

Natterjack Toad

Epidalea calamita



Top: Male Natterjack Toad, Middle: A typical Natterjack Toad spawn string, Bottom: A comparison of Common Toad (large) and Natterjack Toad (small) tadpoles. © Alex Hyde

Identification

Natterjack Toads have a distinctive yellow dorsal stripe, red/pink/brown warts and are small in size with short limbs meaning they crawl rather than hop or jump.

Sexes: Male Natterjacks are smaller and darker in colour than females and can be recognised by the dark inner edges of the first two digits (nuptial pads) on their front feet and bluish throat. Females (and juveniles) have a white throat with some black marks (spots and or flecks).

Spawn strings: Natterjack Toad spawn is almost always laid in the shallow margins on the bottoms of pools (or on top of submerged vegetation) whilst Common Toad spawn in deeper water, wrapping their spawn around vegetation. Natterjack spawn is thinner and more delicate looking, the eggs are small and neatly arranged in a zig-zag and after a few days, relax into a single row of eggs. Whereas Common Toad spawn has larger eggs which often remain in a double row and can look “messy” in appearance.

Tadpoles: Common Frog tadpoles are large, light-brown in colour and swim feely in deep water, whilst both species of toad tadpoles are smaller and darker. Common Toad tadpoles are larger than Natterjack tadpoles, have a more rounded snout and tend to shoal around the shallow edges of pools. Natterjack tadpoles will often be the smallest ones with a slenderer appearance and a slightly more pointed snout. They also bask around the edges of pools but tend not to shoal – when disturbed Natterjack tadpoles are much more skittish and flick their tails as they swim away in a zig-zag. As they begin to develop back-legs, a small, white spot may be visible on their chin, growing into a large patch as they develop.

Toadlets: Initially, Natterjack toadlets are small and black, have a large white chin patch and may have the faintest yellow dorsal stripe. After a few days, as the toadlets begin to grow they become much like miniature versions of the adults with a distinctive yellow stripe and red warts.



The white chin spot is clearly visible on this Natterjack tadpole
© Andrew Hampson

Surveying

Where: Surveys should be focussed in areas where the right habitat characteristics are present: open, shallow (often ephemeral), unshaded pools surrounded by areas of bare sand and/or very short vegetation and a number of slopes nearby with a southerly facing aspect and ideally many slopes with multiple aspects.

When: Natterjack Toads emerge in March although spawning tends not to start until there have been several consecutive nights with temperatures above 7°C. Surveys should run from mid-March to July or until the last of the toadlets have dispersed.

How: Walk slowly around the margin of each pool, scanning towards the centre of the pool and back to the margin, then repeat in the other direction. Count new spawn strings laid between visits and add these to the running total for that pond – new spawn strings may be marked with a small stick to avoid counting again in the future. Spawn may hatch out in 7-10 days, hence the frequency of visits, but be aware that during warmer periods it may hatch out quicker. Tadpoles develop into toadlets over a period of 6-10 weeks, effort should be made to identify and count tadpoles at the different life stages (no legs, 2 legs and 4 legs). Estimate the number of tadpoles by first counting how many occupy a small area and then multiply up. Before metamorphosis, tadpoles tend to go into hiding and will lie on the bottom of ponds, sometimes in the middle out of sight – if it appears as though all tadpoles have disappeared between visits, it may signal that toadlets will soon emerge and you should therefore increase your visits to every few days. In their first year, Natterjack toadlets are diurnal and will more easily be seen in damp vegetation around the pond margins and under refugia such as wood and litter.

Night surveys: Night surveys may be carried out during peak breeding season, typically April-May to identify breeding pools through the presence of calling male Natterjack Toads. Every four years, the snout-vent lengths of adult toads are measured to reveal the age-structure and health of a population.

What to record

Records in the field should be captured on a recording form or in a notebook. For each survey, record the date, start time, end time and weather conditions. Record the name/number of each pool or the 10-figure grid reference. For each pool visited, record the abundance of each species at each life stage. Only count new spawn strings and add to your previous total to give a cumulative total for each pool, this provides an estimate of breeding pairs. Tadpole and toadlet numbers should be estimated. For night surveys, record the sex and size of each individual measured. Always remember to record any negative records.

Protection

Natterjack Toads are listed as a European Protected Species under Annex IV of the European Habitats Directive and are protected in the UK under the Wildlife and Countryside Act 1981 and as a Priority Species under the post-2010 Biodiversity Framework. A licence is strictly required to carry out surveys for Natterjack Toads and all records must be submitted to the agent supplying the licence. Always obtain the landowners permission prior to carrying out any surveys.

Biosecurity

Ensure all footwear and equipment is thoroughly disinfected before and after every site visit to prevent the spread of disease. Please refer to 'ARG UK Advice Note 4: Amphibian Disease Precautions: A Guide for UK Fieldworkers. Amphibian and Reptile Groups of the United Kingdom' for further information.

Personal safety

Lone-working should be avoided, especially at night and near open water. Carry a torch and wear a hi-vis vest. If lone-working, a buddy system must be enforced; provide someone local with your start and estimated end time, mobile phone number and the location of your survey area.