apex of this modification) 4

4 1st flagellar segment very distinctly shorter than the 2nd, about two-thirds to three-quarters as long 5

– 1st flagellar segment as long as, or almost as long as, the 2nd 9

5 Modification of 2nd flagellar segment covering one-third length of segment; gutter between occipital margin and occiput completely smooth; scutellum margined laterally at least on posterior half, with a row of irregular, large foveae (fig. 67 ♀). (Scape highly polished and with only very sparse hairs; face highly polished, very sparsely hairy; transverse ridge separating dorsal from posterior, vertical surface of propodeum weak to almost absent.) . . . . . ariadne sp.n.

(See key to females)

England: Devon, Torquay, viii. 1♂. Ireland: Donegal, Drinnahilly, 16.vi.1961, 1♂; Wexford, Ards, 17.vi.1965, 1♂; Wicklow, Devil's Glen, 18.vi.1950, 1♂. Not paratypes. The latter three males in U.S. National Museum.

– Modification of 2nd flagellar segment hardly defined as such, its weak keel covering hardly more than basal quarter of segment; gutter between occipital margin and

occiput foveate; scutellum margined laterally with a keel that may be bordered behind on its inner side with 1–2 elongate foveae. (Transverse, posterior ridge of propodeum better defined than in *ariadne*.) 6

6 Notaulices widened behind, the distance between them here about one and a half times width of one of them; preapical segment of the antenna slightly less than three times as long as wide; antenna dark brown throughout (fig. 55) . . . . . .**galesiformis**

– Notaulices less widened behind, the distance between them here at least twice the width of one of them; preapical segment of flagellum at least slightly more than three times as long as wide; at least the scape pale, varying from yellowish to brownish-yellow . . 7

7 Preapical segment of antenna slightly more than three times as long as wide. (Legs bright yellow; the emargination at base of 2nd flagellar segment ends apically in a distinct tooth (fig. 58).) . . . . . .**ruficornis**

Summer generation of generations associated with fully winged females. See also couplet 2.

– Preapical segment of the antenna hardly less than four times as long as wide 8

8 Preapical segment of the antenna slightly less than four times as long as wide; 1st segment of the flagellum shorter in proportion to 2nd; keel at base of 2nd flagellar segment covering a greater length of segment (fig. 54); dorsal areas of propodeum smoother with posterior, transverse ridge strongly developed; head and scape more hairy; largest species, about 4.5 mm; scutellum (fig. 66) . . . . . **gracilicornis**

Widespread and one of the commonest species. Could be the male of pentatomus *Thomson. The flagellum of this species has a particularly roughened and bristly appearance.*

– Preapical segment of the antenna fully four times as long as wide; 1st segment of the flagellum longer in proportion to the 2nd; dorsal areas of propodeum more rugose, with transverse, posterior keel less well developed; head and scape less hairy (fig. 69). (In the four examples available, the sculpture of the petiole is predominantly rugose-reticulate with longitudinal elements hardly in evidence; length about 3.5 mm.)

coryphe sp.n.

Holotype ♂. France: Fl., Huelgoat, 3.vi.1954 (J. F. Perkins), in BMNH. Paratypes. Same data, 1♂. England: East Kent, Walland Marsh, 13–14.vi.1954, 1♂ (J. A. and D. J. Clark); Westmorland, 23.vi.1956, 1♂ (V. Chambers).

9 Notaulices much widened behind, the distance between them here about one and a half times the width of one of them; 2nd flagellar segment with short, often very indistinct keel, the segment in profile not widened at apex of this keel (fig. 55). (Antenna dark brown throughout with the preapical segment slightly less than three times as long as wide; 1st flagellar segment often not much shorter than 2nd, 5:6; dorsal areas of propodeum tending to be smooth, shining; petiole strongly shining between its well marked keels.) . . . . . .**galesiformis**

– Notaulices less widened behind, the distance between them here at least twice their greatest width; basal keel of 2nd flagellar segment better developed; the segment in profile distinctly a little widened at apex of this keel (fig. 53) 10

10 Head very strongly narrowed behind the eyes (fig. 68) . . . . . **longicornis**

Sweden: Skåne, 8♂. Ireland; Westmeath, 1♂; Dublin, 1♂. England: Leicestershire, Charnwood Forest, 1♂. This species has the head behind the eyes more narrowed than in any other; for all that, it still remains somewhat unsatisfactorily separated from obliquus.

– Head much less narrowed behind the eyes . . . . . **obliquus**

England: Gloucester West, Staunton, 1♂. Ireland: Westmeath, 1♂. Germany: Bavaria, 1♂. Scotland (type loc.). This is possibly the male of oviventris.

Genus **Platymischus**

Both sexes wingless; scutellum with no trace of an anterior fovea or transverse furrow; propodeum densely pubescent and without trace of a medial keel; petiole slightly transverse and, seen from the side, raised roof-like above the

narrow, posterior neck attaching it to the large tergite. The male is easily recognized by the enormously expanded antennal scape and the apically expanded basal segment of the front tarsus (fig. 2). It is curious that Kieffer (1916:34, footnote) states that he did not observe this tarsal expansion in any of the specimens sent to him from England. It should also be recorded that the figure of the male shown by him (1916:35) is incorrect in many details and quite misleading.

Eyes very small in both sexes; antenna of female not much thickened towards apex and with weak 4-segmented club; antennal scape of male (figs 3, 4) . . . . . **dilatatus**

A coastal species and probably abundant where it occurs, frequenting rotting seaweed. Has been bred from Orygma luctuosa *(Dorset, in BMNH).*

Genus Basalys

A distinct basal vein present (fig. 115). Females are easily recognized by the very sharply differentiated club. It seems that in some species the females may be either macropterous or micropterous. The flagellum of the male is subject to very little sexual modification and has a type of pubescence that is short and provides no specific characters, as far as I have been able to judge.

The males are especially difficult to separate and the key I give is no more than provisional. To make the best use of the keys it is absolutely essential to find out whether pubescence is present along the basal margin of the large tergite or not; this is not always easy for such pubescence is often obscured by the longer, overlapping hairs of the posterior part of the petiole.

Key to species of *Basalys* (females)

(The females of *bifoveata, ciliata, euterpe, formicarum, fumipennis, iphicla, luctuosa* and *scotica* are unknown)

1 Antennal club 3-segmented 2
– Antennal club 4-segmented 17
2 Pubescence of petiole showing as a dense brush of rust-red, thickened, scale-like hairs. (Forewing shortened, reaching to about middle of large tergite; head from above somewhat quadrate; antennal club rather thin, its 2nd segment only very slightly transverse.) **rufocincta**

England: Bucks, Burnham Beeches, 25.viii.1974, 1♀ (Bouček). An unmistakable and elegant little species on the vestiture of the petiole.

– Pubescence of petiole consisting always of pale hairs, whitish with sometimes yellowish tinge, or ash-grey, not thickened 3
3 Wings shortened, not or hardly reaching beyond middle of large tergite 4
– Wings fully developed or at least reaching virtually apex of large tergite 7
4 Extreme base of large tergite without pubescence on each side 5
– Extreme base of large tergite with at least a small tuft of pubescence or cluster of hairs on each side 6
5 Head from above (excluding antennal prominence) slightly longer than wide, subrectangular and considerably flattened (fig. 81); seen laterally, in three-quarter view, frons obtusely angled on each side. (Small species, about 1.5 mm with body much flattened; forewing reaching only slightly beyond base of large tergite.) . . . . . **orion sp.n.**

Holotype ♀. England: Berks, Windsor Forest, ix.1931 (H. St. J. Donisthorpe), in BMNH. Paratype. England: Devon, Torquay, viii, 1♀ (G. E. J. Nixon), in BMNH.

– Head from above (excluding antennal prominence) not longer than wide and not flattened; frons, as thus seen, not obtusely angled. (Forewing sometimes reaching

nearly to middle of large tergite; hairs of petiole so sparse that basal margin of large tergite clearly visible; scape very slightly shorter than flagellar segments 1–7.) . . **parva**

England. Germany. Ireland. Sweden. Numerous examples from Hants and Surrey in England. Commonest of the flightless species.

6 Forewing reaching fully to middle of large tergite; large tergite without long hairs; head from above (excluding antennal prominence) distinctly transverse and much narrowed behind the eyes (fig. 82). (Ocelli in triangle with base markedly longer than wide) **crassiceps**

England: Hants; Somerset; Surrey. Germany. Scotland. 12♀

– Forewing reaching at most slightly beyond base of large tergite; large tergite with long, sparse hairs (fig. 88); head from above (excluding antennal prominence) hardly transverse, 12:11. (Antenna longer than in *parva*; club segments slightly longer and slightly less closely adpressed.) . . . . . **pedisequa**

England: Devon, Somerset. Austria. Germany. Sweden. 15♀. If gastral hairs are rubbed off, the difference in head shape between this species and crassiceps *needs to be carefully appreciated. Both species frequently have a reddish thorax and in one female of* pedisequa *(Germany, Heidelberg), the entire body is yellowish-brown.*

7 Head strongly flattened; seen from the side strongly elongate (fig. 74); frons on each side produced to form a small tooth-like projection; if head is seen slightly from behind, this projection appears merely as an obtuse angle. (Antennal scape markedly widened at middle; propodeal keel almost obliterated; scutellar fovea small, shallow; in two out of five females the wings slightly surpass apex of gaster; in remaining three females, wings fully developed; very small species, about 1.0 mm.) . . . **cymocles** sp.n.

Holotype ♀. England: Surrey, Ashtead, 30.vii.1932 (wings fully developed), (G. E. J. Nixon) in BMNH. Paratypes. England: Surrey, Ashtead, 2.viii.1930, 1♀, 10.viii.1930, 1♀ (G.E.J.N.) London, S. Kensington, 12.viii.1932, 1♀ (G. V. Vredenburg). All in BMNH.

– Head at most slightly flattened and seen from the side not elongate; frons without such a tooth-like or angular projection 8

8 Extreme basal margin of large tergite without pubescence on each side (merest trace in *tritoma*) 9

– Extreme basal margin of large tergite with at least a small, distinct tuft of pubescence on each side (fig. 88) 11

9 Malar space so short as to be virtually absent (fig. 84); head in lateral view markedly flattened; propodeal keel very weak, almost obliterated, not raised anteriorly to form a projection. (Lateral areas of propodeum large, subquadrate, shining; antennal club rather thin.) . . . . . **tritoma**

England: Hants, Surrey, S.E. London. Bred from Oscinella frit. *Distinct from all other incuded species on the shortness of the malar space. See also couplet 11.*

– Malar space more than half width of eye; head in lateral view not at all flattened; propodeum with stronger keel 10

10 Antenna short; scape as long as first 7 segments of flagellum; 2nd segment of antennal club strongly transverse. (Dark-legged species; dorsal areas of propodeum occupying most of dorsal surface of propodeum (fig. 86); somewhat thickset species; rarely forewing not reaching beyond apex of large tergite; head, in dorsal view, markedly quadrate (fig. 83).) . . . . . **exigua**

England: Bucks; Hants; Kent; Surrey; S.E. London. 12♀. Probably a fully winged form of parva.

– Antenna long; scape much shorter than first 7 segments of flagellum, 9:14; 2nd segment of antennal club about as long as wide . . . . . **semele** sp.n.

Holotype ♀. England: Surrey, Dorking, near White Down, 29.viii.1970, (Bouček), in BMNH. Very distinct from exigua *on length of antenna but otherwise very like that species; the petiole is more sparsely hairy; scutellar fovea virtually circular and space between scutellar disc and axilla crossed by some fine aciculation.*

11 Malar space so short as to be virtually absent . . . . . **tritoma**

See also couplet 9.

– Malar segment at least about one-third width of eye 12

12 2nd segment of antennal club not at all transverse (fig. 114). (Malar space slightly more than half width of eye; ocelli in triangle with base clearly longer than wide; head from above (including antennal projection) slightly longer than wide (fig. 80).)

longipennis

England: Hants; Surrey. Ireland. Scotland. Differs from all other included species on narrowness of antennal club.

– 2nd segment of antennal club slightly but distinctly transverse 13

13 Antenna fulvous-yellow throughout; underside of thorax and of gaster inclining to fulvous-yellow with segments distal to large tergite entirely of this colour. (Malar space rather short, less than half width of eye, 3:5; scutellum distinctly transverse and distinctly widened behind; lateral, polished areas of propodeum not very obliquely placed (fig. 87); lateral, backwards projecting processes of propodeum well developed, translucent; head less transverse than in *convexa*.) . . . . . tripartita

Evidently not common. England: Cambridge; Essex; Kent. 3♀; Bedfordshire, 2♀; these have a blackened head, contrasting sharply with the almost red body.

– At least antennal club blackened; thorax and gaster blackish though sometimes thorax with marked reddish tint but then the head is more transverse than in *tripartita* . . . 14

14 Malar space short, hardly more than one-third width of eye. (Head from above somewhat cubical; scutellar forvea rather small, the isthmus between axilla and scutellar disc in consequence broad; propodeal areas larger and less transverse in the oblique direction than in *helicicola*; scape slightly shorter than flagellar segments 1–7, 9:10)

insignificans sp.n.

Holotype ♀. Wales: Glamorgan. Pontypridd, 25.v.1975 (J. Noyes), in BMNH. Paratype. England: Bedfordshire, 1♀, in Coll. Chambers.

– Malar space considerably longer, at least two-thirds width of eye 15

15 Head from above more transverse and more narrowed behind the eyes (fig. 79); flagellar segments 2–4 moniliform or even slightly longer than wide; hairs of flagellar segments 1–7 longer (fig. 112). (Antenna of powerful build, its segments appearing loosely articulated (fig. 112); surface of club segments rougher and with their adpressed setae more widely dispersed; propodeal areas narrow, obliquely orientated; thorax sometimes markedly fulvous; pronotal collar very thick and dense; length: 2.0–2.5 mm)

helicicola

Widely distributed but not common.

– Head from above less transverse and less narrowed behind the eyes; flagellar segments 2–4 very slightly transverse; hairs of flagellar segments 1–7 shorter 16

16 Size larger, about 2.8 mm; scape almost black . . . . . macroptera

Scotland. I know only the type of this species and one more specimen – the type of Loxotropa sulcata *Kieffer, which is a new synonym of* macroptera.

– Size smaller, 1.8–2.0 mm; Scape yellow or obscurely reddish-yellow. (Legs same colour as scape; in this species and *macroptera* the surface of the club segments is smoother and their setae less widely dispersed (fig. 113) than in *helicicola*) . . . . . abrupta

The brightly coloured yellow antenna (except club) and legs, combined with narrow propodeal areas (fig. 85) and rather thick pubescence along basal margin of large tergite make this a fairly easy species to recognize. It is perhaps the commonest of the included species and is widely distributed on the material available.

17 Petiole with dense brush of reddish-fulvous, thickened hairs. (Wings fully developed; thickened hairs of petiole in sharp contrast with pale hairs along extreme basal margin of large tergite.) . . . . . singularis sp.n.

Holotype ♀. Ireland: Dublin, Furry Glen, 26.ix.1937 (A. W. Stelfox), in BMNH. Paratype. England: Yorkshire, Poole, 27.viii.1938, 1♀ (A. M. Low), in BMNH.

– Petiole with whitish or yellowish hairs and thinner 18

18 Wings fully developed. (Antenna (except club) and legs bright reddish-yellow; head in frontal view almost circular, its width to height as 10:9.) . . . . . erythropus

England: Bedfordshire; Hants; Surrey. 4♀. Largest species of genus, 2.5–3.0 mm. May be only a fully winged form of tuberculatus.

– Wings shortened, the forewing not or hardly reaching beyond apex of gaster 19

19 Flagellum, excluding club, yellow without reddish tint; flagellar segments 5–6 less transverse; forewing not reaching apex of gaster; head from in front strongly transverse, forewing only weakly darkened . . . . . collaris

England: Devon; Herts; Hants; Surrey. 24♀.

– Flagellum excluding club, deeply reddish-yellow; flagellar segments 5–6 more transverse; seen at their widest; forewing reaching apex of gaster; head from in front less transverse; forewing conspicuously darkened . . . . . tuberculatus

England: Surrey, 30.v.1912, 1♀. Ireland: 8♀. I have not been able to establish firmly the differences between this species and collaris *but I am convinced the two species are valid.*

Key to species of *Basalys* (males)

(The males of *crassiceps, erythropus, exigua, helicicola, insignificans, longipennis, macroptera, orion, parva, pedisequa, semele, singularis* and *tuberculatus* are unrecognized)

1 Pedicel distinctly longer than wide; 1st flagellar segment contrasting less in length with 2nd and clearly more than half as long as this. (Frequently first three segments of antenna yellowish or reddish and contrastingly paler than segments distal to them.) . . 2

– Pedicel not longer than wide, more or less spherical; 1st flagellar segment strikingly shorter than 2nd, hardly half as long. (Head from above always strongly transverse; head, frons and upper part of thorax with numerous, long, black hairs; preapical segment of antenna at least twice as long as wide.) 12

2 Malar space so short as to be virtually absent. (Head in profile slightly flattened and somewhat elongate; propodeal keel virtually not raised in front to form an angle, weak and almost obliterated.) . . . . . tritoma

– Malar space clearly defined and at least half as long as pedicel 3

3 Petiole completely hidden beneath dense brush of rust-red, thickened hairs. (Legs, scape and pedicel bright yellow; head somewhat quadrate seen from above; preapical segment of antenna as long as wide.) . . . . . rufocincta

England: Devon, Bovey Tracy, x. 1♂.

– Petiole less thickly pubescent; its pubescence consisting always of pale silvery white or ash-grey hairs which are not thickened 4

4 1st and 2nd flagellar segments equal in length, thickness and colour; emargination of 2nd flagellar segment very weak (fig. 76). (Antenna frequently pale yellowish-fulvous throughout; preapical segment of flagellum fully twice as long as wide; head transverse; dorsal areas of propodeum large; basal margin of large tergite with distinct tuft of hairs on each side.) . . . . . tripartita

England: Kent; Middlesex. Sweden. Switzerland. 16♂.

– 1st flagellar segment usually shorter than the 2nd, thinner and paler in colour; if these two segments are hardly different, then the emargination of the 2nd is deeper and its keel is represented throughout by a transparent, membranous flange 5

5 Extreme base of large tergite without a trace of pubescence on each side 6

– Extreme base of large tergite with at least a very small tuft of pubescence on each side (sometimes these tufts united at middle, or each reduced to a small cluster of short hairs) 8

6 Head in profile flattened and somewhat elongate; frons with small, tooth-like projection on each side. (Antenna short, the middle segments very slightly transverse; very small species about 1.2 mm.) . . . . . cymocles sp.n.

(See key to females)

England: Surrey, Coulsdon, 5♂, ix.1975 (J. Noyes); Oxfordshire, Ipsden, vi.1975, 22♂ (J.N.). Not paratypes.

– Head in profile neither flattened nor elongate; frons without trace of such a projection . 7

7 Antenna long, rather thin; preapical segment about twice as long as wide; head from above markedly transverse; petiole about twice as long as wide, its hairs longer, very sparse, not dense enough to form greyish pubescence. (Legs on the whole bright

yellow; head considerably narrowed behind the eyes; ocelli markedly large, forming almost an equilateral triangle; malar space hardly more than one-third width of eye.)
euterpe sp.n.

Holotype ♂. Ireland: Sligo, Trawallua, 24–29.vii.1933 (G. E. J. Nixon), in BMNH. Paratypes. 3♂, same data. England: Surrey, Bookham, 14.ix.1929, 1♂ (G.E.J.N.). Perhaps the male of semele.

– Antenna considerably shorter and thicker; preapical segment not more than one and a third times longer than wide; head from above markedly cubical; petiole shorter, its hairs shorter and dense enough to form greyish pubescence at least in front. (Scape and legs darker; 2nd flagellar segment large, more expanded apically than in *euterpe* and with more conspicuous keel (fig. 77); scape slightly shorter than the following 3 segments together, 8:9 and slightly swollen at middle; disc of scutellum distinctly a little widened behind; dorsal areas of propodeum relatively smaller.) . . . . . **bifoveata**

Widespread. Numerous examples in BMNH. Almost certainly the male of parva.

8 Large species, 3.2–3.4 mm. (Scape almost black; flagellar segments 3–7 more or less barrel-shaped; preapical segment of antenna about one and half times longer than wide; lateral areas of propodeum less transverse in the oblique direction than in *convexa*.) . . . . . **iphicla** sp.n.

Holotype ♂. Scotland: Inverness, Loch Morlich, 24.vi.1934 (R. B. and J. E. Benson), in BMNH. Paratype. Sweden: Skåne, Höör dist., 17.vi.1938 (D. M. S. and J. F. Perkins). Probably male of macroptera.

– Smaller species, at most 2.5 mm 9

9 2nd flagellar segment in profile not more than twice as long as wide; dorsal areas of propodeum short, transverse in oblique direction (cf. fig. 85 9); tufts at base of large tergite denser, more conspicuous. (Scape of antenna, pedicel and usually also legs, bright yellow; scape of antennae as long as following 3 segments together; bristle-like hairs on scape, head and front part of thorax longer and blacker than in the related species; hairs of subcostalis particularly long; head from above transverse.) . . . **abrupta**

Common and widespread. The shape of the dorsal areas of the propodeum is important for the recognition of this species.

– 2nd flagellar segment in profile either more than twice as long as wide or, if not, then dorsal areas of propodeum longer, less transverse and hence not appearing so obliquely placed; tufts of pubescence at base of large tergite loose, less conspicuous or even hardly noticeable 10

10 Ocelli in triangle with base very distinctly longer than wide. (Head transverse and narrowed behind the eyes; 2nd flagellar segment in profile rather short, less than twice as long as wide, 5:3; three preapical segments of antenna about twice as long as wide; scutellar shield not at all transverse; scape a little shorter than the following three segments, 4:5. On the whole, a dark-legged species with deeply infuscate scape.)
ciliata

England: Devon; Gloucester; Hants; Surrey. Germany. Ireland. Scotland. 23♂.

– Ocelli in virtually an equilateral triangle 11

11 Emargination of 2nd flagellar segment carried further forwards towards apex of segment and distinctly a little longer than the 1st segment (fig. 75); disc of scutellum not at all transverse and not, or hardly, widened behind; head more transverse; preapical segment of antenna about twice as long as wide. . . . . **formicarum**

England: Devon; Gloucester; Hants. Germany. Switzerland. 14♂.

– Emargination of 2nd flagellar segment carried less far forwards towards apex of segment (fig. 78); disc of scutellum markedly transverse and distinctly widened behind; preapical segment of antenna about one and a half times longer than wide; head less transverse . . . . . **luctuosa**

England: Hants; Herts; S.E. London; Surrey. Germany. Sweden. Switzerland. 19♂.

12 Head from in front strongly transverse; smaller, 1.5–1.6 mm . . . . . **collaris**

England: Gloucester to Surrey. Numerous ♂♂ in BMNH.

– Head from in front almost circular; larger, 3.0–3.2 mm 13

13 Flagellar segments 4–6 about two and a half times longer than wide; hind coxa bright reddish . . . . . **scotica**

Scotland to S.W. England. Ireland. Germany: Bavaria, 1♂. Sweden: Skåne, 10♂.

– Flagellar segments 4–6 not more than twice as long as wide; hind coxa merely obscurely reddish or even blackish. (A blacker-looking species than *scotica* but extremely like it.) **fumipennis**

Scotland to S.E. England. Sweden: Skåne, 14♂. Switzerland, 1♂. The three species, collaris, scotica *and* fumipennis *are not here satisfactorily separated and need further study; there is little doubt that they all belong to females with a 4-segmented club.*

Genus **Corynopria**

The synonymy of this genus has been tangled up with that of *Monelata* (auctt.) and *Phaenopria*. Pschorn-Walcher (1956) went a long way towards straightening out the matter and in so doing discovered structural characters in the species that are of great value at the generic level.

The 13-segmented female antenna of *Corynopria* is characterized by its greatly enlarged apical segment; this tends to be slightly compressed and its appearance thus varies according to aspect; a certain caution, therefore, is needed in the use of this segment for separating species. The antenna of the male is 14-segmented, with the 2nd flagellar segment showing no obvious emargination. This absence of a sexual modification is considered to be a generic character distinguishing the males of *Corynopria* from those of *Phaenopria* (Pschorn-Walcher, 1956; Hellén, 1963) but as I know the male of only *cincta*, I would prefer to accept, in the absence of confirmation of the antennal character, the different arrangement of hairs on the basal third of the forewing and the presence (? always) of a ring of fine pubescence at the base of the large tergite as more reliable criteria for separating the males of the two genera. The species range from 1.2 to 1.4 mm in length.

Nothing is known about the biology of *Corynopria* but Pschorn-Walcher records *solida* as having been taken in samples of stable manure.

Key to species of *Corynopria* (females)

1 Dorsal areas of propodeum polished and virtually free from hairs; hairs of the petiole modified to form broad, iridescent scales; forewing faintly to hardly emarginate at apex (fig. 1). (Apical segment of the antenna smaller and more globose than in the other two species.) . . . . . **solida**

England: Cambridge; Devon; Surrey. Germany. 22♀. Monelata nigra *Whittaker, 1930, type in BMNH;* **syn.n.**

– Dorsal areas of the propodeum hidden by dense yellowish or tawny pubescence; hairs of the petiole forming dense pile but hairs not scale-like though some of the posterior ones somewhat thickened. (Subcostalis more gradulally thickened towards apex than in *solida*.) 2

2 Apical segment of antenna shorter, more oval in shape, 10:5 (fig. 10); pubescence at base of large sternite much less extensive in area; hind wing normal and long, its venation ending distinctly proximal to middle. (Pubescence of propodeum and of petiole often having a reddish tint.) . . . . . **cincta**

Generally distributed in Great Britain and Ireland. A series of 16 females taken in February (Scotland: Aviemore) suggests that the species hibernates.

– Apical segment of the antenna longer, narrower, 13:5 (fig. 19); pubescence at base of large sternite much more extensive in area; hind wing unusually short, its venation ending slightly proximal to middle. (Pubescence of propodeum and especially of

petiole more yellowish, considerably denser; scutellum and posterior part of mesoscutum somewhat flattened; subcostalis more obviously widened towards apex than in *cincta*; forewing only slightly surpassing apex of gaster.) . . . . . aphrodite sp.n.

Holotype ♀. *England: London, Tulse Hill, vi.vii.1929, (G. E. J. Nixon), in BMNH. Paratypes. 3* ♀, *same data. A particularly elegant species.*

Male

(The males of *aphrodite* and *solida* are unknown)

2nd flagellar segment like 1st but slightly longer; preapical segment almost three times longer than wide; petiole yellowish; base of large tergite with ring of very fine pubescence . . . . . cincta

England: Surrey, Bookham, ix.2♂; *Devon, Bovey, Heathfield, 1*♂.

Genus **Diapria**

Differs mainly from *Trichopria* in that the basal margin of the large tergite is slightly raised at middle and here shows a distinct emargination (fig. 71). Dorsal areas of the propodeum pubescent. Antennal club indistinctly 5-segmented. Mesoscutum with two or three pairs of bristles, arranged as in *Trichopria* (cf. fig. 89).

In the structure of the scutellum the genus resembles very closely that part of *Trichopria* containing *aequata* and *longicornis* but the males in this section of *Trichopria* have a flagellum showing very characteristic whorls of hairs. The flagellar pubescence of *Diapria conica*, on the other hand, is simple, though composed of hairs that are clearly a little longer than the width of the segments. I have not seen any male that I can with confidence associate with *Diapria nigricornis*.

Key to species of *Diapria*

1 Gaster of female strongly produced towards apex (fig. 73); 6th tergite appearing much longer than wide; apical sternite much lengthened and closely ensheathing laterally the tergites distal to the 5th; mesoscutum with two pairs of bristles; sometimes these double but they always occur as four distinct groups. (Male. Preapical segment of flagellum fully three times longer than wide; 1st flagellar segment only very slightly shorter than scape, 9:10.) . . . . . conica

Widely distributed and common. Parasite of Eristalis tenax.

– Gaster merely sharply pointed at apex (fig. 72); 6th tergite appearing slightly transverse; ensheathment of tergites distal to 5th by apical sternite much less obvious; mesoscutum with three pairs of bristles (two of these bristles double in two out of five specimens; emargination at base of large tergite less deep than in *conica* (cf. fig. 71) nigricornis

Ireland: 4♀. *Germany: Kiel,* 1♀.

Genus **Trichopria**

As far as the British species are concerned, this genus need not be confused with any other. Both sexes can be separated from *Basalys* by the absence of a basal vein in the forewing; the females of the two genera are also different in that the antennal club of *Trichopria* is composed of a much more variable number of segments than that of *Basalys* and lacks the characteristically sharp

definition that is a feature of the club of the latter genus. In perfect specimens, the mesoscutum of *Trichopria* shows either two or three pairs of hairs (figs 89, 90). In *Basalys*, on the other hand, whatever hairs are present are not arranged in pairs and there are usually more than six of them.

Trichopria shows a fairly wide range of scutellar structure; sometimes the scutellum is keeled throughout as in *aequata* and allies, sometimes no keel is present as in *ciliaris*. Extremes of this kind have in the past been used as a basis for genera or subgenera but Masner (1965) recognizing that every intermediate condition occurs, has sensibly rejected, by synonymy, such generic fragmentation.

Trichopria is the largest and most commonly met with genus in Great Britain. Some of the species, especially *aequata* and *verticillata*, are often abundant. I do not claim to have worked out the species as satisfactorily as I should have liked. Associating the sexes has been particularly difficult so that in some cases the male and female of the same species are likely to appear under different names.

Key to species of *Trichopria* (females)

(The females of *crassifemur, evanescens, halterata, nigripes, sequester* and *stelenes* are unrecognized)

1 Scutellum with a sharp keel that extends downwards and forwards into the anterior hollow and divides it into two more or less distinct foveae. (Dorsal areas of the propodeum smooth, bare; distal half of subcostalis with 6 or more closely placed semi-decumbent hairs (fig. 106).) 2

– Scutellum with or without a keel and even if this is well defined and sharp, it does not extend downwards and forwards into the anterior hollow 5

2 Club fairly sharply 4-segmented, the 7th flagellar segment very obviously nearer in size to the 8th than the 6th (fig. 121). (Mesoscutum with two pairs of bristles; gaster more narrowly pointed behind than in *aequata* and *longicornis* (cf. fig. 103) . . . . **oxygaster**

England: Sussex, iii, 1♀. Sweden: Skåne, 2♀; hardly distinguishable from aequata *and* longicornis *except on antennal club.*

– Club virtually 3-segmented, the 7th flagellar segment being nearer in size to the 6th than the 8th (fig. 122) 3

3 Malar space very short, equal to one-third width of eye. (Mesoscutum with three pairs of bristles; gaster narrower and more tapered to apex than in *aequata*) . . . . . **isis sp.n.**

Holotype ♀. *England: Hants, Farley, 12.vi.1938 (R. B. Benson), in BMNH. Paratypes. England: Bedfordshire, Tingley Wood, 2.ix.1961, 1♀ (V. Chambers); Devon, Torquay, viii.1929, 1♀ (G. E. J. Nixon).*

– Malar space longer, equal to about half width of eye 4

4 Mesoscutum with two pairs of bristles (often missing), (fig. 89); gaster slightly more tapered to apex (fig. 103). (Club a little thinner than in *aequata* with less of a size contrast between 8th and 9th flagellar segment; flagellum, except club, strongly reddish.) . . . . . **longicornis**

Surrey: Weybridge. Both sexes taken flying over nest of ant Formica rufa.

– Mesoscutum with three pairs of bristles (often missing) (fig. 90); gaster less tapered apically . . . . . **aequata**

Widespread and often abundant. Slightly larger than longicornis *and with thicker pronotal collar but sometimes hard to separate from that species if mesoscutal bristles are in part missing.*

5 Disc of scutellum with sharp keel covering its full length 6

– Disc of scutellum without or at most with a very weak, blunt keel, not covering its full length 8

6 Entire thorax bright reddish-yellow; malar space half as long as width of eye; mesoscutum with three pairs of bristles. (Legs and antennae, except club, yellow; antennal

club 4-segmented, the 7th flagellar segment being clearly nearer in size to the 8th than the 6th, though in colour almost as pale as the 6th; subcostalis with three long bristles arising from middle third; gaster a little darker than thorax.) . . . . . .prema sp.n.

Holotype ♀. *England: Middlesex, Boston Manor, ix.1938 (G. E. J. Nixon), in BMNH.*

– Thorax black or blackish; malar space equal to about three-quarters width of eye; mesoscutum with two pairs of bristles 7

7 Antennal club almost 4-segmented (fig. 117); legs and antenna almost black; subcostalis with 6–8 closely spaced bristles along distal half. (Malar space about equal to width of eye; gaster short, broad, abruptly narrowed to apex (fig. 101) . . . . . .oogaster

Widespread in England. Germany. Sweden. Among the species with sharply keeled scutellar disc, distinct on account of short gaster.

– Antennal club 3-segmented; legs and antenna, excluding club, predominantly yellowish-red or brownish-red. (8th flagellar segment almost conical, smaller than 9th and usually paler (fig. 125); subcostalis with 3–4 widely spaced bristles along its whole length (fig. 105); gaster longer, more evenly narrowed to apex than in *oogaster*; in front view of thorax, the grey pronotal collar is distinctly narrowed above.) . . . . . .wasmanni

England: Beds; Bucks; Devon; Gloucester; Surrey; Herts. 2♀. *Ireland: Sligo, 1*♀. *Sweden: Skåne, 2*♀.

8 Forewing fully developed 9

– Forewing vestigial or at any rate, not, or hardly reaching beyond apex of large tergite. 20

9 Antennal club with at least 4 segments (fig. 124) 10

– Antennal club either sharply 3-segmented or sub-4-segmented when the 7th flagellar segment is more or less intermediate in size between the 6th and the 8th 14

10 Mouth opening very wide (fig. 104); eyes very small; malar space equal to about two-thirds width of eye. (Head in profile somewhat elongate; antennal club sharply 4-segmented; mesoscutum with two pairs of bristles; dorsal areas of propodeum smooth, polished; scutellum sometimes distinctly bifoveate, the foveae united anteriorly by an extremely shallow furrow; hind wing broad, its greatest width twice length of fringe at same point; large tergite almost parallel-sided (fig. 102); gaster abruptly, almost angularly narrowed at apex; large sternite at base densely pubescent right across; scutellum without a keel.) . . . . . bifoveata

England: Devon; Surrey. Germany, Sweden. 9♀.

– Mouth opening not thus wide or, if sometimes rather wide, then eyes larger and malar space shorter 11

11 Malar space very short, clearly less than width of eye. (Scutellum with no trace of a keel; gaster sharply, evenly tapered to apex.) 12

– Malar space much longer, at least about equal to width of eye. (Antennal club almost 5-segmented.) 13

12 Antennal club not distinctly 4-segmented (fig. 119); apical segment of antenna much enlarged, about two and a half times longer than the preapical segment; mesoscutum with two pairs of bristles; furrow of scutellum simple, transverse; hind wing very narrow, parallel-sided distal to nervature, its width distinctly less than length of fringe credne sp.n.

Holotype ♀. *England: Surrey, Ashtead, 6.viii.1932 (G. E. J. Nixon), in BMNH. Paratypes. 1*♀, *same data. Sweden: Skåne, Kivik, 20.vii.1938, 1*♀ *(D. M. S. Perkins and J. F. Perkins), in BMNH.*

– Antennal club more distinctly 4-segmented (fig. 118); apical segment of antenna much smaller, hardly twice as long as the preapical segment; mesoscutum with three pairs of bristles; furrow of scutellum vaguely bifoveate and with a row of weak, extremely short costae extending from furrow to lateral margin of scutellum in form of frenum; hind wing slightly broader but characteristically tapered to sharp, apical point. (Flagellar segments 3–5 almost moniliform.) . . . . . .alifera sp.n.

Holotype ♀. *England: Surrey, Weybridge, viii.1944 (G. E. J. Nixon), in BMNH. Paratypes. Hereford, Burghill, 25–31.viii.1944, 1*♀ *(R. B. Benson); Bucks, Slough, 9.viii.1933, 1*♀, *in old nest of* Vespula rufa *(O. W. Richards). Both in BMNH.*

13 Scutellum with weak keel on posterior half, sometimes nearly reaching anterior fovea; scutellum anteriorly with single, large fovea; surface of forewing adjacent to subcostalis with narrow, hairless zone which is confluent with equally hairless area just distal to stigmalis (fig. 110); mesoscutum with two pairs of bristles; lowest point of side of pronotum without striation; hind wing broad, three times length of fringe at its widest point . . . . . **sociabilis**

England: Berks; Devon; Cambridge (long series bred from puparium of Dipteron Digonochaeta setipennis*). In the type the wings are somewhat shortened and the eyes seem particularly small, the longer diameter of an eye equal to the length of the malar space. In females with fully developed wings the malar space is about equal to shorter diameter of eye.*

– Scutellum without trace of a keel or at most with a minute point at posterior margin; fovea of scutellum from some angles weakly bifoveate; lowest point of side of pronotum with characteristic zone of longitudinal striation (fig. 107); surface of forewing adjacent to subcostalis without such a hairless zone (fig. 111); mesoscutum with three pairs of bristles. (Hind wing slightly narrower than in *sociabilis*; propodeum slightly more evenly dull and with distinct traces of pubescence.) . . . . . **inermis**

England: Devon; Gloucester; Hants, Botley, series from dipterous puparium found beneath strawberry plant, vii; Bucks, 2♀, bred from puparium of Brachicoma devia *in nest of* Bombus pascuorum *(formerly* agrorum*); Herts, Rothamsted, long series, bred ix, from puparium of* Mesembrina meridiana. *Germany. Sweden. Switzerland. France: Toulouse, 1♀, 2♂♂ bred from puparium of* Lucilia sericata. *Female evidently hibernates; 2♀♀ in BMNH taken i–ii, Scotland: Aviemore.*

14 Scutellum with weak keel on at least posterior third. (Malar space about two-thirds width of eye; antennal club sharply 3-segmented.) 15

– Scutellum either without trace of a keel behind or at most with minute raised point at mid-posterior margin 16

15 Pronotal collar very dense and thick, hiding laterally the rounded bosses that mark the pronotal shoulders; seen from in front, this collar is not narrowed above and does not form an angle at the pronotal-mesoscutal suture; distal half of subcostalis, excluding stigmalis, with 5–6 long, downcurved bristles, different from the more erect 2–3 bristles on proximal half; legs and antennal scape bright reddish-yellow; scutellum not distinctly transverse and with weak keel that sometimes extends over full length of disc . . . . . **verticillata**

Widely distributed and almost as common as aequata.

– Pronotal collar much less dense and less thick, exposing more or less the smooth bosses of the pronotal shoulders; seen from in front, the collar is narrowed above and forms a slight projecting angle at the pronotal–mesoscutal suture; distal half of subcostalis, excluding stigmalis, with 3–4 long bristles that are hardly different from the 2–3 erect bristles on proximal half; legs and antennal scape on the whole dark brown to blackish; scutellum distinctly transverse and with more transverse anterior hollow. (Hairs of forewing proximal to stigmalis showing as black bristles and tending to be arranged more or less in single row; flagellar segments proximal to club markedly elongate; hairs of head characteristically long, much more a feature of this species than of the related *melanopa*.) . . . . . **clavatipes**

England: Devon; Hants; Kent, Tonbridge, series with both sexes bred, x, from Syritta pipiens; *Cheshire, series with both sexes bred, ix, from* Sargus iridatus.

16 Malar space hardly half width of eye; mesoscutum with three pairs of bristles (sometimes missing in part). (Antenna very short, with flagellar segments 3–6 not longer than wide (fig. 120); base of large sternite with thick pubescence right across; scutellum slightly transverse, sometimes with faintly indicated, posterior keel; its anterior hollow very shallow; hind coxa reddish; visible part of petiole often reddish and not longer than wide.) . . . . . **evanescens**

England: Devon; Surrey; Sussex. Scotland (type loc. but type apparently lost). Germany. Sweden. Extremely like alifera *in all mentioned features, differing only in shape of antennal club.*

– Malar space at least almost equal to width of eye; mesoscutum with two pairs of bristles (sometimes missing in part) 17

17 Dorsal areas of propodeum more or less smooth, shining, bare 18

– Dorsal areas of propodeum dull, finely pubescent (sometimes thinly). (Mesoscutum with two pairs of bristles.) 19

18 Tufts of pubescence at base of large sternite on each side very dense and conspicuous; club less sharply 3-segmented, the 7th segment of the flagellum being considerably bigger than the 6th (fig. 116); 8th segment of the flagellum not obviously smaller than the 9th; forewing broader; gaster shorter, abruptly narrowed posteriorly; distal half of subcostalis with fewer hairs. (Forewing sometimes with faintly indicated basalis, showing as a broad, smudged line; coxae usually markedly reddish and paler than the mostly dark brown hind femur.) . . . . . tenuicornis

England: Bucks; Devon; Herts; Surrey. vii–ix. 17♀.

– Tufts of pubescence at base of large sternite on each side loose and inconspicuous; club more sharply 3-segmented, the 7th flagellar segment being hardly bigger than the 6th; 8th segment of the flagellum very distinctly smaller than the 9th; forewing narrower; gaster longer, more gradually tapered to apex; distal half of subcostalis with more hairs. (Scutellar disc appearing slightly elongate; hind coxa sometimes reddened; forewing without noticeable basalis.) . . . . . melanopa

England: Devon; Dorset; E. Kent; Hants. 6♀.

19 Legs and antennal scape bright reddish yellow; petiole, seen from above, about twice as long as wide, its pubescence rather thin; gastral segments beyond large tergite almost entirely hidden; antenna decidedly long (fig. 123); club virtually 4-segmented but its 1st segment much smaller than the one distal to it . . . . . ciliaris

Widespread and evidently common. With its bright colour, long antenna and long petiole this is one of the more easily recognized species of the genus.

– Legs and antennal scape predominantly blackish; petiole, seen from above, hardly more than one and a half times longer than wide, largely hidden by dense, long pubescence; gastral segments beyond large tergites, more freely exposed; antenna shorter. (Malar space long, about one and a half times longer than width of eye.) . . . . . atricornis

England: Hants, Brockenhurst, 25.30.vi.1933, 2♀ (G. E. J. Nixon). Scotland (type loc.). Loxotropa morleii *syn.n. See also couplet 21.*

20 Forewing vestigial, hardly longer than tegula. (Antennal club sub-3-segmented, markedly widened towards apex; propodeum somewhat flattened, with a clearly defined, longitudinal keel, evenly and rather densely pubescent all over; eye small, virtually circular, its diameter distinctly greater than length of malar space. Length: 1.4 mm) . . . . . nana sp.n.

Holotype ♀. England: Cambridge, Wicken Fen, 10.ix.1934 (H. St. J. Donisthorpe), in BMNH.

– Forewing reaching to about apex of large tergite 21

21 Head strongly narrowed behind the eyes (fig. 109), markedly wider than the thorax; 2nd flagellar segment about twice as long as wide; hollow of scutellum larger, more transverse and from some angles almost bifoveate . . . . . atricornis

England: Devon; Hants. Ireland. 12♀. See also couplet 19.

– Head much less narrowed behind the eyes, more or less circular, seen from above and not markedly wider than the thorax (fig. 108); 2nd flagellar segment hardly longer than wide; hollow of scutellum smaller, virtually circular . . . . . nigricornis

Probably a common coastal species. Taken frequently by A. W. Stelfox under Silene maritima *in February in Ireland, Dublin. The type of var.* subterranea *was recorded by Donisthorpe from a nest of the ant* Lasius flavus *but I doubt if the occurrence was more than accidental.*

Key to species of *Trichopria* (males)

(The males of *alifera, atricornis, credne, isis, longicornis, melanopa, nana, oxygaster, prema* and *tenuicornis* are unrecognized)

1 Flagellar segments 3–9 much lengthened, narrowly fusiform or petiolate, beset with very long bristle-like hairs, forming whorls and arising from thickest part of segments; these

hairs virtually absent from proximal third of segments, except 1st. (Scutellum usually with sharp keel.) 2

– Flagellar segments 3–9 shorter and with shorter hairs, not forming whorls; or, if these segments are somewhat fusiform and their hairs long, then these hairs are as numerous on proximal third of segments as elsewhere 8

2 Second flagellar segment with deep emargination ending distally in a conspicuous tooth. (Scutellum with sharp keel that extends downwards and forwards into the anterior hollow and tends to bisect it; malar space very short, only about one quarter width of eye.) 3

– Second flagellar segment hardly emarginate or, if an emargination is distinct, then it ends distally in 2–3 very short bristles 4

3 Hairs of flagellar segments 3–9 not longer than segments (fig. 100); tooth at apex of emargination of 2nd flagellar segment less sharp and with segment wider at base of tooth; mesoscutum with two pairs of bristles (often missing) . . . . . longicornis

– Hairs of flagellar segments 3–9 markedly longer than segments; tooth at apex of emargination of 2nd flagellar segment sharper and with segment narrower at base of tooth (fig. 98); mesoscutum with three pairs of bristles (often missing) . . . . . aequata

4 Second flagellar segment without or with only a very weak, hardly noticeable emargination 5

– Second flagellar segment with a fairly deep, distinct emargination 7

5 Legs and scape yellow or at least very pale brownish-yellow; flagellar segments 3–6 with long basal stalk (fig. 96). (Only 3–4 long bristles arise from the subcostalis; scutellum with sharp keel throughout; thickest part of 6th flagellar segment with a row of short bristles beneath.) . . . . . wasmanni

England: Berks; Devon; Kent. 3♂. Ireland: 1♂. Germany: 2♂.

– Legs and scape virtually black; flagellar segments 3–6 without or with only very short, basal stalk. (Bristles of flagellum shorter than in *wasmanni*.) 6

6 Scutellum with hardly a trace of a keel; flagellar segments 3–6 nearly three times longer than wide, with distinct basal stalk; 2nd flagellar segment virtually without bristles on basal half. (Apex of 2nd flagellar segment with single, short, stiff hair; longest bristles of flagellum longer than segments (fig. 97); 3–4 long bristles arise from subcostalis.)

sequester sp.n.

Holotype ♂. England: Essex, Epping Forest, 14–15.viii.1954 (J. A. and D. I. Clark), in BMNH. Paratypes. Hants, New Forest, 1♂ (G. C. Champion); Monmouthshire, Abergavenny, 31.vii.1935, 1♂ (N. D. Riley); Surrey, Wimbledon Common, 6.vii.1971, 1♂ (N. Fergusson); Yorkshire, Ben Rhydding, 6.viii.1931, 1♂ (A. M. Low). All in BMNH.

– Scutellum with sharp keel; flagellar segments 3–6 more or less evenly fusiform, without basal stalk, not more than twice as long as wide; 2nd flagellar segment with several bristles on basal half. (Malar space about half as long as width of eye; wings virtually glass clear; bristles of flagellum shorter than in sequester. Small species, about 1.7 mm.)

oogaster

Taken as commonly as the female. See key to females.

7 Flagellar segments 3–9 with long, basal, yellowish stalk (fig. 93); segments 6–7 of flagellum not more dilated than those segments either distal or proximal to them and without a row of bristles beneath; scutellum with feeble keel on posterior half; malar space very short, only about one third width of eye. (Legs and antennal scape bright reddish-yellow.) . . . . . verticillata

Widely distributed and often abundant.

– Flagellar segments 3–9 with only a very short, basal stalk so that they appear more or less evenly fusiform; segments 6–7 of flagellum slightly more dilated than those segments both distal and proximal to them and with a row of short, stiff bristles beneath (not easily seen!) (fig. 94); scutellum with only the faintest trace of a keel behind. (Legs and scape blackish to reddish-brown.) . . . . . clavatipes

8 Micropterous, with wings hardly reaching beyond end of thorax 9

– Macropterous, with wings fully developed 10

9 Four preapical segments of the flagellum about twice as long as wide; dorsal areas of propodeum with only sparse pubescence; head from above transverse and markedly

narrowed behind the eyes; hollow of scutellum transverse, weakly bifoveate; legs on the whole bright reddish-yellow . . . . . halterata

England: Berks; Devon; Lancs; Surrey. 9♂. Ireland: 10♂. May be the male of atricornis.

– Four preapical segments of flagellum not or only slightly longer than wide; dorsal areas of propodeum densely pubescent; head from above somewhat quadrate and not much narrowed behind the eyes; hollow of scutellum small, almost circular; legs pale brownish to dark brownish . . . . . nigricornis

The emargination of the 2nd flagellar segment shows a slight undulation as seen from the side (fig. 99); the two basal segments of the flagellum are shorter and thicker than those of halterata. *Ireland: long series taken with females from coast of Sligo. Scotland: Fife, Tentsmuir dunes, 11♂, from pitfall traps. Marshall described this species in* Loxotropa, Trichopria nigricornis *is a new combination.*

10 Mouth opening very wide (cf. fig. 104 ♀); legs with much thickened femora. (Antenna short, thick (fig. 92); segment 1 of flagellum about twice as long as wide; malar space fully three-quarters as long as width of eye; scutellum without trace of a keel; dorsal areas of propodeum shining, bare, hind wing beyond venation wider than fringe is long.) 11

– Mouth opening much less wide; legs normal 12

11 Head seen from above markedly transverse; in profile, somewhat flattened above; scutellum distinctly transverse; flagellum very short, with segments 3–9 moniliform (fig. 92); seen from in front, the sides of the head distinctly converge towards the mouth; hindwing at its widest less than twice length of fringe at same point, 8:5; femora less noticeably thickened . . . . . bifoveata

England: Devon, Torquay, 2♂.

– Head seen from above not at all transverse and appearing narrower behind than in front; in profile, the head is strongly domed; scutellum as long as wide; flagellum longer, with segments 3–9 longer than wide (fig. 91); hind wing broader and, at its widest, about two and a half times length of fringe at same point; seen from in front, the sides of the head are almost straight; femora more thickened. (Segments 3–4 of the front tarsus not longer than wide; scape, towards apex, markedly widened and somewhat flattened.) **crassifemur** sp.n.

Holotype ♂. England: Surrey, Ashtead, 10.viii.1930 (G. E. J. Nixon), in BMNH. Paratypes. Devon, Torquay, viii.1929, 9♂ (G.E.J.N.); Heathfield, 8.viii.1929, 1♂, (G.E.J.N.); Kent, Eynsford, 18.vii.1397, 2♂ (G.E.J.N.); Surrey, Ashtead, 25.viii.1929, 1♂, 10.viii.1930, 2♂ (G.E.J.N.) Sweden: Skåne, Degaberga, vii.1938, 2♂ (D. M. S. and J. F. Perkins). Switzerland: Thunersee, Gunten, 1–6.viii.1937, 1♂ (G.E.J.N.). All in BMNH. Both this species and bifoveata *have the aedeagus sharply downcurved at apex in the dead insect. I have made no preparations. I am at a loss to suggest a female to associate with this species.*

12 Malar space very short, about one-third width of eye 13

– Malar space at least two-thirds width of eye. 14

13 Antenna very short, with flagellar segments 3–9 moniliform; dorsal areas of propodeum with a few sparse hairs; head from above slightly transverse; hairy part of petiole transverse, faintly reddish. (Scape almost as long as following 4 segments; scutellum sometimes with merest trace of keel on posterior third; base of large ventrite with dense mass of pubescence right across.) . . . . . evanescens

– Antenna much longer with flagellar segments 3–9 about twice as long as wide; dorsal areas of propodeum polished and without hairs; head from above somewhat characteristically circular; hairy part of petiole slightly longer than wide, dark like rest of gaster. (Base of large ventrite with loose, less dense pubescence.) . . . . . **stelenes** sp.n.

Holotype ♂. England: Bucks, Burnham Beeches, 14.ix.1974 (Z. Bouček), in BMNH. Paratype. Austria: Tyrol, Oberau, 1♂ (G. E. J. Nixon).

14 Mesoscutum with three pairs of hairs (sometimes missing); lowest point of side of pronotum with small zone of longitudinal striation (fig. 107). (Dorsal areas of propodeum faintly roughened and with fine, rather sparse pubescence; 1st flagellar segment about

four times as long as wide; 2nd flagellar segment only weakly emarginate; flagellar pubescence short.) . . . . . **inermis**

– Mesoscutum with two pairs of mesoscutal hairs; lowest point of side of pronotum without such striation 15

15 Hind wing at its broadest about twice length of fringe at same point. (Hairs of flagellum mostly short, not longer than width of segments and semidecumbent.) . . . . **sociabilis**

– Hind wing at its broadest not greater than length of fringe at same point 16

16 First flagellar segment as long as scape, clothed rather sparsely with more or less erect hairs (fig. 95) that are longer than width of segments; malar space fully three-quarters width of eye; scape reddish-yellow; dorsal areas of propodeum finely pubescent. (Legs predominantly bright reddish-yellow; petiole about twice as long as wide.) . . . . **ciliaris**

– First flagellar segment distinctly shorter than scape, its hairs shorter, denser and less erect; scape blackish; malar space hardly two-thirds width of eye; dorsal areas of propodeum shining and more or less smooth, bare. (Scape and legs dark brown; petiole a little shorter than in *ciliaris*.) . . . . . **nigripes**

Widespread and fairly common. This may well be the male of tenuicornis. *In many specimens a weak "basal vein" is indicated by a smudged line. 22♂ seen.*

Genus **Phaenopria**

This genus was sunk under *Trichopria* by Masner. Koslov, however, without giving reasons, restored it to full generic status. I should have preferred to follow Masner but since the genus has now been brought back into use and since it can be readily separated from *Trichopria* for the purposes of this handbook, I am accepting Koslov's opinion.

The malar space of *Phaenopria* is extremely short, less than half the width of the eye (cf. *Corynopria*, in which the malar space is at least equal to the width of the eye). The mesoscutum has three pairs of hairs; these are often in part missing. The antenna of the female is like that of *Trichopria* and the general appearance of the club is similar. The hairs on the basal third of the forewing are thickened, bristle-like and tend to be arranged in a row (fig. 8). This character is important for separating the males of *Phaenopria* from those of *Corynopria* for the antenna is 14-segmented in both genera.

One species, *Phaenopria incrassata*, can be recognized on the shape of the antennal club. The other two are very close, if indeed they be really good species, and the characters I use for separating them are subtle and difficult to appreciate.

Key to species of *Phaenopria* (females)

1 Antennal club clearly 4-segmented, the 7th flagellar segment being much nearer in size to the 8th than the 6th. . . . . **incrassata**

England: Kent, Eynsford, 31.viii.1929, 2♀, (G. E. J. Nixon).

– Antennal club 3-segmented, the 7th flagellar segment being very distinctly nearer in size to the 6th than the 8th. 2

2 Head in profile slightly longer than high, appearing elongate (fig. 7); forewing narrower, with longer fringe; length: about 1.3 mm . . . . . **miron** sp.n.

Holotype ♀. England: London, W. Norwood, ix.1929, from rotting fungus (G. E. J. Nixon), in BMNH. Paratypes. 9♀, same data.

– Head in profile not longer than high, appearing almost circular (fig. 6); forewing broader, with shorter fringe; larger, 1.5–1.6 mm . . . . . **cameroni**

Widespread and common.

Key to species of *Phaenopria* (males)

(The male of *incrassata* is unknown)

1 Head in profile slightly lengthened; eye very small, its greatest width about half distance between eye and occipital margin as seen from side; flagellar segments 3–9 almost moniliform; forewing slightly smaller, narrower and with longer fringe; petiole not noticeably reddish . . . . . miron sp.n.
(See key to females)

England: Surrey, Weybridge, 7.ix.1935, 9♂ (G. E. J. Nixon). Not paratypes.

– Head in profile virtually round; eye much larger, its greatest width fully two-thirds distance between eye and occipital margin as seen from side; flagellar segments 3–9 subfusiform and with slightly longer pubescence than in *miron*; petiole usually conspicuously reddish . . . . . cameroni

Not taken as frequently as the females.

Genus Tetramopria

This genus is distantly related to *Trichopria* but differs from it in many respects.

♀. Head from above somewhat quadrate with almost straight sides. Eyes very small, almost round; their slightly longer diameter about equal to the malar space. Antenna unlike that of any included *Trichopria* species; yellowish with a virtually 5-segmented club; the 4 preapical segments submoniliform. Front of pronotum reddish, its rather thin woolly collar not hiding the smooth, polished shoulders. Mesoscutum in a single well preserved specimen (France: Le Puy) with 12 hairs; a slight hairiness of the mesoscutum thus a feature of the species and unlike any of the included species of *Trichopria*. Scutellum posteriorly with the merest trace of a keel. Structure of propodeum as in *Trichopria*; the dorsal areas dull, rugulose and with merest trace of pubescence. Petiole transverse. Gastral segments posterior to large tergite somewhat flattened and less strongly sclerotized than the large tergite itself.

♂. Antenna 14-segmented, conspicuously yellowish; scape as long as flagellar segments 1 + 2; flagellar segments 3–11 very small, slightly transverse . . . . . donisthorpei

England: Cornwall, Whitsand Bay (type loc.); Hants, New Forest, Matley Heath, vi. 1♀, ex nest of Tetramorium. *France: Le Puy, 1♀, with* Tetramorium caespitum, *25.iv.1937. This is evidently a true myrmecophile and has been taken only in the nest of* Tetramorium caespitum.

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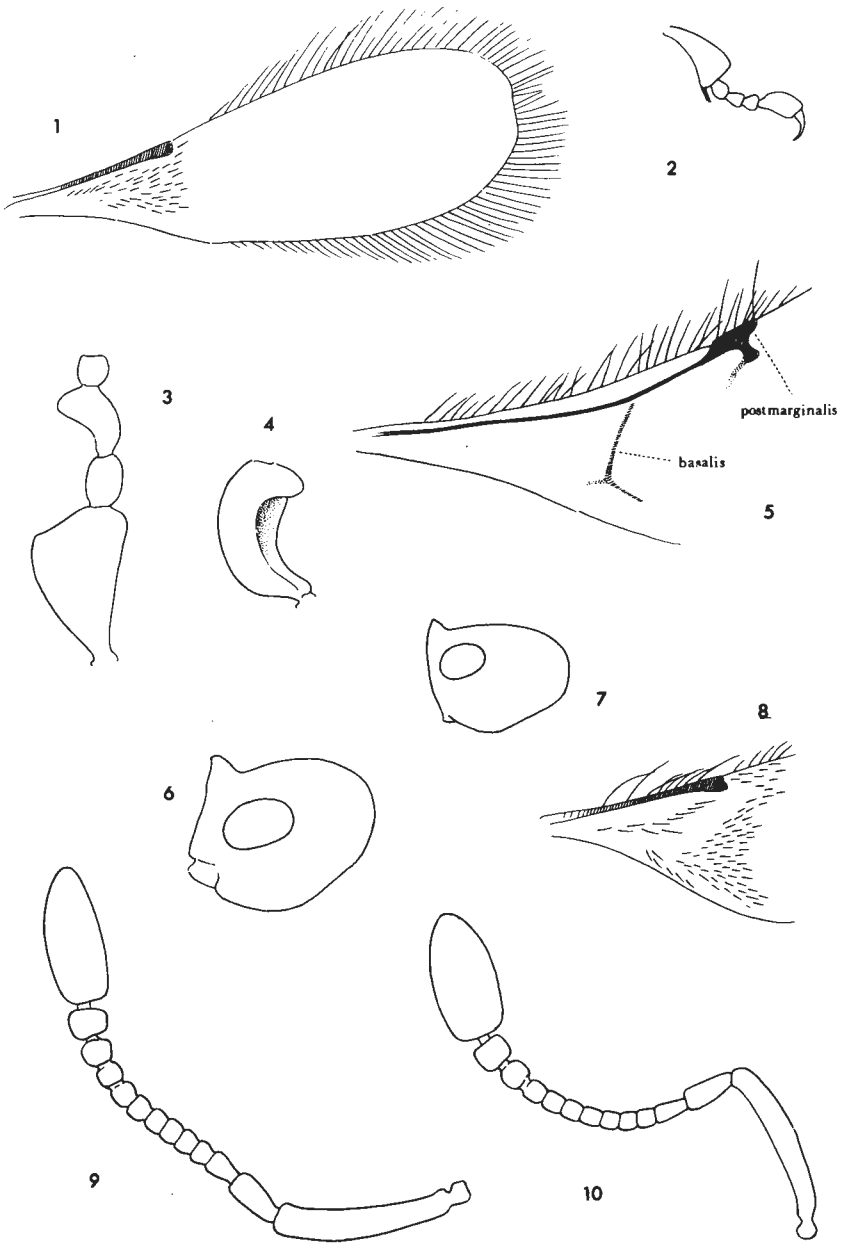
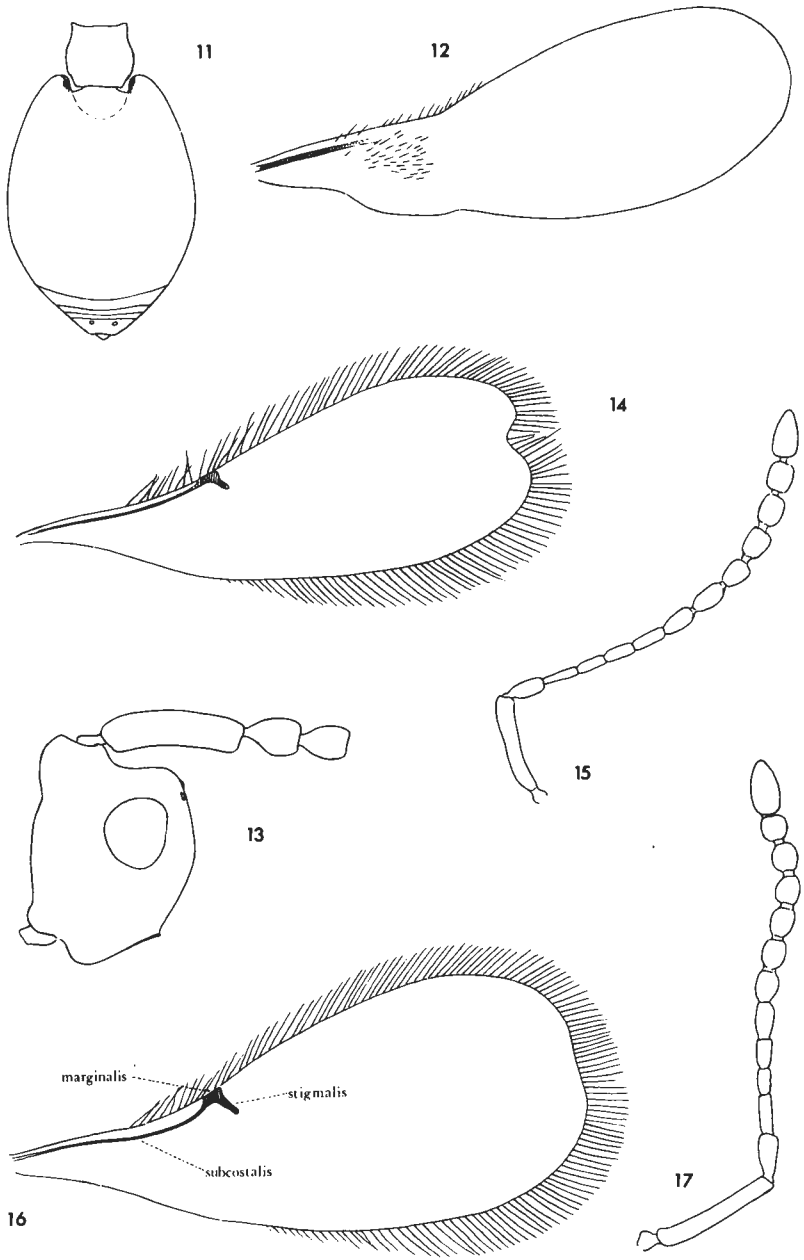
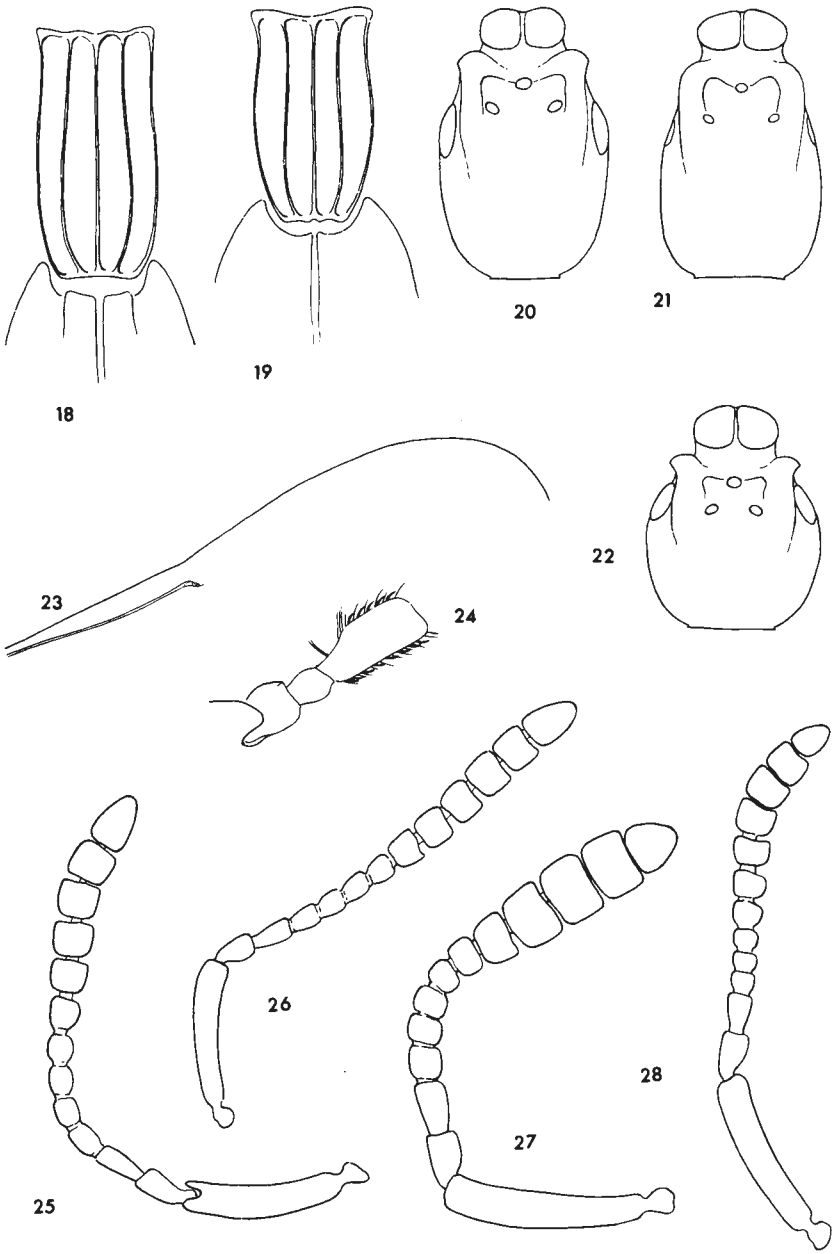


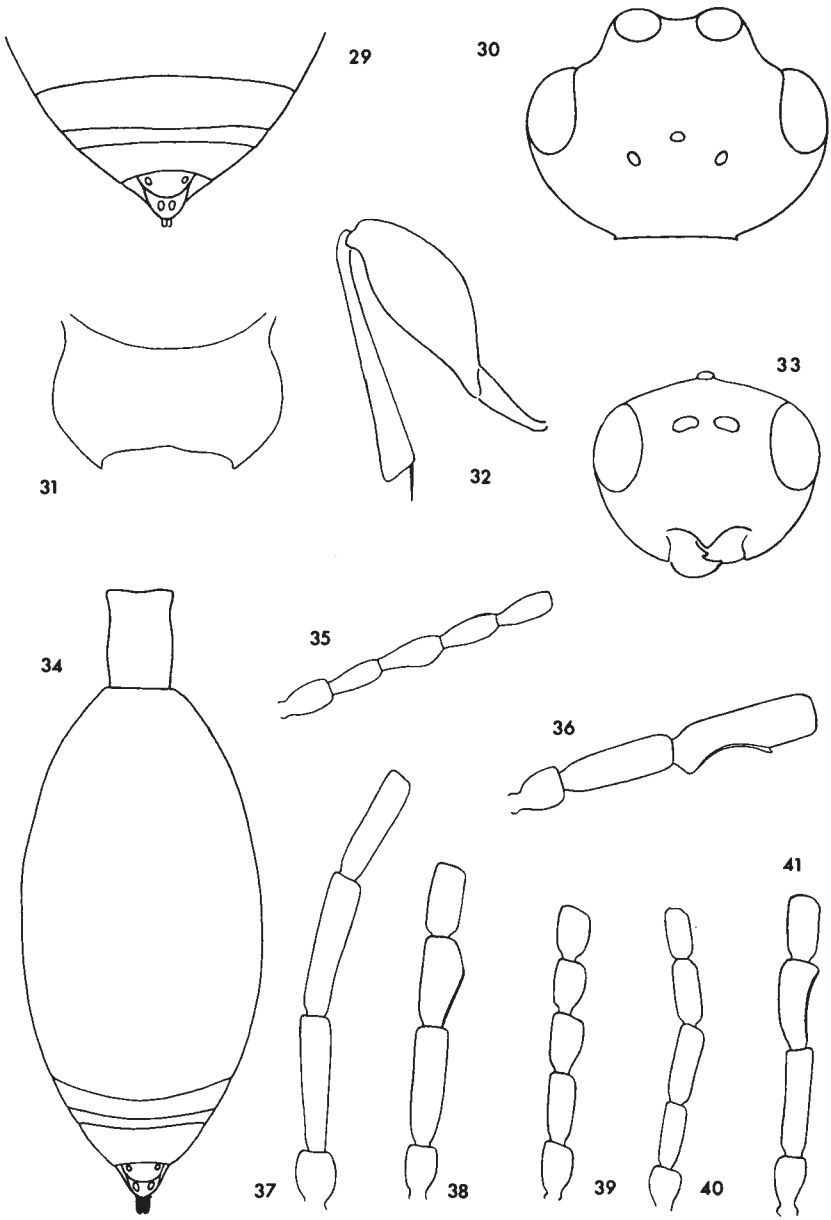
Figs 1–10. 1, *Corynopria solida*, forewing ♀. 2–4, *Platymischus dilatatus*. 2, front tarsus ♂. 3, first four antennal segments ♂. 4, scape ♂. 5, *Idiotypa nigriceps*, part of forewing ♀. 6–8, *Phaenopria*. 6, *cameroni*, head lateral ♀. 7, *miron* head lateral ♀. 8, *cameroni*, part of forewing ♀. 9–10, *Corynopria*. 9, *aphrodite*, antenna ♀. 10, *cincta*, antenna ♀.



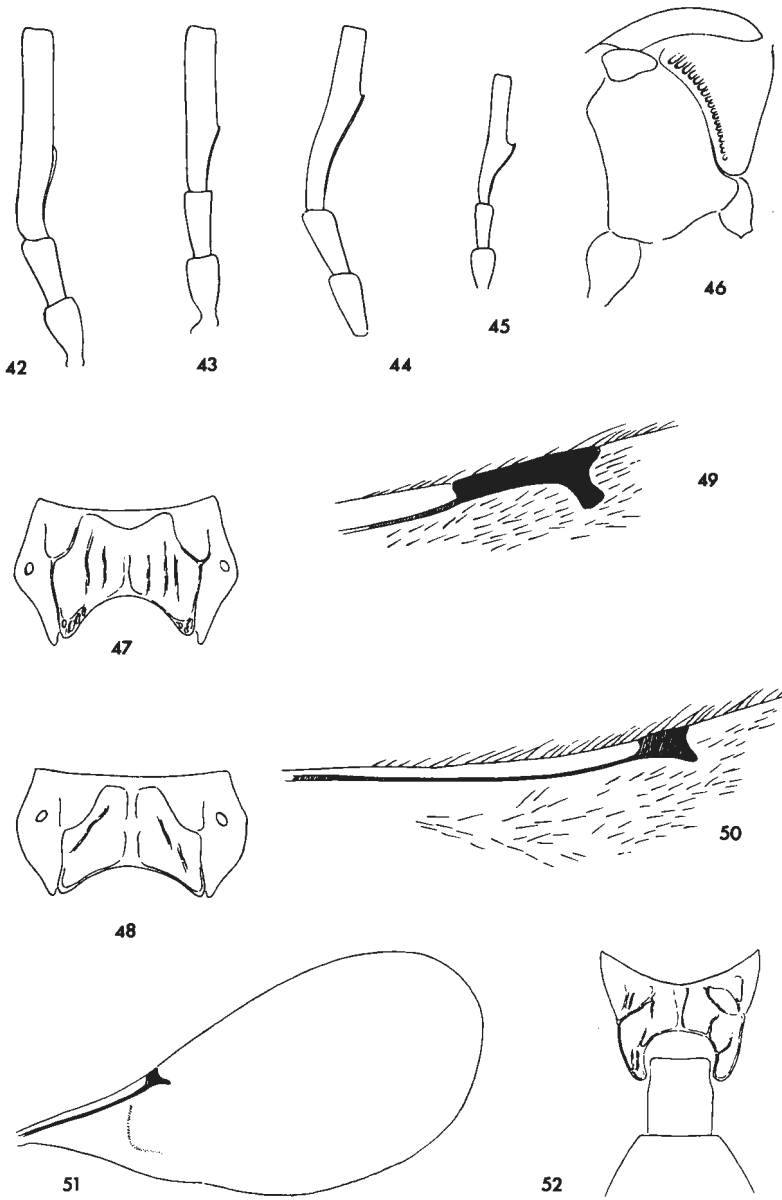
Figs 11–17. 11–13, *Labolips innupta*. 11, gaster dorsal ♀. 12, forewing ♀. 13, head and first three antennal segments ♀, lateral. 14–17, *Entomacis*. 14, *platyptera*, forewing ♀. 15, *platyptera*, antenna ♀. 16, *bipunctata*, forewing ♀. 17, *perplexus*, antenna ♀.



Figs 18–28. 18–24, *Psilus.* **18–19,** petiole and base of large tergite ♀, dorsal. 18, *fuscipennis.* 19, *cornutus.* **20–22,** head ♀, dorsal. 20, *submonilis.* 21, *caecutiens.* 22, *parvulus.* 23, cornutus, *part of forewing* ♀. 24, *fuscipennis,* antennal segments 2–4, ♂. **25–28,** *Spilomicrus,* antenna ♀. 25, *flavipes.* 26, *stigmaticalis.* 27, *hemipterus.* 28, *rufitarsis.*



Figs 29–41. *Spilomicrus*. 29, *flavipes*, apex of gaster ♀, dorsal and seen slightly from behind. 30, *formosus*, head ♀, dorsal. 31, *formosus*, propodeum ♀, dorsal. 32, *rufitarsis*, hind femur ♀. 33, *pelion*, head from in front ♂. 34, *rufitarsis*, gaster ♀, dorsal. 35–41, pedicel and 2, 3 or 4 basal flagellar segments, ♂. 35, *abnormis*. 36, *stigmaticalis*. 37, *formosus*. 38, *compressus*. 39, *rufitarsis*. 40, *pelion*. 41, *integer*.



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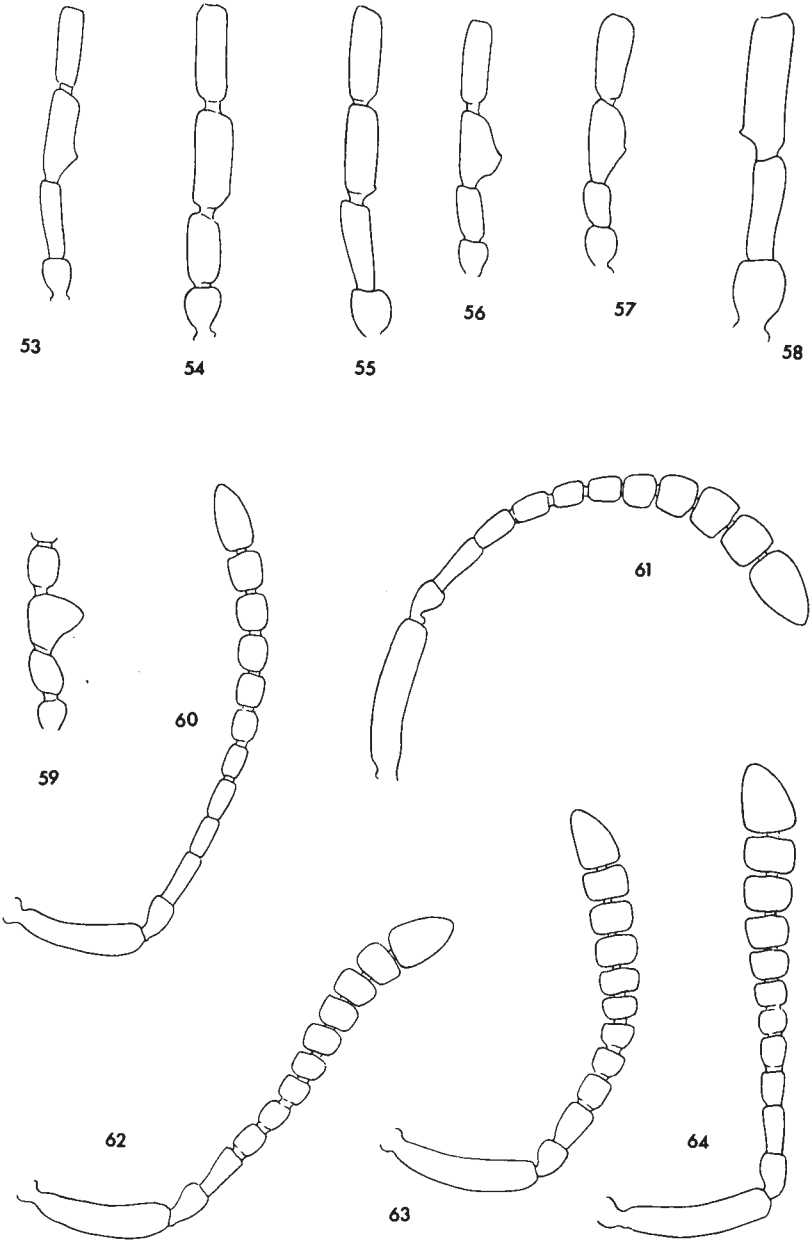

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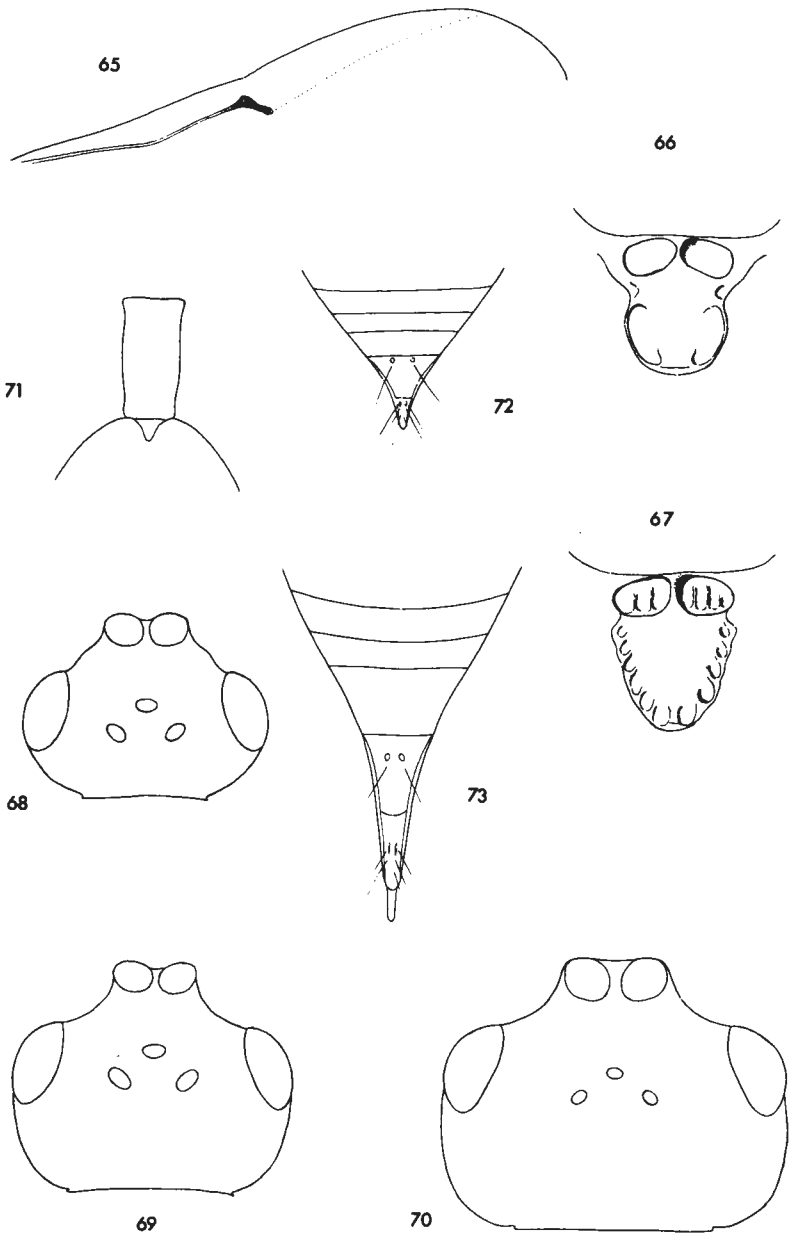

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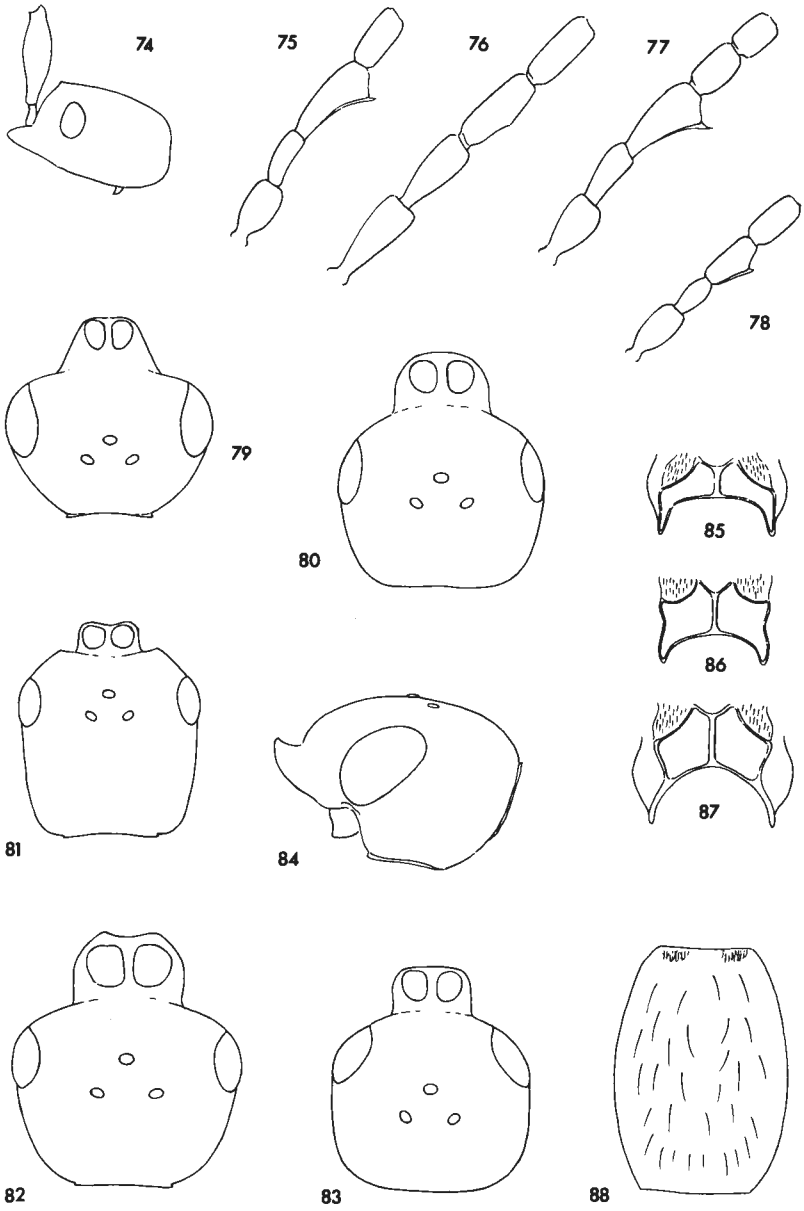

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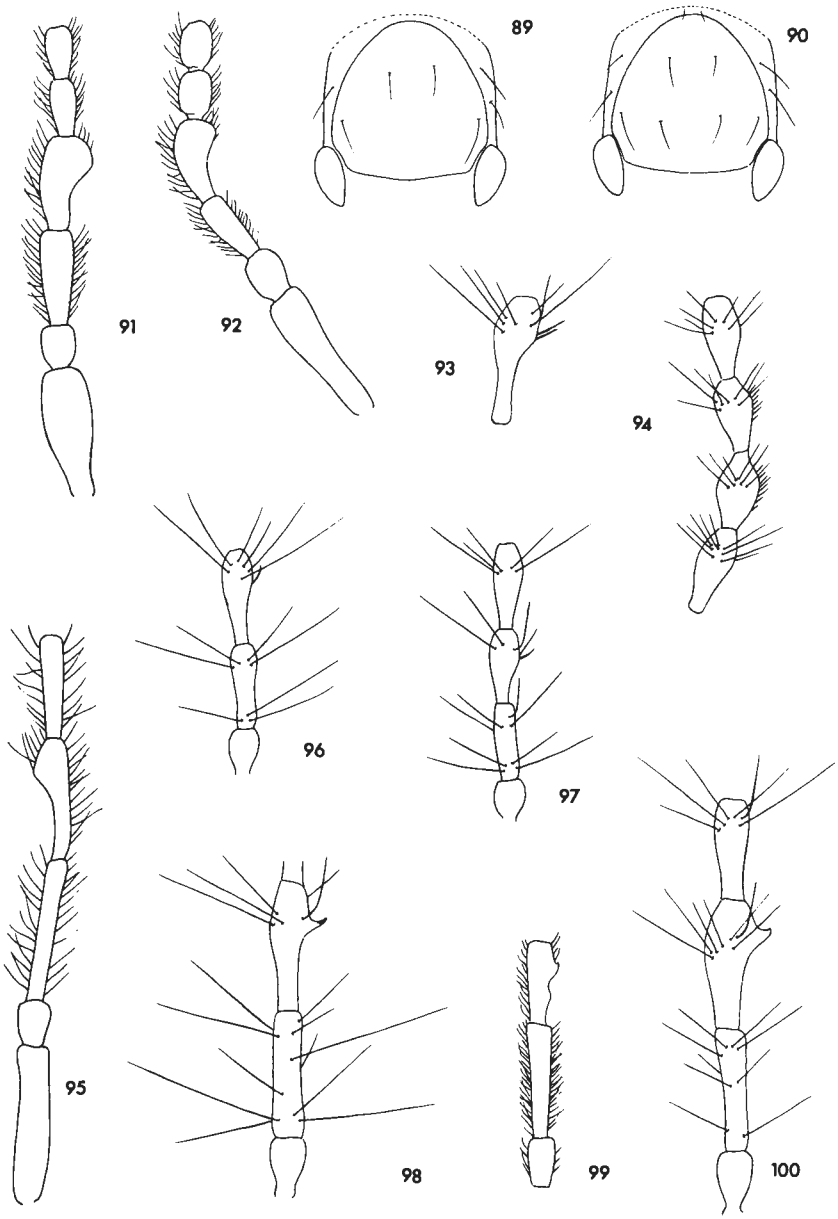

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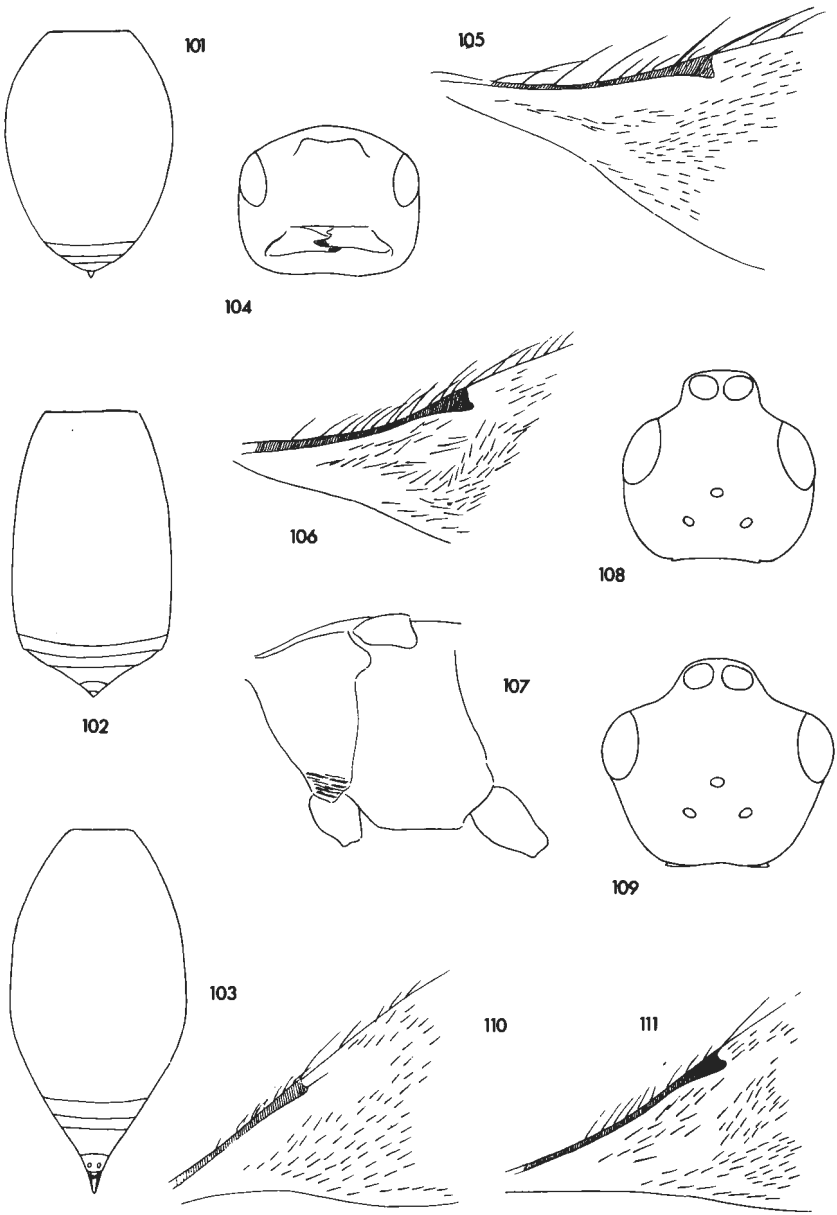

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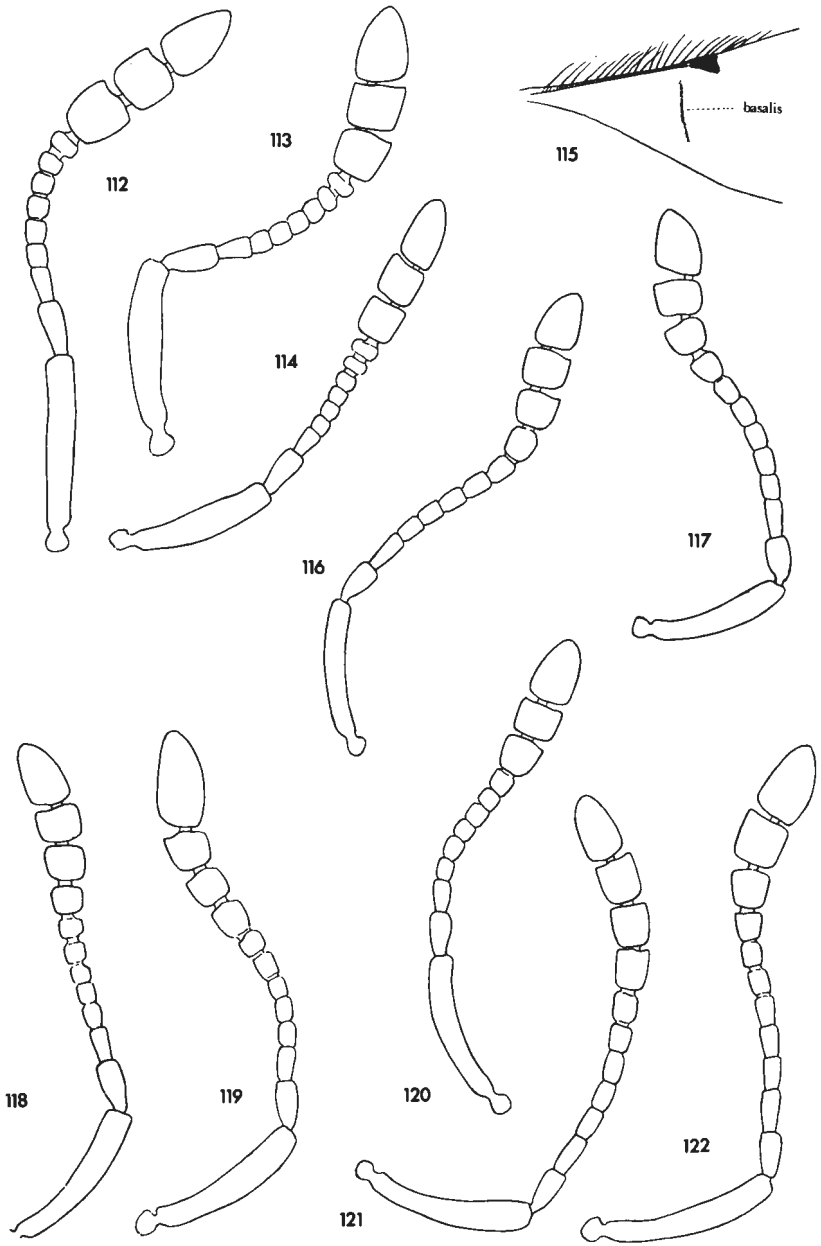

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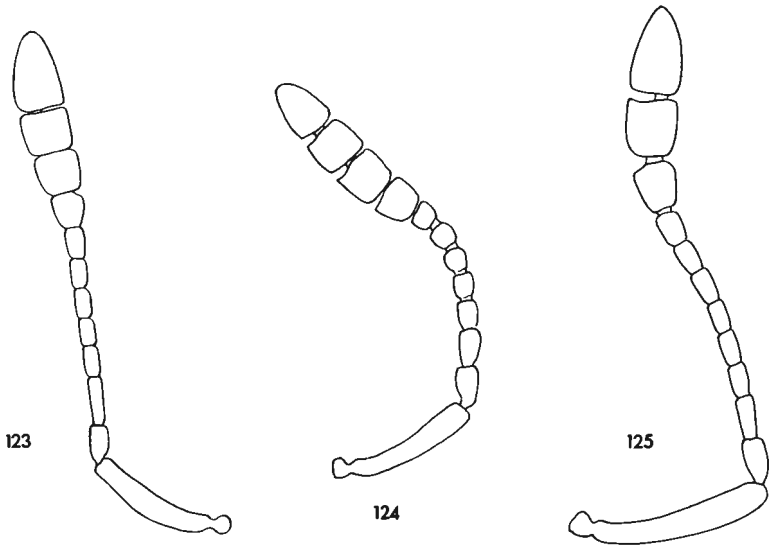

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