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A REVIEW OF THE BRITISH *PHRONIA* WINNERTZ AND *TRICHONTA* WINNERTZ (DIPT., MYCETOPHILIDAE)

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SUMMARY

The British species of *Phronia* Winnertz and *Trichonta* Winnertz have been revised, resulting in the addition of eleven species to the British List, the reinstatement from synonymy of *Trichonta nigritula* Edwards, the description of *Phronia tarsata* auctt., nec (Staeger) and *P. bicolor* sensu Gagné as new species and some other nomenclatural changes in that species group ("*tarsata*" group).

INTRODUCTION

The British fauna of two closely allied genera of Mycetophilini requires review following the works of Gagné on the Nearctic *Phronia* (1975) and Holarctic *Trichonta* (1981). Gagné indicated that the two genera constitute a monophyletic group but did not establish whether the apomorphous characters on which *Phronia* is defined were due to monophyly within the group. He further suggested that the Chilean *Trichonta* species might be the sister group of the Holarctic *Trichonta* and *Phronia* together; *Phronia* is an almost entirely Holarctic genus which probably has its origin in this region.

The genera are thus provisionally constituted as in the generic revision by Edwards (1925) except that *vulcani* Dziedzicki was transferred to *Trichonta* from *Phronia* by Gagné (1975). Its posterior fork is shorter than the median fork (although longer than in most *Phronia*) but the long vein Sc ending in R and presence of a basal seta on the hind coxa suggested that it was best assigned to the plesiomorphous assemblage of species in *Trichonta*.

Edwards (1925) recognised 24 species of *Phronia* (including *vulcani*) and 14 of *Trichonta* in British material. Another *Phronia* was added by Freeman (1956). Then, in the revised Check List (Hutson in Kloet & Hincks, 1976), two species (*Phronia taczanowskyi* Dziedzicki and *P. elegans* Dziedzicki) were deleted because they were based on misidentifications by Edwards (Hutson, pers. comm.); also *P. bicolor* Dziedzicki was placed in synonymy under *P. tarsata* (Staeger) following Hackman (1970) while *tarsata* sensu Edwards was omitted because Hackman had suggested that British material might represent an undescribed species. Some other nomenclatural changes proposed by Hackman (1970) were also adopted in the Check List but some of these were not accepted by Gagné and the further changes necessary are indicated below. *Phronia persimilis* Hackman was introduced as British in the Check List and details of the British records are given here. Gagné (1974) had also dealt with the Canarian *Phronia* described by Becker and had shown that *biarcuata* (Becker) was the valid name for the species called *praecox* by Edwards and cited as *johannae* Steenberg in the 1976 Check List.

Some changes to the British list of *Trichonta* have also been made since the publication of the Check List. Two additional species were recognised in suction trap material from Monk's Wood, Cambs. (Cole & Chandler, 1979), i.e. *fusca* Landrock and a new species described as *pulchra* by Gagné (1981). *T. fusca* has not been found elsewhere but *T. pulchra* has been found in Oxfordshire recently. Gagné (1981) recognised *T. submaculata* (Staeger) (previously placed as a synonym of *vitta* (Meigen) as distinct but he reduced *nigritula* Edwards to synonymy under *vitta*, a decision which required confirmation in view of the loss of the type material of *nigritula*; recent material agreeing with Edwards' description is here considered distinct from *vitta*. Gagné also cited the first British record of *clavigera* Lundström, for which additional records are given here. Two other nomenclatural changes affecting the British fauna were also made by him.

In the present work, two *Trichonta* (*fragilis* Gagné, *brigantia* sp. n.) and nine *Phronia* (*caliginosa* Dziedzicki, *egregia* Dziedzicki, *electa* Dziedzicki, *longelamellata* Strobl, *mutabilis* Dziedzicki, *petulans* Dziedzicki, *portschinskyi* Dziedzicki, *sudetica* Dziedzicki, *sylvatica* Dziedzicki) are introduced to the British list, and *Trichonta nigritula* Edwards is reinstated. In addition *P. tarsata* sensu Edwards is given a new name (*coritanica* sp. n.), while *bicolor* Dziedzicki is deleted as its inclusion by Edwards (1913, 1925) is considered to have been based on misidentifications. Gagné (1975) appears to have misapplied the name *bicolor* and his *fusciventris* van Duzee is here placed as a synonym of the true *bicolor* while the European species *crassitarsus* Hackman, not found in Britain, is restored to specific rank; the *bicolor* of Gagné was found to be an unnamed north American species, described as new here (*gagnei* sp. n.).

TRICHONTA WINNERTZ, 1863

The male genitalia of all species studied by Gagné (1981) were figured; he also keyed all known northern hemisphere species; and provided figures of all British species except those figured here. The females have not been recognised in all cases but the greater range of chaetotactic characters permit the association of the sexes on a surer basis than is yet possible in *Phronia* and external characters can be used with more confidence for identification.

As with *Phronia* there is a large boreal element and Scandinavia is the richest region in Europe, followed by the mountainous areas of central Europe. Of the 46 Nearctic species, 28 are Holarctic (27 European) and 14 occur in the British Isles. A further 14 recognised by Gagné in Europe include 5 British species; the recognition of *nigritula* and the species described here as new bring the British list to 21. Hackman (1980) listed 32 valid species (15 of them British) from Finland, while Matile (1977) and Gagné (1981) recorded 13 species from France (11 of them British).

Nomenclatural changes in British *Trichonta* proposed by Gagné (1981)

Trichonta apicalis Strobl, 1897 = *vernalis* Landrock, 1913
Trichonta atricauda (Zetterstedt, 1852) = *melanura* sensu Edwards, 1913/1925
Trichonta foeda Loew, 1869 = *stereana* Edwards, 1925
Trichonta melanura (Staeger, 1840) = *atricauda* sensu Edwards, 1913/1925
Trichonta nigritula Edwards, 1925 in error considered = *vitta* (Meigen, 1830)

The synonymy of *apicalis* with *vernalis* was based on comparison of Landrock's figure with the type of *apicalis*.

Gagné established that Edwards had misapplied the names *atricauda* and *melanura* and their usage is reversed from that of most earlier authors. Both species are frequent in the British Isles and reliably separated only by their male genitalia.

Although Loew's type of *foeda* was a female, Gagné was able to establish its identity by comparison with a reared series; Edwards' holotype of *stereana*, unlike the other *Trichonta* types mentioned below, is still extant at the Natural History Museum, London.

Edwards (1925) described *Trichonta nigritula* from a single male closely resembling the common *vitta* but with hyaline wings (usually dark shaded near wing tip in *vitta*) and a shorter vein Sc. Gagné (1981) stated that the type of *nigritula* was lost (together with those of *icenica* Edwards and *terminalis* Walker and all of these are unaccountably missing from the separate British Type Collection in the Natural History Museum, London) but did not consider Edwards' figures of the genitalia to differ in any significant way from *vitta*. He did not mention Edwards' statement that the genitalia were black in *nigritula* (yellow or sometimes light brown in *vitta*) so the synonymy was open to doubt pending the discovery of further such specimens. Recent collections from water traps in East Anglia (Norfolk: Catfield, Brancaster, Sutton; Suffolk: Walberswick) during the survey by A. Foster and D. Proctor vii–xii.1988/89, included numerous examples with the characters described by Edwards. Similar specimens have since been seen from Wychwood, Oxon, x.89 (*K. Porter*, malaise trap) and Oxwich, Glamorgan, x.89 (*Holmes, Boyce & Reed*). The darker more sclerotised genitalia (figs 1–2) differ in detail from *vitta* (figs 3–4), the row of long setae near the ventrocaudal margin of the gonocoxite and aedeagal structure being diagnostic of *nigritula*, which is therefore considered a good species.

Species introduced as British by Gagné (1981)

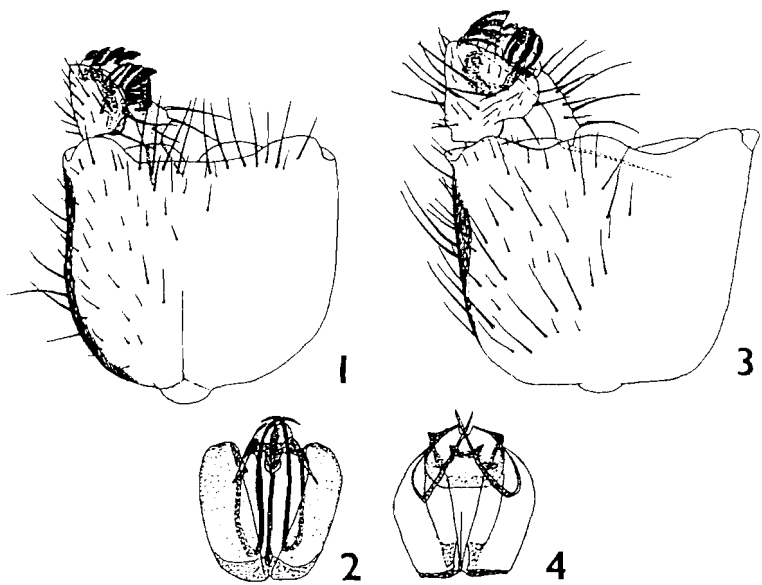
Trichonta clavigera Lundström, 1913: 309

This is a medium sized dark coloured species, known only from Europe. Gagné recorded it from Brockenhurst, Hants and other records are mainly from old forest areas.

Material examined (all ♂♂). ENGLAND: Berks, Windsor Forest, 23.iv.1977 (*Chandler*); Berks, Bucklebury Common, 27.v.1990 (*Chandler*); Hants, Eyeworth Wood, 2.vi.1985 (*Chandler*); Hants, Brinken Wood, 5.vi.1988 (*Chandler*); Hants, Mark Ash Wood, 28.vii.1991 (*Chandler*); Worcs, Wyre Forest, 30.v.1977 (*J.W. Ismay*), 6/7.viii.1988 (*Chandler*); Salop, Haye Park Wood, 12.x.1984 (*C. McLean*); Norfolk, Swanton Novers Great Wood, 18.x.1983 (*I.F.G. McLean*); Cumbria, Witherslack Hall Woods, 9.v.1978 (*A. Brindle*, Manchester Museum). WALES: Gwynedd (Caernarvon), Coed Dolgarrog, 6.vii.1987 (*A.E. Stubbs*). SCOTLAND: W. Ross, Talladale, oakwood by Loch Maree, 19.ix.1989 (*Chandler*); I. of Skye, Tokavaig, 27.v.1990 (*P. Skidmore*). IRELAND: Offaly, Charleville Wood, 26.vi.1987 (*Chandler*).

Trichonta pulchra Gagné, 1981: 25

This was cited as "sp. near *nigritula* Edwards" by Cole & Chandler (1979) because it ran to couplet 11 in Edwards' (1925) key (except in possessing several posterior setae on the hind tibiae) and resembled *nigritula* in its dark genitalia. Some of the Monk's Wood examples were cited as paratypes and the holotype from Ontario was the only other known specimen. Malaise trap material collected in 1988–89 in Oxon (Cothill; Spartum Fen; Wychwood) (*K. Porter*) provided some fresh material of *pulchra*. All British specimens have the petiole of the posterior fork setose so would run to *apicalis* in Gagné's key, but they differ in having Sc ending free, brighter body coloration and entirely dark brown genitalia (gonostyli contrasted yellow in *apicalis*).



Figs 1–4. — Male genitalia of *Trichonta* species: 1–2, *T. nigritula* Edwards; 3–4, *T. vitta* (Meigen). 1, 3, ventral view; 2, 4, aedeagus.

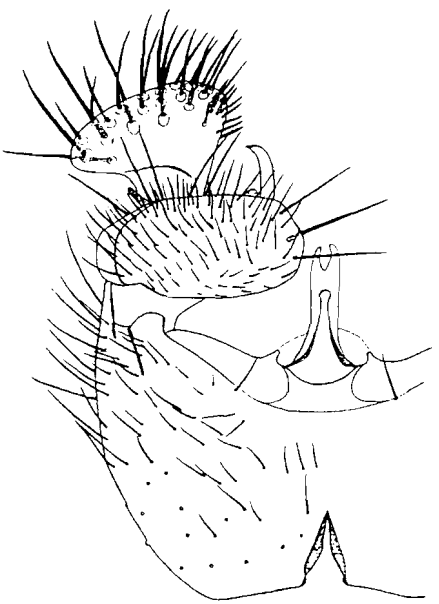
Trichonta submaculata (Staeger, 1840: 251)

Edwards (1924) placed this name in synonymy with *vitta* (Meigen), for which it had previously been used, when he studied Meigen's collection. Gagné, however, found that a previously unrecognised species was also present in Staeger's type series and so raised the name from synonymy. It is a widespread European species, reported from England by Gagné. I have seen specimens from many deciduous woodland localities throughout Britain north to Sutherland.

Species new to the Brisith List

Trichonta brigantia sp. n.

Male. Head and body mainly brown, grey dusted. Antennae with basal segments and base of first flagellar segment yellow, rest brown, more than twice length of head and thorax together. Palpi yellow. Dorsum of thorax with three darker faintly shining stripes on an entirely grey dusted ground including humeral areas. Prothoracic sclerites yellow, brown on disc; prothoracic spiracle yellow, rest of pleura brown. Mesanepisternum with 4 strong setae on posterodorsal margin; metepisternum without strong setae, only fine hairs; scutellum with 4 strong setae. Abdomen brown; genitalia light brown, gonostylus paler on front margin (figs 5–6). Halteres yellow. Legs yellow, hind femora and tibiae



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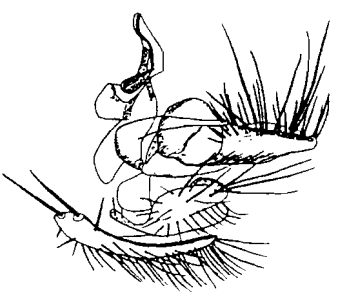

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Figs 5–6. — Male genitalia of *Trichonta brigantia* sp. n. 5, ventral view; 6, posterior view of gonostylus.

narrowly darkened apically. Hind coxa without posterobasal seta, sometimes a weak seta further from base. Hind tibial setae: 5–6 a, 5 d (shorter than depth of tibia), 12–13 short p on apical half to two thirds, 0–1 a-v, 3 short p-v near tip. Wing membrane hyaline but with distinct brownish marking on apical third extending from costa beyond R_{s}. Anterior edge of wing straight. Vein Sc long, ending in R more than halfway to base of Rs. M forking a little beyond level of Rs. Fork veins setose almost to base, their petioles bare, posterior branch of posterior fork only slightly sinuous. Vein A strong, setose on basal three quarters, fading to level of base of posterior fork. Wing length 3.7–4.0 mm.

Female. Unknown.

Holotype ♂: ENGLAND: N. Yorks, Birk Gill, 5.x.1985, by wooded stream (*Chandler*, deposited in Natural History Museum, London). Paratypes: ♂, same data as holotype; ♂, N. Yorks, Gunnerside, 5.x.1985 (*I.F.G. McLean*); ♂, N. Yorks, Highscree Wood, 8–15.x.1980 (*R.H.L. Disney*); ♂, Derbyshire, Goyt Valley, 24.x.1940 (*H. Britten*, Liverpool Museum).

Discussion

In Gagné's key *T. brigantia* runs to *fusciventris* van Duzee, a western Nearctic species differing in genital structure, in having 6 strong scutellars and only 4–7 posterior setae on the hind tibia. Its genitalia more closely resemble *falcata* Lundström, to which it runs in Edwards' (1925) key, but they differ in many details; *falcata* also differs in having a strong posterobasal on the hind coxa, two long metepisternals, the petiole of the Cu-fork setose and the wing entirely hyaline.

The specific name follows Edwards, who named *T. icenica* after the ancient Celtic tribe who inhabited the region where the type material originated.

Trichonta fragilis Gagné, 1981: 20

This is a little known Holarctic species, which appears to be mainly northern and western in the British Isles. Material examined is more brightly coloured than the types. The mesoscutum is yellow with three brown stripes and there are extensive yellow abdominal markings (tergites 1–5 yellow laterally, extended dorsally on hind margin of 2–5). The female, not previously recognised, resembles the male and has slender fore tarsi.

Material examined (8 ♂, 2 ♀). ENGLAND: ♀, Cumbria, Common Wood, 10.x.1991 (*D. Gibbs*); 2 ♂, Devon, Chudleigh Rocks, 31.v.1978 (*J.H. Cole & Chandler*); ♂, Devon, near Knap Mill, 2.vi.1978 (*Chandler*); ♂, Surrey: Staffhurst Wood, 19.x.1991 (*Chandler*). SCOTLAND: ♂, Perthshire, Craighall, 4.vii.1977 (*I.F.G. McLean*); ♂, Inverness, Aviemore, 13.vi.1984 (*D.M. Ackland*); ♂, Inverness, Belladrum Burn, 16.vi.1984 (*A.E. Stubbs*); ♀, Moray, Logie, 28.viii–26.ix.1909 (*F. Jenkinson*, Cambridge University Museum). IRELAND: ♂, Wicklow, Glen of the Downs, 5.x.1980 (*Chandler*).

Revised Check List of British *Trichonta*
(indicating changes to the List provided by Hutson in Kloet & Hincks, 1976)

apicalis Strobl, 1897	New synonymy (Gagné, 1981)
vernalis Landrock, 1913	
atricauda (Zetterstedt, 1852)	New interpretation (Gagné, 1981)
melanura: Edwards, 1925, nec Staeger, 1840	
fissicauda: Edwards, 1913, nec (Zetterstedt, 1852)	
bicolor Landrock, 1912	
brigantia sp. n.	Added in present paper
clavigera Lundström, 1913	Added by Gagné, 1981
falcata Lundström, 1911	
flavicauda Lundström, 1914	
foeda Loew, 1869	New synonymy (Gagné, 1981)
stereana Edwards, 1925	
fragilis Gagné, 1981	Added in present paper
fusca Landrock, 1918	Added by Cole & Chandler, 1981
hamata Mik, 1880	
icenica Edwards, 1925	
melanura (Staeger, 1840)	New interpretation (Gagné, 1981)
melanopyga (Zetterstedt, 1852)	
atricauda: Edwards, 1925 nec (Zetterstedt, 1852)	
nigritula Edwards, 1925	Reinstated in present paper after having been synonymised with *vitta* by Gagné, 1981
pulchra Gagné, 1981	Added by Gagné, 1981
subfusca Lundström, 1909	
submaculata (Staeger, 1840)	Raised from synonymy by Gagné, 1981
terminalis (Walker, 1850)	
venosa (Staeger, 1840)	
vitta (Meigen, 1830)	
vulcani (Dziedzicki, 1889)	

PHRONIA WINNERTZ, 1863

Although Gagné (1975) dealt in detail only with the Nearctic species, of the 49 recognised, 33 were found to be Holarctic in distribution and 19 of these occur in the British Isles. His comments on habits and biology are also applicable to the British fauna. A check list of all names proposed in the genus, with indication of those likely to be valid, was included. There are at least 29 further European species (several others known from females only) of which 12 occur in the British Isles so 31 species can now be recognised as British.

A few errors in Gagné's paper should be noted. He cited as British *forcipula* Winnertz (under which name *humeralis* Winnertz was known before Hackman's work) and *petulans* Dziedzicki (Hackman's (1970) figure under the name was based in error on *signata* Winnertz), also *bicolor* Dziedzicki and *taczanowskyi* Dziedzicki (British records due to misidentifications by Edwards). The first three of these are recorded

from France but the only British material that has been seen is of *petulans*, which is hereby confirmed as British. Furthermore in his check list the Holarctic *cornuta* Lundström and the Palaearctic *electa* Dziedzicki were omitted, and the Holarctic *egregia* Dziedzicki is incorrectly cited as Palaearctic only.

Many species are boreal and Hackman (1970) showed that at least 54 species occur in Finland, including all known to be Holarctic. The British total of 31 is more akin to the 26 species recorded from France by Matile (1977, 1980), although these included seven not found in Britain.

For figures of the genitalia of species not figured here, the original works of Dziedzicki (1889), Hackman (1970) and Gagné (1975) should be consulted. Plassmann (1977) reproduced the figures of earlier authors and without knowledge of Gagné's work provided a revised version of Landrock's (1927) key to the Palaearctic species to incorporate those more recently described. His key is of limited value because he used principally colour characters which are very variable in the genus. Also several species are misplaced in the key, even where the more constant characters of wing marking or coloration of the hind femur are concerned and, as Gagné found, a key to this genus must be based on the male genitalia.

Nomenclatural changes in British *Phronia* due to Gagné (1974, 1975)

Phronia biarcuata (Becker, 1908) = *johannae* Steenberg, 1924
Phronia signata Winnertz, 1863 = ? *austriaca* Winnertz, 1863
Phronia strenua Winnertz, 1863 = ? *flavicollis* Winnertz, 1863

Edwards (1925) noted that *biarcuata*, described from the Canary Islands, had the female wing markings of his *praecox* (= *johannae*) in both sexes. Gagné (1974) found the genital structure to be not significantly different and considered the Canarian form only a local variation, analogous to local forms of an allied Nearctic species, *nebulosa* (Johannsen), which he considered to have been isolated during the Pleistocene glaciation.

In the use of the names *austriaca* and *flavicollis*, the British Check List followed Hackman (1970) who proposed use of these names based on females. Gagné (1975) preferred to regard all names based on females as *nomina dubia* and restored use of the names based on the males of these species.

Other recent changes in the British List of *Phronia*

Phronia persimilis Hackman, 1970: 45

This was recognised as British from a specimen taken by Mr D.M. Ackland and added to the list by Hutson in Kloet & Hincks (1976). It is a small species with the mesoscutum mainly yellow, bearing more or less distinct dark longitudinal stripes. It is Holarctic, known from

northern North America and Finland, where it is frequent. The genitalia were figured by Hackman (1970).

Material examined. ENGLAND: ♂, Hereford, Mains Wood, 23.viii.1973 (*A.M. Hutson*, Natural History Museum, London). SCOTLAND: ♂, Inverness, Craigellachie N.N.R., 20.vi.1967 (*D.M. Ackland*, Oxford University Museum).

Phronia siebeckii Dziedzicki, 1889: 495

Kidd & Ackland (1969) placed *sinuata* Freeman, 1956 in synonymy with this species. Hackman (1970) was dubious about this synonymy but Finnish specimens I have examined are conspecific with the British material. *P. siebeckii* typically has the male genitalia dark brown but British material has them yellow, enhancing a close resemblance to the Nearctic *laffooni* Gagné. This is a widespread but local species in Britain.

Species new to the British List

Phronia caliginosa Dziedzicki, 1889: 512

Holarctic species, known from central Europe, Finland and North America. Gagné figured the male genitalia; Dziedzicki (1889) figured the genitalia of both sexes, the female under the name *trivittata* Dziedzicki.

Material examined. SCOTLAND: 2 ♂♂, Ross, Beinn Eighe N.N.R., near stream in Caledonian pine forest, 10.vi.1984 (*I.F.G. McLean*); ♂, Perthshire, Rannoch Forest, Black Wood, 30.viii.1987 (*Chandler*).

Phronia egregia Dziedzicki, 1889: 484

Another Holarctic species, widespread in Canada and Alaska, also known from Greenland, Spitsbergen, northern Europe and the Alps (Gagné, 1975, who figured the genitalia; Matile, 1977). Since it was discovered in woods in north Wales in the autumn of 1975, several records from woods in England as well as fens in Wales have accrued and Chandler (1987) recorded it from Ireland.

Material examined (23 ♂). ENGLAND: Cornwall; Devon; Hants; Lancs; Cumbria; N. Yorks. WALES: Gwynedd (Merioneth); Ynys Mon (Anglesey); Clwyd (Denbigh). SCOTLAND: Argyll; Nairn. IRELAND: Antrim.

Phronia electa Dziedzicki, 1889: 504

A little known Palaearctic species, of which the types were from Austria and Czechoslovakia. Hackman (1970) recorded it from two districts in southern Finland. The genitalia were figured by Dziedzicki (1889).

Material examined (9 ♂). ENGLAND: Hants, New Forest, Mark Ash Wood, 19.vi.1988 (*Chandler*); Somerset, Harptree Combe, 19.vi.1988 (*Chandler*); N. Yorks, Slapston Holm Wood, 27.vi.1981 (*I.F.G. McLean*); small clough near Rylstone, 13.vii.1978 (*A. Brindle*, Manchester University Museum). WALES: Gwynedd (Merioneth), Cwm Bychan, 12.vii.1976 (*Chandler*); (Caernarvon), Aber Valley, 7.vii.1987 (*Chandler*). SCOTLAND: Banff, River Avon, Tomintoul, 28.viii.1990 (*A.E. Stubbs*).

Phronia longelamellata Strobl, 1898: 288

A Palaearctic species, known from central Europe and Finland (Hackman, 1970). Lundström (1906) figured the male genitalia.

Material examined (7 ♂). ENGLAND: Cumbria, Brough, Swindale Beck, 28.viii.1985 (*J.H. Cole*). SCOTLAND: W. Ross, Beinn Eighe N.N.R., near stream in Caledonian pine forest, 10.vi.1984 (*Chandler*); E. Ross, Easter Fearn, birchwood, 11.vi.1984 (*Chandler*); Perthshire, Bridge of Balgie, oak/beechwood, 10.vii.1988 (*Chandler*); Perthshire, Rannoch, Allt nan Bogair, 22.vii.1990 (*Chandler*); Argyll, Ariundle, 10.vi.1982 (*A.E. Stubbs*).

Phronia mutabilis Dziedzicki, 1889: 477

A Holarctic species, known from northern and central Europe and north America (Gagné, 1975). Genitalia of both sexes were figured both by Gagné and by Dziedzicki (1889); it is close to *obtusa* Winnertz among British species but differs in detail including the shape of the aedeagus.

Material examined (34 ♂, 2 ♀). ENGLAND: Durham, Nesbitt Dene, 11.vii.1991 (*Chandler*); Norfolk (vii–xii.1988/89), Reedham, Sutton, Woodbastwick, Catfield (water traps, *A. Foster & D. Proctor*). WALES: West Glamorgan, Crymlyn Bog, 5.x.1989, 1 ♂ humid heath and 6 ♂, 2 ♀ *Phragmites/Molinia* (*Holmes, Boyce & Reed*). SCOTLAND: E. Ross, Loch Ussie, 18.vi.1976 (*Chandler*); E. Ross, Braelangwell, 1.ix.1984, in small remnant of Caledonian pine forest (*Chandler*); Inverness, near Carrbridge, birch fringed stream in conifer plantation, 17.vii.1991 (*Chandler*); Lanark, Gorge of Avon, 18.ix.1908 (*J.J.F.X. King*, Glasgow University Museum).

Phronia petulans Dziedzicki, 1889: 465

A Holarctic species, found in north and central Europe. The genitalia of the British males agree well with the figures by Gagné (1975) who recorded it from Canada. The specimens confirming this as British were found along a dry shaded limestone stream bed, where fungus gnats were numerous and *Bolitophila nigrolineata* Landrock, also seen from Scotland and added to the British List by Chandler (1992), was among them.

Material examined (3 ♂). ENGLAND: Durham, Nesbitt Dene, 23.vii.1990 (*Chandler*).

Phronia portschinskyi Dziedzicki, 1889: 502

A small dark Holarctic species, recorded from northern Europe and north America (Gagné, 1975). Genitalia of both sexes were figured by Gagné and by Dziedzicki (1889); the shape of the aedeagus is diagnostic in this and closely related species like *mutabilis* Dziedzicki and *obtusa* Winnertz. The British material was collected in water traps during surveys of fen sites.

Material examined (14 ♂). ENGLAND: 4 ♂, Norfolk, Catfield, 27.ix–12.x.1988; 5 ♂, Norfolk, Reedham, viii–x.1988; Norfolk, Thompson Common, ix.1988; Stallode Wash, viii–ix.1988; Suffolk, Walberswick, viii.1988, viii.1989 (*A. Foster & D. Proctor*). WALES: ♂, Mid Glamorgan, Nelson Bog, 12.x.1988 (*Holmes, Boyce & Reed*).

Phronia sudetica Dziedzicki, 1889: 505

A Holarctic species, widespread in Europe although only a single example was recorded from North America by Gagné (1975). The genitalia, figured both by Gagné and Dziedzicki, are very distinctive.

Material examined (5 ♂). ENGLAND: Cumbria, Brigsteer Woods, near Levens, 17.viii.1978 (*A. Brindle*, Manchester University Museum); Hants, New Forest, Mark Ash Wood, 19.vi.1988 (*Chandler*); Worcs, Wyre Forest, Shelf Held Coppice, 7.viii.1988 (*Chandler*). WALES: Gwynedd (Caernarvon), Coed Caedafydd, 8.vii.1987 (*Chandler*); Glan y Gors, wooded stream to Afon Glaslyn, 8.vii.1987 (*Chandler*).

Phronia sylvatica Dziedzicki, 1889: 488

Hackman (1970) recorded this Holarctic species from two provinces in Finland while Gagné (1975) reported three males from eastern North America and Alaska. It was described from a single male from Bjelorussia and I have seen it from Croatia; Dziedzicki and Gagné figured the male genitalia.

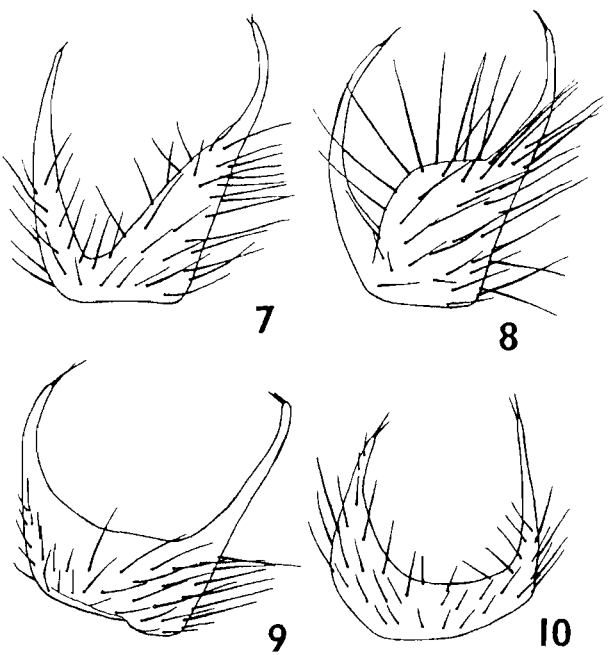
Material examined. SCOTLAND: ♂, Argyll, Loch Tromlee, 11.vi.1976 (*A.E. Stubbs*).

The *Phronia "tarsata"* Group

Hackman (1970) and Gagné (1975) both recognised two species in this group, but both considered that British material identified as *tarsata* (Staeger) was not referable to either of their species. The earliest name proposed in this group was *tarsata* (Staeger, 1840), described from Denmark. Gagné (1975), however, found that the series in Staeger's collection (which I have examined) included four unrelated species and several unrecognisable specimens but only one female, which he established as lectotype, belonged to this group of the genus. However, because of difficulty in distinguishing females of this group (which have enlarged fore tarsi as do some other *Phronia* species) he decided to place *tarsata* as a *nomen dubium*, which I now accept as the best course. In recent years I have retained the name *tarsata* for the British species as this identification seemed most likely to be correct, but in view of the previous confusion surrounding the use of the name in the literature, I here propose a replacement name for *tarsata* sensu Edwards. Some discussion of the names used for the other species in this group is also necessary.

Hackman found that the two Finnish species had respectively northern and southern distributions and correctly identified them with *crassipes* Winnertz sensu Dziedzicki (1889) and *bicolor* Dziedzicki (1889). Because *crassipes* was originally based on a female, he considered it a *nomen dubium* and redescribed Dziedzicki's *crassipes*, based on the male, as *crassitarsus*. However, because *tarsata* was described from lowland Denmark, he considered his more southerly species *bicolor* to be a synonym of *tarsata*.

Gagné also recognised two related Holarctic species and considered that they corresponded to the two Finnish species; he reinstated the name *bicolor* for the reason stated above, but synonymised *crassitarsus* with the North American species *fusciventris* van Duzee. He had seen specimens which he considered conspecific with *fusciventris* from Switzerland, Austria and Swedish Lapland but had not examined Hackman's type of *crassitarsus*. His figures agreed much better with Dziedzicki's figures of *bicolor* than of *crassipes*, while his *bicolor* did not fit well either of Dziedzicki's species. Examination of Gagné's North American material has confirmed the suspicion that his *bicolor* is a distinct species for which a new name is proposed here. *P. fusciventris* must, however, be placed in synonymy with the true *bicolor*. A related Madeiran species is being described elsewhere.



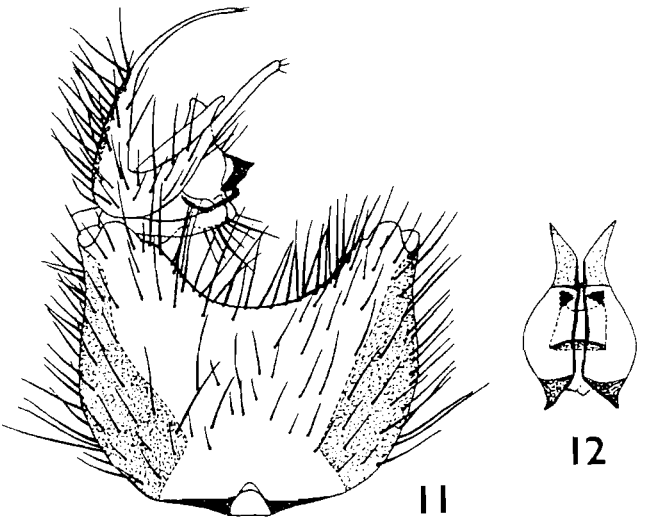
Figs 7–10. — Lateral view of lateral portion of gonostylus of *Phronia "tarsata"* Group: 7, *P. bicolor* Dziedzicki; 8, *P. crassitarsus* Hackman; 9, *P. coritanica* sp. n.; 10, *P. gagnei* sp. n.

Phronia bicolor Dziedzicki, 1889: 510

Phronia fusciventris van Duzee, 1928: 52, **syn. n.**
Phronia tarsata sensu Hackman, 1970: 58

The name *bicolor* is here used for the more southerly of the Finnish species and according to Gagné's figures of *fusciventris*, of which he had examined the type, the latter is a synonym. Genitalia, figs 7, 11, 12.

Material examined (9 ♂). FINLAND: Kolmiranta, 31.vii.1979 (*A.E. Stubbs*); Vihtijarvi, 16.ix.1963 (*R. Tuomikoski*, slide mounted, labelled *bicolor*, Zoological Museum, Helsinki). U.S.A.: Oregon, Wahkeena Falls, 9.ix.1934; Idaho, Chatcolet, 15.viii.(? year); Idaho, Priest L., Hurst Creek, 1.ix.1919; California, Muir Woods, 7.viii.1915; Colorado, Estes Park, Bear L., 11.vii.1934; WN [Washington], Sequim Bay, 3.ix.1934 (all *A.L. Melander*).



Figs 11–12. — Male genitalia of *Phronia bicolor* Dziedzicki: 11, ventral view; 12, aedeagus.

Phronia crassitarsus Hackman, 1970: 48, sp. *restit.*

Phronia crassipes sensu Dziedzicki, 1889: 455 ♂, nec Winnertz, 1863: 877

This species is recognised here as examination of the type material has shown it to be distinct from *fusciventris* van Duzee under which it was placed by Gagné (1975). The male genitalia (figs 8, 13, 14) agree well with the figures of *crassipes* by Dziedzicki.

Material examined. Holotype ♂, FINLAND: Ivalo, 19.vi.1962 (*W. Hackman*); 6 other ♂ and 1 ♀ from Finland (Zoological Museum, Helsinki). 1 ♂, CZECHOSLOVAKIA: Moravia, north west of Rýmařov, conifer woods, 6.ix.1990 (*Chandler*). 1 ♂, RUMANIA: Cibinului Mts, below Paltinis, 24–25.vi.1969 (*B.H. & M.C. Cogan, R.I. & R. Vane-Wright*, Natural History Museum, London).

Phronia coritanica sp. n.

? *Phronia tarsata* (Staeger, 1840: 264), NOMEN DUBIUM (Gagné, 1975: 300)
Phronia tarsata (Staeger) and *P. bicolor* Dziedzicki sensu Edwards, 1925

Male. Body grey brown, with basal antennal segments, humeral areas and sides of mesoscutum, and often sides of tergites 2 and 3 more or less yellow. Legs mainly yellow; femur 3 darkened apically; hind coxa and sometimes also mid coxa darkened on outer face. Mesanepisternum with 2 setae. Wing yellowish; costa produced a little beyond tip of vein R_5. Setulae on wing veins; r-m 2–4, M_1 and M_2 setulose from near base, petiole of posterior fork setulose from level of base of r-m, continuous with setae on its posterior branch which is entirely setulose, anterior branch setulose except for basal quarter. Setae on mid tibia 3–5 a, 3–4 d, 4–9 p, 5–10 v; on hind tibia 7–9 a, 7 d, 4–9 p. Wing length 2.7–3.3 mm. Male genitalia figs 9, 15, 16.

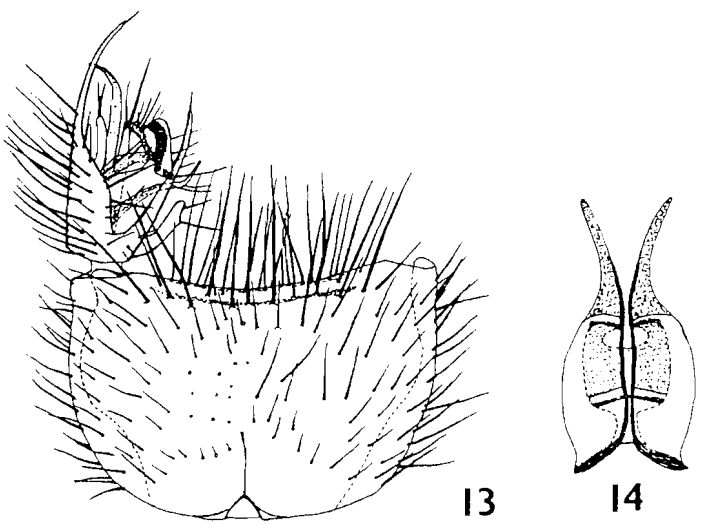
Holotype ♂, SCOTLAND: Sutherland, Migdale Wood, pine and birch woods, 17.vi.1976 (*Chandler*) (deposited in Natural History Museum, London). Paratypes (all ♂): ENGLAND: Surrey, Chobham Common, Gracious Pond, 30.x.1978; Devon, Gara Bridge, woods by River Avon, 4.vi.1974. SCOTLAND: Perthshire, Tummel Forest, 28.v.1973; Aberdeen, Glentanar N.N.R., Dinnet Oakwood, 2.viii.1975. WALES: Powys (Brecon), Glasbury Cutting, 26.vi.1976. IRELAND: Wicklow, Derrybawn, oak forest, 24.vi.1975 (all *Chandler*).

Other material examined: many ♂ from the British Isles (many collectors); also seen from France (Corsica and several mainland localities, some determined as *bicolor*); Belgium (Lesse et Lomme); Spain (Canfranc), Yugoslavia (Croatia: Plitvice) and Turkey.

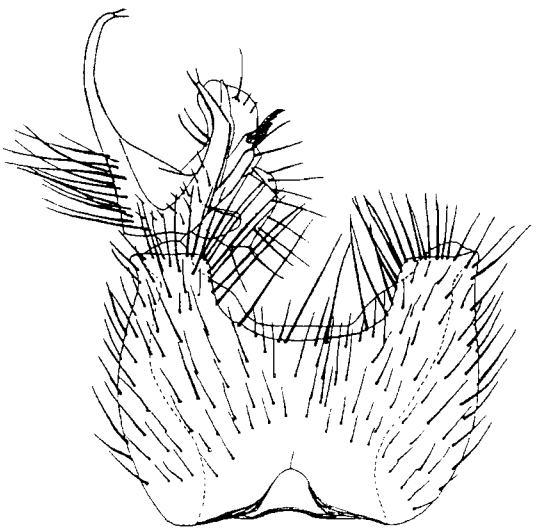
Discussion

This species is frequent in the British Isles, and perhaps widespread in western and southern Europe. It was absent from the plentiful Finnish and Nearctic material examined by Hackman and Gagné, who mentioned it only as a probably distinct British species.

The specific name is based on the old Celtic name for Britain.



Figs 13–14. — Male genitalia of *P. crassitarsus* Hackman: 13, ventral view; 14, aedeagus.



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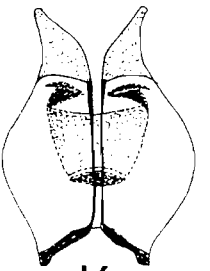

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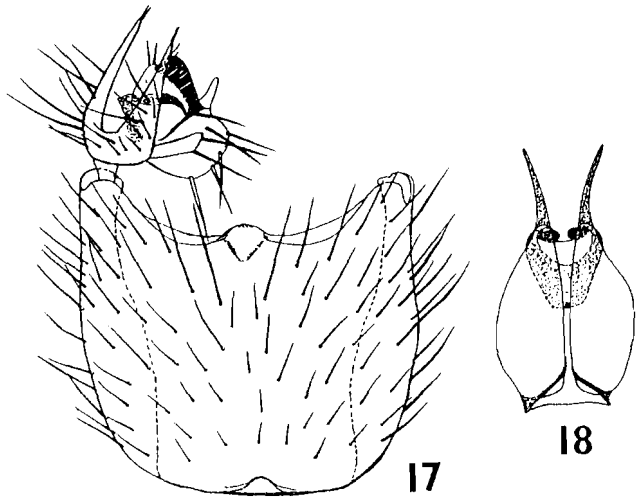
Figs 15–16. — Male genitalia of *P. coritanica* sp. n.: 15, ventral view; 16, aedeagus.

Phronia gagnei sp. n.

Phronia bicolor Dziedzicki sensu Gagné, 1975: 244.

Male. Body grey brown, with basal antennal segments, base of first flagellar segment, prothoracic spiracle, halteres and greater part of legs yellow. Tergites 4–6 more blackish, genitalia brown. Legs with mid and hind coxae brownish, hind femur only vaguely darkened apically and hind tibia dark apically (the Montana examples have the humeral area and sides of the mesoscutum yellow, also triangular yellow patches on the hind margin of tergites 2–3, side of tergite 1 and greater parts of sternites 1–3 yellow). Mesanepisternum with 2 strong setae. Wings yellowish grey; costa produced a little beyond tip of R_5. Setulae on wing veins: r-m with 3 on apical part, M_1 and M_2 setulose from near base; petiole of posterior fork setulose from before level of base of r-m, posterior branch entirely setulose, anterior branch setulose except for extreme base. Setae on mid tibia: 3–5 a, 3–4 d, 5–7 p, 5–8 v. Setae on hind tibiae: 7–9 a, 7–10 d, 5–7 p. Wing length 2.4–3.0 mm. Male genitalia figs 10, 17, 18.

Holotype ♂, U.S.A. Alaska, Matanuska, 15.v.1949, rotary trap (*J.C. Chamberlain*, det. *P. bicolor* Dziedzicki by Gagné, 1963). Paratypes: ♂, same data as holotype; 2 ♂, U.S.A.: Montana, Silver Lake, 30.vii.1923 (*A.L. Melander*); ♂, U.S.A.: Iowa, Boone County, Ledges State Park, 25.ix.1950 (*W. Downes*); ♂, U.S.A.: Maryland, near Laurel, Patuxent wildlife refuge, malaise trap (*D.R. Smith*) (all material in United States National Museum).



Figs 17–18. — Male genitalia of *P. gagnei* sp. n.: 17, ventral view; 18, aedeagus.

Revised Check List of British *Phronia* (treated as with *Trichonta* above)

basalis Winnertz, 1863	
biarcuata (Becker, 1908)	
johannae Steenberg, 1924	New synonymy (Gagné, 1974)
praecox Edwards, 1925	
nitidiventris: Winnertz, 1863, nec Wulp, 1859	
braueri Dziedzicki, 1889	
? *annulata* Winnertz, 1863, *nom. dub.*	
caliginosa Dziedzicki, 1889	Added in present paper
cinerascens Winnertz, 1863	
conformis (Walker, 1856)	
coritanica sp. n.	The *bicolor* = *tarsata* of the List
tarsata: auctt. (? Staeger, 1840, *nom. dub.*)	
? *crassipes* Winnertz, 1863, *nom. dub.*	
bicolor: Edwards, 1913 nec Dziedzicki, 1889	
disgrega Dziedzicki, 1889	
egregia Dziedzicki, 1889	Added in present paper
electa Dziedzicki, 1889	Added in present paper
exigua (Zetterstedt, 1852)	
flavipes Winnertz, 1863	
forcipata Winnertz, 1863	
humeralis Winnertz, 1863	
forcipula: auctt., nec Winnertz, 1863	
interstincta Dziedzicki, 1889	
longelamellata Strobl, 1898	Added in present paper
mutabilis Dziedzicki, 1889	Added in present paper
nigricornis (Zetterstedt, 1852)	

nitidiventris (Wulp, 1859)	
notata Dziedzicki, 1889	
obtusa Winnertz, 1863	
persimilis Hackman, 1970	Added by Hutson (in Kloet & Hincks), 1976
petulans Dziedzicki, 1889	Added in present paper
portschinskyi Dziedzicki, 1889	Added in present paper
siebeckii Dziedzicki, 1889	Added by Freeman, 1956
sinuata Freeman, 1956	
signata Winnertz, 1863	Use proposed by Gagné, 1975
? *austriaca* Winnertz, 1863, *nom. dub.*	
strenua Winnertz, 1863	Use proposed by Gagné, 1975
? *flavicollis* Winnertz, 1863, *nom. dub.*	
sudetica Dziedzicki, 1889	Added in present paper
sylvatica Dziedzicki, 1889	Added in present paper
tenuis Winnertz, 1863	
triangularis Winnertz, 1863	

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I thank Dr Raymond J. Gagné (United States National Museum, Washington) for assistance with checking specimens of *Trichonta*, for the loan of material of *P. gagnei* sp. n. and for discussion on various points. Dr B. Lindeberg kindly loaned Finnish specimens of several species. I am also grateful to Mr A.M. Hutson for information on changes to the British List for which he was responsible, also for the opportunity to examine relevant specimens and to see his correspondence with Mr L.N. Kidd on nomenclatural problems in *Phronia*. Many other museums and private collectors have contributed valuable records.

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and other notes on British fungus gnats (Diptera: Mycetophilidae). *Entomologist* **102**: 22–24. **Kloet, G.S. & Hincks, W.D.**, 1976. A check list of British Insects. (2nd ed.) Part 5. Diptera and Siphonaptera. *Handbk Ident. Br. Insects* **11**(5): 1–139. **Landrock, K.**, 1926–7. Fam. 8. Fungivoridae (Mycetophilidae). *Fliegen palaearkt Reg.* **14**: 1–196, 13 pls. **Lundström, C.**, 1906. Beiträge zur Kenntnis der Dipterenfauna Finlands. 1. Mycetophilidae. *Acta Soc. Fauna Flora Fenn.* **29**(1): 1–67, 14 pls. **Matile, L.**, 1977. Catalogue provisoire des Diptères Mycetophilidae de la Faune de France. *Bull. Mus. natn. Hist. nat. Paris* (3) **456**, Zool. 319: 621–655; 1980. Complément au Catalogue des Mycetophilidae de France (Dipt.). *Bull. Soc. ent. Fr.* **85**: 93–102. **Plassmann, E.**, 1977. Revision der europäischen Arten der Pilzmückengattung *Phronia* (Diptera: Mycetophilidae). *Dt. ent. Z.*, **24**: 305–344. **Winnertz, J.**, 1863. Beitrag zu einer Monographie der Pilzmücken. *Verh. zool.-bot. Ges. Wien* **13**: 637–964.

Weston Research Laboratories, Vanwall Road, Maidenhead, Berks SL6 4UF
December 13th, 1991

Cionus scrophulariae (L.) (Col., Curculionidae) feeding on Buddleja globosa Lam. — Bullock (1987, *Entomologist's mon. Mag.* **123**: 190) recently summarized the records of *Cionus scrophulariae* feeding on *Buddleja globosa* and *B. davidii* Franch. My own observations of these associations in my garden suggest that plant age/size may be a governing factor. In 1974 I planted a young (? two-year-old) *B. globosa* and soon noticed the presence of adults of *Cionus scrophulariae*. The shrub (now large) still thrives but *Cionus* has not been seen on it since, in spite of regular close inspection (of it and several *B. davidii* of various ages). A few years ago I introduced a young plant of *Scrophularia auriculata* L. (*aquatica* auctt.), a usual food plant of *Cionus*, but it was two years before singletons of *C. scrophulariae* occurred in two successive years and in 1989 a breeding colony was present.

In 1989 I planted a two-year-old cutting of *B. globosa* some four yards from the *Scrophularia* to see if the *Cionus* transferred to it. Unfortunately the main *Scrophularia* plant died out during the very cold February of 1991 but on 20.vi.1991 leaf damage and several adult *Cionus scrophulariae* were found on the young *B. globosa*. On the morning of 21.vi.1991 several copulating pairs were observed but by the evening they had all gone. Some days later a larva was found which pupated 1.vii.1991 produced an adult 10.vii.1991, when inspection of the *B. globosa* revealed a few more larvae. In 1991 a new *S. auriculata* plant appeared two feet away from the site of the original plant and a new *S. nodosa* L. (common figwort) also appeared (some 10 yards away) but no *Cionus* have yet occurred on either of these.

These findings suggest that while the *Cionus* deserve their reputation as good botanists in recognizing the basic relationship of *Buddleja* and *Scrophularia*, the former is not so attractive once of the larger (flowering) size, while the latter is more attractive then. The earlier records largely support this. Bullock (*loc.cit.*) and Williams (1974, *ibid.* **110**: 63) refer to 'young' and 'small' *B. davidii* respectively. Interestingly, Williams adds that on moving the insects (*C. alauda* Herbst and *C. scrophulariae*) onto a larger plant (of *B. davidii*) they had all vanished within a few days. Daltry (1944, *ibid.* **80**: 42) refers to regrowth of two feet from plants cut to the ground by hard frost and Walker (1914, *ibid.* **50**: 248), although his own record was from a breeding colony on a large plant, also cites a nurseryman who had considered digging up all his young *B. globosa* because of heavy damage by colonies of *Cleopus pulchellus* (Herbst) (as *Cionus*).

As it is not recommended practice to hard prune *B. globosa* (as it is with *B. davidii*) this may be another factor rendering *B. globosa* more rapidly unattractive. It would be interesting to know if the 'young' *B. globosa* mentioned by the authors cited continued to be attractive to *Cionus*. Apparently British and European Lepidopterists recognize that smaller examples of various shrubs are more attractive to ovipositing butterflies than larger examples of the same species, possibly because they come into leaf earlier (Wright, 1991, *Bull. amat. Ent. Soc.* **50**: 72; Cribbs, *ibid.*: 197). — K.G.V. SMITH, 70 Hollickwood Avenue, London, N12 0LT: *August 14th*, 1991.