

Natterjack Toads

Learn from Home by Fota Wildlife Park



Welcome to Fota Wildlife Park!



- Fota Wildlife Park was established in 1983.
- Our aim is to help conserve animals across the globe through **Conservation**, Education and research!
- The Wildlife Park is a charity and a not for profit organisation.
- By visiting Fota Wildlife Park, you are playing a part in helping to conserve the world's endangered wildlife!

Natterjack Toad

Epidalea calamita

The Natterjack toad, is one of three amphibians found in Ireland.

Distribution

The natural range of the natterjack toad is restricted to the coastal zones of Castlemaine Harbour and Castlegregory in Co Kerry. The species suffered significant losses in range and population in the early 20th century due to land reclamation and changes in agricultural practices in these areas. Latest estimates put the population at less than 10,000 individuals in the wild.



Habitat

Natterjack Toads in Ireland are primarily associated with coastal habitats, such as sand dunes, machair grasslands, and salt marshes. They prefer open, sandy areas with shallow pools or ponds where they can breed. These habitats are often characterized by a mixture of freshwater and saltwater, providing the toads with suitable conditions for breeding and foraging.

Appearance

The Natterjack Toad is a relatively small species, with adults typically ranging from 6 to 9 centimeters in length. It has a yellowish-brown to olive-green coloration with a warty skin. One of its distinguishing features is a yellow stripe down the middle of its back, which becomes more prominent during the breeding season.



Lifespan

The lifespan of Natterjack Toads in the wild is estimated to be around 5 to 10 years. Threats in the wild, include predation, habitat quality, and environmental conditions. In captivity, Natterjack Toads have been known to live for over 15 years.

Breeding Behaviour

Natterjack Toads have a unique breeding behavior that sets them apart from other amphibians. They are known for their distinctive loud mating calls, which resemble a rasping or "nattering" sound. Breeding typically occurs between April and July, and the males gather in shallow water bodies, such as temporary pools or flooded areas, to call and attract females

Conservation

The Natterjack Toad is a protected species in Ireland and is listed under Annex IV of the European Union's Habitats Directive. It is considered a priority species for conservation due to its restricted range and declining populations. Threats to its survival include habitat loss, coastal development, and the degradation of breeding sites. Conservation efforts in Ireland focus on habitat management and restoration, as well as monitoring and research initiatives.

Fota Wildlife Park is part of the National Parks and Wildlife Services Head Starter programme for the Natterjack Toad.

Natterjack Toad Headstarter Project

Under the Head Starter population augmentation programme, toad spawn from County Kerry has been transferred to both Fota Wildlife Park and Dingle Aquarium and subsequently are reared in tanks before being released back into the native habitat, following the metamorphosis into toadlets.

Staff from NPWS collect toad spawn and tadpoles from ponds in the wild and transport them to Fota where they are carefully looked after in special holding tanks over the summer months (captive rearing).

Natterjacks endure natural mortality rates as high as 90%, with large numbers of eggs and tadpoles typically lost every summer due to predators and ponds drying out. Weather conditions play a part in the challenges the toads face, with dry springs and summers meaning that spawning in the wild can become limited. Captive rearing decreases the mortality rate, in an effort to boost numbers reaching adulthood in the wild.

The decline in farmland ponds through wetland drainage and agricultural intensification has been identified as the main cause of natterjack toad decline across Europe. Survival rates of eggs and tadpoles in the wild are typically very low. Predation by invertebrates such as the predatory diving beetle and early pond desiccation is also a significant cause of mortality in the wild.

NPWS efforts to address habitat loss for the toad have focussed on pond creation schemes, with some success. A new results-based farm plan scheme specifically for natterjack toads is now being rolled out by NPWS with local farmers.

Natterjack Toad

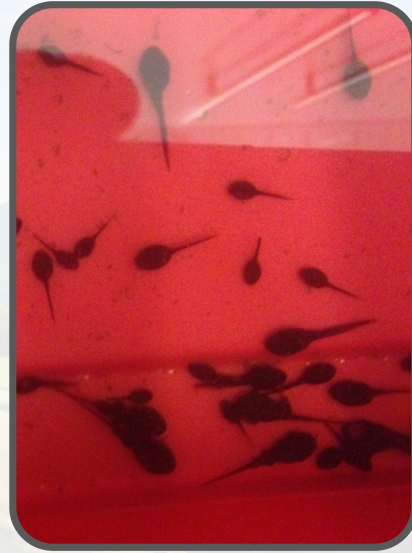


The Irish for
Natterjack Toad is
Cnádán

Life Cycle in the Headstarter Project



After the Toadspawn and Tadpoles are collected in the wild by NPWS it is then brought to Fota Wildlife Park, to be reared to toadlets.



At Fota Wildlife Park, there are special tanks set up to control water and heat and Fota Wildlife Park staff rear them for 8 - 12 weeks before they go back to the wild.



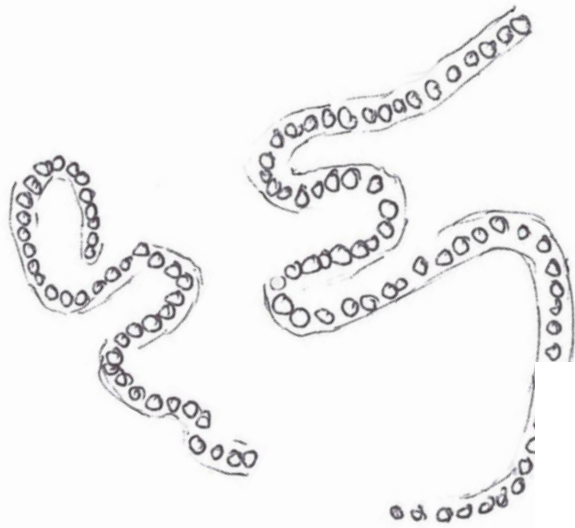
Once their legs start to grow and their tails start to shorten, the toadlets are moved into different tanks with water and dry areas, this mimics the leaving the pond in the wild.



Within a few weeks the toadlets have grown enough that they are now ready to be released back to the wild. They are then transported back to County Kerry.

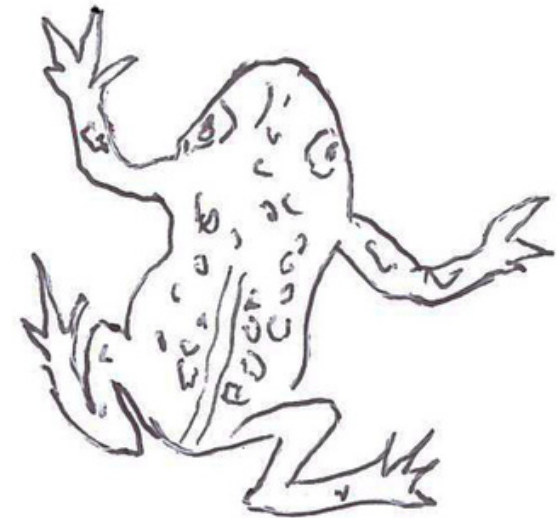
Natterjack Toad Lifecycle

How can you tell the difference between toad and frog spawn?
Toads lay their eggs in long strings, whereas Frogs lay clusters of eggs.



During their metamorphosis between tadpole to toadlet, their legs grow and their tail recedes.

The Natterjack toad's skin turns an olive-green colour and their distinctive yellow stripe appears.



First captive-bred Natterjack toadlets released into the wild.

In July 2022, in a first for Ireland, toadlets that had spawned in captivity at Fota Wildlife Park were released into the wild. As part of the the National Parks and Wildlife Service (NPWS), Natterjack Toad Head Starter population augmentation programme.

It was the first time, the project produced its own toadlets. A small number of mature natterjacks are being held in Fota Wildlife Park and this produced spawn.

Natterjacks endure natural mortality rates as high as 90%, with large numbers of eggs and tadpoles typically lost every summer due to predators and ponds drying out. 2022 was a particularly challenging year for the toads, with the dry spring and summer meaning that spawning in the wild was very limited.



Pictured (l-r); Declan O'Donovan, Animal Care Manager at Fota Wildlife Park. John McLaughlin, Fota Wildlife Park and Minister Malcolm Noonan TD

Minister for Heritage and Electoral Reform, Malcolm Noonan TD, was in Castlegregory to see the toadlets being returned to the wild. “This project is a fantastic example of scientists, conservationists and communities coming together to protect this rare amphibian and the habitat it depends on,” he said.

“I want to commend my staff in NPWS, the team in Fota Wildlife Park and the nature lovers of Castlegregory for their efforts. I’m also delighted that local farmer can now benefit from a new results-based farm plan scheme specifically for Natterjack toads. This will pay farmers to manage their land in a way that helps ensure the conservation of this endangered species, and I hope that everyone will get involved.”

Ireland's other Amphibians

Common Frog

Rana temporaria

- Found throughout Ireland
- Adult frog is typically 6 - 9 cm in length



To survive the common frog needs suitable bodies of water, for feeding and breeding, and also places for them to hibernate.

Frogs play an important role in our lives; they are great pest controllers in our gardens and on farms by eating slugs, worms and flies, otters and herons rely on frogs to supplement their diets.

A female frog will lay around 1000 eggs at a time, many of these will not survive, but simply not hatch or be eaten. Even at froglet stage, many will be easy prey.

Ireland's other Amphibians

Smooth Newt

Lissotriton vulgaris

- Widespread in Ireland
- Adults are typically 8 - 11 cm in length



The Smooth or Common Newt is Ireland's only tailed amphibian. For most of the year, Smooth newts live on land, moving to pond or similar bodies of water during the breeding season.

Females will lay as many as 300 eggs. Laying her eggs on water plants and leaves. Larvae will hatch from the eggs after 10 - 20 days. The larvae will develop for around three months before metamorphosing into efts.

Natterjack Toad Wordsearch

S	R	N	A	T	T	E	R	J	A	C	K	A	T
G	Y	W	E	I	O	A	C	O	W	P	O	M	C
N	R	G	A	G	O	A	B	O	O	O	O	P	H
I	R	R	A	T	E	E	D	N	L	N	T	H	N
R	G	Y	R	S	R	C	R	L	L	D	P	I	O
T	A	R	E	W	T	T	G	T	E	E	O	B	N
S	P	R	W	T	O	R	T	A	Y	T	O	I	E
W	P	E	G	I	E	R	I	D	N	D	L	A	C
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Y	D	E	R	E	G	N	A	D	N	E	I	N	S
W	H	L	A	T	S	A	O	C	G	E	L	A	A

POOL
EGGS
HABITAT
POND
STRIPE
COASTAL
TADPOLE
KERRY
TOADLET
WATER
ENDANGERED
AMPHIBIAN
NATTERJACK
STRINGS
YELLOW



Do you want to learn more about other animals at Fota Wildlife Park?

Download other Native Species / Work from Home resources from our website -



<https://bit.ly/FWPHomeRe>