

NORTHERN IRELAND
SPECIES INVENTORIES

MUSCIDS
(DIPTERA: FANIIDAE AND MUSCIDAE)

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INTRODUCTION

This is one of a series of species inventories covering taxonomic or ecological groups of terrestrial and freshwater invertebrates of Northern Ireland. These reviews provide an inventory of the northern Irish fauna as currently known and for each of these species, a brief statement on its status in Northern Ireland. These statements will be used as the local species account in the **Recorder** database of **CEDaR**, The Northern Ireland environmental records centre.

The majority of muscid flies are rather dull (at first glance) flies but once recognised are relatively easily identified in the field or with the aid of a low-power microscope. A good general account of the families Fanniidae and Muscidae, grouped together and with Anthomyiinae (not covered here and now considered a family) is given by Colyer and Hammond (1968). The biology of the Fanniidae and Muscidae is covered by Skidmore, P. (1985), Oldroyd, H. (1964) and Seguy, E. (1950), all of which works contain extensive bibliographies. Good general information on Diptera is given in Stubbs and Chandler. (1978).

The identification of Fanniidae and Muscidae is best accomplished by a judicious use of the following keys, swapping one for another if difficulties are encountered: Fonseca (1965), Seguy (1923) and a series of keys to genera by Collin and Ringdahl. A good deal depends on the proper interpretation of bristle characters especially of the legs. A most important point is omitted from all current key works... the leg (femur and tibia) flexes in the posterodorsal plane: once this is understood no further problems should be encountered excepting with flies from alcohol traps which lose their characteristic patterns or tessellations. To properly place Fanniidae and Muscidae Unwin (1983) is most useful.

Taxonomy and nomenclature

The taxonomy and nomenclature of the muscid flies of the British Isles is now relatively stable and here the names used are those in the **RECORDER** package. These are out of step with some early literature and with some recent continental works but I have included synonymies which I know to be correct and appropriate.

Biology

There is no comprehensive account of adult muscid flies. what information is available on such matters as flower-feeding preferences, swarming, general behaviour, population sizes and so on is scattered through the literature and frequently the muscids themselves are not the prime object of study. As biological data on adult muscids accumulates it is being added to the **RECORDER** data base (**CEDaR**). The

situation in respect of larvae is much better. Skidmore, (1985) gives a comprehensive account. Basically the muscids fall into three biological groups. In group 1 (*Phaonia*, *Helina* and most species of *Mydaea*, *Hydrotaea*, *Limnophora* and the *Coenosiinae*) the larvae leave the egg in the last instar (third) and are predaceous from the outset. In group 2 (*Hebecnema*, *Gymnodia* and some species of *Hydrotaea* and *Mydaea*) the larvae leave the egg in the second instar and are saprophagous until the third when they become predaceous. In group 3 (Muscinae, Stomoxinae, certain Phaoniinae and all the Fanniidae) the larvae leave the egg in the first of the three instars and reach the pupa without becoming carnivorous although sometimes structurally capable of it.

The Irish fauna in a regional context

Here the families Fanniidae and Muscidae are grouped together following Fonseca. Separated the numbers of species are as follows:

Fanniidae	60 British Isles	: 27 Ireland	: 16 Northern Ireland
Muscidae	278 British Isles	: 183 Ireland	: 109 Northern Ireland

The breakdown for the British Isles fauna into regions may be helpful

S England (southern half of Britain)	: 290	(48 British Isles species not recorded)
Scotland	: 247	(91 British Isles species not recorded)
N England (Northern half of England : i.e. Lancs-Cheshire to Northumberland/ Cumberland	: 237	(101 British Isles species not recorded)
Ireland	: 186	(152 British Isles species not recorded)
Isle of Man	: 32	(101 British Isles species not recorded)

Status of muscid flies in Britain (only)

Falk, (1992) gives a categorised (RDB1, 2, 3, and K, notable and extinct) (list of fanniid and muscid flies on pp. 167/8 details of some of which will appear no doubt in Vol. 2 (forthcoming).

The conservation of Fanniidae and Muscidae

No matter what their habitat all larval muscids require moisture. If the species lives as a larva in dead wood it must be moist dead wood, if in excrement or decaying matter these too must be moist. The prime conservation requirements then is for muscid rich habitats or sites containing rare muscids to be kept from drying out. Drainage projects, then, represent the biggest threat to most insects although special measures must be taken with dead wood species (see Stubbs and Chandler, 1978, p.65)

Literature

Only primary and recommended sources are listed here. A proper bibliography will be assembled as part of the RECORDER programme at the Ulster Museum.

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FANNIIDAE

Fannia armata (Meigen, 1826)

A fairly frequent (20 or so sites) species in both Northern Ireland and the South. It occurs in both open and wooded situations and is a very common species in South England although not in the North.

Fannia canicularis (Linnaeus, 1761)

A very common and probably ubiquitous species. Anthropogenic. As in the case of other very numerous and widely distributed species actual records are sparse until recently.

Fannia fuscula (Fallén, 1825)

The status of this fly in Britain remains uncertain. Its distribution is scattered though it has a wide range. In Ireland it is known only from Kerry, Wicklow, Mayo and Down. The Down site (Tollymore) is typical: well-wooded with mature trees.

Fannia lustrator (Harris, 1780)

Widely scattered right across Britain and Ireland but local. Northern records from Down and Antrim. Woods which seem entirely suitable appear not to contain it. It is usually obvious, hovering in small swarms in deep shade beneath branches of large trees especially beech or sycamore.

Fannia manicata (Meigen, 1826)

Generally very common and certainly widely ranging and densely distributed in Britain. This is not true of Ireland where the fly is known only from Kerry, Waterford, Clare and Dublin in the Republic and Fermanagh, Down and Londonderry in the North.

Fannia mollissima (Haliday in Westwood, 1840)

Common and widely distributed at least in Cos. Antrim and Down, especially in woodland. There are few records from elsewhere in Ireland but little collecting has been done in other counties in May when the fly peaks. It is generally distributed but local in Britain. It favours marshy places with a marked preference for hilly areas.

Fannia monilis (Haliday, 1838)

Known in Ireland only from Haliday's Holywood, Co Down types. Haliday refers to it as 'not uncommon'. Repeated searches for it around fungi and fungus infested logs (it has a fungus-feeding larva) have proved fruitless. Oddly since it is a common and generally distributed species in Britain (definitely not in N. England).

Fannia parva (Stein, 1895)

Known from 5 Scottish counties and 20 or so English *Fannia parva* is known in Ireland only from Copeland Islands, Co Down. The fly has been reared from birds' nests especially those of house martins and is reported as swarming on trampled grass.

Fannia postica (Stein, 1895)

Generally distributed and frequent in Britain. The few Irish records are all from woodland. In Down and Antrim.

Fannia pretiosa (Schiner, 1862)

A common woodland species in southern England often feeding on umbels in diffuse sunlight as in the captures at Inishmakill, Co Fermanagh and Tollymore, Co Down. The only other Irish records are from Glendalough, Co Wicklow. It is much rarer in Northern Britain (only a single record from N. England).

Fannia rondanii (Strobl, 1893)

Common and widely distributed in Ireland not unexpectedly since in Britain it is a northern and western species preferring hilly districts. It is found in wooded or scrubby areas.

Fannia scalaris (Fabricius, 1794)

A common species in Britain which develops in a wide variety of decomposing materials. Its Irish distribution is surprisingly limited to Dublin, Mayo and Down. It has been taken on a number of occasions at Dixon Park, Belfast but by no means often. It is not recorded from the Isle of Man.

Fannia serena (Fallén, 1825)

A very common and widely distributed species as in Britain. Most prolific in wooded areas.

Fannia similis (Stein, 1895)

Common and generally distributed in both Britain (but not north of Lancashire) and Ireland.

Fannia sociella (Zetterstedt, 1845)

Common and generally distributed in both Britain and Ireland.

Fannia subsimilis Ringdahl, 1934

A widely distributed but very local species in Britain and rare in N. England. In Ireland only known from Barnett's Park, Co Antrim.

MUSCIDAE

Achanthiptera rohrelliformis (Robineau-Desvoidy, 1830)

Widely distributed but very local. Although the adult is occasionally seen at flowers the species is best collected by rearing from wasps' nests where the larva is a scavenger. Until 1986 the species was only known from a Haliday specimen (thought to be lost but later discovered in the Rondani Collection, Florence) and from a female

from Forth Hills, Wexford. In that year several were identified as larvae from a wasps nest at Hilden, Co Antrim.

Polietes albolineata (Fallén, 1823)

A common and generally distributed species in both Ireland and Britain. *P. albolineatus* occurs wherever horses are pastured. It bears a remarkable superficial resemblance to *Morellia* spp.

Polietes hirticrura Meade 1887

A northern and western species in Britain most common in Scotland. In Ireland it is known from Clare, Westmeath, Roscommon, Sligo, Tyrone, Fermanagh, Antrim and Down. *P. hirticrura* is unknown outside the British Isles. It only occurs where cattle are grazed and is solitary.

Polietes lardaria (Fabricius, 1781)

A common and generally distributed fly, rural in both Ireland and Britain. The 'larder fly' is inaptly named for this fly is purely an outdoor species. It is often seen in huge numbers on tree trunks, fences or on fresh dung of animals (including man).

Mesembrina meridiana (Linnaeus, 1758)

The 'noontide' fly, glossy black with orange wing bases. A very familiar fly which is common and very widely and densely distributed in Britain and Ireland. The larvae live in dung, predatory on other fly larvae and so it is most common in cattle-rearing areas.

Mesembrina mystacea

A surprise addition to the British List. Found in a Malaise trap at Rea's Wood, Co Antrim. *M. mystacea* is now believed to have been accidentally introduced with cattle imported from continental Europe to the nearby Greenmount Agriculture College.

Dasyphora cyanella (Meigen, 1826)

Common throughout Ireland, as in Britain, in pastures and lightly wooded or open country wherever cattle are grazed. Less frequently it may be found in purely arable areas.

Orthelia cornicina (Fabricius, 1781)

Known in Ireland only from Clare (Corofin), some Antrim Glens and Bangor, Co Down (Stricklands Glen). It is a southern species in Britain decidedly rare in Northern England.

Orthellia viridescens (Robineau-Desvoidy, 1830)

A common and widely distributed species in Ireland as in Britain. Primarily a fly of pastures where cattle and other domestic herbivores are grazed. In autumn it congregates in stony walls and screes for hibernation.

Morellia aenescens Robineau-Desvoidy, 1830

A local fly, common though occurring throughout Britain. Known from Fermanagh (Correl Glen) and Co Antrim (Rathlin Island) and four southern localities in Ireland. Neither of the two Northern Ireland localities are the lightly wooded cattle-grazing areas typical for this species.

Morellia hortorum (Fallén, 1816)

A common and widely distributed species in Ireland as in Britain, occurring in woods, pastures and open country but never as often as *M. simplex*.

Morellia simplex (Loew, 1857)

A dung breeding fly which makes itself a nuisance by sucking sweat from animals including man. Very common and widely distributed in both Britain and Ireland.

Musca domestica Linnaeus, 1758

The common house-fly of the North-west temperate. Ubiquitous but not anywhere near as common in houses as the fanniid *Fannia canicularis* - the lesser house-fly. Far less abundant than formerly.

Azelia cilipes (Haliday, 1838)

Generally distributed and common in Britain. Irish records are widely distributed but few. In the North it is known from woods and open country and two *Nardus* moorland sites.

Azelia macquarti (Staeger, 1843)

A common and widely distributed species in Ireland as in Britain, especially on bracken or running on the foliage of trees, particularly sycamore where it feeds on exuded honey. It is found not just in woodlands but in bushy and scrubby places and quite often on upland moors.

Azelia triquetra (Wiedemann, 1817)

Recorded from Holywood, Down in the last century where it is still abundant. There is only one other Irish locality, Baldoye, Co Waterford. Uncommon in Britain and very local though widespread.

Thricops diaphanus (Wiedemann, 1817)

A widely distributed and common species in Britain. There are very few Irish records of this predominantly woodland insect (larvae are carnivorous on other larvae in fungus). In Ireland *T. diaphanus* is known only from Kildare, Wicklow, Mayo, Monaghan and Down (recent record to add to a nineteenth century one).

Thricops hirsutula (Zetterstedt, 1838)

A Northern high ground species in Britain. Very common in the Scottish highlands. It is frequent in Antrim and the Mourne, Co Down. The southern most Irish record is Lough Dan, Wicklow. It prefers lighter well-drained soils under trees.

Thricops longipes (Zetterstedt, 1845)

Widespread throughout Britain but very local in the South and abundant in the Scottish highlands. In Ireland this species is known only from the Mourne, Co Down (Tollymore). Extensive search in the Wicklow and Kerry mountains has failed to reveal it. It is an essentially boreal fly tolerant of open country and climatic extremes.

Thricops nigrifrons (Robineau-Desvoidy, 1830)

Widespread throughout Britain becoming more densely distributed northwards and abundant in the Scottish highlands. In Ireland this species is known from S. Kerry (Kenmare) and in Co Down (the Mourne: Tollymore). *T. nigrifrons* is a woodland insect less tolerant of climatic extremes than *T. longipes*.

Thricops nigritella (Zetterstedt, 1838)

Frequent on high ground in Wales and Northern England *T. nigritella* is abundant in the Scottish highlands. In S. Ireland it is known only from Waterford but is reasonably common in Fermanagh (Lough Navar Forest) and Antrim (Garron Plateau, Glens of Antrim) localities which favour this upland, woodland fly.

Thricops rostratus (Meade, 1882)

A northern and montane species common and widespread in Scotland becoming less frequent and local in Northern England (only). In Ireland it is known only from Clare (Black Head) and Fermanagh (Lough Navar Forest) a good example of a montane species occurring at low altitudes in Ireland.

Thricops semicinerea (Wiedemann, 1817)

Common and widely distributed in both Britain and Ireland, but purely a woodland species. The Northern Ireland sites unlike those in N. Britain are not predominantly light soiled.

Trichopticoides decolor (Fallén, 1824)

A 'sweat fly' attracted to animals including man, often along with another muscid *Hydrotaea irritans* which is very much commoner. There are fewer than 25 sites in S. Britain. In Ireland it is known only from Annagh Bog, Co Londonderry, odd since it is common in N. England where it is found in woods, pastures and grassy places where cattle are grazed.

Drymeia hamata (Fallén, 1822)

Very common and widely distributed both in Britain and Ireland. Almost always seen at flowers especially yellow composites in wooded and open country alike but avoiding excessively urbanised areas.

Ophyra leucostoma (Wiedemann, 1817)

Generally distributed and common in Britain. Local but widely distributed (at least in eastern Ireland). Town gardens, pastures and woods.

Hydrotaea albipunctata (Zetterstedt, 1845)

A single Northern Ireland record from Copeland Is. Co Down, but there are several Irish records and the species is wide ranging and fairly common in Britain.

Hydrotaea basdeni Collin, 1939

The only British isles records are Bix, Oxfordshire (owl's nest), Woodstock, Oxfordshire, (unidentified bird's nest) and Killard Point, Co Down, (sand-martin's nest). RDB3 in Britain (Falk, 1991)

Hydrotaea bimaculata (Meigen, 1826)

A common species in southern Britain (becoming less common and more local in England and very local in Scotland). Fairly frequent and widely distributed in Ireland but in the North only known from Holywood, Co Down (1832) and Rea's Wood, Co Antrim. Bushy areas often in damp situations.

Hydrotaea capensis (Wiedemann, 1818)

Known from only 4 localities in S. Britain and from the Hebrides. When it occurs it is usually in great numbers associated with bulk fish or bone meal. The only Irish specimens are from Holywood Co Down (early nineteenth century).

Hydrotaea dentipes (Fabricius, 1805)

Common and widely distributed. A 'sweat' fly. Found in urban and rural areas, woodlands and open country.

Hydrotaea irritans (Fallén, 1823)

Very common and widely distributed. The most prevalent and widespread 'sweat' fly in Ireland. The larval habitat is soil either in pastures or under long grass. In Britain the fly is usually absent from moorland areas, being an insect of lower lightly wooded areas, but in Ireland it is common in the least hospitable terrains.

Hydrotaea meteorica (Linnaeus, 1758)

A generally distributed and common fly in Britain mainly in woods. Known as Irish from 8 specimens, one of which (La Specola, Florence) is from Tollymore, Co Down.

Hydrotaea militaris (Meigen, 1826)

A fairly common and widely distributed species in both Britain and Ireland. It is decidedly western in Britain and mainly upland. The females have a conspicuous habit of congregating on trampled rank vegetation.

Hydrotaea similis Meade, 1887

Widely but not densely distributed in Britain mostly in hilly districts. Very local in Ireland: Kerry, Waterford, Galway, Antrim and Down only. The Down record is from Copeland Island, the Antrim records from the Lagan Valley Regional Park where it is locally abundant.

Muscina assimilis (Fallén, 1823)

Common and widely distributed in England less so in Ireland. Southern records are few but widely scattered. In the North the species is known only from Co Down (Holywood and Newtownards) and Antrim (Lagan Valley Regional Park). It is the rural counterpart of *M. stabulans* favouring at least lightly wooded areas.

Muscina pabulorum (Fallén, 1817)

Common and widely distributed in Britain and fairly widespread and locally frequent in the South of Ireland but the only Northern Ireland record is from Magilligan, Co Londonderry, odd since the fly favours wooded areas in Britain.

Muscina stabulans (Fallén, 1817)

Not as densely distributed and common as in Britain but locally fairly frequent and widespread. The Northern records are mostly from Antrim and Down the most populous counties. Not surprising since *M. stabulans* is usually associated with human habitation. However in Northern England there are large areas of human dwelling where the fly is not found.

Lophosceles cinereiventris (Zetterstedt, 1845)

Widely distributed and common in Britain but in Ireland apparently local. There are records from Co Dublin, Co Wicklow, Co Cork, Co Waterford and Co Mayo in the South. In the North it has been found only in Down, in shaded parts of woodlands feeding on umbels.

Lophosceles mutatus (Fallén, 1825)

A frequent species in Britain widely distributed but with very scattered records. The same seems to be true of Ireland with 12 records indicating a wide range (Kerry, Dublin, Mayo, Down). Northern records are from Down where females have been found on umbels in shaded woodlands, males more often in swarms in sunny places nearby.

Phaonia basalis (Zetterstedt, 1838)

Common and widely distributed in Ireland as in Britain and recorded from all parts. It is most often encountered in the flowers of Compositae and Umbelliferae.

Phaonia errans (Meigen, 1826)

Common and widely distributed. One of the most regularly seen muscids on sunlit tree trunks, palings and fences, but less recorded than *P. basalis* since it is not a flower visitor to the same extent.

Phaonia erronea (Schnabl, 1886)

An uncommon species in Britain although it ranges only to the N and W of the Tees-Exe line. There is only one Irish record: Fermanagh, Lough Navar Forest, Lough

Achork where it was encountered in shaded woodland in considerable (100+) numbers.

Phaonia halterata (Stein, 1893)

Records of this uncommon species are mostly from the southern half of Britain (although it is known from Inverness Scotland). In Ireland it is known from Wicklow, Mayo and Down (Rostrevor) a typical damp woodland habitat.

Phaonia incana (Wiedemann, 1817)

Common and widely distributed in Ireland as in Britain. Often encountered in abundance on Compositae and umbelliferous flowers often with *P. basalis* and assorted Syrphidae.

Phaonia mystica (Meigen, 1826)

A very uncommon (less than 20 records) species in Britain. *P. mystica* is only found in old woodland sites (ancient usually). In Ireland it is known only from Rossacroonaloo Wood, Co Kerry and Rostrevor Wood, Co Down both old oak mossy woodlands.

Phaonia pallida (Stein, 1897)

A common and widely distributed species in Ireland as in Britain. A woodland insect.

Phaonia palpata (Stein, 1897)

A local species with a wide range (most of Britain and Ireland). It is found in damp shady woods. There are Northern records from 10 widely scattered woods indicating a wide range.

Phaonia populi (Meigen 18 26)

A widely distributed and fairly common species throughout Britain and Ireland.

Phaonia rufipalpis (Macquart, 1835)

Wide ranging but with a very scattered distribution across Britain in woodlands. Sometimes found along hedges in intensively agricultural areas. In Ireland only known from Cos. Waterford, Kildare and Antrim (Rea's Wood).

Phaonia serva (Meigen, 1826)

Wide ranging and fairly common in both Britain and Ireland. Found in wooded areas or at least where trees are present in numbers.

Phaonia vagans (Fallén, 1825)

A most uncommon species in Britain, but wide ranging. In Ireland the species is known from Kerry, Antrim (Rea's Wood) and Londonderry (Toome). Little is known of its habitat preferences.

Phaonia variegata (Meigen, 1826)

Widely distributed and common. A characteristic fly of woodlands

Phaonia viarum Robineau-Desvoidy, 1830

Generally distributed but scattered in Britain. There are Irish records from Wicklow, Armagh (Newry Forest), Down (Holywood), Copeland Islands. It is essentially a lowland species, associated with woodland where it favours sheltered tree trunks.

Helina abdominalis (Zetterstedt, 1846)

Known as Irish only from a single specimen from Rostrevor Oakwood, Co Down 19 July 1975. A tree rot-hole species mainly southern in Britain. Falk 1991 "Notable".

Helina anceps (Zetterstedt, 1838)

A fairly common species throughout Britain and probably Ireland though it is very scattered and infrequent in N. England. The N. Ireland records are all from low-lying areas and usually riversides.

Helina atricolor (Fallén, 1824)

Known as Irish only from a single specimen from Rostrevor Oakwood, Co Down 19 July 1975. An upland fly in Britain and mainly northern and western.

Helina depuncta (Fallén, 1825)

Widely ranging but with a scattered pattern of distribution in both Britain and Ireland. Not nearly as ubiquitous in the British Isles as has been suggested.

Helina fratercula (Zetterstedt, 1845)

A mountain species in Britain, or at least confined to areas where the ground is higher than 300 metres. The same is true of Ireland where the species is found only in the Wicklow Mountains, Co Wicklow and the Mourne, Co Down, on open moorland or bracken beds in or on the site of upland woods.

Helina impuncta (Fallén, 1825)

Common and widely distributed in Britain and Ireland, probably occurring everywhere save in the most elevated, open areas or in heavily urbanised districts. Most abundant in bushy or wooded areas or amongst rank vegetation.

Helina laetifica (Robineau-Desvoidy, 1830)

Very common and widely distributed in both Britain and Ireland. Probably the most ubiquitous and abundant Irish muscid although oddly not recorded for the Isle of Man.

Helina lasiophthalma (Macquart, 1835)

Wide ranging and with a scattered distribution in Britain where it is uncommon except in S. England. In Ireland *H. lasiophthalma* is known only from Dublin (Malahide) and Down (Murlough) both coastal sites and both eastern but both intensively worked.

Helina latitarsis Ringdahl

A fairly common and widely distributed species in South England but far less known in North England and Ireland. It may be a woodland insect of lighter soils (to judge from the records).

Helina maculipennis (Zetterstedt, 1845)

A northern species in Britain and very local although there are a few southern records. The only Irish record is from Northern Ireland (Co Down, Mourne Mountains, Spelga Dam). It may well be an insect of higher ground.

Helina pertusa (Meigen, 1826)

An uncommon species in Britain from Cheshire southwards. There are no Scottish records. In Ireland it is known from Clare and Antrim (Shane's Castle) where it is found on the tree trunks where it will lay its eggs, the larvae developing under the bark. It is rarely seen as an adult.

Helina protuberans (Zetterstedt, 1845)

A sand-dune species, but not one which is present in every sand-dune system. Wide ranging in Britain but in Ireland found in Kerry, Wexford and Down (Murlough National Nature Reserve).

Helina pubiseta (Zetterstedt, 1845)

A fairly common species in Scotland and on higher ground in (mostly) Northern England and in Wales. In Ireland it is known from Cos Dublin, Londonderry (Magilligan) and Down, (Rostrevor). It favours hilly areas where it is found mainly in woods or along hedgerows.

Helina quadrimaculella Hennig, 1958

A very local species in which females are very rarely recorded. Wide ranging in Britain. In Ireland the species is recorded from Kerry, Clare, Leitrim and Tyrone (Fintona). It is invariably associated with old established woodland although this may be fragmentary.

Helina quadrum (Fabricius, 1805)

Frequent and widely distributed in both Britain and Ireland. It is found most often in lightly wooded areas and may have a preference for river banks or lakesides.

Helina subvittata (Seguy, 1923)

A widely ranging but very local species in Britain. In Ireland it is known from Waterford, Mayo and Down (Tollymore Forest Park and Stormont Park). The former site where it is abundant is the more typical (upland woods and moors).

Brontaea humilis (Zetterstedt, 1850)

The status of this fly in Britain is uncertain, but it is quite wide ranging although local. In Ireland it is known from Cos Waterford, Dublin, Louth, Monaghan and Down (Drumbo). The Drumbo occurrence in a house (roof space formerly occupied by bats) is typical.

Hebecnema affinis Malloch, 1921

Widely ranging and densely distributed in both Britain and Ireland. Encountered most often in rank vegetation and amongst brambles.

Hebecnema fumosa (Meigen, 1826)

An uncommon species in Britain where it is confined to the southern half of England. In Ireland it is known from Dublin, Kerry and Down (Stormont) the last being the most northerly record in the British Isles.

Hebecnema nigricolor (Fallén, 1825)

A widely ranging species with a scattered distribution but nowhere common. These remarks apply equally to Britain and Ireland. A woodland species particularly in hilly areas.

Hebecnema umbratica (Meigen, 1826)

A widely ranging species with a dense distribution and very common in Britain and Ireland. Extends from sea level to high moors and occurs both in urban and rural areas.

Hebecnema vespertina (Fallén, 1823)

A fairly common species found right across Britain but fairly scattered. The same appears to be true of Ireland but in the past *vespertina* was often confused with the much commoner *affinis*.

Mydaea affinis (Meade = *discimana* Malloch, 1921)

An uncommon species in Britain with a very scattered distribution but ranging across the whole island. In Ireland it is known only from West Mayo and Fermanagh (Lusty Beg). Has been bred from *Boletus* fungi.

Mydaea ancilla (Meigen, 1826)

An uncommon species in Britain with a very scattered distribution and found only in England from Yorkshire southwards. In Ireland it is known only

from Northern Ireland: Co Antrim (Barnett's Park; Dixon Park (both Belfast)) and Rea's Wood.

Mydaea anicula (Zetterstedt, 1860)

A very uncommon species in Britain found in only 4 locations in Scotland and 14 in England. There are Irish records from Clare (Lough Derg) and Antrim (Belfast, Barnett's Park). It is an insect of damp woodland.

Mydaea electa (Zetterstedt, 1860)

Widely ranging across Britain but with a scattered distribution mostly in S. England. In Ireland it is known only from Co Antrim (Barnett's Park). It is a woodland species.

Mydaea scutellaris Robineau-Desvoidy, 1830

A widely ranging, densely distributed species common right across Britain and Ireland. It is essentially a species of at least lightly wooded areas and is quite unknown where trees are absent.

Mydaea setifemur Ringdahl, 1924

Widely ranging across Britain with a very scattered distribution. Not known from Scotland. In Ireland it is known from Waterford (Stradbally), Wicklow (Glendalough), Fermanagh (Innishmakill) and Down (Murlough National Nature Reserve). It is a woodland species (light woodland at Murlough).

Mydaea urbana (Meigen, 1826)

A widely ranging, densely distributed species common right across Britain and Ireland. It is found in almost all damp woodland and lightly wooded sites

Myospila mediatubunda (Fabricius, 1781)

A common, widely ranging and densely distributed fly throughout Britain and Ireland.

Graphomyia maculata (Scopoli, 1763)

A widely ranging and densely scattered and common species in both Britain and Ireland. It is found in almost all damp woodland and lightly wooded sites.

Graphomyia picta (Zetterstedt, 1855)

A widely ranging species but uncommon and at very few sites (Scotland 1, England and Wales 13). In Ireland it is known only from Mayo and Down (Portaferry, walled garden) where it was present in great numbers.

Spilogona aerea (Fallén, 1825)

Widespread around the British and Irish coast.

Spilogona compuncta (Wiedemann, 1817)

A very rare species in Britain known only from Inverness (Glenmore and Glen Einich) and Perthshire (Killin, Ben Lawess and Dalnaspidal). A single male in the

Rondani collection (La Specola, Florence) collected by A. H. Haliday in the early 19th century is from “sandhills, Newcastle”, presumably Murlough N.N.R. There are no subsequent Irish records.

Spilogona contractifrons (Zetterstedt, 1845)

Widely ranging but the densely crowded records from Scotland become much more scattered in the South of England. In Ireland it is known only from Wicklow in the South and Fermanagh (Lough Achork) in the North.

Spilogona denigrata (Meigen, 1826)

A widely ranging species found at many sites in Britain and Ireland especially in wooded valleys in hilly areas.

Spilogona litorea (Fallén, 1823)

A widely ranging species most densely scattered in the Scottish highlands becoming less scattered southwards. It is generally but patchily distributed in Ireland in damp woodland situations.

Spilogona marina (Collin, 1921)

A widespread sea-coast species. There are specimens in the Rondani collection (La Specola, Florence) from Holywood, Co Down (1836). No other Irish records.

Spilogona meadi (Schabl, 1915)

Widely ranging but most common and densely distributed in the Scottish highlands. In Ireland it is fairly common in hilly areas (Kerry, Waterford, Wicklow, Dublin in the South: Down (Mournes) and Antrim (Garron Plateau) in the North.

Spilogona solitaria (Collin, 1921)

In Britain this species ranges South to Herefordshire from a core area in Scotland where it is densely distributed and common. In Ireland it is found in hilly areas (easily seen on boulders in streams) in Cork and Wicklow but it is much more common in the North. Armagh (Newry Forest); Down (Mournes) Antrim (Plateau). It is essentially a species of open country and commonest in mountainous areas.

Villeneuveia aestuum (Villeneuve, 1902)

A very widely ranging species but very local too. Sites in England and Scotland are very scattered. The same is true of Ireland - Kerry, Waterford, Mayo and in the North of Ireland, Down (Murlough National Nature Reserve).

Limnophora olympiae Lyneborg, 1965

A wide ranging species right across N. W. Britain but records are very scattered and there are none S of a line from Dorset to Yorkshire. It is much scarcer in Ireland. In Northern Ireland it is known Down (Copeland Islands). There is only one southern record.

Limnophora riparia (Fallén, 1824)

A wide ranging species right across Britain but records are very scattered. In Ireland whilst it is found in Dublin and Wicklow it seems to be mostly found around Lough Neagh. Essentially it is an insect of swift flowing streams or dam-outflows but it is also seen on the wave-lapped shores of Lough Neagh.

Limnophora tigrina (Am Stein, 1860)

Ranges from Lancashire southwards in England but mainly a southern insect. Not Scotland. In Ireland it is found throughout but widely scattered. Fairly frequent along streams on the Antrim Plateau.

Limnophora triangula (Fallén, 1825)

Ranging across the whole of Britain densely distributed and very common. In Ireland this is not so. The species is known from Kerry, Cork, Sligo and Antrim (Lough Neagh, Kettlebottom Island, Bartin's Bay).

Lispe litorea Fallén, 1825

Very widely ranging on the British coast and found wherever there is salt marsh. It is curious then that *L. litorea* is known from Ireland only as a C19 specimen (Holywood, Co Down), Haliday.

Lispe tentaculata (DeGeer, 1776)

Very widely ranging, densely distributed and common throughout Britain. In Ireland the species is known only from Wicklow, Westmeath, Armagh (Lough Neagh, Ardmore Point) and Down (Holywood). It is essentially a species of low lying clayey situations about ponds or muddy drains, river margins or canals.

Caricea agromyzina (Fallén, 1825)

Widely ranging and occurring in most British woods. The same is probably true of Ireland. It is a predator of small midges most often seen running on broad-leaves especially those of sycamore.

Caricea alma (Meigen, 1826)

A very widely ranging though thinly scattered species in Britain and Ireland.

Caricea verna (Fabricius, 1794)

Wide ranging in Britain (Scotland to Isle of Wight) but only 4 Scottish sites and 6 English. There is a single Irish locality. Holywood, Co Down (19th century, Haliday).

Schoenomyza litorella (Fallén, 1823)

Widely ranging densely distributed and common in Britain. Equally widely ranging in Ireland but more scattered and less common. A fly of mosses and wet moorland.

Dexiopsis littoralis (Zetterstedt, 1846)

Coastal only in Scotland and Ireland becoming an inland species with increasing frequency towards S. England but only in dry places. The single Northern Ireland site

is Murlough NNR, Co Down. In the Republic it is known from Co Wicklow, grassland above beach at Kilcoole, and Co Dublin, the North Bull.

Coenosia intermedia (Fallén, 1825)

Common and widely distributed in both Britain and Ireland. A grassland species.

Coenosia lineatipes (Zetterstedt, 1845)

Common and widely distributed in both Britain and Ireland. A grassland species.

Coenosia mollicula (Fallén, 1825)

Common and widely distributed in both Britain and Ireland.

Coenosia pedella (Fallén, 1825)

Common and widely distributed in both Britain and Ireland and in Ireland often found inland whereas in northern Britain at least it tends to be coastal.

Coenosia rufipalpis Meigen, 1826

A species illustrating inaccuracies in existing literature. Widely scattered and not often in large numbers in southern England. *C. rufipalpis* is the commonest *Coenosia* in N. England and Scotland. Fonseca lists 14 counties in England and 2 in Scotland with the comment 'frequent'. Nash and Chandler's (1978) suggestion that *C. rufipalpis* would prove common in Ireland was incorrect. There remain few records. Though the species is widespread in Ireland it is widely scattered and nowhere common.

Coenosia tigrina (Fabricius, 1775)

Found over the whole of Britain and Ireland. A very common species both in woodland and open localities. Predaceous feeding on other small Diptera.

Coenosia tricolor (Zetterstedt, 1845)

Widely distributed and fairly common in Northern Ireland and the rest of Ireland but records are not as densely distributed as in the rest of the British Isles.

Stomoxys calcitrans (Linnaeus, 1758)

Common and widely distributed over the whole of the British Isles. A 'biting fly' commonest in the vicinity of farms, stables, barns, etc.

Haematobosca stimulans (Meigen, 1826)

Common and widely ranging and densely distributed. A 'biting fly' but one of open fields and pastures where livestock is grazed, its place in farm buildings being taken by *Stomoxys calcitrans*.

CHECKLIST OF IRISH SPECIES OF FANNIIDAE

* denotes found in Northern Ireland)

	Synonyms/comments
<i>Piezura</i>	
<i>graminicola</i> (Zetterstedt, 1846)	
<i>Fannia</i>	
<i>aequelineata</i> Ringdahl, 1945	
<i>armata</i> (Meigen, 1826)	*
<i>canicularis</i> (Linnaeus, 1761)	*
<i>fuscula</i> (Fallén, 1825)	*
<i>genualis</i> Stein, 1895	
<i>hamata</i> (Macquart, 1835)	
<i>incisurata</i> (Zetterstedt, 1838)	
<i>lepida</i> Wiedemann, 1817	* <i>mutica</i> Zetterstedt, 1845
<i>lustrator</i> Harris, 1780	* <i>hamata</i> Macquart, 1835
<i>manicata</i> (Meigen, 1826)	*
<i>melania</i> Dufour, 1839	
<i>mollissima</i> (Haliday in Westwood, 1840)	*
<i>monilis</i> (Haliday, 1838)	* old record only
<i>parva</i> (Stein, 1895)	*
<i>postica</i> (Stein, 1895)	*
<i>pretiosa</i> (Schiner, 1862)	
<i>rondanii</i> (Strobl, 1893)	*
<i>scalaris</i> (Fabricius, 1794)	
<i>serena</i> (Fallén, 1825)	*
<i>similis</i> (Stein, 1895)	*
<i>sociella</i> (Zetterstedt, 1845)	*
<i>subs similis</i> Ringdahl, 1934	*
<i>umbrosa</i> (Stein, 1895)	

CHECKLIST OF IRISH SPECIES OF MUSCIDAE

* denotes found in Northern Ireland)

Synonyms/comments

Achanthiptera

rohrelliformis (Robineau-Desvoidy, 1830)

Polietes

albolineata (Fallén, 1823) *

hirticrura Meade , 1887 *

lardaria (Fabricius, 1781) *

Mesembrina

meridiana (Linnaeus, 1758) *

mystica (Linnaeus, 1758) * importation

Pyrellia

rapax (Harris 1780)

(*ignita* (Robineau-Desvoidy, in older literature: *coeo* Harris in some recent literature)

Dasyphora

cyanella (Meigen, 1826) *

Orthellia

cornicina (Fabricius, 1781) *

viridescens (Robineau-Desvoidy, 1830) *

in some older literature this species is most confusingly also called *cornicina* and the two taxa have also been confused. It is also known incorrectly as *viridis* (Wiedemann, 1824).

viridis (Wiedemann, 1824)

Morellia

aenescens Robineau-Desvoidy, 1830 *

hortorum (Fallén, 1816) *

simplex (Loew, 1857) *

Musca

autumnalis Degeer, 1776

domestica Linnaeus, 1758 *

Azelia

aterrima Meigen, 1826

cilipes (Haliday, 1838) *

gibbera (Meigen, 1826)

macquarti (Staeger, 1843)

triquetra (Wiedemann, 1817) *

zetterstedti Rondani, 1866

Thricops

<i>diaphanus</i> (Wiedemann, 1817)		in <i>Alloeostylus</i> in older literature
<i>hirsutula</i> (Zetterstedt, 1838)	*	
<i>longipes</i> (Zetterstedt, 1845)	*	
<i>nigrifrons</i> (Robineau-Desvoidy, 1830)	*	
<i>nigritella</i> (Zetterstedt, 1838)	*	
<i>rostratus</i> (Meade, 1882)	*	
<i>semicinerea</i> (Wiedemann, 1817)	*	
<i>Trichopticoides</i>		
<i>decolor</i> (Fallén, 1824)	*	
<i>Drymeia</i>		
<i>hamata</i> (Fallén, 1822)	*	
<i>Ophyra</i>		
<i>leucostoma</i> (Wiedemann, 1817)	*	
<i>Hydrotaea</i>		
<i>albipunctata</i> (Zetterstedt, 1845)	*	
<i>armipes</i> (Fallén, 1825)		
<i>basdeni</i> Collin, 1939	*	
<i>bimaculata</i> (Meigen, 1826)	*	
<i>capensis</i> (Wiedemann, 1818)	*	was in <i>Ophyra</i> ; the Northern Ireland record is 19th Century
<i>cyrtoneurina</i> (Zetterstedt, 1845)	*	
<i>dentipes</i> (Fabricius, 1805)	*	
<i>irritans</i> (Fallén, 1823)	*	
<i>meteorica</i> (Linnaeus, 1758)	*	19th Century record
<i>militaris</i> (Meigen, 1826)	*	
<i>similis</i> Meade, 1887		
<i>Muscina</i>		
<i>assimilis</i> (Fallén, 1823)	*	
<i>pabulorum</i> (Fallén, 1817)	*	
<i>stabulans</i> (Fallén, 1817)	*	
<i>Lophosceles</i>		
<i>cinereiventris</i> (Zetterstedt, 1845)	*	
<i>mutatus</i> (Fallén, 1825)	*	
<i>Phaonia</i>		
<i>basalis</i> (Zetterstedt, 1838)	*	
<i>cincta</i> (Zetterstedt, 1838)	*	
<i>errans</i> (Meigen, 1826)		
<i>erronea</i> (Schnabl, 1886)	*	
<i>falleni</i> Michelsen		<i>vagans</i> (pars) Fallén, 1825
<i>fuscata</i> (Fallén, 1825)		

<i>gobertii</i> (Mik, 1881)		
<i>halterata</i> (Stein, 1893)	*	
<i>incana</i> (Wiedemann, 1817)	*	
<i>lugubris</i> (Meigen, 1826)		
<i>mystica</i> (Meigen, 1826)	*	
<i>pallida</i> (Stein, 1897)	*	
<i>palpata</i> (Stein, 1897)	*	
<i>populi</i> (Meigen 18 26)	*	
<i>rufipalpis</i> (Macquart, 1835)		
<i>serva</i> (Meigen, 1826)	*	
<i>vagans</i> (Fallén, 1825)	*	
<i>variegata</i> (Meigen, 1826)	*	
<i>viarum</i> Robineau-Desvoidy, 1830	*	
<i>Helina</i>		
<i>abdominalis</i> (Zetterstedt, 1846)	*	Northern Ireland only
<i>allotalla</i> (Meigen, 1830)		
<i>atricolor</i> (Fallén, 1824)	*	Northern Ireland only
<i>depuncta</i> (Fallén, 1825)		
<i>duplicata</i> (Meigen, 1826)	*	
<i>fratercula</i> (Zetterstedt, 1845)	*	
<i>impuncta</i> (Fallén, 1825)	*	
<i>laetifica</i> (Robineau-Desvoidy, 1830)	*	
<i>lasiophthalma</i> (Macquart, 1835)	*	
<i>latitarsis</i> Ringdahl 1924	*	
<i>maculipennis</i> (Zetterstedt, 1845)	*	Northern Ireland only
<i>obscurata</i> (Meigen, 1826)		
<i>parcepilosa</i> (Stein, 1907)		
<i>pertusa</i> (Meigen, 1826)	*	
<i>protuberans</i> (Zetterstedt, 1845)	*	
<i>pubiseta</i> (Zetterstedt, 1845)		
<i>quadrimaculella</i> Hennig, 1958		
<i>quadrum</i> (Fabricius, 1805)	*	
<i>subvittata</i> (Seguy, 1923)		
<i>vicina</i> (Czerny, 1900)		
<i>Brontaea</i>		
<i>humilis</i> (Zetterstedt, 1850)	*	was placed in <i>Gymnodia</i>
<i>Hebecnema</i>		
<i>affinis</i> Malloch, 1921	*	
<i>fumosa</i> (Meigen, 1826)	*	
<i>nigricolor</i> (Fallén, 1825)	*	

<i>umbratica</i> (Meigen, 1826)	*	
<i>vespertina</i> (Fallén, 1823)	*	
<i>Mydaea</i>		
<i>affinis</i> Meade	*	under <i>discimana</i>
<i>ancilla</i> (Meigen, 1826)	*	
<i>anacula</i> (Zetterstedt, 1860)	*	
<i>detrita</i> (Zetterstedt, 1845)	*	
<i>discimana</i> Malloch, 1920		
<i>electa</i> (Zetterstedt, 1860)	*	
<i>scutellaris</i> Robineau-Desvoidy, 1830	*	
<i>setifemur</i> Ringdahl, 1924	*	
<i>tincta</i> (Zetterstedt, 1845)		
<i>urbana</i> (Meigen, 1826)	*	
<i>Myospila</i>		
<i>bimaculata</i> (Macquart 1835)		(<i>hennigi</i> Gregor and Povolny 1959)
<i>Graphomyia</i>		
<i>maculata</i> (Scopoli, 1763)	*	
<i>minor</i> (Robineau-Desvoidy, 1830)		<i>picta</i> Zetterstedt, 1855
<i>Spilogona</i>		
<i>aerea</i> (Fallén, 1825)	*	
<i>brunneisquama</i> (Zetterstedt, 1845)		
<i>contractifrons</i> (Zetterstedt, 1838)	*	
<i>denigrata</i> (Meigen, 1826)		
<i>litorea</i> (Fallén, 1823)	*	
<i>marina</i> (Collin, 1921)	*	
<i>meadi</i> (Schnabl, 1915)	*	
<i>setigera</i> (Stein 1893)		<i>compuncta</i> Wiedemann, 1817
<i>solitaria</i> (Collin, 1921)	*	
<i>Villeneuveia</i>		
<i>aestuum</i> (Villeneuve, 1902)	*	
<i>Limnophora</i>		
<i>exuta</i> Kowarz, 1893		
<i>maculosa</i> (Meigen, 1826)		
<i>olympiae</i> Lyneborg, 1965	*	
<i>riparia</i> (Fallén, 1824)	*	
<i>tigrina</i> (Am Stein, 1860)	*	
<i>triangula</i> (Fallén, 1825)	*	
<i>Lispe</i>		
<i>litorea</i> Fallén, 1825	*	
<i>pygmaea</i> Fallén, 1825		

<i>tentaculata</i> (Degeer, 1776)	*	
<i>Pseudocoenosia</i>		
<i>abnormis</i> Stein, 1916		
<i>solitaria</i> (Zetterstedt, 1838)		
<i>Caricea</i>		
<i>agromyzina</i> (Fallén, 1825)		
<i>alma</i> (Meigen, 1826)	*	was in <i>Lispocephola</i>
<i>erythrocerata</i> (Robineau-Desvoidy, 1830)		was in <i>Lispocephola</i>
<i>verna</i> (Fabricius, 1794)	*	was in <i>Lispocephola</i>
<i>Schoenomyza</i>		
<i>litorella</i> (Fallén, 1823)	*	
<i>Macrorchis</i>		
<i>meditata</i> (Fallén, 1823)	*	
<i>Dexiopsis</i>		
<i>lacteipennis</i> (Zetterstedt, 1845)		
<i>laustris</i> Karl, 1930		
<i>litoralis</i> (Zetterstedt, 1846)	*	
<i>minutalis</i> (Zetterstedt, 1860)		
<i>Coenosia</i>		
<i>antennata</i> (Zetterstedt, 1849)		
<i>campestris</i> (Robineau-Desvoidy, 1830)		<i>sexnotata</i> Meigen, 1826
<i>dubiosa</i> Hennig, 1961		
<i>femoralis</i> Robineau-Desvoidy, 1830		
<i>flavimana</i> (Zetterstedt, 1849)		<i>albatella</i> Zetterstedt, 1849
<i>infantula</i> Rondani, 1866		
<i>intermedia</i> (Fallén, 1825)	*	
<i>lineatipes</i> (Zetterstedt, 1845)	*	
<i>means</i> (Meigen, 1826)		
<i>mollicula</i> (Fallén, 1825)	*	
<i>pedella</i> (Fallén, 1825)	*	
<i>pumila</i> (Fallén, 1825)		
<i>rufipalpis</i> Meigen, 1826	*	includes <i>flavicauda</i> of older literature
<i>tigrina</i> (Fabricius, 1775)	*	
<i>tricolor</i> (Zetterstedt, 1845)	*	includes <i>alleni</i> Fonseca, 1966
<i>verralli</i> Collin, 1953		
<i>Stomoxys</i>		
<i>calcitrans</i> (Linnaeus, 1758)	*	
<i>Haematobosca</i>		
<i>stimulans</i> (Meigen, 1824)	*	