

Ponds in gardens and the countryside

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reviewed by Steve Head

What a pond is and why they are important?

A pond is defined as a body of still water between 1m² and 2 hectares (about the size of two football pitches), which holds water for at least four months. This can cover just about anything that has formed naturally or artificially; puddle, pool, duck-pond or storm-water basin and so on. Generally speaking, sunlight should be able to penetrate throughout a pond's depth such that aquatic vegetation can grow, and not be so large that wind can influence water-mixing...so the difference between a pond and a lake is not always obvious.

Today relatively few ponds (perhaps 2%) are natural in origin. In most settings, small to medium ponds eventually fill with peaty material and silt, and come to appear to be dry land. Many ponds were originally dug as watering holes for livestock or for the extraction of minerals such as marl for spreading on fields. However, although many of the natural processes that once created ponds across the landscape are prevented by man, artificial ponds are just as valuable for wildlife as natural ones.

If you are able to fit a pond the size of two football pitches into your garden, then congratulations. However, the beauty of ponds is that size really is of little importance. Studies have shown that the diversity of life supported by a network of ponds is often greater than rivers and streams¹. It is thought that the wide variety of pond life depends on two things; a clean water source and a complex habitat with many subtle differences in the physical and chemical make-up from one pond to another. What this means is that if you are able to introduce any size pond to your garden then you can make a really positive impact to wildlife in your neighbourhood.

Importance of ponds in the landscape, numbers of country and garden ponds

In the United Kingdom alone it has been estimated that there are between 2.5 and 3.5 million garden ponds, the average size of which is about 1m².² That means a potential for about 350 hectares, or the equivalent of over fifty football pitches of (potentially) clean, secure water in our gardens that could provide wildlife havens; and that's before any new ones are added. At the same time though, about 80% of ponds in the countryside are degraded and many of our streams and rivers are polluted³. The number of countryside ponds may also be close to an historical low as urban areas have grown and land-use such as agriculture has intensified. The result is little room left for the field-corner pond but even more reason to introduce a pond to your garden.

¹ Davies, B.R., J. Biggs, P. J. Williams, J. T. Lee, S. Thompson 2008. A comparison of the catchment sizes of rivers, streams, ponds, ditches and lakes: implications for protecting aquatic biodiversity in an agricultural landscape *Hydrobiologia* **597**:7-17

www.freshwaterhabitats.org.uk/wp-content/uploads/2013/09/Davies-et-al-2008b.pdf

² Williams PJ, Biggs J, Crowe A, Murphy J, Nicolet P, Weatherby A, Dunbar M (2010) CS Technical Report No. 7/07 Countryside Survey: Ponds Report from 2007. Lancaster

³ Davies ZG, Fuller R a., Loram A, Irvine KN, Sims V, Gaston KJ (2009) A national scale inventory of resource provision for biodiversity within domestic gardens. *Biol Conserv* 142:761–771. doi: 10.1016/j.biocon.2008.12.016

The issue of water quality remains a sticking point however. The majority of garden ponds have poor water quality⁴ and are below their ecological potential.

Pond-dwelling wildlife relies on access to a healthy network of ponds. It's within this network that pond species move to reproduce, avoid predators, seek refuge from pollution or recolonise ponds recently recovered from damage. And, it's from this network that a mind-boggling array of creatures big and small will find your newly created pond whether by flying in, hitching a lift with some other creature, crawling or hopping across the landscape.

The Freshwater Habitats Trust is the leading pond biodiversity organisation in Britain, and it has been running the [Million Ponds Project](#) which aims to create an extensive network of new ponds across the UK to reverse a century of pond loss and degradation . The project offers a great range of useful guidance and leaflets for establishing quality ponds. They also have an excellent garden pond guide, [Creating garden ponds for wildlife](#).

⁴ Biggs, J. 2009 The Big Pond Dip Proceedings Wildlife Gardening Forum Conference November 2009
wlgf.org/November%202009%20Proceedings.pdf