

Ponds



Introduction

The UK has lost many of its ponds due to urbanisation, water abstraction and intensive agriculture. Even many village ponds have been destroyed. The loss of a pond speeds up the decline of many pond plants and animals. Many ponds are also degraded due to pollution from surrounding land through chemicals, nutrients and sediment from agriculture and road run-off. Polluted ponds cannot support as many plants and animals as unpolluted ones.

Networks of ponds and other water bodies allow wildlife to move across the landscape and colonise new areas. Where ponds are lost or degraded these networks are broken, therefore creating new wildlife-friendly ponds is an important way to conserve pond wildlife.

Wildlife in ponds can often be overlooked as much of it is underwater and difficult to see. Ponds provide wildlife with a place to live and a source of food. The birds, dragonflies and amphibians that visit ponds and to feed upon underwater plants and animals give an indication of the wealth of wildlife within the water. Both bankside and water wildlife use the abundant food that a pond can provide.

Aquatic and bankside plant life adds structure and variety to a water body whilst providing animals with food, shelter and a place to breed. The plants present in ponds vary from algae to tall straight reeds, from submerged plants and floating lilies to bushy flowering marginals (plants that grow on the edge of water bodies) and water-edge trees.

Creating the perfect pond

A simple small back garden pond can be brimming with wildlife so if you don't already have a pond, why not make one? To create a pond in which wildlife will flourish follow the golden rules for pond creation - clean water, not too deep (the deep area is not more than 30cm) and with gently shelving natural edges. For more detailed information and lots of handy tips on how to make a pond see the Pond Conservation website (details at end of leaflet).

The size of your pond is up to you, but even the smallest pond will have its own wildlife. If you have lots of space you could try making a series of ponds of different sizes and shapes as this will attract a lot more wildlife. When deciding on the shape of your pond try to make sure that the edges are shallow and slope gradually. Shallow edges are essential as these are the areas where most small invertebrates are found and a bit of bare mud at the edges of a pond is not a bad thing – mud is good: for example some dragonflies, like the Southern hawker (*Aeshna cyanea*), lay their eggs in the mud at the edge of ponds.



Common darter (*Sympetrum striolatum*)

To create a pond that is a palace for invertebrates make areas which provide shelter and protection, as well as open water for other animals to hunt. Aim for lots of different plants and a varied underwater structure (mix of shallow and deep areas). Plants should be allowed to colonise naturally with plant life; however, if you do plant something try to use native local

species. For more information on sourcing native species see Flora Locale (details at end of leaflet).

Pond water

Don't be tempted to fill your new pond with tap water. This is a bad idea as it will add a nutrient boost to your pond water which encourages algae. Use rainwater instead for a more natural and balanced start. For the best wildlife pond don't add too many non-natural materials at the beginning as your pond doesn't need them and adding soil, fertilisers and chemicals will stop your pond from having a good start. Also do not add fish as they may eat the young of frogs and newts as well as many invertebrates.

Good pond management

Some people think it's important to have lots of open water in a pond, but relatively few species live there, so to help encourage lots of bugs as well as other pond species do not dredge too regularly or remove water plants. If you do clear out vegetation, then remove only part of the vegetation at one time, and don't eliminate any habitat completely. Leave your dredgings on the pond side for a day to allow the residents animals a chance to escape back to the pond.

A key part of a wildlife rich pond is maintaining good water quality. This means reducing any chemicals, nutrients and sediments getting into the pond water. So avoid using pesticides near your ponds, or letting too much soil or fertiliser wash into the pond as this will cause high nutrients and you will get problems with algae and duckweed. A broad margin of plants surrounding the pond helps to filter any water entering the pond by removing excess nutrients, chemicals and sediments. Trees around ponds provide shelter whilst the roots provide a safe haven for animals in the water. However, a lot of shading and fallen leaves will alter the appearance of your garden pond by suppressing plant growth and adding organic matter, and you may want to consider this when creating a new pond.

Temporary Ponds

You would be forgiven for thinking that ponds that dry out for part of the year have no

interesting wildlife. However temporary ponds have their own unique plants and animals including the Pond mud snail (*Omphiscola glabra*). Temporary ponds are particularly vulnerable to draining and from excavation to make them permanent and so our temporary water bodies need to be preserved and new temporary ponds created to replace the ones we have lost.

Top tips

Different types of ponds support different invertebrates. If you have several ponds manage them in a variety of ways, e.g. allowing some to become quite heavily vegetated or even to dry out in the summer. Below are some simple tips to help manage your pond.

Varied marginal vegetation

Maintain a varied structure and mixture of plant species in the marginal vegetation to increase the range of places available for invertebrates to shelter and breed in. Avoid introducing any non-native species.

Trees and shrubs

Ideally, any overhanging vegetation should be on the northern margin and no more than 25% of the pond edge should be shaded, although shaded woodland ponds can provide special habitats for some rare aquatic invertebrates.

Buffer strips

Leave a buffer strip of unfertilised rough tussocky grass at least 10m wide around any pond in improved grassland or arable fields to protect it from pesticide spray drift or fertiliser inputs.

Poached ground

Allow livestock some access to pond margins to create areas of poached ground and bare mud that are important for invertebrates such as craneflies.

Submerged vegetation

Leave plentiful submerged vegetation for aquatic invertebrate species such as dragonflies and some hoverflies that lay their eggs on aquatic vegetation and whose larvae live in the water.

Mess is best

When you are looking after your pond don't be too tidy. Your pond is not meant to be perfectly neat, so don't over manage it. A good wildlife pond needs a tangled mess for animals to hide and overwinter in so keep your pond looking naturally chaotic. The best ponds have a mix of sediments, fallen leaves, twigs and branches on the bottom and plenty of plants in the water. Twigs and branches that fall in ponds, as well as old plants, may look a bit messy but you don't need to pull these out to keep your pond in good condition. These areas are good habitats for animals. Eventually much of the plant material will be naturally recycled.

Problem pond plants

A really important part of looking after your pond is making sure that it has no invasive plant species. These plant species are bad for your pond as they grow rapidly preventing establishment of other plants. Unfortunately some invasive species are still sold in garden centres so it is important to check you don't introduce problem plants to your pond.



Parrotfeather (*Myriophyllum aquaticum*)

Some of the commonest invasive plant species include:

- Water fern (*Azolla filiculoides*) - a floating fern that smothers the pond's surface.
- Parrot's feather (*Myriophyllum aquaticum*) sometimes sold as an oxygenator but this plant will rapidly out grow your pond
- New Zealand pigmyweed (*Crassula helmsii*) produces dense mats of vegetation which shades out other plants

For further information on recognising invasive water plants go to the Plantlife website (details at end of leaflet).

Bibliography

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The Ponds Conservation Trust (1999) The Pond Book – A guide to the management and creation of ponds. Available from Pond Conservation: www.pondconservation.org.uk

Plantlife – Pond Alert! Managing Garden Ponds to Protect Wildlife - www.plantlife.org.uk

Flora Locale - www.floralocale.org

More information

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