

Toads surprise scientists by climbing trees in UK woodlands

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Credit: Froglife

Volunteers surveying dormice and bats in trees have made the unexpected discovery of over fifty common toads in nest boxes and tree cavities at least 1.5 meters high

Until now, common toads were thought to be terrestrial. The highest toad in this study was found three meters up a tree—and scientists say there is a chance the toads might be venturing even higher.



This is the first time that the tree climbing potential of amphibians has been investigated at a national scale.

The surprising discovery was made during a survey to search for hazel dormice and bats as part of the National Dormouse Monitoring Program and the Bat Tree Habitat Key project.

The research was led by the University of Cambridge and Froglife. It is published today in the journal *PLOS ONE*.

Dr. Silviu Petrovan, Senior Researcher at the University of Cambridge and Trustee at Froglife, and first author of the study, said, "This is a really exciting finding, and significant for our understanding of the ecology and conservation of common toads—one of the most widespread and abundant European amphibians."

"We know common toads favor woodlands as foraging and wintering habitat, but it appears their association with trees is much more complex than we had previously thought."

Common toads are regarded as typical terrestrial amphibians, which spend their time both on land and in water during breeding. To date there have only been a handful of documented sightings of common toads in trees in the UK.

Consequently, common toads and UK amphibians in general have never been surveyed for in trees, unlike bat and dormouse surveys—which specifically target this habitat. The study highlights the importance of sharing data between conservation organizations representing different species, and shows that there is a lot to learn about wildlife in the UK—even about species believed to be well-known.

Nida Al-Fulaij, Conservation Research Manager at PTES said: "We



couldn't believe what we found. We're used to discovering woodland birds and other <u>small mammals</u> in nest boxes but we hadn't considered finding amphibians in them."

Over 50 common toads were found during surveys of hazel dormouse nest boxes (located 1.5 m above ground) and tree cavities usually used by bats.

Many of the cavities were small or not visible from the ground, so it is unclear how toads are finding them and how difficult it is for toads to climb particular trees.

Toads were not found in boxes or tree holes with other species, however they were found using old nests made by dormice and even birds.

While 50 records is not a huge number, it is comparable to records of other animals known to use trees regularly—such as blue tits. This suggests that toads spend more time in trees than was previously thought. If this is true, it means that common toads could be found in up to one in every hundred trees in the UK in particularly favorable areas, such as near large ponds or lakes.

The discovery suggests that tree cavities might represent an even more important ecological feature than conservationists previously thought. It highlights the importance of protecting our remaining natural woodland habitats, especially ancient trees with veteran features (such as hollows, cracks and other natural cavities) for all wildlife.

Froglife research in 2016 showed that common toads have declined by 68% on average over the last 30 years across the UK.

It is not currently known why toads are climbing <u>trees</u> and using <u>nest</u> <u>boxes</u>. Factors could include searching for food, avoiding predators or



evading parasites such as toad fly.

"Future targeted research will enable scientists to better understand the reasons for this tree-climbing behavior in toads, and how woodland management should take it into account," said Petrovan.

More information: Silviu O. Petrovan et al, Why link diverse citizen science surveys? Widespread arboreal habits of a terrestrial amphibian revealed by mammalian tree surveys in Britain, *PLOS ONE* (2022). DOI: 10.1371/journal.pone.0265156

Froglife is calling on members of the public to record any sightings they have of amphibians in trees on their <u>Dragon Finder App</u>, or to <u>contact</u> <u>them directly</u>.

Provided by University of Cambridge

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