

How To: Improve your garden for amphibians



Your garden is likely to host common amphibians such as frogs, toads and newts. Managing areas of your garden to attract amphibians will benefit other garden creatures, and amphibians are predators for species we consider as pests, such as slugs. Encouraging populations of frogs, toads and newts in your garden can help you control pests without the use of harmful chemicals.



Smooth newt
Photo: Piet Spaans via Wikimedia Commons



Common frog
Photo: Steve Head



Common toad
Photo: Steve Head

Target species:

Common amphibian species in our gardens include the common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris*, and the palmate newt *Lissotriton helveticus*.

How to do it

Amphibians spend most of their lives on land, preferring shady damp habitats with lots of invertebrate food. But because they need water in which to breed and for their larvae to develop, you must provide *two* good habitat areas in your garden. However, even if you don't have a pond, you may still find frogs and toads because they will migrate some distance from the pond in which they grew up, only to return to it to breed.

Aquatic habitat

- To give the best opportunity for amphibia, put in a pond. See our guide on creating and maintaining [ponds](#) for wildlife. If your garden has limited space, you could [make a container pond](#) which could still be good for amphibians and other wildlife if it is flush with the ground surface.
- Frogs and toads need shallow areas or outposts to rest and breathe on, so make sure your pond has some areas they can climb up out of the water. This could be within emergent vegetation or by adding rocks or logs. All ponds should allow animals to get in and out, over vegetation or using an inclined ramp. Easy escape routes are vital for tiny newly-metamorphosed young frogs and toads. "Beach" areas of pebbles look good on larger ponds.
- To encourage newts plant some narrow-leaved water plants for them to lay their eggs on, easy choices include watermint *Mentha aquatica*, common water starwort *Callitriche stagnalis*, and watercress *Rorippa nasturtium-aquaticum*.

- Don't add fish to your pond, as they will eat the spawn, tadpoles and other aquatic wildlife.



A mixture of frog and toad tadpoles. The big grey ones are frogs and the smaller black ones are toads.

Photo: Piet Spaans via Wikimedia Commons

Terrestrial habitat

- Like most garden vertebrates, amphibians like plenty of cover, and this should be pretty dense, and with damp shady areas.
- You should (of course) avoid using pesticides that kill the small creatures that amphibians like to eat.
- Make sure there are entry points around the perimeter of your garden at ground level, like small gaps under fencing to allow free movement between gardens.
- Creating a log pile is a great way to attract amphibians to your garden, as log piles harbour insects they prey on and provide shelter for overwintering. Making a log pile in a shady spot near a pond will greatly benefit amphibians as a place of refuge and hibernation site and increase their chances of survival over the winter. Take a look at our guide on [habitat piles](#) for guidance. A log pile in a sunny spot will also give reptiles a place to bask in the sun.
- Rockeries can help amphibians, especially newts, by creating very well protected cavities under the stones where they can over-winter.
- Compost heaps provide food for amphibians by attracting insects that feed on the decaying matter. See our guide on making [compost](#).

How easy is it to do?

Easy to moderate. Making a pond can be challenging and requires time and resources, however making a pond in a pot, log pile or rockery is relatively easy if you have the materials.

How much will it cost?

If you're making a pond, the cost will depend on its size. Pond liners for a pond of about 2m in diameter would cost a little under £100, or preformed ponds can be bought from as little as £30. Reusing an old sink or container as a pond is free! For your log pile, you can use trimmings from your own trees or you could ask neighbours who have had tree work done to keep some logs for you.

How effective is it for the target species?

Very effective. Even a small pond or small log pile will be of great benefit for and *lots* of other species of invertebrates.

Golden rules – what the science tells us

- You may find your amphibian populations vary a lot through time. Some years breeding success may be limited by sudden weather changes, while in other years baby frogs seem to be everywhere.
- Newts are voracious predators on frogspawn, sucking out the black embryos and leaving the jelly. If you have lots of newts, you may find your frog population goes into decline.
- If you're buying or recycling wood for your log piles, make sure you use untreated logs with their bark on, as preservative chemicals will kill any fungi and insects that try to colonise, and many wood boring invertebrates such as beetles like to shelter beneath the bark.
- To ensure your pond has good water quality that can support a diverse array of wildlife, avoid filling it with tap water and use rainwater instead as tap water contains phosphates and nitrates.
- Don't add fish to your pond as they will eat any frogspawn and tadpoles, and the waste from feeding them will add nutrients into the water that lower water quality and encourage algal growth. A wildlife pond will always do better without fish. If you do add fish, the herons will help to remove them.

What to look for?

Watch frogs and newts in your pond, keeping still at the top of the water. In early spring mornings and evenings, listen for the calls of the male frogs. Look out for frogspawn in shallow areas of your pond from February onwards. On colder and damp rainy days, you might find frogs and toads out around your pond or near your compost heap.

Things to be aware of

- Amphibia, particularly frogs, are eaten by quite a lot of wildlife, especially grass snakes and herons. Try to tolerate this predation, because these are also important species, and eating frogs is in their job description.
- Be very careful mowing near ponds in the late summer, because there may be tiny newly metamorphosed frogs in the long grass.
- Don't use any chemicals or fertilisers in and around your pond, as this will disrupt the ecosystem and pollute the water. Nitrate pollution is particularly bad for tadpoles.
- The wood at the bottom of your wood pile will rot down over time, so occasionally add new logs and prunings to the top of your stack.
- There have been outbreaks of [ranavirus](#) in some parts of the country in recent years affecting a large number of frogs. To reduce risks to your local population, avoid moving frogspawn or tadpoles between ponds.
- Great-crested newts are very heavily legally protected in Britain, so if you find them in your garden (which is possible but not very likely) you should contact your local Wildlife Trust for advice.

Further information

Amphibian and Reptile Conservation Trust [website](http://www.arc-trust.org/) www.arc-trust.org/

Froglife [website](http://www.froglife.org/) www.froglife.org/

Garden Wildlife Health [Ranavirus](http://www.gardenwildlifehealth.org/portfolio/ranavirus-disease/) information www.gardenwildlifehealth.org/portfolio/ranavirus-disease/

On our website:

Natural England's booklet on [amphibians](http://www.wlgf.org/ne18amphibians.pdf) www.wlgf.org/ne18amphibians.pdf

How to: [Bring water into the garden](http://www.wlgf.org/ht_bring_water.pdf) www.wlgf.org/ht_bring_water.pdf

How to: [Create and maintain ponds](http://www.wlgf.org/ht_ponds.pdf) for wildlife www.wlgf.org/ht_ponds.pdf

How to: Make a [pond in a pot](http://www.wlgf.org/ht_pond_pot.pdf) www.wlgf.org/ht_pond_pot.pdf

How to: Create [habitat piles](http://www.wlgf.org/ht_habitat_piles.pdf) www.wlgf.org/ht_habitat_piles.pdf

Detailed pond advice

Our introduction to [ponds and their ecology](http://www.wlgf.org/water_ecology.html) www.wlgf.org/water_ecology.html

Our advice on [siting and making ponds](http://www.wlgf.org/placing_constructing_pond.pdf) www.wlgf.org/placing_constructing_pond.pdf

Our advice on [pond creation](http://www.wlgf.org/Establishing_pond.html) www.wlgf.org/Establishing_pond.html

Our advice on [planting-up ponds](http://www.wlgf.org/Planting_pond.html) www.wlgf.org/Planting_pond.html

Our advice on [managing ponds](http://www.wlgf.org/Managing_ponds.html) www.wlgf.org/Managing_ponds.html