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Take a
Closer look...

The Natural World of Canals

CANAL WILDLIFE
challenge

Poster inside



THE NATURAL WORLD OF CANALS

Canals, though man-made, provide a unique sanctuary for a wide variety of plants and animals, some of which are becoming rare elsewhere. Much of the wildlife value of canals is due to the unusual combination of different habitats within a very narrow strip of land.

The first of these habitats is the hedgerow, usually planted when the canals were first built to keep livestock off the towpath.

Today these mature hedgerows have become home to a wide range of plants and animals and are very different from the hawthorn strips originally planted.

Next to the hedgerow comes the towpath. Depending on how it is used and managed it can provide homes for numerous species. In rural areas up to three distinct habitats can occur:

- the wildflower and insect-rich tall grass next to the hedge
- the mown central section dominated by trample resistant plants
- the marshy strip at the edge of the canal channel.

The last of these is particularly valuable for insects such as dragonflies, which spend part of their life-cycles underwater but use this habitat to emerge and feed as adults.

The canal channel itself is the most important habitat, providing a home for many different species of animal and plant.

At the margins there may be reedy fringes which merge with the marshy strip of the towpath. The reedy plants here are important for aquatic insects and fish. They are often used by nesting waterbirds and waterside animals, particularly on the opposite side of the canal to the towpath.

The open water of the central canal channel is yet a different habitat, with a wide range of pondweeds, aquatic insects and fish.

This combination of habitat strips in such a narrow corridor gives canals a unique 'biodiversity', further enhanced in places by cuttings, embankments and water supply reservoirs. The poster picture overleaf shows how these habitats fit into the wider countryside.

BIRDS

The variety of canal habitats means that many different kinds of bird live along the canals. In the hedgerow and along the towpath you may see terrestrial species such as sparrows, finches, thrushes and warblers. The hedge provides a good nesting site for these species.

Between the branches of the hedge you may glimpse a **wren**, **1** one of our smallest birds. At the water's edge you'll often see a heron stand motionless waiting to catch fish. The **kingfisher**, **2** another fish-eating bird is also fairly common but much harder to spot. Watch out for a flash of sapphire as it flies alongside the water.



The open water of the channel is ideal for waterbirds. Mute swans feed on water plants and are sometimes seen with large families of cygnets in summer. **Moorhens**, **3** are a common sight on the water. They often nest amongst the reedy plants of the canal margins and like to feed in the shallows. Overhead, swallows and martins swoop and dive, attracted by the aquatic insects emerging from the canal.



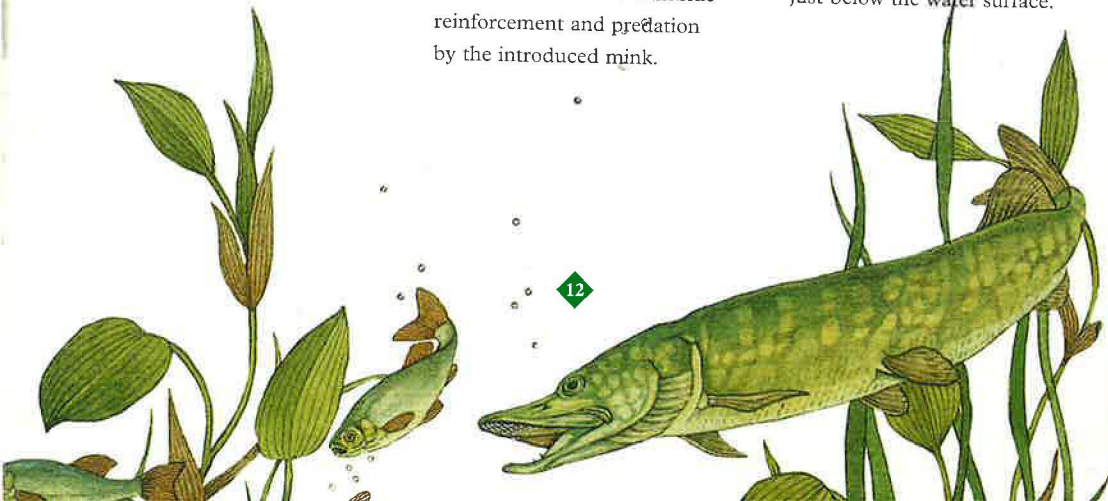
ANIMALS

The towpath, cuttings and embankments of canals can provide an important habitat for many mammal species. Some, like wood mice and bank voles live in the hedgerow. Others, like badgers and foxes, burrow into the embankment slopes. Canalside buildings, bridges and tunnels provide roosting sites for **Bats**, **10** which forage for their insect prey above the canalside vegetation.



Along the water's edge amphibians and reptiles can often be seen. These include frogs, toads and newts as well as the harmless grass-snake, which is fond of swimming in the canal's still waters. Other waterside animals include the increasingly rare **Watervole**, **11** which burrows into canal banks. Its main enemies are bankside reinforcement and predation by the introduced mink.

Beneath the water the dominant animals are the fish. The disturbed waters of navigated canals mean that large numbers of small roach, bream and gudgeon dominate, though there are many other species present, including the predatory **Pike**, **12** often seen basking just below the water surface.



RARE AND UNCOMMON SPECIES

Much of the nature conservation value of canals lies in their wildlife diversity, rather than the presence of particularly rare species. However many rare and protected species can be found. As well as the bats and badgers already mentioned these include the lesser known **Native Crayfish**, **13** and the Floating Water Plantain. Other canal species are locally rare or uncommon, or are restricted to particular sorts of canal habitat. **Reed Warblers**, **14** for example are limited to those sections of canal that have Common Reed growing in the margins.



COLONISING SPECIES & ALIENS

Canals are home to many species that have used them to colonise new areas over the years. Some of these species are natives that have found the canal environment particularly suitable. These include the rare Floating Water Plantain, which spread from Welsh lakes into canals in the 1860s. Other colonisers are less desirable. These are the alien species, colonists from abroad which use the canals to spread around the country.

Aliens include Canadian Pondweed, which spread rapidly through the canal system in the 19th century to become a common pondweed today. More recent examples include Zander, a predatory fish from Europe that is changing the ecosystem of Midland canals, and most recently, **Red-eared Terrapins**, **15** released as unwanted pets.




PLANTS




The towpath vegetation can include many types of wildflower. A study of one wildlife-rich canal revealed over 400 different species along its towpath. This is many more than would be typical but most canals host a good range. Characteristic species include **Skullcap, Meadowsweet** and **Hairy Willowherb**,  as illustrated here.


In the reedy margins of the canal are plants that need to be rooted in shallow water. Reeds and tall grasses dominate, though they are usually mingled with a variety of shorter flowering plants.




Sometimes fast-growing species like reed sweetgrass and canary grass dominate, crowding out other types of plant. Typical flowering plants of the margins include **Yellow Flag, Arrowhead** and **Branched Bur-reed**. 


In the canal channel live the true aquatic plants. They range from the floating duckweeds to the submerged **Pondweeds**  and starworts. The floating species grow prolifically in hot summers, causing problems for other species by reducing oxygen in the water. The many species of starworts, hornworts and pondweeds, are essential food and habitat for aquatic invertebrates.

INVERTEBRATES

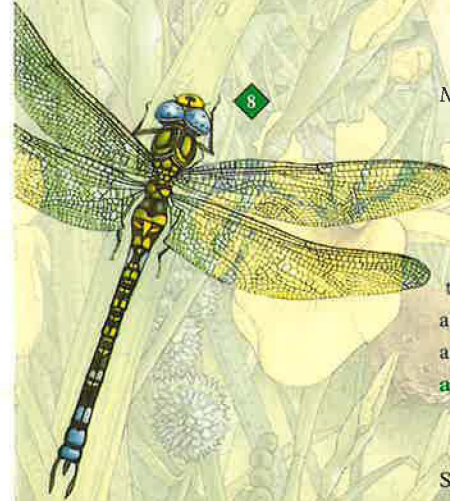
Scores of different insects live amongst the towpath grasses and flowers. Many are hidden in the undergrowth but some such as bees, hoverflies and butterflies are easy to spot. The waterside flowers of meadowsweet are particularly attractive to bees and flies. Many species of butterfly can be seen. They include the distinctive **Gatekeeper**,  so-called because it patrols up and down the hedgerow.

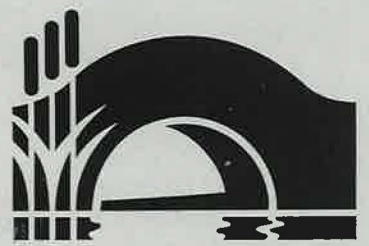


In the water itself is a whole different world of aquatic invertebrates: insect larvae, water beetles and bugs and aquatic crustaceans and molluscs. Molluscs range in size from tiny pond snails to the huge swan mussels, which can be 12cm long. The crustaceans also come in many sizes from the tiniest freshwater shrimp to the crayfish, sometimes bigger than the swan mussels. The waterbugs are particularly well-adapted to canals: common species include the various water boatmen, water scorpions and skimming on the surface, the **Pond Skaters**. 

Many insects spend their larval stages underwater but emerge to spend their adult life flying amongst the flowers of the towpath. These include the mayflies, caddisflies and alderflies as well as the larger and more familiar **Damselflies and Dragonflies**. 

Several species of blue damselflies can be seen along the towpath in the spring and early summer. They are replaced in July and August by the larger hawker dragonflies.





British Waterways

CANAL WILDLIFE challenge

Take a closer look at the natural world of canals...

How many of these can you spot? (Answers below)

- Birds?
- Water voles?
- Dragonflies and damselflies?
- Butterflies and moths?
- Fish?
- Frogs?
- Swans?
- Bats?
- Badgers?



Answers:
28 birds, 4 water voles,
5 dragonflies & damselflies,
6 butterflies & moths,
2 fish, 2 frogs, & 2 badgers.