

Why Are Dragonflies Important?

Their size and beauty make dragonflies valuable subjects for research on insect behaviour and ecology. They have played a significant role in some cultures and they are increasingly used as subjects for art. Dragonflies have aquatic larvae, which generally rely on good quality water. They can therefore be used to assess water quality and indicate a healthy ecosystem.



A. and H. Holt

Threats and Conservation

Over the last 60 years we have witnessed the extinction of two species of dragonfly in the British Isles. At least a third of the remainder are considered to be rare and localised.



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The greatest threats come from habitat destruction and fragmentation, pollution, inappropriate habitat management, alteration of site hydrology and the impacts of climate change.

Dragonflies are worthy of conservation in their own right. However, their requirements of clean water and a mosaic of habitats mean that dragonfly conservation helps many other species. They can be used as a flagship species not only for aquatic habitats but also for the insect world.

Remember: Dragonflies are harmless to humans; they have no sting and will not attack or bite.

For more information visit
www.british-dragonflies.org.uk

or write to
The British Dragonfly Society
23 Bowker Way
Whittlesey
Peterborough
Cambridgeshire, PE7 1PY

or contact the BDS Conservation Officer, Genevieve Dalley: genevieve.dalley@naturalengland.org.uk

The Life and Times of a Dragonfly

Dragonflies are amazing insects with fascinating behaviours, majestic flight and beautiful colours.

History

Dragonflies are ancient creatures, whose ancestors flew above the carboniferous forests 300 million years ago, before the dinosaurs roamed the earth.

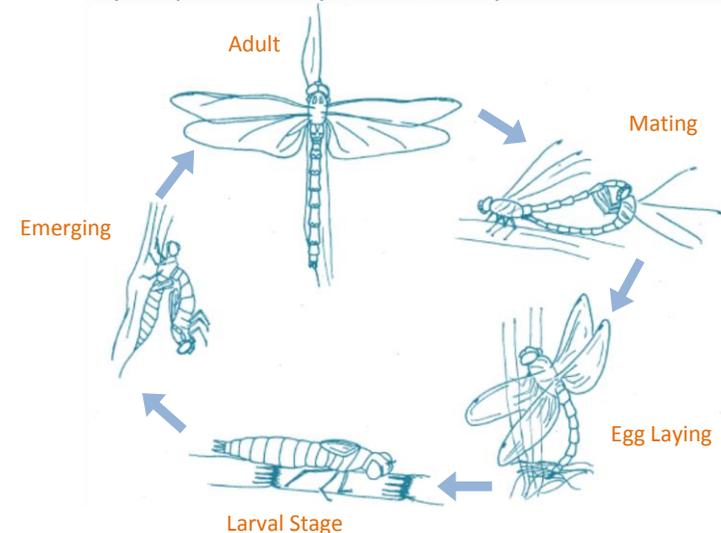
Folklore about dragonflies dates back many centuries. In several countries they are revered as symbols of strength, regeneration and pure water. In others they are feared as creatures with supernatural powers, symbolising instability and weakness.



L. B. Tettenborn

Life Cycle

Dragonflies have a complex life cycle, with a long larval phase underwater (ranging from 8 weeks to 5 years) followed by a short adult phase.



Dragonfly or Damselfly?

Dragonflies belong to an order of insects known as the Odonata (meaning 'toothed jaws') and in Britain they are classified into 2 sub-orders:

▶ **Damselflies** (Zygoptera) are delicate, slender insects with a weak, fluttering flight. The head is rectangular with the eyes on either end. The front and back wings are the same shape and these are normally held closed along the abdomen when the damselfly is at rest.



◀ **Dragonflies** (Anisoptera) are larger, more robust and more powerful fliers. The head is more spherical and consists almost entirely of a huge pair of eyes. The front and back wings are dissimilar in shape and these are normally held open whilst the dragonfly is at rest.



Where do you find them?

In Britain, dragonflies all require permanent water. They can be found in almost any wetland habitat, from ponds and lakes to canals, rivers, ditches and even bogs.

Dragonflies thrive in unpolluted waters that support plenty of aquatic plants. These plants provide egg-laying and emergence sites as well as shelter. Many species also require open water. Dragonflies tend to prefer places which are open to sunlight with some shelter from strong winds.



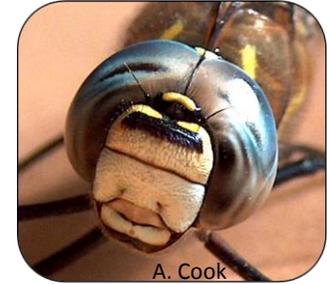
Adult dragonflies use woodland glades and rides, hedgerows and grassy meadows. These are important places to hunt for food, and places where immature dragonflies can develop in relative safety away from aggressive territorial males.

Top Facts

Eyesight

Dragonflies are visual hunters and have impressive vision. They are able to see colour as well as ultraviolet and polarised light. This enables them to see reflections of light on water.

The large compound eyes are made up of as many as 30,000 lenses (ommatidia). Those in the upper part are usually larger and more numerous. This provides an area of superior visual acuity and is why dragonflies usually approach prey from behind and below.



Flight

Dragonflies are most noticeable when in flight, as the sunlight catches their wings and the iridescence of their bodies. Sometimes they can be heard before they are seen, as they clash in aerial battles or brush past vegetation.



Dragonflies can fly at a top speed of 36km/hour and Damselflies at 10km/hour.

Dragonflies are beautifully adapted for flight. They have powerful flight muscles and wings that move independently. They are

incredibly agile and manoeuvrable: able to hover, fly forwards, backwards, sideways and to change the direction and speed of flight rapidly.

Feeding

Both larval and adult dragonflies are voracious predators.

Adults feed on flying insects, especially small flies, midges and mosquitoes. Some of the larger species will take butterflies and damselflies. Many species consume their prey on the wing, but some damselflies and chasers rest whilst feeding.



The larvae are mostly ambush predators, feeding on anything that is smaller than them such as insect larvae, water fleas, snails, small fish and tadpoles. Larvae catch prey by extending their modified lower lip (labium) at lightning speed and impaling prey on the sharp mandibles.