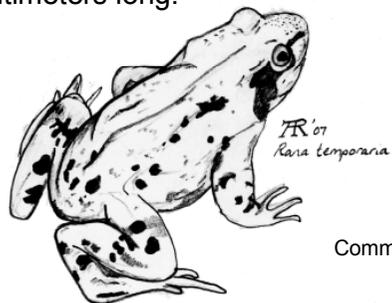


**'The clever men at Oxford, know all there is to be known.  
But they none of them know, one half as much, as intelligent Mr. Toad'**

Amphibians are cold-blooded animals with moist skin and no scales or claws. Their skin has the ability to change, depending on the environmental conditions. When frogs are away from water, for example, the skin will easily absorb moisture from the atmosphere, but when in water, the skin prevents much absorption. This mechanism cleverly regulates the animal's water balance, meaning they can move further from water without the need to drink. However, amphibians do tend to stay in damp places, because if their skins are not moist, they quickly become dehydrated and can die. During the colder months of the year amphibians need to hibernate; they can be found hibernating underwater, in the mud of ponds and ditches; or sometimes in rotting vegetation.

#### **Common Frog - *Rana temporaria***

The Common Frog is probably the most widely known amphibian, as it is often seen in gardens. Following winter hibernation, the Common Frog is the first amphibian to emerge and become active. Frogs are often seen in Shotover's marshes and ponds between mid February and mid April. Colouring can vary from a yellowy-green, to brown, often with dark markings all over the smooth clammy skin, as well as a distinctive marking behind each eye. They move in short jumps using their long hind legs, and can grow up to 10 centimeters long.



Common Frog

#### **Common Toad - *Bufo bufo***

The Common Toad is no longer quite so common! Infrequent sightings have occurred on the heath and in the woodland. It is similar in size to the Common Frog; the males growing to about 8 centimeters long, and the females up to 13 centimeters. The skin is very different from a frog's being dry and bumpy. Skin colour can vary from dark brown, to grey and sometimes almost red. The underside is pale. If you get close enough you will see their eyes are a coppery-red colour. They spend more time on dry land than frogs, often moving by walking.



Common Toad

#### **Common Frog and Toad breeding behaviour**

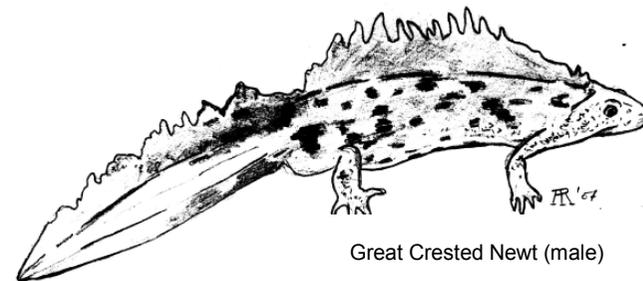
During the breeding season male frogs communicate using a dull rasping croak and toads use a squeaking call. This sometimes attracts not only a mate but unfortunately predators too. Between late winter and spring the female frogs lay their eggs in clumps, commonly known as frogspawn, which can contain several hundred eggs. Female toads lay their spawn in March and April. Toad spawn is different in appearance to frogspawn being long and ribbon-like, sometimes reaching 2-3 meters, and often found wound around vegetation. The eggs are usually fertilized by the male as the female lays them. When the familiar frog tadpoles are newly hatched they are a dull black, soon becoming olive green. The tadpoles of toads are always black.

#### **Smooth Newt - *Triturus vulgaris***

The Smooth or Common Newt is the most common of our newt species at Shotover. It is widespread in Britain, yet its numbers are declining. The Smooth Newt is 8-11 centimeters in length when fully-grown, and normally brown or olive-brown in colour. Both sexes have a yellow and orange underside, sometimes with spots extending to the throat.

#### **Great Crested Newt - *Triturus cristatus***

The Great Crested Newt is the largest of the newts; sometimes reaching a whopping 17 cm in length. It has bumpy, slate-grey or black skin, with small white spots and a pronounced, serrated wavy crest along its back and tail. The vividly coloured underside can vary from yellow to orange and red. The great crested newt is a protected species and is known from ponds on the lower slopes of Shotover.



Great Crested Newt (male)

#### **Smooth Newt and Great Crested Newt breeding behaviour**

The breeding season for newts is between March and June, during which, the male Smooth Newt becomes brightly coloured with bold spotty markings. It develops a continuous wavy crest extending along the back and underside of its tail. The male Great Crested Newt's tall, serrated crest increases in size during this period. The female lacks the crest but boasts the yellow and orange underside to the tail. Newt eggs are laid singly, with foliage wrapped around them for protection.

## Conservation

All of our native British species of amphibian are threatened by loss of habitat and are protected under the Wildlife and Countryside Act 1981. It is therefore important to conserve the remaining habitat. Many populations of amphibian thrive in garden ponds due to the food and hibernation sites they provide. It is important not to remove decomposing vegetation from around your garden, especially during September right through to March, as it is possible amphibians are hibernating in it. If disturbed, they will be unable to find a new spot in their dormant state and may be predated on. Unfortunately if your local or garden pond is stocked with fish, they will eat the eggs of the frogs, toads and newts, and the developing young.

### INTERESTING FACTS ABOUT AMPHIBIANS...

- Male frogs and toads have been known to use their tongues to whip other males in the eye during combat.
- Frogs will, when possible, return to their birth-pond to spawn.
- Toads sometimes hibernate in old birds nests.
- Unlike other newts the Great Crested does not always hibernate.
- Toads will walk long distances from hibernation sites to breeding ponds, rejecting unsuitable ponds on their route.
- Toads snatch insects from the air using their long sticky tongue.
- When frogs or toads have food in their mouth, they blink, and their eye muscles help to push the food down.

## AMPHIBIANS

Amphibians are considered the most primitive group of land-living vertebrates (animals with a backbone), and have been around for 360 million years. They are direct descendants of early lobe-finned fish, (the first vertebrates to live on land), and these fish gave rise to amphibians and reptiles.

On Shotover four species of amphibian occur, the common frog and toad, smooth newt and great crested newt. Some are more common than others, and they can be seen easily, with a little knowledge about their behaviour. You can find out about these species, and their behaviour, in this leaflet.

**Shotover Wildlife** is a voluntary organisation founded to research and communicate the importance of Shotover Hill for wildlife

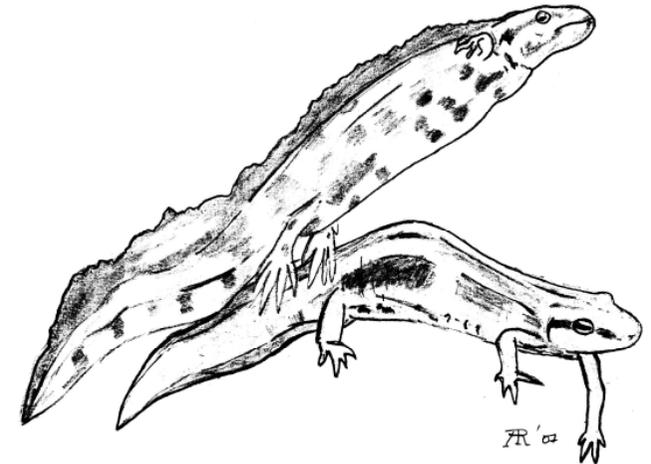
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### Related leaflet titles:

Reptiles  
Habitats  
SW Making a difference

# AMPHIBIANS

## on SHOTOVER



Front cover: Smooth Newts: male (above) and female

Leaflet written and illustrated by  
Xenia Snowman and Alex Rey

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