

OBSERVATIONS ON THE BIRDBROOKE SITE, LONDON S.E.3

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This small urban nature reserve contains, as many B.H.S. members are aware, colonies of European reptile and amphibian species as well as native. These include European Tree Frog (*Hyla arborea*), Edible Frog (*Rana esculenta*) and European Wall Lizard (*Podarcis muralis*).

Observation over the years has revealed a great deal of information not available in the books that I have, as yet, referred to.

TREE FROG (*HYLA ARBOREA*)

Tree frogs do not appear, on the site, to like trees. Although the site has a roughly equal mix of trees & bramble scrub, bramble not growing in the open in full sun is not used. From my observations they have a preferred situation of between one and four feet above ground level. I have yet to find (or hear) a tree frog higher than this or in a tree. Perhaps their English name has misled those enthusiasts, who tried many introductions during the later part of last and early part of this century, to release the frogs in unsuitable sites (i.e. ponds in woodland).

The British colony of *Hyla arborea* in the New Forest is in fact also centred around a pond which is surrounded by scrub, in an open situation.

The choice of scrub and especially thorny scrub may have many advantages. One, of course, is that the breeding pond temperature will not be reduced by shading by trees. The inducement of breeding behaviour, the speed of tadpole growth and metamorphosis is very dependent on water temperature (i.e. warmer the better 18°—28° seeming optimal). A second advantage may be a lack of predation. Only smaller carnivorous birds (e.g. whitethroats, wren, dunnoek) use the brambles as a habitat. Larger birds that might eat the frogs, such as thrushes, blackbirds, starlings, jays, magpies, crows, etc. show a preference for trees. In my opinion, the ideal sites in Britain for this species would have relatively infertile soil to encourage scrub growth and not trees, and should contain a shallow, unshaded pond (or the potential for creating such or modifying an existing pond). A heathland site might be ideal.

Spawning this year started in mid-April; calling started mid-March.

EDIBLE FROG (*RANA ESCULENTA*)

A colony of edible frogs now exist on the Kidbrooke site. These must have derived from tadpoles that metamorphosed in my garden pond, which adjoins the site, and subsequently found the pond on site. They have been in evidence since 1980 and have bred from 1981 onwards. I have had fears for the safety of the much smaller tree frogs. At night calling tree frogs will sit in the pond alongside edible frogs, so far edible frogs have not been seen to take them. Should they be partial to tree frogs they could by now have caused their extinction from the site, so hopefully, they should co-exist.

Unlike tree frogs, the edible frogs call by day as well as night and are active on the pond surface. For this reason many male edible frogs have fallen prey to a heron.

Calling started at the end of April and the first spawn was found (in 1984) on the 4th June (tree frogs were much earlier at mid-March and mid-April respectively).

The numbers of young tree frogs and edible frogs coming out of hibernation after the winter of 1983-4 did not seem as high as in 1982-83 when the winter was far more severe. This confirms my past observations, that survival of herps during winter is better during a consistently cold winter than our usual relatively mild and variable winters. Note also that Sweden, for instance, has a greater herp variety than Britain although winters are more severe. This is also true, of course, of mainland Europe of like latitude.

It would seem logical to suppose that, as tissue respiration in herps is related to environmental temperatures, body fat would be used up quicker in milder winters and put the animals at greater risk of not surviving through.

WALL LIZARD (*PODARCIS MURALIS*)

The colony is still healthy and breeding. In 1983 young of the year could be seen alongside one year old individuals and mature adults. Observations of the part of the colony that uses the garden indicates that they can breed before reaching one year old. Hatching occurs in July, August or September, depending on weather and time of egg laying. Hatchlings in their following year, while still undersized and without mature green colouration, can become gravid from late June onwards. Mature females lay two clutches about 5-6 weeks apart.

Pair bonding is very strong. The females will stay close to their mate. The males, however, often go on "long walkabouts" leaving the female on the pair's territory. Occasionally the males have more than one female but still show a preference for one — usually the original female — with whom they will consort more often. This preferred female often shows aggression towards the other females which seem to accept her higher status and give her the choice of the best basking places, etc. Occasionally an aggressive female may usurp the preferred female, but from my observations so far, this is not too common. Adults will share their basking places with very young lizards without quarrel. The males show territorial behaviour but disputes normally amount only to the trespasser running off when confronted by the male in territorial possession. I have repeatedly seen much larger and stronger males run away from smaller males in cases where the smaller was in possession. It would appear that, as with many other animal species, the territory owner has a "psychological" advantage. A correspondent tells me that this is not the case, in his opinion, with some other species (e.g. *Lacerta agilis*). I would welcome any personal observations from members on territorial behaviour in other *free living* colonies of other (or the same) species. In captive colonies, where the males cannot escape each other, behaviour is very different and can lead to deaths. Their main predators are cats: in spite of this they are increasing and expanding their range.

Their preferred habitats are:

- (i) walls or fences with vegetation below (herbage, brambles, etc. but not tightly mown grass) or cracks and crevices into which they can run.
- (ii) tree stumps that are unshaded and surrounded by vegetation but at the same time protrude above the vegetation in the sun.
- (iii) gardens. Especially those with rockeries and not frequented by cats.
- (iv) sunny banks with basking areas, e.g. tree stumps, areas bare of vegetation, concrete, rocks, etc.
- (v) builders rubble. Piles of bricks, slate, concrete etc. especially when surrounded by vegetation.

The site has recently improved for herps by emplacing brick rubble on a south facing bank or in piles on flat ground and then covered in one to two inches of soil to mask their appearance and encourage vegetation. Both banks and mounds were seeded after construction with seeds of species tolerant of dry conditions. These are successfully establishing.

Hibernation. Wall lizards do not seem to hibernate in the true sense and can occasionally be found basking in mid-winter on a suitably sunny day.