

## Wildlife in streams

### River Pollution

Rivers and streams are very important wildlife habitats. The water provides the living environment for fish, plants and animals, while the banks and nearby land support creatures such as otters, kingfishers and dragonflies and a variety of water-loving plants.

When a river or stream becomes heavily polluted, only the harmful bacteria can survive. Not only do these rivers usually smell bad and look unsightly, but fish, animals and plants may die.

Our rivers are polluted by:

#### Acid rain

Rain falling through polluted air absorbs some pollutant gases such as sulphur dioxide and nitrogen oxides. These react with rainwater to form sulphuric and nitric acids, forming what we call "acid rain".

This acid rain can release harmful substances such as aluminium and heavy metals from the soil which wash into our rivers. The aluminium can kill small water creatures and fish and also the creatures that feed on the fish.

#### Agricultural pollution

Nitrate pollution problems occur when too much chemical fertiliser is applied to the land. The excess fertiliser runs off and can find its way into rivers and lakes. Too much nitrate can create a 'pea soup' effect where the water becomes clogged with fast-growing plant life like algae and weeds. When the algae dies and decomposes, it uses up oxygen in the water leaving less for plants and animals.

#### Industrial pollution

Industrial wastes are often discharged into rivers. These chemicals are often difficult to treat. Some companies try to cut the costs of dealing safely with waste by illegally dumping chemicals at times and in places where they think they will not be caught. The major pollutants are:

- phosphates from detergents
- warm water from power stations
- chemicals from industry

Read more about these in the sheets on **Water treatment**.

#### Spillage

Occasionally accidents occur and chemicals spilt on the roads and land find their way to the rivers. These spills need to be dealt with promptly to prevent the rivers becoming polluted and the wildlife being affected.

## Effects of pollution on wildlife

To support a wide range of plants and animals, a stream needs to be clean and unpolluted. Streams also need to provide cover and a variety of habitats as different plants and animals require different conditions. Ideally there should be deep and shallow stream areas, a variety of vegetation and different levels of shade.

### The return of the otters

The otter is a predator at the top of the food chain so the presence of otters reflects the health of our rivers and wetlands.

Otters are shy creatures that tend to hide away in their holts (burrows under tree roots) during the day. In Great Britain we have Eurasian otters. Look for them by quiet streams at dusk.

Eurasian otters prey mainly on fish including eels, trout or blenny, but they also hunt crayfish, frogs and birds. They catch fish underwater in their strong jaws. Otters eat about 1kg of food each day.

Otters need:

- unpolluted water with lots of fish to eat
- safe holts
- dense bankside cover
- safe undisturbed areas

During the 1950s, otters in many parts of the country were nearly wiped out by the accumulation of pesticides in our rivers. The otter is now considered an endangered species.

Scientists think this decline was mainly due to certain chemicals in rivers that affected otters' reproduction, poor river quality, fewer fish for them to eat and a lack of suitable places for them to live.

The good news is that the otter population has continually increased over the last 25 years and their range is expanding in England.

Not only is this major recovery great news for otters - it shows that our rivers and streams are becoming a lot cleaner!

### Did you know?

Typically 2 to 3 cubs are born in a holt. Cubs start to catch food after 4 months but spend 7-12 months with their family group to learn to fish properly.

Otters spend a lot of time resting. Each otter may have up to 30 rest sites in its territory.

### Find out more

[www.wildlifetrusts.org](http://www.wildlifetrusts.org)

<https://www.southwestwater.co.uk/environment/a-precious-resource/>