

# Natterjack Toad

## *Epidalea calamita*



Top: Natterjack Toad (© Trevor Davenport), Middle: Natterjack Toad spawn string (© Ruth Popely), Bottom: Common Toad (large) and Natterjack Toad (small) tadpoles (© Alex Hyde)

Europe's loudest amphibian, the Natterjack Toad, may be easily identified by the bright yellow stripe running down its back. It can be distinguished from its relative, the Common Toad, in a number of ways. Natterjack Toads are smaller animals, reaching lengths of only 5-7cm, and they also move in a distinctive manner – their short legs mean that they run or crawl across the ground rather than leaping or hopping. The Natterjack's iris is a different colour, being green-yellow as opposed to copper in Common Toads.

On a warm spring evening, the male toads will gather in the shallows of the breeding pools and sing their distinctive call which gives them their name.

### Lifecycle

Natterjack Toads begin to emerge from hibernation when night time temperatures consistently stay above 7°C. This can be 4-8 weeks after Common Frog and Common Toad emergence.

During the breeding season (April to July) males call from the edges of pools at night in an effort to attract a mate. Once spawning has taken place, adults will not return to the water until the following year, spending the summer in the dunes hunting for small insects.

Toad spawn is laid in strings rather than in clumps like frogspawn, however Natterjack spawn strings are much smaller and more delicate-looking than that of Common Toads. Natterjacks spawn in the shallows, close to the edge rather than in deeper water like Common Toads. Within spawn strings, eggs are arranged as a double row but Natterjack's eggs quickly change to a single, uniform row of eggs. Eggs hatch into tadpoles 7-10 days after being laid.

Natterjack tadpoles are small, black and have a less rounded head compared to the common tadpoles. Later in the season, a small white chin spot can be used to identify Natterjack tadpoles. They develop quickly and by mid-summer the yellow dorsal stripe is clearly visible on the toadlets. Adults reach sexual maturity around 3 years old and can live for 10-15 years.



*Distribution of Natterjack Toad populations across Britain*

## Distribution

Natterjack Toads are found on about 60 sites in Britain and occur on a small number of sites in south-west Ireland.

Natterjack Toad populations exist along the sand dunes of the Merseyside, North Wales and Cumbrian coasts as well as the Scottish Solway and East Anglian coasts. Only one or two colonies remain on the heaths of Surrey and Hampshire.

## Habitat

In Britain, the Natterjack Toad is almost exclusively confined to coastal sand dune systems, coastal marshes and sandy heaths. They use shallow, often temporary pools in sandy environments for mating and spawning as shallow pools are much warmer in temperature. Natterjacks favour warmer water as this speeds up the development of spawn strings and tadpoles. Shallow pools often dry out at the end of summer which removes any potential predators such as insect larvae. They also require a terrestrial habitat of short sward and bare sand where they can chase after prey. The presence of sandy banks with a southerly aspect provides Natterjacks with

somewhere to dig their burrows for hibernation.

## Survey method

Surveys start in April and visits to Natterjack Toad breeding pools take place every 7-10 days for a period of at least 14 weeks. Spawn strings, tadpoles and toadlets are recorded. Night surveys are carried out to record calling males to denote presence and absence and to allow measuring of adult and juveniles toads to assess population dynamics. Surveys may only take place under licence. For further information, see the 'Natterjack Toad – species survey guide'.

## 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. Always obtain the landowners permission prior to carrying out any surveys.

## Reasons for decline

The coastal dunes and sandy heaths are in serious decline. On the Sefton Coast, 81% of bare sand has been lost since 1945, and with it, the dynamic processes that would help to create and maintain dune slacks for breeding Natterjack Toads.

The reduction in suitable habitat can be attributed to the spread of invasive species such as Sea Buckthorn and Japanese Rose and also to successional changes taking place at an increased rate. This has been linked to the disappearance of natural grazers such as rabbits, increased levels of nitrogen in the atmosphere being deposited into the natural environment and climate change.

Climate change may also be impacting seasonal weather patterns, including drier springs which results in an ever-lowering water table.

## Habitat management

Ideal Natterjack Toad habitat is maintained by keeping tall, dense scrub to a minimum including invasive species such as Sea Buckthorn. Natterjack Toad breeding pools are kept in good condition by maintaining shallow, sandy pools with minimal vegetation. Creating new breeding pools can help connect existing pools and extend the population range. For further information, see the 'Creating and managing dune slacks – habitat management guide'.