



Flies

There is a great deal still to learn about flies.

Mapping the distribution of some groups is a major achievement of the Dipterists Forum to date, but the immature stages of the majority of species are still unknown. Many species are becoming increasingly rare as a result of habitat loss and climate change.

Why not join the Dipterists Forum and help us find out more about flies? There is so much still to learn; we welcome beginners and there are always people who can help you out in the early stages. You don't need to be an expert, or even to leave your own garden, to contribute to our knowledge of these fascinating insects.

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the facts



The truth about flies

Their diversity, importance and benefits to humans



Our association with flies has always been seen as one of negative interaction. Flies are regarded by most people as pest species, involved primarily in disease transmission, pests in agriculture or as nuisances in human homes. This is true for a minority of species. But many more are exceptionally important to the ecosystem, with direct economic benefits to humans and indirect effects on human health and wellbeing.

Biodiversity

✦ Flies are one of the top four species-rich orders of insects and, as such, one of the most species-rich groups found on the planet (12% of the planet's biota).

✦ There are 160,000 species described globally, with more than 7,000 in the UK. This is about a third of all insects described in the UK, with new species being added to the UK list all the time.

✦ They exist in all habitats on all continents, often in incredibly extreme environments.

Pollination

✦ At least one third of all global agriculture relies on insect pollination, with Hymenoptera (bees, bumblebees) and flies (Diptera) being the most important.

✦ 71 of the 150 families of flies include those that feed at flowers as adults.

✦ Within hoverflies, over 270 species have been identified as important pollinator species (in comparison to 250 species of solitary bees and 22 species of bumblebee). Many more species from other fly families have been identified as playing an important pollinator role, but as yet have been poorly studied. Yet recent studies have found that 84% of total pollen carried by flies was by non-hoverfly species.



✦ As well as agricultural crops, there are medicinal and cultivated garden plants that rely on fly pollinators.

Waste control and nutrient recycling

✦ Flies play an important part in decomposing plant and animal matter. They break down large bodies for other organisms, and enable nutrients to be recycled from decaying vegetable and animal matter – so aiding soil fertility, in both aquatic and terrestrial environments.

Biocontrol

✦ Diptera are important as possible biological control of pest species on crops. Parasitic flies have a big impact on pest populations. For example, certain members of the Tachinidae family parasitise caterpillars, while others parasitise scale insects, slugs and snails – flies are true friends of gardeners.

Food for other wildlife

✦ Flies are an abundant aquatic and terrestrial source of food for many birds and fish.

✦ Flies are now being used in the development of animal feed, using fly larvae – especially black soldier flies. These are cheap, easy to rear, rich in nutrients and not detrimental to the environment.

Medical and chemical uses

✦ Forensic entomology – flies are the first to arrive and last to leave a corpse, and so the most helpful at determining postmortem intervals.

✦ Maggot therapy (debridement therapy) – not a common procedure, but maggots are extremely efficient at removing necrotic (dead) flesh from wounds and also release an antiseptic as they do so, reducing amputations due to gangrene.

