Asilus
head from front

Asilus with prey

ROBBER-FLIES Asilidae. Very bristly predatory flies that generally chase and catch other insects in mid-air. Most species sit in wait and dart out when likely prey appears. The prey is then sucked dry with the stout proboscis, which projects horizontally or obliquely forward. There is a deep groove between the eyes in both sexes, the eyes never touching even in males. A 'beard' on the face protects eyes from struggling prey. Legs are sturdy and have 2 pads at most. Wings folded flat over body at rest. Larvae eat some dead vegetable matter, but most are at least partly predatory and some feed mainly on beetle and fly grubs in the soil.

△s ***Asilus crabroniformis***. An unmistakable fly – one of the largest in B – inhabiting open country 7-10. A very strong flier. Breeds in cow pats and other dung.

Dasypogon diadema. First 2 long veins both reach wing margin: wing membrane ribbed. Front tibia has curved spine at tip. Male more uniformly black, with dark wings. 6-8 in scrubby places, especially coastal dunes. S.

▲ ***Leptogaster cylindrica***. Feet without pads. Hind femur yellow. 3rd antennal segment ends in bristle. One of the slimmest robber-flies, it resembles a crane-fly in flight. It hunts in grassy places, flying slowly and plucking aphids from the grasses. 5-8. △ ***L. guttiventris*** is similar but has reddish hind femur.

△s ***Dioctria atricapilla***. First 2 long veins reach margin. Beard rather sparse and, as in all *Dioctria* species, the antennae spring from a prominence high on the head. Female wings much lighter than male. 5-8 in grassy places.

△n ***Laphria flava***. First 2 long veins join before reaching margin. 3rd antennal segment blunt, not with long bristle as in most other genera. 6-9 in pine woods. Breeds in pine logs and stumps. Confined to Scottish highlands in B. Several similar species, all furry and bee-like, live on the continent. △s ***L. gilva*** is much less furry than *flava*, with hairs lying flat. 6-8 in old woodland: breeds in tree stumps, especially pines.
△s ***L. marginata*** is very similar but has yellow hairs on legs and thorax. 6-8 in oakwoods.

△s ***Eutolmus rufibarbis***. First 2 long veins join before reaching wing margin. Legs black with yellow hair. 5-9. N & C. Several similar species live on the continent.

△ ***Pamponerus germanicus***. First 2 long veins join before reaching wing margin. Bristles behind eyes bend sharply forward. Femora black: tibiae and tarsi orange or yellow with black tips. Wing base clear in female, not milky white. 5-7: mainly coastal.

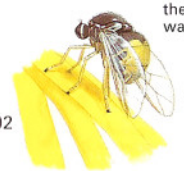
△s ***Acrocera orbicula*** Acroceridae. Minute head appears to consist of nothing but the eyes. Antennae on top of head. Abdomen yellowish or brown, becoming darker after death. Thorax strongly rounded. 6-8 in grassy places: often on flowers, although adult does not feed. Larva parasitises spiders.

▲ ***Thereva nobilitata*** Therevidae. Resembles robber-flies, but no groove between eyes: male eyes touching. Face very hairy. First long vein much shorter than in robber-flies. Female abdomen largely golden, with last 2 segments shiny black. 5-8. Larva omnivorous in leaf litter. There are several similar species, difficult to separate. ▲ ***T. annulata*** male is silvery. Female is greyer and duller, with only last abdominal segment shiny black. 4-8 in sandy places, especially coastal dunes.

▲ **Window-fly** *Scenopinus fenestralis* Scenopinidae. Most often seen on windows, with wings tightly folded to give the fly a dark, bullet-like appearance. No bristles. Larva inhabits birds' nests and buildings, preying on grubs of other insects.

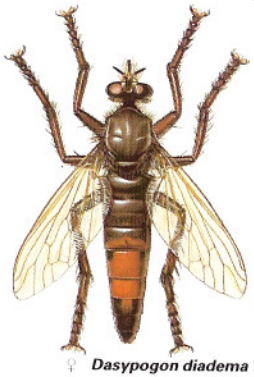
▲ ***Empis tessellata*** Empididae. Short triangular cell close to wing-tip is typical of this genus. Head almost spherical, with slender, down-pointing proboscis. Predatory on other flies, but also takes nectar. Often hunts on hawthorn and umbellifer flowers. 4-8. Larva lives in soil. ▲ ***E. stercorea*** is easily recognised by its yellow-brown colour with a black stripe along the back. 4-6 in lush, grassy places.

▲ ***Hilara maura***. Venation like *Empis*, but triangular cell near wing-tip is longer and narrower. Swollen front tarsi of male produce silk, which the fly uses to wrap prey as a courtship gift for female. Swarms over water throughout the summer.



Acrocera orbicula ×2

Asilus crabroniformis ×1.5



♀ ***Dasypogon diadema*** ×2.

Leptogaster cylindrica ×1.5

Dioctria atricapilla ×1.5

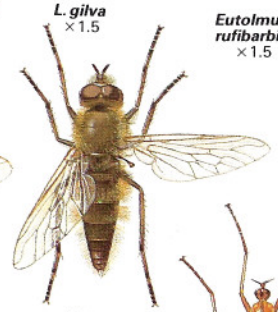
Laphria flava ×1.5

L. gilva ×1.5

Eutolmus rufibarbis ×1.5

♂, ♀ ***Pamponerus germanicus*** ×1.5

Acrocera orbicula ×3

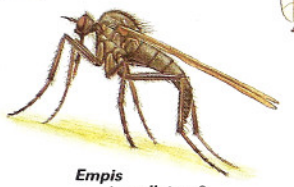


Thereva nobilitata ×2

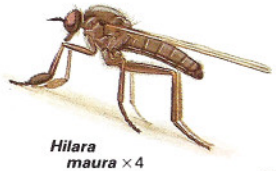
T. annulata ×2

E. stercorea ×3

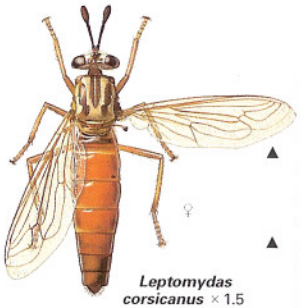
Window-fly ×3



Empis tessellata ×2



Hilara maura ×4



Leptomydas corsicanus × 1.5

Leptomydas corsicanus Mydaidae. Male much smaller and darker. Nectar-feeding with darting flight. 5-8 in rough, grassy places. Corsica only. Two similar species in Spain and another in Sardinia, all with clubbed antennae.

▲ ***Lonchoptera lutea*** Lonchopteridae. Pointed wings with no central cross-vein identify this small family. Last 2 veins join before reaching margin only in female. 4-10 in damp, shady places. Commonest of several similar species.

▲ ***Phora atra*** Phoridae. One of the scuttle-flies, so called for their active running. Front edge of wing spiny at base: most veins very weak. Abundant on shrubs in summer: males hover in shafts of sunlight. There are many related species.

▲ ***Sciapus platypterus*** Dolichopodidae. Only one prominent cross-vein, as in all the family. 4th vein distinctly forked. Female lacks black and white markings on mid-tarsus. Hedgerows and tree trunks in summer. There are several similar species. All members of the family have a metallic sheen and prey on other small insects.

▲ ***Dolichopus popularis***. Male genitalia very large, as in most members of the family. Female lacks plumes on mid-tarsus. Damp places throughout the summer, resting with front end raised. There are many similar species.

▲ ***Poecilobothrus nobilitatus***. Male easily recognised by wing pattern: female like *Dolichopus*. Both sexes with 3rd and 4th veins wavy and convergent. 5-9 in damp places, resting on mud or on floating or waterside plants with front end raised.

HOVER-FLIES Syrphidae. A family of about 5,000 species, with hovering and darting flight. Body shape very variable, but all species have a false margin formed by veins running more or less parallel to rear margin of wing. There is also a false vein near the centre – simply a thickening of the wing membrane and unconnected to any real vein. Vein pattern important in identification. Antennae usually short and drooping. Most are nectar-feeders, especially fond of umbellifers. Many mimic bees and wasps. The larvae live in a wide range of habitats and include predators, vegetarians, and scavengers.

▲ ***Syrphus ribesii***. First 2 long veins both reach margin: anterior cross-vein is before middle of discal cell. Thorax greenish black with brown hair. Face has no black line. 4-11, often in swarms. Larva (p. 294) feeds on aphids.

▲ ***Scaeva pyrastri***. Venation like *Syrphus*. Pale lunules on abdomen white or cream and of almost constant width. △***S. selenitica*** has outer lunule arm much thinner than inner one. 6-10. Larva eats aphids.

▲ ***Episyrphus balteatus***. Venation like *Syrphus*. Easily identified by additional narrow black bands on 3rd and 4th abdominal segments. 3-11 (may be all year in S). Often forms dense migratory swarms. Abundant in gardens. Larva eats aphids.

△ ***Xanthogramma pedissequum***. Venation like *Syrphus*. Distinctive body pattern and dark smudge on wing readily distinguish it from other yellow and black species. Abdomen very flat. 5-9. Larva feeds on aphids in ant nests.

▲ ***Leucozona lucorum***. Resembles *Volucella pellucens* (p. 206), but distinguished by brown scutellum and *Syrphus*-like venation. 5-9. Larva eats aphids.

▲ ***Rhingia campestris***. Venation like *Syrphus*, but easily identified by its snout. 4-11, mostly in hedgerows and light woods. Breeds in cowpats and other dung.
△s ***R. rostrata*** is very similar but has a slaty blue thorax.

▲ ***Baccha elongata***. Venation like *Syrphus*. 4-10, hovering in and around damp vegetation but not easily seen because of slim build. Larva eats aphids.

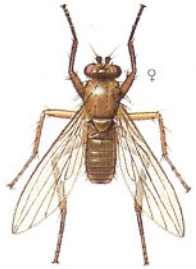
△s ***Doros conopseus***. Venation like *Syrphus*. Superficially like *Physocephala* (p. 208) but antennae quite different. Wasp-like in flight. 5-8, mainly in woodland. Larva believed to feed on aphids in soil.

▲ ***Melanostoma scalare***. Venation like *Syrphus*. Male abdomen much slimmer than female: always parallel-sided. 4-11. Very common in gardens: especially fond of hawthorn blossom in spring. Larva eats aphids. There are several similar species.

▲ ***Neoascia podagrica***. One of the smallest hover-flies. Venation like *Syrphus*, but outer cross-veins almost upright, destroying false margin. Abundant everywhere 3-10. Larva feeds in rotting vegetation. There are several similar species.

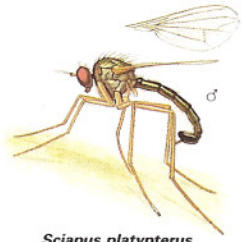
venation of *Neoascia*

DOLICHOPIDS and HOVER-FLIES

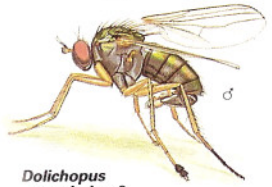


Lonchoptera lutea ×6

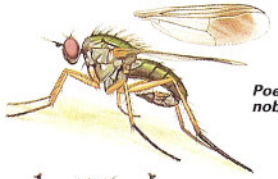
Phora atra ×6



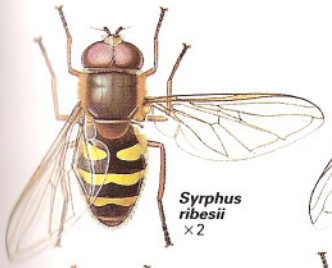
Sciapus platypterus ×3



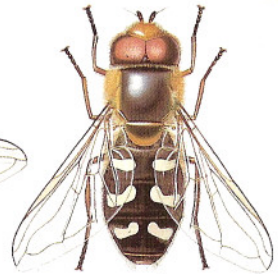
Dolichopus popularis ×3



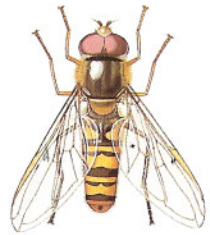
Poecilobothrus nobilitatus ×3



Syrphus ribesii ×2

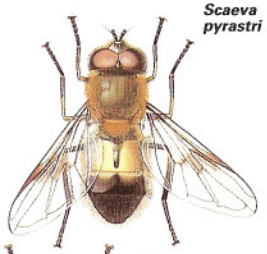


Scaeva pyrastri ×2

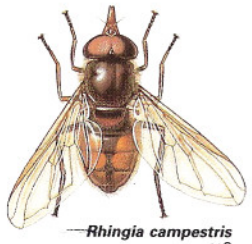


Episyrphus balteatus ×2

Xanthogramma pedissequum ×2

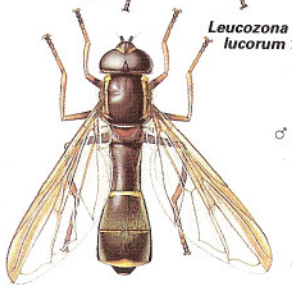


Leucozona lucorum ×2

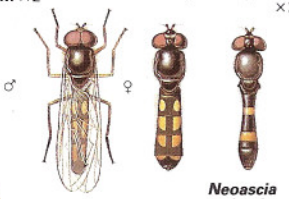


Rhingia campestris ×2

Baccha elongata ×2



Doros conopseus ×2



Melanostoma scalare ×2

Neoascia podagrica ×3

▲ ***Volucella bombylans***. As in all *Volucella* species, the first 2 long veins meet before reaching wing margin and the anterior cross-vein is before the middle of the discal cell. The false margin also bends sharply inwards at the front end. Antennae are feathery. Distinguished from its relatives by its dense hair, *bombylans* is a very variable species mimicking several kinds of bumble bees. 5-9. *Volucella* larvae (p. 294) all live as scavengers in the nests of wasps and bumble bees.

△s ***V. zonaria***, easily recognised by its size and colour, is a good hornet mimic. It flies 5-9 in many habitats: not uncommon in suburban areas.

▲ ***V. pellucens*** resembles *Leucozona* (p. 204), but is bigger and has a black scutellum: venation also differs. 5-9, mainly in wooded areas: very fond of bramble blossom. Hovers at about head height (mainly the males).

△ ***V. inanis*** is like *zonaria* but is smaller and has yellow at front of abdomen instead of brown. 6-9.

Milesia crabroniformis. First two long veins meet before reaching wing margin. Anterior cross-vein well beyond middle of discal cell. Anal vein bends sharply back to wing margin. 6-9, visiting various flowers and basking on the vegetation: a superb hornet mimic. Larva develops in rotting beech timber. S, mainly western.

▲ **Drone-fly** *Eristalis tenax*. Named for its remarkable resemblance to the drones of some races of honey bees. First 2 long veins meet before reaching wing margin: 3rd long vein with a deep U-shaped bend. Anterior cross-vein at about the middle of discal cell. Yellow or orange marks at base of abdomen often indistinct. Face has a wide black stripe down the centre. All year, hovering at about head height in sunshine: very common in gardens, often basking on walls in winter. Larva (p. 297) is the rat-tailed maggot, living in stagnant water. There are several similar species.
▲ ***E. pertinax*** has a narrow facial stripe and yellow tarsi on front and middle legs. 3-11 almost everywhere.

▲ ***E. arbustorum*** is smaller and has no facial stripe. Front and mid tarsi are dark. 4-10, mainly in open habitats.

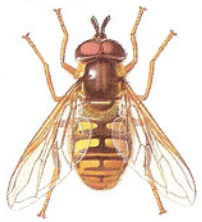
▲ ***Helophilus pendulus***. First 2 long veins both reach wing margin: 3rd long vein with a deep U-shaped bend. Anterior cross-vein at about middle of discal cell. Black line down centre of face. At least half of hind tibia yellowish. 4-10. Most frequent in damp places: fond of basking on waterside vegetation. Males hover just above water surface. Larva is like that of *Eristalis* and lives in muddy water. △ ***H. hybridus*** is similar but only basal third of hind tibia is yellowish.

▲ **Narcissus-fly** *Merodon equestris*. Venation like *Helophilus*. Hind femur with prominent bulge on underside of apex. Body essentially black with grey, tawny, or black hair. Mimics various worker bumble bees. 3-8. Larva lives in bulbs of narcissi and other plants, often causing severe damage. There are several similar species on the continent, mainly in S.

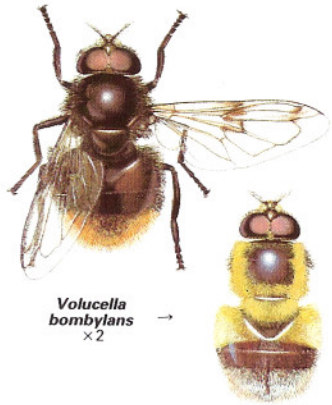
▲ ***Myathropa florea***. Resembles a brightly marked Drone-fly, but readily distinguished by thoracic pattern and *Helophilus*-like venation. Pale markings vary in size, with western specimens tending to be darker. 5-10, mainly in wooded areas. Larva lives in stagnant water in hollow trees and similar places.

△s ***Brachypalpoides lenta***. First 2 long veins reach wing margin. Anterior cross-vein beyond middle of discal cell and strongly oblique. Abdomen very flat. Black legs and red patch on abdomen distinguish this from several related species. 5-7. Breeds in rotting wood. Widespread but uncommon.

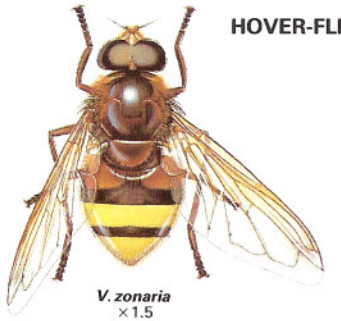
△ ***Chrysotoxum cautum***. Antennae long and forward-pointing, with 3rd segment about as long as other two together. First 2 long veins both reach margin. 5-8, mainly in woods and hedgerows: not uncommon in gardens and fond of basking on leaves. Breeds in ants' nests, where larvae eat aphids. S & C. There are several similar species, usually smaller. ▲ ***C. festivum*** is much blacker than *cautum*, with 3 pairs of narrow yellow bars on abdomen. The bars curve distinctly backwards in the outer region and do not reach the sides of the abdomen. The front half of the wing is yellowish brown, although this colour does not reach the wing-tip. 6-10 in grassy places. ▲ ***C. bicinctum***, the commonest member of the genus in Ireland, has just 2 prominent yellow bands on the abdomen – on segments 2 and 4 – and an intense brown patch on the outer part of the wing. 5-9 in grassy places.



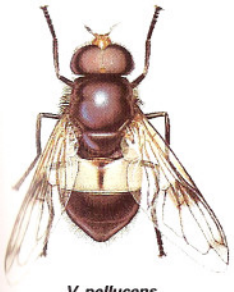
Chrysotoxum cautum ×2



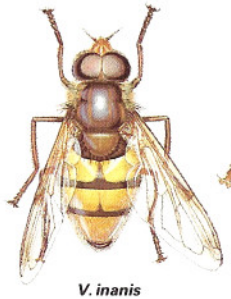
Volucella bombylans ×2



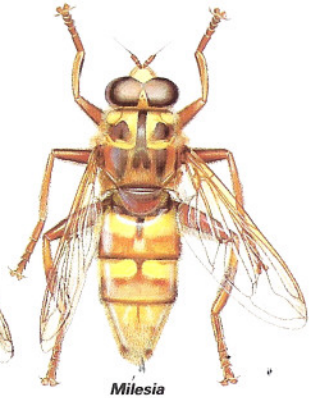
V. zonaria ×1.5



V. pellucens ×2

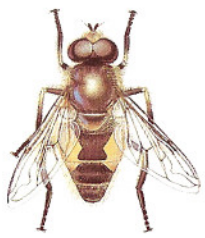


V. inanis ×2

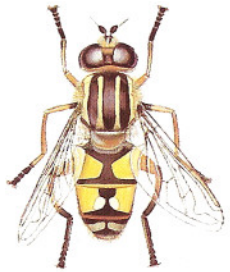


Milesia crabroniformis ×1.5

Drone-fly ×2

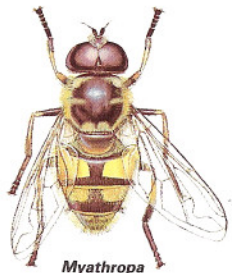


E. arbustorum ×2

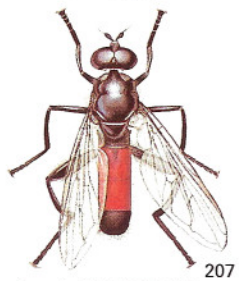


Helophilus pendulus ×2.5

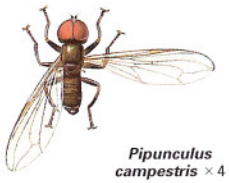
Narcissus-fly ×2



Myathropa florea ×2



Brachypalpoides lenta ×2



Pipunculus campestris ×4

▲ ***Pipunculus campestris*** Pipunculidae. Female abdomen very shiny. Stigma often yellow at first, but may darken with age. 4-10 in woods and hedgerows: especially fond of bramble blossom. Larvae are internal parasites of leafhoppers. Large head, nearly all eyes, is typical of this large family. Venation, usually with a distinctly beaked sub-apical cell, is also characteristic. All are superb hoverers, often hovering low down in dense vegetation.

△ ***Conops quadrifasciata*** Conopidae. Long proboscis and antennae, and long, pointed anal cell near hind edge of wing. Hind femur yellowish brown. Female has small yellow pouch under 5th abdominal segment. 6-9 on umbellifers and composites, especially ragwort: mainly in dry habitats. Larva is internal parasite of bumble bees. There are several similar species. All members of the family have the pointed anal cell, but not all have the long proboscis and antennae.

△ ***Physocephala nigra***. 5-7 on a wide range of flowers, especially in light woodland and scrubby places. ▲ ***P. rufipes*** is smaller, with a browner body and black antennae. Larvae of both species parasitise bumble bees.

△ ***Myopa buccata***. Ocelli and short antennae clearly separate this from the last two species. Tip of 1st long vein very close to sub-costal vein. 4-8 on a variety of flowers: very fond of dandelions and hawthorn blossom. There are several similar species.

▲ ***Platystoma seminationis*** Platystomatidae. Prominent cream patch under end of abdomen. 5-10. Crawls rather slowly over rank vegetation in many habitats, especially in woods, hedgerows, and gardens. Rarely attracted to flowers, but has been seen sucking dead insects. Breeds in decaying matter. There are many similar species on the continent.

▲ ***Melieria omissa*** Otitidae. Face has deep grooves to accommodate antennae. Wing with 7 dark spots. Commonly waves wings slowly up and down as it rests on or walks slowly over vegetation. 5-8 on river banks and other damp places. Breeds in decaying matter. S & C. There are several similar species, differing slightly in pattern.

▲ ***Seioptera vibrans***. Head red at front: face grooved. Body shiny blue or black. 3rd and 4th long veins converge slightly. Resembles sepsids (p. 210) in frantic wing-waving, but distinguished by larger size. 5-9 on trees and shrubs, especially lime. Feeds on aphids and other small insects. Breeds in decaying vegetation.

Family Tephritidae. A large family of rather small flies in which the wings are heavily mottled or pictured, as in the two previous families. Sub-costal vein sharply bent towards costa about half way along its length. Anal cell usually with a characteristically pointed extension. Female abdomen pointed, with rigid ovipositor. Larvae develop in fruits or elsewhere in plants, often causing galls.

▲ ***Urophora cardui***. Anal cell blunt. Dark markings heavier in male. 5-8 in open country. Larvae induce very hard, egg-shaped many-chambered galls on stems of creeping thistle. Many similar species cause galls in composite flowerheads.

▲ ***Cerajocera ceratocera***. Male has bristly horn on antenna. 6-8. One of several species causing galls in flowerheads of greater knapweed. The carpels become very hard and woody and can be felt by squeezing the dead flowerheads. N & C.

▲ **Celery-fly** *Euleia heraclei*. Eyes become reddish after death. Body and wing markings either blackish brown or pale reddish brown. 4-11. Larvae excavate mines in leaves of celery, parsnip, and other umbellifers.

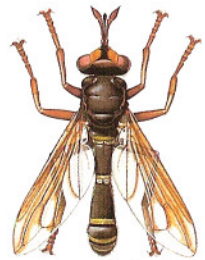
△ **Mediterranean Fruit-fly** *Ceratitis capitata*. Wings with pink and yellow blotches. Thorax strongly humped. Female lacks the two spatulate, horn-like bristles on the head. Most of the year: continuously brooded in S. Larvae infest a wide range of fruits, including cherries, peaches, and oranges. S & C: not native in B but often imported in fruit. A serious pest in all the warmer parts of the world.

Rhagoletis cerasi. Head rather square in profile. Scutellum yellow: rest of thorax shiny black. 5-7. Larvae in wild and cultivated cherries. N & C: in B only through introduction in fruit. ▲ ***R. alternata*** has the whole thorax orange-yellow. Larvae in cherries and rose hips. N & C. Both species have very slow flight.

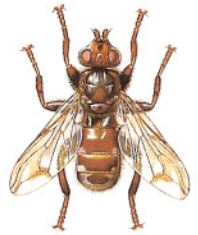
▲ ***Anomoia purmunda***. Eyes green with 2 transverse red bands in life: becoming red when dead. Wing pattern very characteristic. 8-10. Larvae in hawthorn fruits. N & C.

CONOPID and PICTURED-WINGED FLIES

Conops quadrifasciata ×2

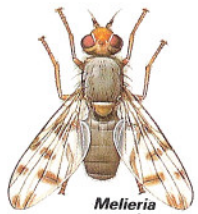


Physocephala nigra ×2



Myopa buccata ×2

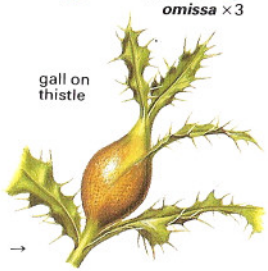
Platystoma seminationis ×3

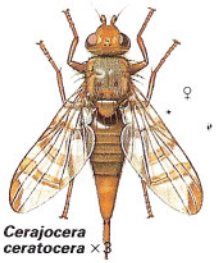


Melieria omissa ×3

Seioptera vibrans ×3

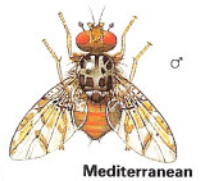
Urophora cardui ×3





Cerajocera ceratocera ×3

Celery-fly ×3



Mediterranean Fruit-fly ×3

Rhagoletis cerasi ×4

Anomoia purmunda ×3

grubs in cherry

▲ ***Calobata petronella*** Micropezidae. One of several long-legged species known as stilt-legged flies. 5-7, walking rather hesitatingly on foliage, mainly in damp places, and feeding on other small insects. Breeds in decaying matter. N & C.

Micropeza corrigiolata ×2.5

▲ ***Micropeza corrigiolata***. An even more slender stilt-legged fly, with a very flat, pointed head. Mid and hind coxae brownish. 5-9 on vegetation in damp and shady places. Not uncommon in shady gardens, where it probably breeds in compost heaps. △ ***M. lateralis*** has coxae all yellow and more yellow on abdomen. 8-10. S & C. ***M. brevipennis*** is all black with short wings. C.

▲ ***Coelopa frigida*** Coelopidae. One of the kelp-flies, a small family distinguished from several similar groups by the very straight vein closing the anal cell, but best recognised by seashore habitat. *C. frigida* has a very flat body and swarms over shore throughout the year: on coastal flowers in summer. Breeds in rotting seaweed on beach. ▲ ***C. pilipes*** is similar but much hairier in male. The closely related ▲ ***Malacomyia sciomyzina*** flies with them but is not flattened. N & C.

▲ **Carrot-fly** *Psila rosae* Psilidae. One of many similar species, all with a pale streak running across basal part of wing although this is not always obvious. Front margin of wing with a distinct break about ¼ of the way along. Ocellar triangle very clear. 5-9. Larvae infest carrots, the leaves of infested plants often becoming rust-coloured.

▲ ***Helcomyza ustulata*** Helcomyzidae. Wings longer than abdomen and with prominent spines on front margin. 6th long vein reaches margin. Size varies a good deal. On seashore all year, with characteristic darting flight. Larvae live in sand or mud below high-tide level. N & C.

▲ ***Coremacera marginata*** Sciomyzidae. Dappled wings laid very flat over body at rest. Conspicuous, forward-pointing antennae. 6-10 in damp grassy and scrubby places. Larva preys on small molluscs. A few related species have all-yellow femora.

▲ ***Lonchaea chorea*** Lonchaeidae. One of several very similar shiny blue or greenish black flies with large, clear wings. Front margin distinctly broken at tip of sub-costal vein. Female with pointed ovipositor. 2-12 on bushes and herbage: movements rather sluggish. Breeds in decaying matter and under bark.

▲ ***Sepsis fulgens*** Sepsidae. One of several very similar species that wave their wings as they scuttle over the vegetation. Common on umbellifer flowers. Sometimes forms dense swarms in autumn, with hundreds of thousands of flies milling about on a small patch of plants. Hibernates as adult. Breeds in dung.

▲ ***Psilopa nitidula*** Ephydridae. One of many very small, shiny flies known as shore-flies, recognised by the presence of just one very long cell in hind region of wing: anal vein absent. Front margin with 2 small breaks. All year on margins of ponds and streams.

▲ ***Suillia variegata*** Heleomyzidae. Spines along front edge of wing. Distinguished from *Helcomyza* by smaller size, spotted wings, and much smaller anal cell. 3-12 in damp places. Breeds in fungi and decaying matter. Never on seashore.

▲ ***Opomyza germinationis*** Opomyzidae. One of several similar small flies with spotted wings, but distinguished from most by the long dark streak on front margin. 1st vein extremely short: 2nd and 3rd long veins converge strongly towards tip. Very common in leaf litter and grasses in moist habitats. Walks slowly: reluctant to fly. 6-10. Breeds in grass stems.

▲ **Frit-fly** *Oscinella frit* Chloropidae. A very small fly, often even smaller and paler after mid-summer. Ocellar triangle plate-like and very distinct, as in all members of the family. Anal cell absent. Abundant 3-11 in cereal fields, especially in oats and barley. Larvae tunnel in stems and ears and cause serious damage.

▲ ***Lipara lucens***. One of the largest chloropids, but with relatively small eyes – well separated and with a very large ocellar plate between them. 2-11, mainly in marshy areas. Larva in a cigar-shaped gall (left) on common reed. There are several smaller but otherwise similar species.

▲ ***Thaumatomyia notata***. Ocellar triangle very large in relation to head. This tiny fly is sometimes called the yellow swarming-fly because of its habit of entering buildings in vast numbers in autumn prior to hibernation. At other times it lives in rough vegetation. The larvae feed on root aphids in the soil.

gall of *Lipara*

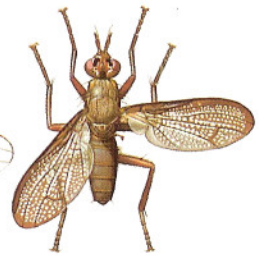
STILT-LEGGED-FLIES and OTHERS

Calobata petronella ×3

Coelopa frigida ×3

Carrot-fly ×4

Helcomyza ustulata ×3



Coremacera marginata ×3

Lonchaea chorea ×3

Psilopa nitidula ×4

Sepsis fulgens ×6

Suillia variegata ×4

Frit-fly ×6

Opomyza germinationis ×4

Thaumatomyia notata ×6

Lipara lucens ×3