

Making a difference

The Reptiles & Amphibians in your Garden Survey



Common Frogs in a breeding pond by John Harding

In the spring of 2009 we teamed up with Froglife and Amphibian & Reptile Conservation to discover how gardens were used by our different amphibian and reptile species. The results presented here highlight some of our key findings and should help you to make your garden more 'herp' friendly.



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ESTABLISHING THE VALUE OF GARDENS

Garden ponds often provide breeding sites for frogs, toads and newts, and feeding opportunities for visiting Grass Snakes. However, we do not really know how important our gardens are for amphibians and reptiles, nor do we have a full understanding of what makes a particular garden good (or bad) for individual species.

The Reptiles and Amphibians in your Garden Survey (RaGS), which took place in 2009, set out to answer these questions. A joint venture between the Amphibian and Reptile Conservation (ARC), the BTO and Froglife, the survey asked participants about the species of reptile and amphibian that were present in their garden and, importantly, about the nature of the garden itself and the garden management practises employed. Just under 4,000 people took part in the survey,

80% of whom were existing BTO Garden BirdWatchers, and their efforts provided us with a very valuable set of information, not to mention some fascinating records of one or two non-native reptiles and amphibians.

THE GARDEN HERPETOFAUNA

Perhaps unsurprisingly, Common Frog was the most commonly recorded amphibian (noted in 89% of gardens). This was followed by Smooth Newt (45%), Common Toad (44%) and Palmate Newt (8%). The most commonly recorded reptiles were Slow-worm (16%) and Grass Snake (13%).

Records of rare or non-native reptiles and amphibians were validated by BTO and ARC staff, either over the phone, by email or by letter. Through the validation process we were able to reveal the presence of five gardens with introduced Alpine Newts, four with Midwife Toads, 17 with 'green' frogs,



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two with Sand Lizards and one with Smooth Snake (the last two species are known from gardens in Dorset where housing has been built on or adjacent to lowland heath). The 'green' frog records refer to either Marsh Frog or Edible Frog, both of which have been introduced to a number of sites around the country. The most unusual record was what could only have been an escaped European Tree Frog, in Exeter.

DETERMINING FACTORS

BTO researcher Liz Humphreys then examined information provided on the nature of each garden (e.g. what micro-habitats it contained and how it was managed) to explore how this influenced the reptile and amphibian species present. A number of general patterns emerge from this work. The permeability of the garden's boundary was important, with walls and fences lowering the chances that the garden would support amphibians and reptiles. Hedges were better!

As might be predicted, the presence of ponds was important for amphibian occurrence and also for Grass Snake. Compost heaps, log-piles and piles of rubble were all positively related to the occurrence of all the common amphibian and reptile species, whereas plastic compost bins were not. Features associated with individual ponds were also found to play a part. In particular, the presence of ornamental fish (e.g. Goldfish) appeared to have a negative influence on the use of the pond by newts. This is something that has been suggested by other researchers, with the fish thought to be significant predators of newt eggs and larvae.

A WIDER LANDSCAPE

Of course, gardens do not exist in isolation; they are part of a wider landscape of habitats. By looking at the impact of surrounding habitats on what occurred in our study gardens, Liz revealed that habitats associated with urban landscapes (e.g. parks, recreation areas and other gardens) had a generally negative impact, while those

Things you can do in your garden

Our results have highlighted things that you can do in your own garden to improve its suitability for reptiles and amphibians.

Create a diversity of micro-habitats by:

- allowing part of the garden to become wild.
- using hedges as boundaries, in preference to fences or walls.

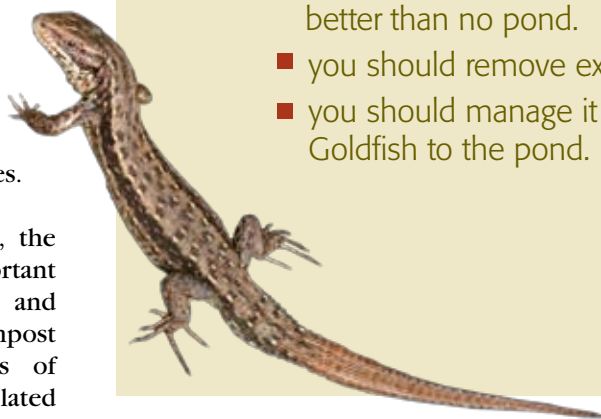
Create habitat features by:

- making a log pile.
- making a compost heap.
- exchanging your plastic compost bin for a compost heap.

Dig a pond:

Our results show that:

- it should be as large as you can make it, with 2m² in area the recommended minimum, but any pond is better than no pond.
- you should remove excess weed on an annual basis.
- you should manage it for wildlife and not introduce Goldfish to the pond.



GET INVOLVED:

Get more information from:

Froglife: www.froglife.org

ARC Trust: www.arc-trust.org

BTO: www.bto.org/gbw

associated with the wider countryside were generally positive. This suggests that favourable gardens (in terms of the habitats they contain and the management practises adopted) may be separated by unfavourably-managed gardens or areas of unsuitable habitat (including physical barriers to dispersal like walls or roads).

Our findings imply that gardens have the potential to provide good reptile and amphibian habitat but that good practices (both within and beyond the garden) are needed to realise this potential. We also took the opportunity to examine how your Garden BirdWatch records could be used to monitor changes in garden use by reptiles and amphibians over time. This highlighted the value of your records, revealing (for example) that we can detect a 5% change in frog populations in gardens. ■

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