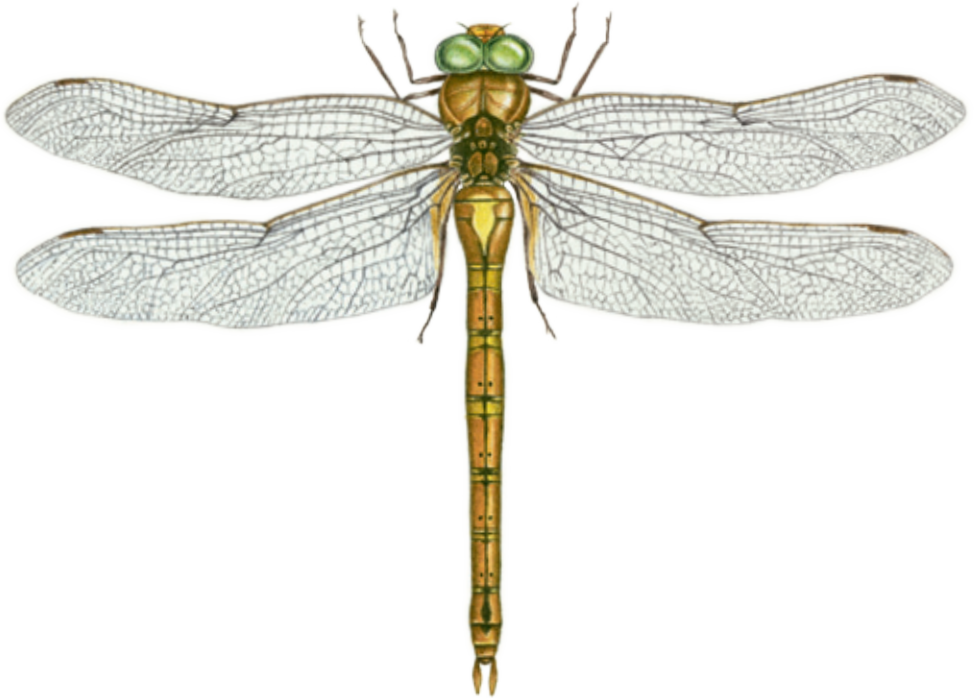


Broads Wildlife

Dragonflies & Damselflies



Broads Authority

The Broads - a member of the
National Park family

The Broads



The tremendous diversity of habitats and wildlife in the Broads creates its special magic, and is the key to its environmental importance. The Broads is a fragile mosaic of wetland habitats. Six rivers and over 60 broads (shallow lakes) and other areas of open water, reed fen, carr or wet woodland and grazing marsh all provide different habitats and support different kinds of wildlife with something in common - they all like wetlands.

Water is the most important element and without it these habitats wouldn't exist. The water needs to be good quality - improving water quality in the Broads has been the main focus of the Broads Authority's conservation strategy since its creation in 1989. It's the key to maintaining the diversity of rare

creatures which live in the Broads, like the Norfolk hawker dragonfly and the swallowtail butterfly which are found nowhere else in this country.

The Broads fens are also home to over 440 different plant species, many of which are rare or cannot be found anywhere else in lowland Britain. Over 200 species of invertebrates have been recorded from marsh dykes, and amongst birds, about 15 per cent of the UK population of the rare bittern breeds in the Broads.

The wildlife of the Broads is an important factor in its membership of the national park family, with two internationally designated Ramsar sites. Ramsar is the oldest (1971) global environmental treaty focused on wetlands. The Broads has a quarter of the rare species in the UK.



Dragonflies & damselflies



Look out for them on warm, sunny days. Dragonflies rest with wings open, the closely related damselflies rest with wings closed or partially closed. Traditional names for them were horse-stingers and devil's darning needles, but in fact they have no sting and will not attack humans.

Dragonflies will, however, devour anything smaller than themselves - gnats, greenfly, mosquitoes, butterflies or smaller dragonflies. This is the key to their enduring success - dragonflies were around on earth long before mammals, birds or even dinosaurs.

Dragonfly eggs are laid into open water, plant material or organic debris and they hatch into aquatic larvae after a few weeks or months. The larval stage lasts from a few months to seven years, depending on species. Larvae feed on small animals, even tadpoles and small

fish, and when fully grown they crawl out of the water and up the stem of a plant, usually at night. The casing of the larva splits open and the dragonfly pulls itself out, pumps up its wings and sits while these dry and harden. As a flying insect most dragonflies live for between three to eight weeks.

One of our largest and rarest dragonflies is the **Norfolk hawker**. In Britain it has always been scarce, although at the beginning of the 20th century it is thought that the Broads supported thriving populations. Since the early 1980s habitats have been restored, grazing marshes have been protected by government and water quality has improved. The Norfolk hawker has spread steadily, re-colonising former sites and currently it is most often found in the fens and grazing marshes of the Broads where there is good quality water.

Encouraging dragonflies & damselflies



Nature reserves are some of the best places to see dragonflies. For details contact the Broads Authority information centres or go to www.enjoythebroads.com

You can help by making dragonflies feel welcome - in gardens and on allotments - by providing the sort of habitat and food they need, such as a pond or other water source, with plenty of plants and other insects. Mature dragonflies and damselflies return to a pond, dyke, river or broad to mate. The best ponds are sheltered from the wind, mostly unshaded and have shallow water at the edge. Submerged plants provide habitat for the developing larvae and put oxygen into the water. Floating plants and those around the sides provide perching, roosting and egg laying sites for the adults, and sites for larvae to emerge. Vegetation around a pond will provide shelter for newly emerged adults and places to hunt and rest.

To find out more, including details on how to report your wildlife sightings, go to these sites:

British Dragonfly Society

www.british-dragonflies.org.uk

Norfolk Biodiversity Information Service

www.nbis.org.uk

Suffolk Biological Records Centre

www.users.globalnet.co.uk/~sbrc

Broads Authority, Dragonfly House

2 Gilders Way, Norwich NR3 1UB

tel 01603 610734

broads@broads-authority.gov.uk

www.broads-authority.gov.uk

www.enjoythebroads.com



*illustrations by
Pat Thorne*



Inside illustrations are life-size, front cover illustration is 40% larger than actual size.



< **Norfolk hawk** ♀
dragonfly
June - July



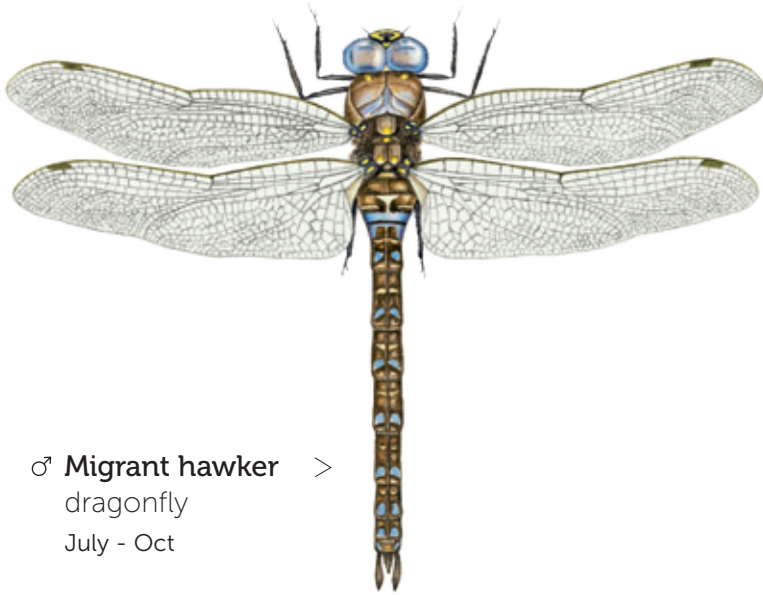
< **Red-eyed** ♂
damselfly
May - Aug



♂ **Blue-tailed** >
damselfly
May - Sept



< **Four-spotted
chaser** ♂
dragonfly
May - Aug

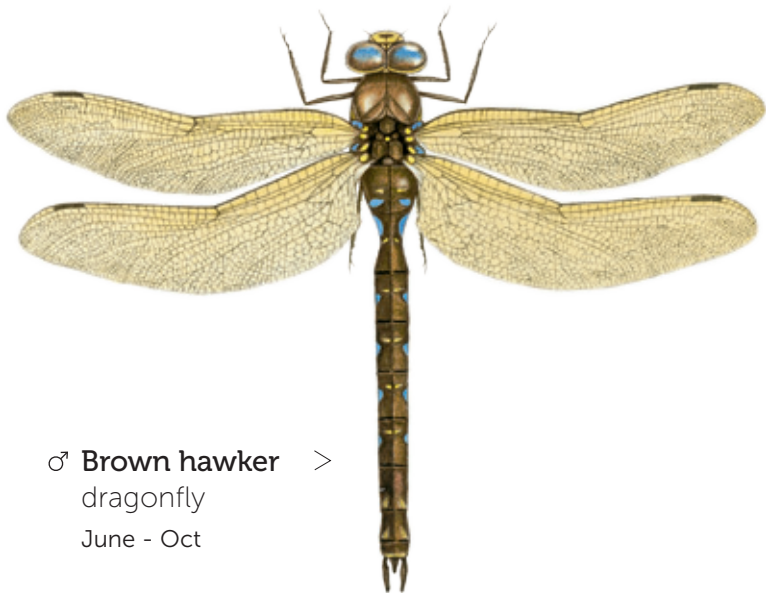


♂ **Migrant hawker** >
dragonfly
July - Oct

♂ **Azure** >
damselfly
May - Aug



< **Black-tailed
skimmer** ♂
dragonfly
May - Aug

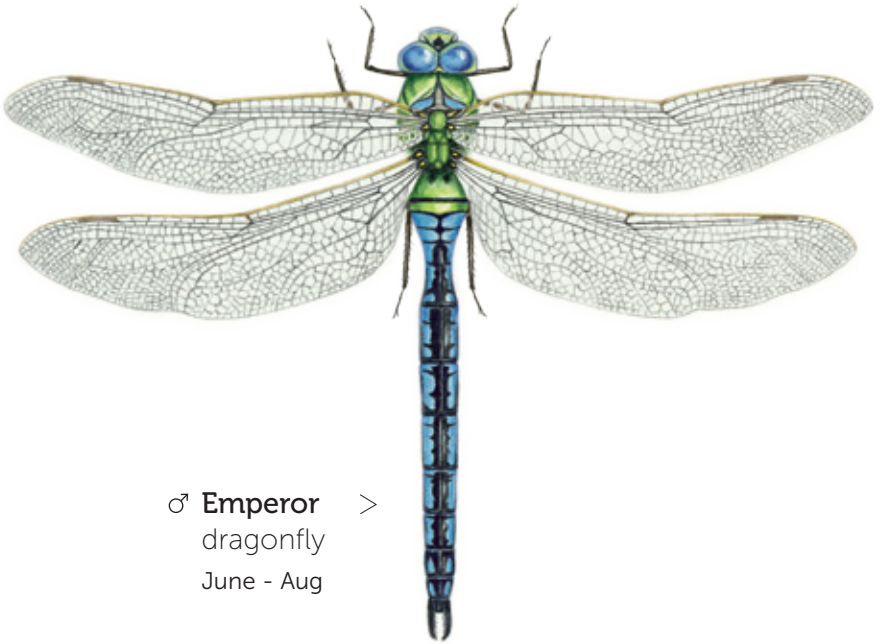


♂ **Brown hawker** >
dragonfly
June - Oct

♀ **Large red** >
damselfly
April - Sept



< **Banded demoiselle** ♂
damselfly
May - Aug



♂ **Emperor** >
dragonfly
June - Aug



♂ **Common darter** >
dragonfly
June - Sept



< **Emerald** ♂
damselfly
June - Sept