

## NOTES ON THE HUSBANDRY AND A FURTHER CAPTIVE SPAWNING OF THE EUROPEAN GREEN TOAD (*BUFO VIRIDIS*)

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I wrote in the December 1980 Bulletin about a successful spawning of *Bufo viridis* in captivity, and the subsequent rearing of the tadpoles.

Metamorphosis was rapid, the first toadlets emerging barely five weeks after hatching. The average length on absorption of the tail was 11 mm from snout to vent.

During the first few days the young toads were fed on various types of aphid; these were placed in the vivarium attached to the food plant on which they were found. As the toadlets grew this diet was first supplemented with, and later replaced by, newly-hatched mealworms and a variety of small creatures obtained by hedge-beating.

The onset of winter presented the problem of how best to overwinter the toadlets which, by the beginning of November 1980, were between 20-24 mm in overall length and still feeding voraciously. I had retained nine individuals only, the remainder having been sold/exchanged to other BHS members or released in the garden.

It would have been difficult to provide the young toads with enough live food through the winter months as I was at the time working away from home, returning only at weekends. I therefore decided to hibernate the toadlets, placing their vivarium in a frostproof outbuilding.

This proved unsuccessful because whenever there was a mild period of weather the toadlets would become active, emerging from hibernation and moving about the vivarium seeking food. Towards the end of February several were observed to be in an emaciated condition, so I consequently brought the vivarium indoors, where the toadlets soon commenced feeding. Within a few days all nine had regained their usual rotundity, remaining healthy until late March.

About this time I noticed two toadlets wandering aimlessly about the vivarium; they could not be induced to feed and within 48 hours both had died. Within another week the same fate had befallen the remainder.

Two months after the occurrence of the 1980 *Bufo viridis* spawning, the male involved in the spawning died suddenly with no prior illness. The loss of this individual was particularly acute as it had been in my possession for more than eleven years. It was fully grown when first obtained in May 1969.

Another male *Bufo viridis* was purchased towards the end of May 1981 and released in a newly-constructed outdoor reptiliary (measuring 3 metres x 2.7 metres) for quarantine. This reptiliary was arranged as a rockery in the form of a central mound, sloping towards the walls of the enclosure. Various rockery plants, ferns and heathers were planted among the rocks, ordinary garden loam mixed with sand and peat was used for bedding.

On one side of the mound an area of earth was levelled to accommodate a pond of butyl rubber lining, the overall dimensions of which were 120 cm x 45 cm. One end of the pond contained a shallow ledge of about 5 cm depth.

The new male *Bufo viridis*, when released into the above enclosure, promptly disappeared and did not reappear until the afternoon of 5th July when it was observed sitting half-submerged in the shallowest part of the pond. Shortly afterwards it commenced calling, inflating and deflating its enormous vocal sac to produce a rather pleasant "trill". There had been very little change in the weather, which although remaining bright was not particularly warm. It is therefore difficult to ascertain what had stimulated the breeding responses of this male.

As soon as the male was observed calling, two gravid females and two more males were transferred to the reptiliary from the greenhouse in which my *Bufo viridis* are normally housed. Both these males were in breeding condition, having well developed nuptial pads. They had not, however, shown any desire to breed as yet.

On being released into the reptiliary the two females immediately entered the pond where the original male was still calling. The nearest female was immediately seized by this male, but amplexus lasted only for about four hours, after which time the pair separated without spawning.

Both the females left the pond that evening (5th July) and neither were seen in or near it until the evening of 16th July when the original pair were seen in amplexus again. The male had continued calling during the whole of the intervening period, mostly at night but often during the day. Meanwhile the other two males took no part in the proceedings; neither were heard calling or seen to take the slightest interest in the females.

Several strings of spawn were discovered in the pond wound around submerged *Elodea crispera* on the morning of 17th July. I could not determine whether both females had spawned as neither looked any slimmer afterwards.

The circumstances in which the spawning took place were different from those described for the previous spawning, although on both occasions only one male was involved despite the presence of others. The male Green Toad has a very large vocal sac which, when fully distended, is much larger than the head of the creature. In order to inflate the sac fully, the toad is obliged to thrust its head upwards, lifting itself up on its sturdy forelimbs. Being partially submerged in the water would lessen the strain on the forelimbs and make calling less effort.

I now hope to raise this year's *Bufo viridis* progeny to maturity with the aim of eventually breeding from my own captive bred specimens.

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