

## NOTES ON THE HUSBANDRY AND BREEDING OF THE COMMON BRITISH REPTILES AND AMPHIBIANS PART II: THE COMMON TOAD (*BUFO BUFO*)

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### INTRODUCTION

The Common Toad has, in the past, suffered much persecution by man who surrounded it with many superstitions and myths. It was considered to be deadly venomous, malevolent in disposition and the possessor of evil or even magical properties. Needless to say it was killed whenever encountered, often in a very cruel manner. Early this century Kenneth Graham, in his much loved classic, "The Wind in the Willows" somewhat redressed the balance with the immortal "Toad of Toad Hall", an endearing little rogue despite all his conceit and capriciousness, whose exploits have delighted several generations of children.

Happily, the Common Toad no longer suffers widespread persecution thanks to more enlightened attitudes, in fact it is difficult to comprehend why such a harmless, inoffensive creature could ever have been the source of such fear and hatred. True, it is able to emit toxin from its parotid glands, but this is done in self-defence when in extreme danger, usually as a last resort. I have never heard of one doing so when being handled no matter how frightened it is of the experience.

### DESCRIPTION, DISTRIBUTION AND HABITAT

The Common Toad is robustly built with a large, broad head and sturdy limbs; the basic colouration is a rather uniform brown, grey or brownish black while the underside is a drab whitish-grey speckled dark brown. Sometimes juvenile specimens are found of striking copper colour or even brick red. Unfortunately these hues invariably fade with maturity. Many large tubercles occur on the back, and the large parotid glands are quite prominent; the eyes are a beautiful coppery-red, real living jewels; female attain much larger sizes than males which seldom exceed 8cm in overall length. Females can reach a length of 13cm.

The Common Toad has an extensive range, being found throughout the whole of Europe except Northern Scandinavia, Ireland and the Mediterranean Islands; it also occurs in the temperate zones of Asia. It is not particular in its choice of habitat which includes woods, fields and gardens. Dry conditions are tolerated so it can exist in well-drained localities such as arable farmland or dry heath. It also thrives on a variety of soil types but prefers lighter soils which it can burrow into. On heavier soils it utilises the burrows of small mammals such as voles or mice.

Lakes, meres, disused gravel pits, canals or slow moving rivers are preferred for spawning purposes and since these larger bodies of water are often used for human recreational activities, boating, angling and suchlike they are not under such direct threat of destruction as are the small ponds and ditches favoured by Common Frogs for spawning. This has ensured a relatively stable Common Toad population but local declines have undoubtedly occurred due to the usual causes, namely urbanisation, pollution and agricultural "improvement" schemes.

### HUSBANDRY AND BREEDING

For most of the year the Common Toad makes a good vivarium inmate soon becoming confiding enough to accept food from the fingers. It is also undemanding in its requirements, being able to withstand aridity or high temperatures with equanimity. Although it is crepuscular or nocturnal in its habits, emerging from its daytime retreat at dusk to hunt for worms, slugs, spiders, woodlice and insects. In captivity it can soon be tempted out of hiding during the day with a mealworm or earthworm placed in front of its retreat. In fact if this is done regularly, it will soon emerge whenever the vivarium is approached in expectation of an extra meal.

Life in captivity suits Common Toads admirably during summer, autumn and winter, with hibernation taking place naturally in outdoor vivaria. The problems arise when they awaken from hibernation in spring to begin futile but ceaseless attempts at escape from what has now become a prison in order to migrate to their traditional breeding haunts. This migratory instinct is so strong at this time of year that it seems to me rather unfair to confine them against their will. Quite often they will not mate or spawn in the vivarium at all, any spawn that is eventually laid proving infertile.

It is, however, reasonably easy to establish a garden colony of Common Toads but a largish pond is essential, at any rate not smaller than 30 square feet. It should contain a shallow margin of about 6-8 inches depth as shallow water is preferred for depositing spawn.

Because Common Toads usually return to their birth place each year to breed, the obvious way to ensure success is to start with spawn which can be obtained from fellow B.H.S. Members at the relevant time of year.

General emergence from hibernation takes place in late February or early March depending on prevailing weather conditions as well as geographical location, earlier in Southern and Western areas, later in the North and East. They immediately make for their chosen breeding sites, males and females travelling together; often the males will get into amplexus with a female encountered en-route, thereby obtaining a free ride for the remainder of the journey.

Males usually outnumber females by four or five to one, and there is great rivalry between them as they compete for "unattached" females in the water; sometimes a female can be seen with several males attached all trying to prise each other off.

Several weeks are often spent in the water before any spawn is laid, the males calling throughout the day and night. It is usually late March or early April before the spawn is laid, the familiar strings being wound carefully around underwater plants by the female who lays between 3,000 and 5,000 eggs. Soon after the spawn has been laid the females leave the water but the males stay on hoping to attract another gravid female. It is sometimes late May before they finally abandon the water completely.

In my own experience most garden pond fish seem to ignore both spawn and tadpoles of the Common Toad because they are noxious and therefore unpalatable to the fish. I have a large pond containing Koi, Orfe, Tench, Rudd and Goldfish which is used annually by Common Toads for spawning, yet even when the tadpoles swim in the open water away from the plant cover they are completely ignored by the fish. However, B.H.S. Member, Charles Snell of South-East London once informed me that he has actually witnessed his large Mirror-Carp eating Common Toad tadpoles, so perhaps some caution is required here.

The golden rule with rearing all tadpoles is not to overcrowd them; I would say that about 12 per square foot of water surface area is the optimum number for Common Toad tadpoles. These tadpoles love the sun and warm, shallow water; when the weather is warm and sunny they congregate in the shallows in large numbers, hence the importance of a shallow margin in the garden pond.

For the first few weeks after hatching the tadpoles browse on algae growing on underwater plants and sides of the pond, later they scavenge on animal or vegetable matter. They will also accept raw or cooked meat and fish plus any kind of fish flakes or pellets. In a large pond they should be able to find enough food for themselves without any supplementary feeding. Metamorphosis is usually completed within 12-13 weeks, the minute toadlets leaving the water during July to disperse far and wide.

Common Toads are more phlegmatic, less secretive creatures than Common Frogs, and will probably be seen quite frequently in the garden, taking up a regular territory and becoming semi-tame while still retaining complete freedom. They seem to find the average garden very much to their liking, and once they have "staked out" their territory they should remain for many years.

Some difficulty might be experienced in starting a garden colony of Common Toads without a generous sized pond, but once adult toads begin returning to spawn the likelihood is that within a couple of years or so very large numbers will be making the annual pilgrimage until the pond becomes so overcrowded with spawn that most of it will need to be removed to other suitable sites.

In my next article in this series, aimed specifically at the younger or inexperienced herpetologist, I will discuss the care and captive breeding of our most adaptable British amphibian, the Smooth Newt.