Flat-footed Fly Recording Scheme

Newsletter 1 Autumn 2016

A new recording scheme

A new scheme is launched here to cover the 35 British species of the family Platypezidae, and has been added to the Diptera Recording Schemes recognised by BRC.

This small family, with fungus feeding larvae is varied in form and coloration, with females in particular often exhibiting attractive patterns, e.g. the female of *Polyporivora ornata* (photo Jeremy Richardson) shown above.

Records are acceptable in any form and specimens can be submitted to me for checking. At present available data is being assembled into a spreadsheet, with name, grid reference, county, locality, date, recorder, number and gender of specimens. If it is in a museum collection or a published record this is noted.

Identification

Platypezidae is a distinctive group of primitive Cyclorrhapha, characterised by a broad head with holoptic eyes in the male, erect antennae with a terminal arista, a humped thorax, acrostichal bristles either as a median uniserial row or absent, broad wings with a well-developed anal cell, and the hind legs more or less enlarged and often with broadened tarsi – particularly broad and flattened in the females of subfamily Platypezinae, hence the name Flat-footed Flies.

While males of most species and females of some are mainly dark coloured, the sexes often differ in coloration. In these cases the females are usually more brightly coloured, with distinctive patterns of brown, grey, silver, yellow or orange markings.

All British species may be identified using the keys to the European species in Chandler (2001), except that *Agathomyia elegantula* of that work was shown to be a complex of at least five species in northern Europe by Ståhls *et al*. (2014). The only member of this group confirmed to occur in Britain is *A. boreella*, under which name it was first introduced as British by Dr J.H. Wood (Wood 1905).

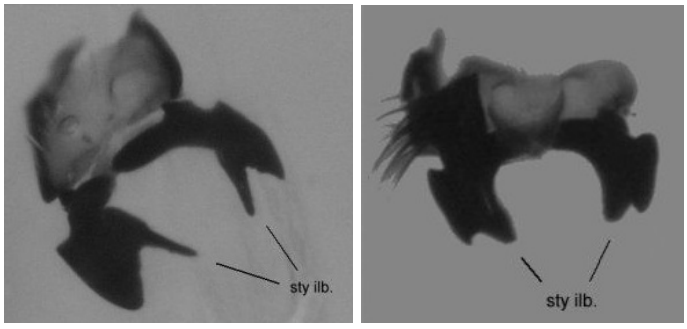
Ståhls *et al*. (*op. cit*.) also include revised keys to the European species of *Agathomyia*.

A manuscript key to the British species was circulated to those attending the workshop on fungus-associated flies held at Preston Montford in 2011. This needs to be modified in respect of the above-mentioned changes, and also to add *Platypezina*. It is available on request. A colour version of this newsletter is also available as a pdf.

Two species confused under *Callomyia amoena*

There is also a cryptic species that was confused under *Callomyia amoena* by Chandler (2001), and which closely resembles both sexes of that species in coloration. It was recognised as distinct in Germany a few years ago by Claus Claussen, who observed that males that had a dark stem to the halteres differed in the form of the surstyli.

Chandler (2001) considered that the dark-stemmed form, which predominates in northern Europe, was an intraspecific variation. However, this difference in surstyli clearly shows that it represents a different species, and this has been confirmed by Gunilla Ståhls using DNA. The correct nomenclature for these species awaits re-examination of Meigen's type of *amoena*.



Surstyli of *Callomyia amoena* sensu lato: left, common form in British Isles, with halteres all yellow; right, with dark stem to halteres (photos by Claus Claussen; sty ilb = inner lobe of surstylus).

It can be reported that both species occur in Britain, as a few males with dark-stemmed halteres, agreeing with the

above photograph in the form of the surstyli, have been seen from northern England. It is presently unclear if females can be separated on a similar basis. Hence the total of 35 species found in Britain.

Opetiidae

Chandler (2001) also included *Opetia nigra*, which was formerly in Platypezidae but is now separated as family Opetiidae. It differs in having a two- instead of three-segmented arista, irregular thoracic bristling between the dorsocentrals without distinct acrostichals, distinctive wing venation and the hind legs are simple without any enlargement. Small and black in both sexes, it has been reared from rotten wood but the immature stages are unknown – their discovery would be an exciting development in determining its phylogenetic position. *Opetia nigra* is common, with British records from at least 230 hectads. Records of this species will also be accepted.

How to find platypezids

(1) Smoke Flies – *Microsania* species

These are small and black in both sexes, with distinctive wing venation – a short R_1, an associated stigma with a distinct margin, M_1 free basally and crossveins absent.

Wing of *Microsania pectipennis* (photo by NHM)

They are rarely recorded away from the smoke of burning wood or other vegetation. Records have diminished in recent years due to such fires being less often available for recording, but this is unlikely to indicate any decline in their populations. Males are often numerous when observed in aerial swarms, in which there are often two or more species present in the smoke, though presumably in species-specific sub-swarms (unconfirmed). Females may be found entering the swarm or settled in the vicinity.

The frequency with which they are found when smoke is investigated suggests that they are common everywhere in wooded districts, so what they do otherwise is a mystery. Collin (1934) swept two species from marram grass and one had been found on a poultry house window in 1926 by F.W. Edwards. Russell (1960), when recording them in bonfire smoke, also noted swarms near the upper branches of a nearby sycamore; he didn't say how tall the tree was.

***Microsania meridionalis* (S Europe) male, with mites on abdomen (photo Rui Andrade)**

The larval habitat remains unknown. The adult flies often have clusters of pink mites on the abdominal membranes, which has not been recorded in other Platypezidae, so that should be a clue to the likely habitat. However, the several attempts to have these mites identified have produced different results, with four different mite taxa being implicated (Chandler 2001, Tkoc *et al*. in press) – in general they are dung or compost associated mites but this is at present too imprecise to reach a satisfactory conclusion. It is unclear whether this is a purely phoretic association or, in view of its frequency and the numbers of mites involved, a parasitic relationship.

A phylogenetic study of Platypezidae using DNA (Tkoc *et al*. in press) has suggested that *Microsania* is not closely related to other Platypezidae and represents a clade of uncertain status. There are many differences, not least in wing venation, but they do resemble other platypezids in the antennal structure with a terminal arista, the thoracic chaetotaxy with uniserial acrostichal bristles, the enlarged male hind tarsi and the structure of the male genitalia. They are retained in Platypezidae pending any further investigation of their relationships.

The finding of early stages of *Microsania* (as with *Opetia*) would be helpful in establishing its systematic position.

(2) Other Flat-footed Flies

Platypezids are mainly restricted to wooded habitats, as most of the fungi in which they develop are saproxylic. An exception is *Lindneromyia dorsalis* as it develops in field mushrooms.

Both sexes may be observed running about on broad leaves in erratic fashion like Phoridae; in this members of the subfamily Platypezinae are more energetic and more often found in this way than are those belonging to the subfamily Callomyiinae. They apparently feed on honey-dew or other surface deposits. This is the only known adult feeding activity – they don't visit flowers (it isn't known if *Microsania* feed as adults). Leaves of trees and shrubs are favoured but some herbaceous plants are also visited. Presumably leaves at all heights can be utilised so abundance may not be easily determined from sampling

foliage within reach, as use of a long handled net has suggested (see Plate 3, Fig. 4 in the *Dipterist's Handbook* – Malcolm Smart has proved adept at catching platypezids in this way). Callomyiinae are more often swept from low vegetation, so their adult activity is less often observed.

Males of all species are believed to form aerial swarms to attract females for mating, although this has been observed in relatively few species. Swarms may be up to several metres from the ground, often in a gap in the canopy, so are easily overlooked. The distinctive colour patterns of many females are thought to aid recognition when they enter the swarm.

Females may be found visiting the fungal hosts for oviposition, and will usually be seen on the underside of the cap, at the pore surface of polypores, or between the gills of a gill fungus. Finding females on a fungus is an obvious clue to host selection, e.g. *Agathomyia lundbecki* females were found on *Inonotus radiatus* growing on alder *Alnus* some years before it was confirmed to be the host.

Platypezids are overlooked by many recorders because of their small size, specialised behaviour, close association with their fungus hosts, the mainly autumnal flight period of many species and possibly relatively low population densities. They are, however, a rewarding group to study, once the techniques for finding them are understood.

Fungus hosts

All Platypezidae other than *Microsania* are certainly fungus feeders as larvae. Most are monophagous or oligophagous, in the latter case restricting the choice of host to one or a few related genera, or to fungi with a similar form or texture.

Chandler (2010) listed the known fungus hosts of British species. Since then *Paraplatypeza bicincta* has been reared from *Pluteus* and knowledge of the biology of the genus *Agathomyia* has improved with recent work in Scandinavia and the Netherlands (see below).

Puparium of *Callomyia gilloglyorum* (a North American species) (from Kessel 1961)

Callomyia larvae feed at the surface of encrusting fungi on damp rotten wood and it is unclear if they have any specific associations. Their larvae and puparia are rather flat-bodied and very distinctive in having two branched processes at the side margins of each segment.

Platypezina connexa has been obtained in emergence traps over decayed fallen spruce *Picea abies* trunks in Finland (Ståhls & Kahanpää 2006), but it is yet to be established whether it has any specific fungal host. The immatures are undescribed.

Agathomyia larvae develop internally in polypore fungi. Only three of the eleven British species, *A. collini*, *A. viduella* and *A. woodella*, have yet to be reared; it is still thought that *A. collini* is associated with *Phellinus pomaceus* on rosaceous trees, but its rarity has precluded any progress on that. All are highly specific to their hosts but only *A. wankowiczii* is known to cause gall formation, its galls being conspicuous on the underside of brackets of *Ganoderma applanatum*. Part of the photograph below is included in Tyler (2010).

Underside of *Ganoderma applanatum* brackets well-covered with galls of *Agathomyia wankowiczii*, each with an exit hole (photo John Tyler)

Larvae of *Agathomyia* resemble those of Platypezinae in having only a single lateral process on most segments (see photos on p. 4). They are more cylindrical in form, as are larvae of three genera of Platypezinae that also develop in polypores (see photo of *Bolopus* larva on p. 8). The latter choose brackets of softer texture than those selected by most *Agathomyia* species: *Bolopus* in *Polyporus squamosus*, *Seri* in *P. durus* and allied species, and both *Polyporivora* species in *Trametes versicolor*.

The remaining genera of Platypezinae – *Lindneromyia*, *Paraplatypeza*, *Platypeza* and *Protoclythia*, develop in gill fungi. They have broader-bodied larvae (see photo on p. 4) that often feed at the surface of the gills. The last two of these genera are principally associated with honey fungus (*Armillaria* spp), while both British species of *Paraplatypeza* develop in *Pluteus cervinus* and *Lindneromyia dorsalis* develops in *Agaricus* species (field mushrooms) and other similar fungi, e.g. the parasol mushrooms (*Macrolepiota* spp).

The records of *Protoclythia* and *Platypeza* from boletes and *Lycoperdon*, and *Lindneromyia* from *Calvatia* and *Boletus*, require confirmation. It is always possible that larvae may wander in a mixed collection of fungus fruiting bodies, which may lead to misleading conclusions about hosts, so it is important that fungi are isolated for rearing.

Larvae of a *Platypeza* species (photo Judy Webb)

Larvae and puparia of Platypezidae have a good range of structures that aid identification at both genus- and species-level. They are illustrated in many of the works cited here, and descriptions of diagnostic characters of 14 species in 11 Holarctic genera were given by Rotheray *et al*. (2004).

There is plenty of scope for adding to knowledge of platypezid hosts and early stages.

New hosts in *Agathomyia*

Thanks to recent efforts in Finland and the Netherlands the fungus hosts are now known for a further four of the British species of *Agathomyia*, confirming the exclusive association of this genus with polypores. The new findings concern rearing of *A. sexmaculata*, *A. cinerea* and species of the *A. elegantula* group including *A. boreella*; *A. lundbecki* has also been confirmed to develop in *Inonotus radiatus*, as had been expected since females had been observed on this fungus in Britain (Chandler 2001).

Agathomyia cinerea was reared by Reemer (2015) in the Netherlands from *Ischnoderma benzoinum*, a bracket fungus that grows mainly on Scots pine *Pinus sylvestris*. The fungus was growing on pine in a coastal dune area. The rearing took place following an observation of a female of *A. cinerea* ovipositing on the fungus. The article includes photographs of the fly and the fungus, which has a reddish brown cap with a whitish rim. *Ischnoderma benzoinum* is widespread in Britain, growing mainly on conifers but there are occasional records from broad-leaved trees such as horse chestnut *Aesculus hippocastanum*. Most of the sites where *A. cinerea* has been recorded in Britain are broad-leaved or mixed woodland, so observations to establish its host here would be of interest.

Agathomyia lundbecki was a new record for Finland when it was reared in numbers from *Inonotus radiatus* (Ståhls & Kahanpää 2006), confirming that host association.

The ***Agathomyia elegantula*** group was revised by Ståhls *et al*. (2014), from which it is concluded that British material previously identified as *A. elegantula* should be assigned to *A. boreella*. The latter species has an entirely dark-bodied male while most other members of this group including *A. elegantula* have the male abdomen partly yellow or orange, as in the females of all species in this group.

It was found in Finland that *A. elegantula*, *A. boreella* and a third newly described species *A. alneti* develop in fungi of the genus *Antrodiella*; *A. boreella* was obtained from both *A. faginea* and *A. pallescens*, *A. elegantula* from *A. pallescens* and *A. alneti* from *A. serpula*.

Larva of *Agathomyia boreella* (from Ståhls *et al*. 2014)

These small bracket fungi grow in colonies of annual fruiting bodies and are responsible for a white rot, but some species occur only on trees already decayed by other polypores; *A. pallescens* is usually on birch following attack by *Fomes fomentarius*, and *A. serpula* on alder attacked by *Inonotus radiatus*, while *A. pallescens* occurs on a wider variety of broad-leaved trees including beech, oak, poplar and willows. *Antrodiella* species are evidently locally common in Scandinavia but apparently rarer here.

Agathomyia sexmaculata larvae have been found in *Bjerkandera fumosa* in both Finland and the Netherlands (Reemer *et al*. 2014). The Finnish larvae, found in this fungus growing on a decayed sallow *Salix caprea* trunk, were identified by DNA barcoding. In the Netherlands oviposition was first observed, followed by rearing; here the fungus was growing on a fallen decaying poplar *Populus* trunk. The larva was described and illustrated, together with photographs of adults and the habitat.

These findings demonstrate what can be achieved with diligent observation of potential larval habitats. All of these new fungus hosts, and other polypores not yet known to be platypezid hosts, should be searched when fresh for ovipositing females. An article on the fieldcraft necessary to locate immature stages of cyclorrhaphan Diptera (Rotheray 2016), a neglected field, is presently to appear in *Dipterists Digest*.

Phenology

The table below shows the adult flight period for each species, based on British data except for *Agathomyia sexmaculata* and *Platypezina connexa* where each is known only from a single British record in October – the fight period for mainland Europe is given in these cases.

Species	April	May	June	July	August	September	October	November
Paraplatypeza atra	■	■	■	■	■	■	■	■
Agathomyia collini	■	■	■	■	■	■	■	
Lindneromyia dorsalis	■	■	■	■	■	■	■	
Agathomyia antennata	■	■	■	■	■	■		
Bolopus furcatus	■	■	■	■	■	■		
Agathomyia viduella	■	■	■	■				
Polyporivora ornata		■	■	■	■	■	■	
Microsania collarti		■	■	■	■	■	■	
Microsania pallipes		■	■	■	■	■	■	
Microsania pectipennis		■	■	■	■	■	■	
Callomyia amoena		■	■	■	■	■	■	
Callomyia speciosa		■	■	■	■	■		
Callomyia dives		■	■	■	■			
Agathomyia wankowiczii		■	■					
Seri obscuripennis			■	■	■	■	■	
Agathomyia sexmaculata			■	■	■	■	■	
Agathomyia boreella			■	■	■	■	■	
Callomyia elegans			■	■	■	■		
Platypeza consobrina				■	■	■	■	■
Platypeza fasciata				■	■	■	■	
Agathomyia woodella				■	■	■	■	
Microsania straeleni				■	■	■		
Microsania vrydaghi				■	■	■		
Agathomyia lundbecki					■	■	■	
Platypeza aterrima					■	■	■	
Platypeza hirticeps					■	■	■	
Polyporivora picta	■				■	■	■	■
Protoclythia rufa					■	■	■	■
Protoclythia modesta					■	■	■	■
Agathomyia falleni					■	■	■	■
Platypezina connexa					■	■	■	
Paraplatypeza bicincta						■	■	■
Agathomyia unicolor			■	■		■	■	■
Agathomyia cinerea						■	■	
Total per month	**7**	**14**	**19**	**23**	**29**	**31**	**25**	**8**

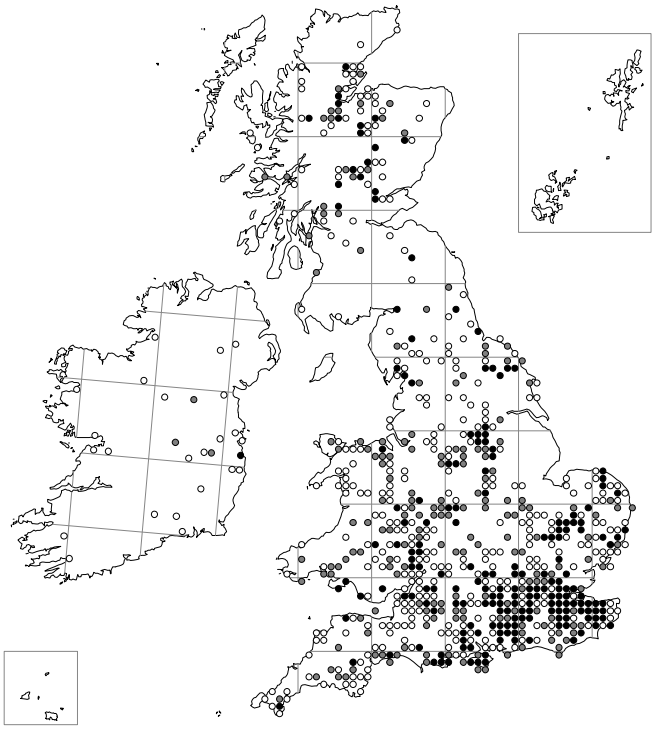
This suggests that September is the most productive month, with August as a close second. However, while the autumn flying species may start to appear in August, there are relatively few records of them for that month, and October is usually the most productive month in numbers of individuals. Some species are found mainly in spring and early summer. *Agathomyia wankowiczii* flies only in May and June, and most records of *A. viduella* are from those months. These and species that only appear from July onwards are probably univoltine. The few records of *Polyporivora picta* in April and of *Agathomyia unicolor* in June and July may suggest that they are occasionally bivoltine. The species with an extended flight period, such as *Paraplatypeza atra*, *Lindneromyia dorsalis* and *Polyporivora ornata* are probably bi- to multivoltine, depending on appearance of their fungal hosts.

Museum collections

Platypezid collections at the following museums were studied in the 1970s and 1980s, some of them (*) also more recently: Natural History Museum, London*; National Museum of Ireland, Dublin*; National Museums of Scotland, Edinburgh*, National Museum of Wales, Cardiff*; the University Museums at Oxford*, Cambridge, Manchester and Glasgow; the World Museum, Liverpool; the local authority museums at Colchester*, Winchester*, Reading, Doncaster, Ipswich, Nottingham, Leicester and Maidstone; the BENHS collection at Dinton Pastures*.

If anyone knows of other collections please let me know.

Present knowledge of distribution



All hectads with platypezid records:
open circles = pre 1990 records only, grey circles = post 1989 records only, black circles = both periods

The available data includes records from 738 of the hectads in the British Isles, shown on the above map. This, and the other maps shown on pages 7 and 8, were kindly prepared by Stephanie Rorke of BRC. The total of 738 includes 711 or 25 per cent of the 2845 hectads including land in Great Britain, but only 27 hectads in Ireland. Although not all of the British hectads include woodland, in which most platypezids are found, this indicates a relatively low level of recording nationally, which needs to be taken into account in determining status.

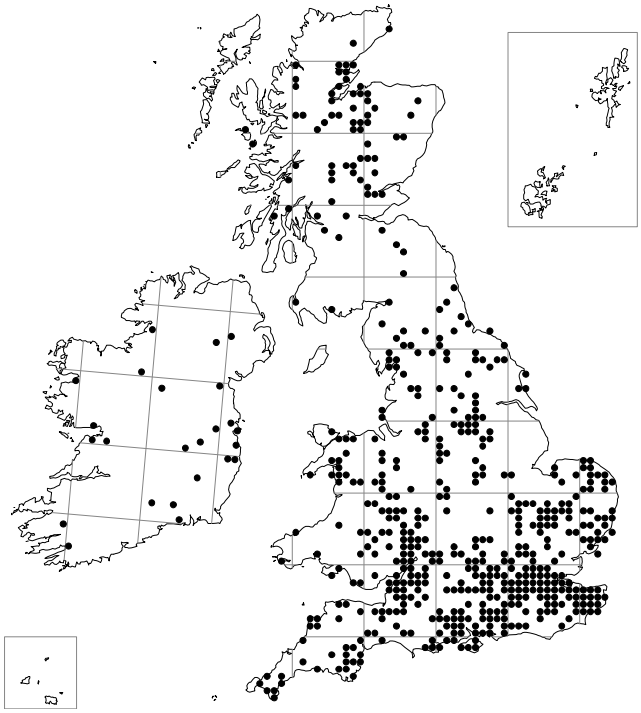
Platypezidae was included in the review of scarce species by Falk & Chandler (2005), when eleven species were accorded conservation status (2 Vulnerable, 1 Near Threatened, 1 Data Deficient and 7 Nationally Scarce). Ten of these had been listed with status by Falk (1991); *Agathomyia wankowiczii* (cover photograph of the 2016 Spring Bulletin) was added although considered likely to have been a recent arrival in this country (first record in 1990) because of its conspicuous galls on *Ganoderma*, which were unlikely to have been overlooked earlier.

Four other species had been added to the British list too recently to be assessed: ***Agathomyia cinerea*** (added in Chandler 1998, first record in 1992, now 19 hectads in S England north to Leicestershire and Anglesey in N Wales); ***Agathomyia sexmaculata*** (added by Chandler 2002a, recorded in that year at Thompson Common, Norfolk, not yet found again in Britain); ***Paraplatypeza bicincta*** (added by Chandler 2002b, first record in 2001, now 16 hectads in S England); ***Microsania vrydaghi*** (added by Ismay 2002, first record in 2001, since found at two other sites). Only one other species has been added since, ***Platypezina connexa*** (Halstead 2016, found in the New Forest, Hampshire in 2015). It is possible that some or all of these species are recent arrivals in Britain, and the spread of *Agathomyia cinerea* and *Paraplatypeza bicincta*, following on that of *Agathomyia wankowiczii*, tends to confirm this.

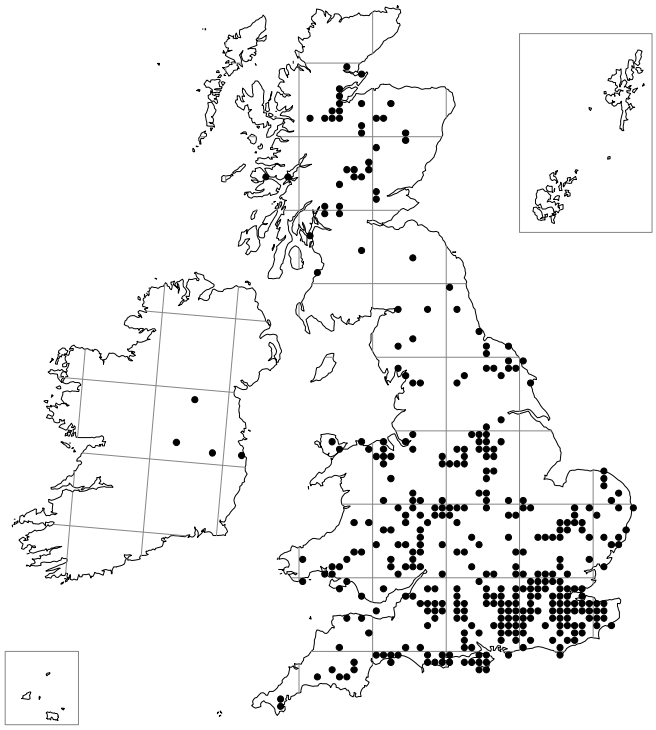
In 2012 a new status review (as yet unpublished) was carried out. This attempted to assess whether there had been recent changes in status, basing the comparison on the numbers of hectads in which a species had been recorded before 1990 and since 1989. When carrying out the earlier review published in 2005 (first compiled in 1995) there was a general trawl only for records of the species already assigned status by Falk (1991). There was a good idea of the frequency of other species from the recording experience of myself and others, and from my examination of museum and other collections, which provided a good coverage of the historic records. For the new review, records in the Dipterists Forum database and on the NBN were also available.

However, the number of post-1989 hectads for several common or frequent species was significantly less than for the pre-1990 period. This is not too surprising as the earlier period encompassed more than a century, going back to the treatment of this family in Verrall's 1901 *British Flies* volume and into the 19th century with recording by Dale, Haliday and Walker. Overall there are more than 100 hectads known for 10 species and none of those is likely to warrant conservation status. As, however, the post-1989 hectad total was less than a hundred in most cases, this could indicate at least Nationally Scarce status *if the level of recording for the family nationally wasn't taken into account*.

A comparison is made here between the number of hectads in which there are records for the family in the two periods. Of the 711 hectads for which there are platypezid records in Great Britain, 522 have records up to 1989 while 377 have records from 1990 onwards, with just 188 in common between the two periods.



Hectads with platypezid records up to 1989



Hectads with post-1989 platypezid records

These maps demonstrate the extensive gaps in recording and the south-eastern bias, with concentrations of records in some other areas indicating location of collectors or of field meetings, particularly those taking place in the autumn. There is plenty of scope for recording in new or underworked regions.

The Irish fauna is especially poorly known, with a high proportion of the records from my own collecting, some provided by Jim O'Connor and the 19th century records by Haliday. However, 16 species have been recorded there, more than half the British fauna before the post-2000 additions.

The status of *Bolopus furcatus*

Bolopus furcatus is a widespread species found throughout the British Isles. It develops in the common dryad's saddle bracket fungus *Polyporus squamosus* and may be locally numerous, but it is small and entirely dark coloured in both sexes, lacking any sexual dimorphism in colour pattern. It is also closely tied to its host fungus.

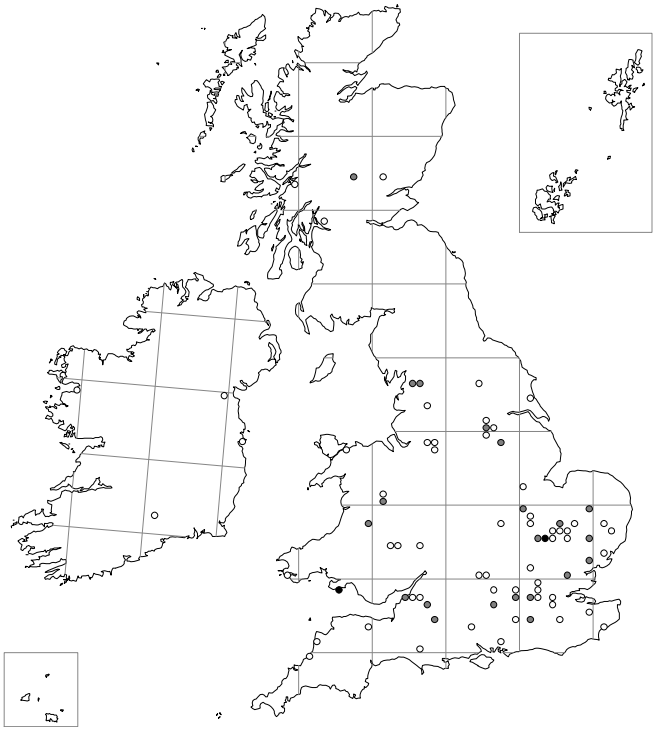
A female of *Bolopus furcatus* ovipositing under a bracket of *Polyporus squamosus* (from Ståhls *et al.* 2012)

The fungus is parasitic on deciduous trees, especially elm (*Ulmus*), beech (*Fagus*) and sycamore (*Acer*), where it causes a white rot decay. The brackets are produced annually from spring to summer, with *Bolopus furcatus* adults visiting from April to September, and larvae being found from May to September. Females may be readily observed assembling for oviposition on the white underside of fresh brackets, but because of this specialised behaviour they only occasionally come to the notice of general recorders. Ståhls *et al.* (2012) illustrated adults and larvae, when confirming its presence in Finland

Because very few recent records were known to me, dipterists likely to have recorded it were contacted in February 2016, increasing post-1989 hectads to 23.

Females of *Bolopus furcatus* under brackets of *Polyporus squamosus* (from Ståhls *et al.* 2012)

The map below shows that, while there are only 23 hectads with records from 1990 onwards, it had been recorded in 56 hectads in Britain and 4 in Ireland before 1990. Comparing these numbers of hectads alone might suggest that a substantial decline had occurred in the population of *B. furcatus*. However, as with most widespread species, the records up to 1989 are from a much longer period, spanning more than a century of recording but by a limited number of recorders, and consequently a relatively small number of hectads are recorded within each decade.



Distribution of *Bolopus furcatus*: open circles = pre-1990 records only, grey circles = post-1989 records only, black circles (only 2) = both periods.

A breakdown of records into periods, each of two decades from 1890 to 2011, shows the following results:

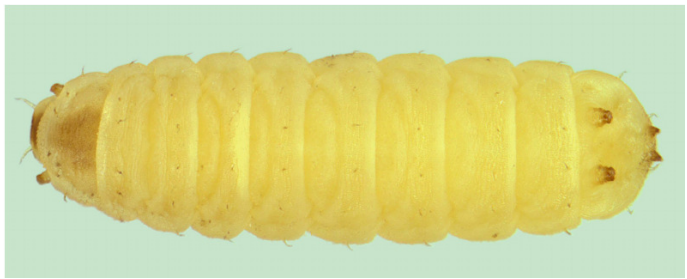
Post-2011 5 hectads (3 recorders)
1990-2011 18 hectads (12 recorders)
1970-1989 22 hectads (9 recorders)
1950-1969 19 hectads (13 recorders)
1930-1949 8 hectads (7 recorders)
1910-1929 8 hectads (7 recorders)
1890-1909 7 hectads (8 recorders)

Only eleven hectads appear in more than one of these recording periods, and only two of the 23 post-1989 hectads had previously been recorded for *B. furcatus*. Overall there have been 43 recorders, 22 of whom have contributed a single record. More than 350 specimens are known to be in collections, relating to 126 records, of which 19 were made by me and 11 by Ivan Perry, i.e. a quarter of all records were by two recorders.

The map shows how widespread it is. It is known from 96 sites in 31 counties in Britain (25 counties throughout England; Caernarvon, Glamorgan and Montgomery in Wales; Dunbartonshire, Argyll and Perthshire in Scotland) and 4 widely separated counties in Ireland. Nine records are of rearing from larvae or puparia found in the host fungus; 21 other records are certainly of adults found on the fungus, and this was probably also true of many others where this information wasn't recorded.

The low number of hectads in common between any of the periods suggests that total recording has covered only a small proportion of hectads within the area of occupancy. That a quarter of all records were made by two recorders confirms that intensive and exhaustive recording by a larger number of recorders and targeting the host fungus would result in a more comprehensive knowledge of its distribution and abundance. There is no reason to suppose that it no longer occurs in any of the recorded hectads where suitable habitat is present. It is thus likely to occur in many more than 100 hectads, and probably does not warrant conservation status.

However, one has to be there on the right day, when the fungus is fresh, to find visiting adults of this species.



Larva of *Bolopus furcatus* (from Ståhls *et al.* 2012)

The past

The history of recording of *Bolopus* related above, and other historic records of platypezid distribution, demonstrate the debt owed to past recorders of this family.

It was thanks to George Verrall (1901), who included Platypezidae with Syrphidae and Pipunculidae, in his first volume of *British Flies* that a firm basis was provided for study of flat-footed flies in the British Isles. In his usual style he gave detailed descriptions of the 14 species known to him, as well as *Opetia nigra* and *Atelestus pulicarius* (as *Platycnema pulicaria*), two species which are no longer included in the family. These were illustrated by drawings of wings, abdominal patterns and other diagnostic features, drawn by his nephew James Collin.

Most of the species then recognised had been described by the early 19th century European authors Meigen, Fallén and Zetterstedt, but one of the species included by Verrall was described by their contemporary, the Irish dipterist Alexander H. Haliday. This was *Platypeza infumata*, now *Polyporivora ornata* (Meigen's name proposed earlier in the same year (1838) having priority, as discussed by Verrall). Verrall (1901) also described two new species, *Agathomyia collini* found by his nephew, and *Platypeza hirticeps* by Dr John H. Wood; both names are still valid.

There had been an earlier treatment of the British Isles species by Francis Walker (1851), who recognised 15 species, with some input from Haliday. Some of these were concluded to be synonymous by Verrall, but *Platypeza aterrima*, previously described by Walker in 1835 and placed in synonymy with *P. fasciata* by Verrall, has since been recognised to be a good species.

The remarkable contribution to knowledge of British Platypezidae by Dr John Wood was described in the recent issue of *Dipterists Digest* devoted to him and to Colonel Yerbury (Chandler 2015: pp 34-35). It wasn't mentioned there that his records, including those of *P. hirticeps*, had already added substantially to the data cited by Verrall. Wood went on to add five species to the British list in the genera *Callomyia* and *Agathomyia*.

***Callomyia elegans* female (photo Dmitry Gavryushin)**

Yerbury's specimens from South Wales added *Callomyia elegans*, though it had been correctly recorded by Walker (1851) from Ireland (in Haliday's collection) under its synonym *C. leptiformis*. Walker's "*elegans*" comprised a male of *C. amoena* and female of *C. speciosa*. *Callomyia elegans* had also been found earlier in England (Glanville's Wootton, Dorset in 1861 and 1890) by C.W. Dale.

Smoke flies (*Microsania* species) came to notice as British insects belatedly when the two most frequent species *M. pectipennis* and *M. pallipes* were recorded by Collin (1934, see p. 2), but records at bonfire smoke rapidly followed starting with Edwards (1934).

My interest began in 1966 when I found *Agathomyia falleni* at Knole Park, Kent (Chandler 1968). This was then a recent addition to the British list, first found by Len Parmenter (1953) at Box Hill in 1952. It is now known to occur widely in S England (31 hectads) but still arouses delight whenever it is seen in the field. Like *A. unicolor* it develops in the bracket fungus *Bjerkandera adusta*, but is much less widespread.

***Agathomyia falleni* female (photo Jeremy Richardson)**

Chandler (1974) attempted to clarify the nomenclature and synonymy in *Callomyia* and *Agathomyia*, and added *Microsania collarti* (as *M. stigmaticalis*), *Agathomyia lundbecki* (as *A. biseta*) and *Seri obscuripennis* to the British list. McLean & Chandler (1982) added *Microsania straeleni*. Later additions from 1990 onwards are discussed above (p. 6).

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