

# WHITE-CLAWED CRAYFISH



WEIGHT = 90g  
LENGTH = 10cm  
LIFESPAN = 12 years

Classed as an endangered species, our native, white-clawed crayfish is threatened by an invasive, relative; *the American signal crayfish*. Farmed for their meat, many have escaped and gone on to thrive in our freshwaters. This invasive, alien species of crustacean damages river banks with their burrows and have decimated our native, smaller, white-clawed, species. Signal crayfish can be identified by a threat posture, revealing vivid, red underside of their large claws.



**SIGNAL CRAYFISH**

## ADAPTATIONS

The **hard exoskeleton** protects the crayfish. As the animal grows, this is replaced and the old shell is moulted.

**Long antennae** are super sensitive organs that detect changes in touch and even chemicals in the surrounding water.

**Muscular tail** propels the crayfish backwards, away from danger.

**RED**  
THREAT STATUS



**Large claws** deter some fish that may seek to predate upon the crayfish, although they are an important source of prey to many larger species.

# WATER SHREW



Whilst populations seem stable where they are found, our largest shrew species is vulnerable to water pollution and the loss of their habitat.

**GREEN**  
THREAT STATUS

## ADAPTATIONS

Special **rigid hairs** along their tail and the base of their feet, act like a rudder, aiding underwater mobility.

**Dense hair** affords the water shrew excellent **insulation** and they are even active in chilly waters during the winter.

The water shrew has a **venomous bite** (causing only a sore rash to humans) to immobilize their prey.

Their **teeth** are reinforced with **iron** and have a slight red appearance. This may allow the shrew to bite into the hard shells of their crayfish and mollusc prey.

**REPRODUCTION** = litters of up to 15

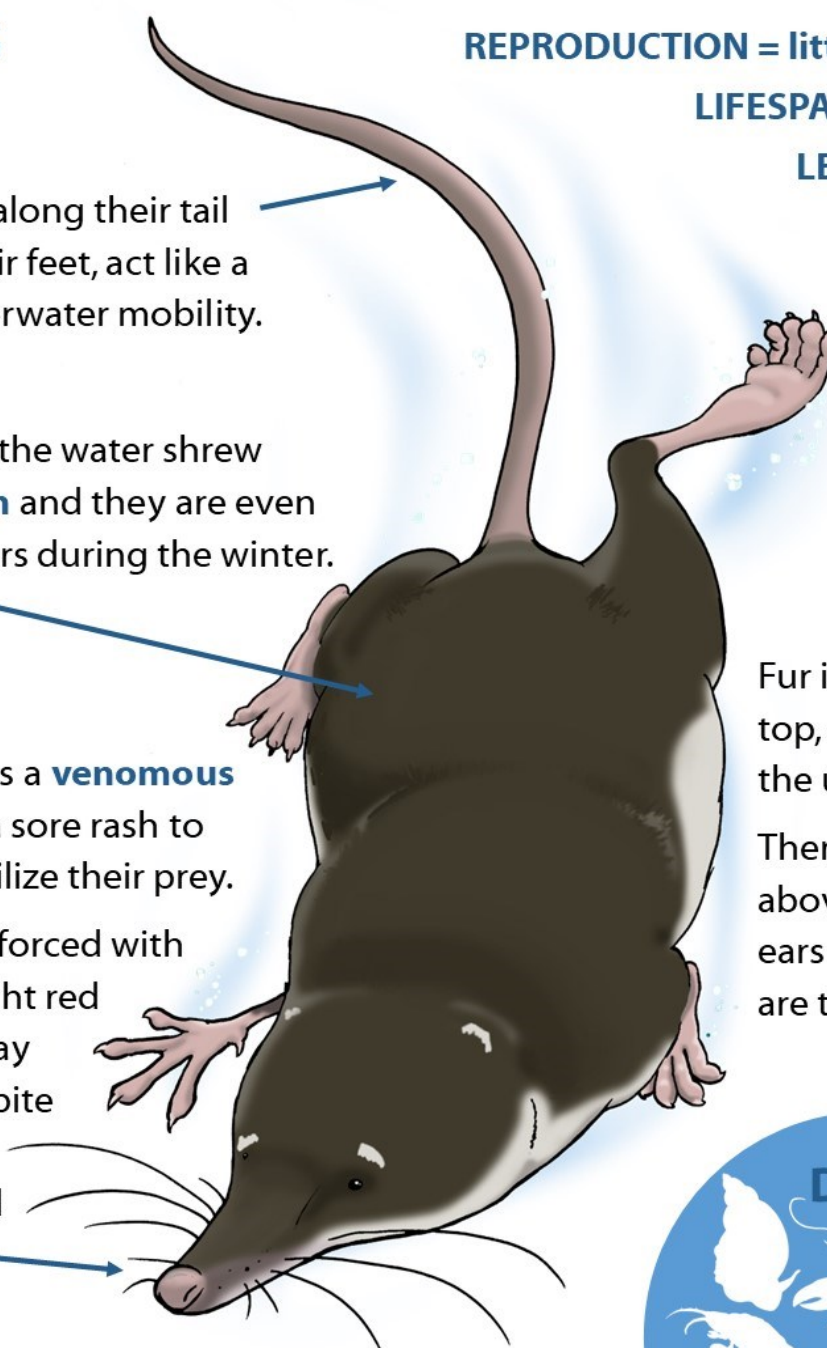
**LIFESPAN** = 19 months

**LENGTH** = 16cm)

**WEIGHT** = 18g

Fur is **very dark** on top, and lighter on the underside.

There are **pale tufts** above the eyes and ears (both of which are tiny).



**Fish, frogs, molluscs and invertebrates e.g. cray fish**



## SPOTTING A WATER SHREW

As these mammals are mostly solitary, highly shy and leave few clues to their presence, it is very hard to spot a water shrew.

Where they are found, they seem to have a preference for beds of water cress.

# WATER VOLE

The rodent is often mistaken for the brown rat which can also swim well. These secretive creatures make burrows along the edges of streams, rivers and canals which may have chambers and escape routes, should it need to escape an invading predator.

## ADAPTATIONS

Water voles have a rounded, **blunt face** compared to rats. Also, their **ears are barely visible**, as they have such long, thick fur.

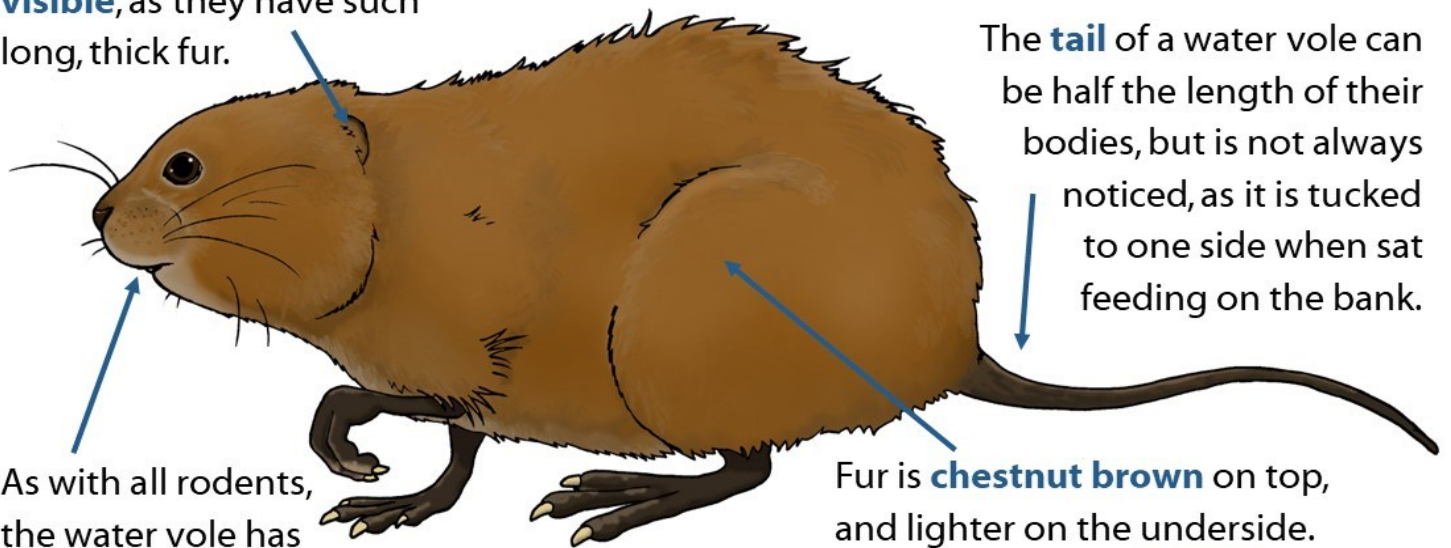
As with all rodents, the water vole has **scissor-like incisors** that snip at the plants they feed on.

**REPRODUCTION** = up to 5 "pups" (3 or 4 litters a year)

**LIFESPAN** = between 5 months 1.5 years

**LENGTH** = 15—20 cm (plus tail)

**WEIGHT** = 300g



## HOW TO SPOT A WATERVOLE

A "plop" sound may be a sign of a water vole entering the water. Watch for them swimming to and from their burrows. Also, look for areas of vegetation that have been cropped short by their chisel-like teeth.

## DIET



**Vegetation and fruits found by the waterside form their diet**



Habitat loss, pollution and over predation led to a huge decline in populations. The release or escape from fur farms of non-native American mink are considered to have been catastrophic in the UK.



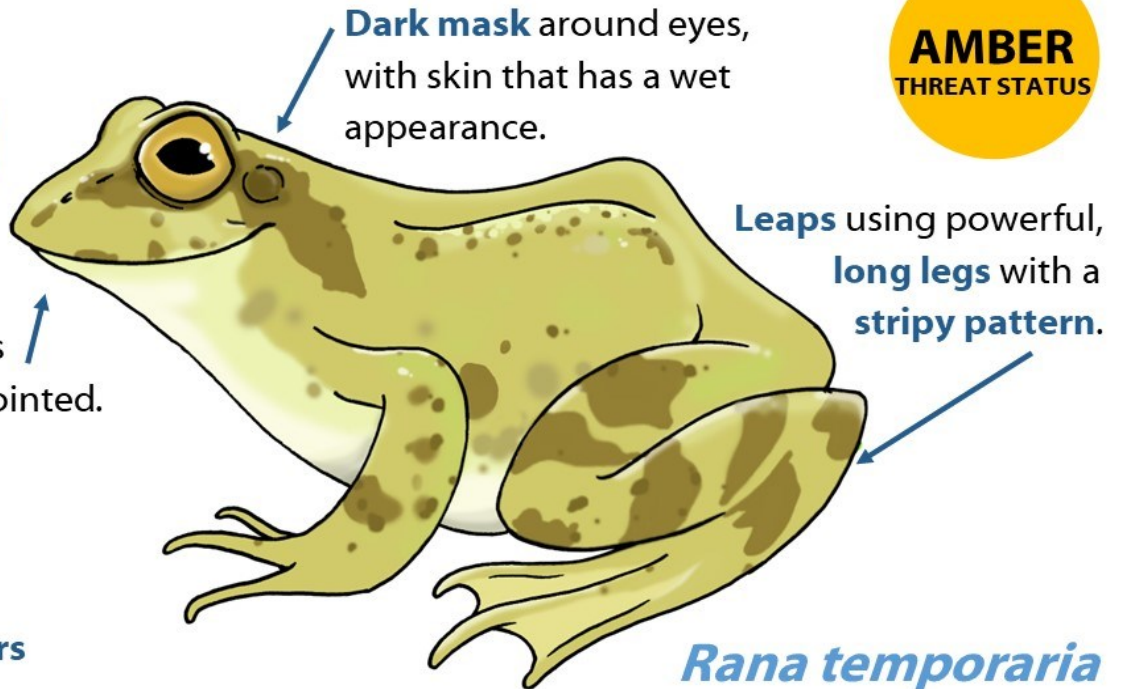
**IDENTIFY**

Both species begin life as tadpoles, before transforming in a process called metamorphosis. The adults have some shared features, but can be distinguished by some of their physical characteristics.

**DIET**

Insects, worms and slugs

**AMBER**  
THREAT STATUS



LENGTH = 10cm  
WEIGHT = 22g  
LIFESPAN = 10 years

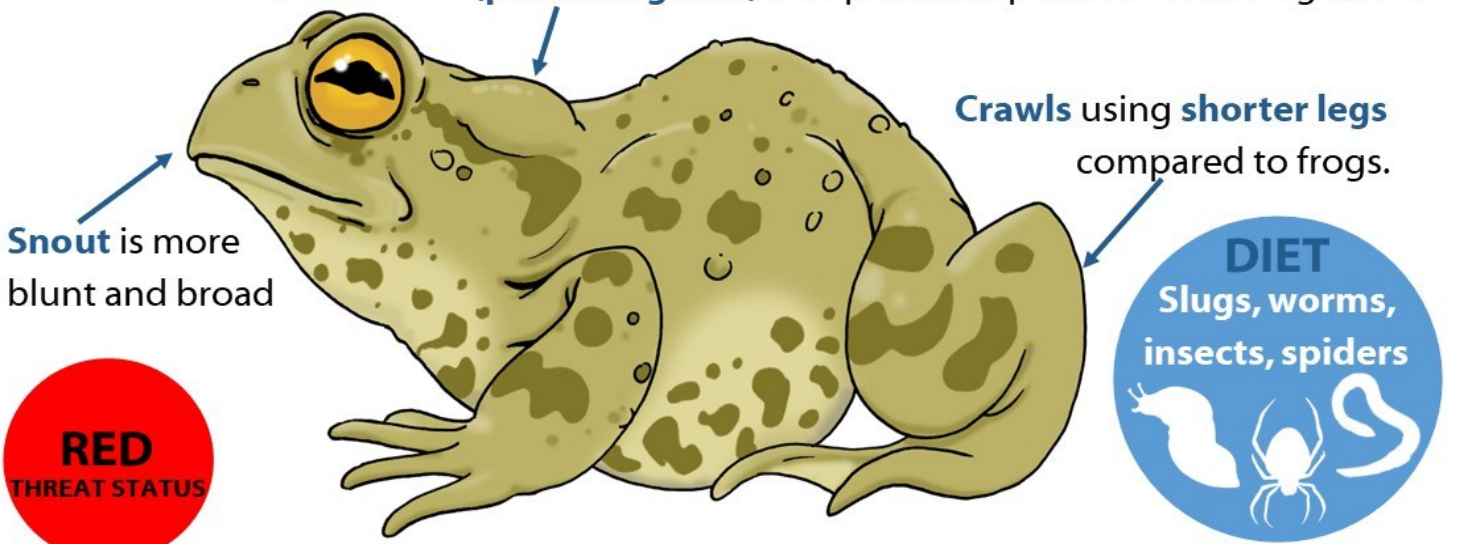
*Rana temporaria*

# COMMON FROG OR COMMON TOAD

LENGTH = 13cm  
WEIGHT = 80g  
LIFESPAN = 12 years

*Bufo Bufo*

Skin has a **bumpy, warty** appearance, with a large lump (**parotoid gland**) that produces predator deterring toxins.



**RED**  
THREAT STATUS

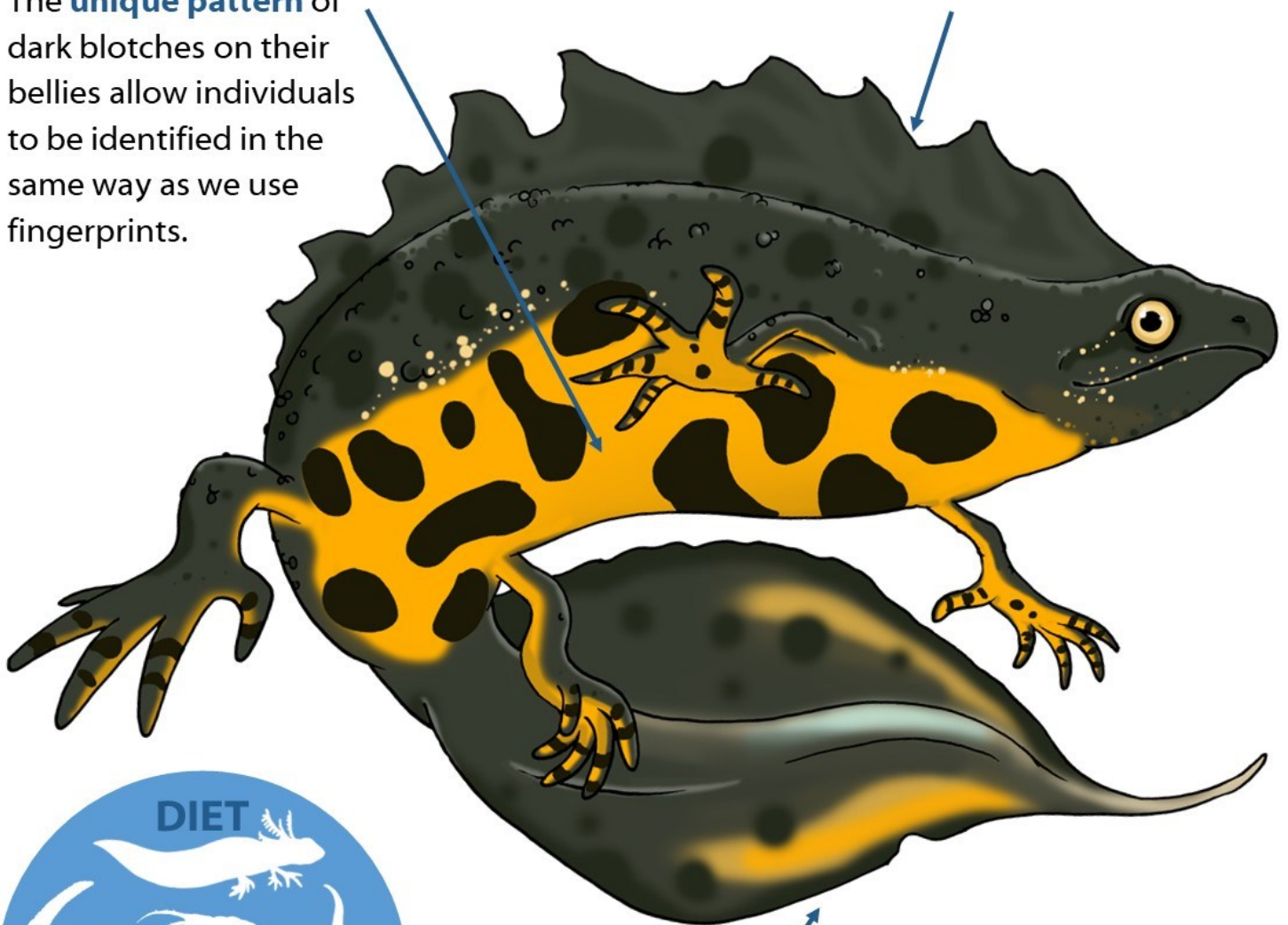
# GREAT CRESTED NEWT

Our largest species of newt has bumpy dark skin which contrasts with a dazzling bright-orange underside. These voracious predators seek prey on land and in water.

## ADAPTATIONS

The **unique pattern** of dark blotches on their bellies allow individuals to be identified in the same way as we use fingerprints.

Males grow a **large, jagged-crest** which is reabsorbed after the breeding season.



Males use their **broad tails** to waft chemical signals, called **pheromones**, to attract females

**LENGTH = 16cm**  
**WEIGHT = 10g**  
**LIFESPAN = 15 years**

The great crested newt population in the UK has crashed, and such is the level of protection, it is illegal to remove them at any stage of life.



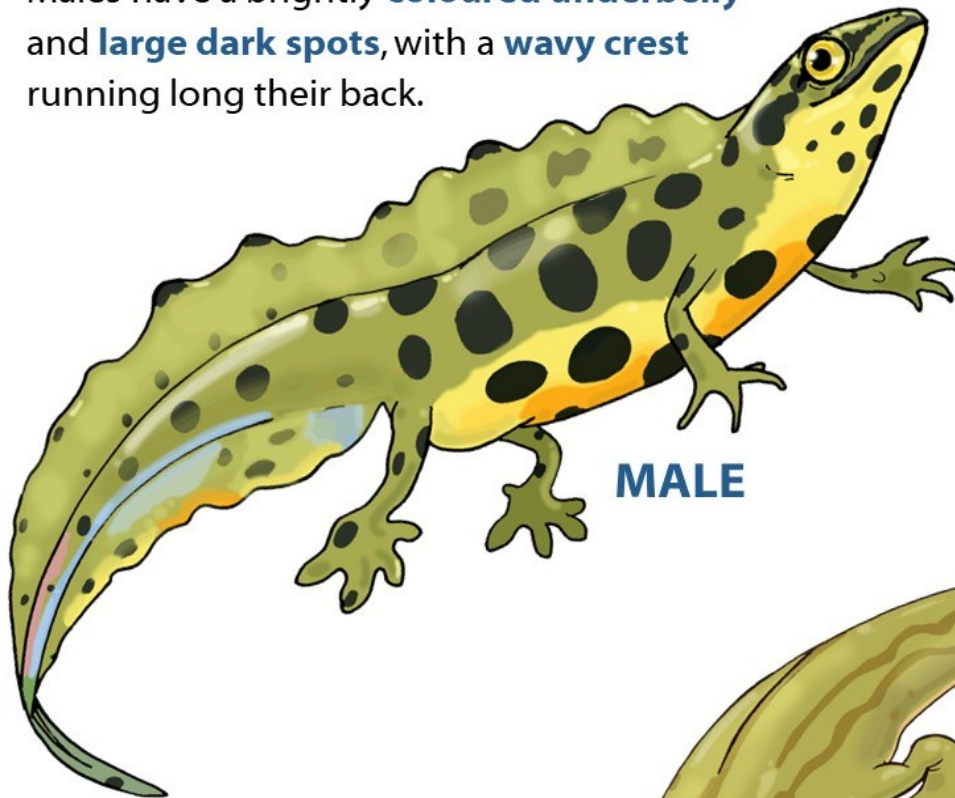
# SMOOTH NEWT



The most common of our newt species, the smooth newt likes to be near water, but will roam on land to forage for worms and insects. In the water, the smooth newt will hunt for a variety of prey including spawn of frogs and toads in the springtime.

## ADAPTATIONS

Males have a brightly **coloured underbelly** and **large dark spots**, with a **wavy crest** running long their back.



**MALE**



### DIET

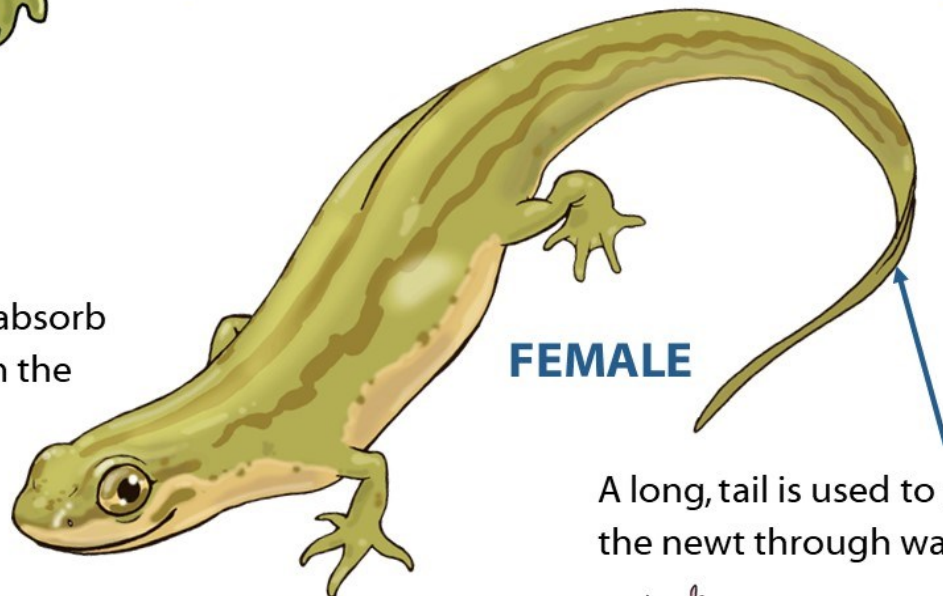
aquatic invertebrates  
worms, tadpoles  
and snails

LENGTH = 10cm

WEIGHT = 5g

LIFESPAN = 6 years

Skin is thin and can absorb oxygen directly from the surrounding water



**FEMALE**

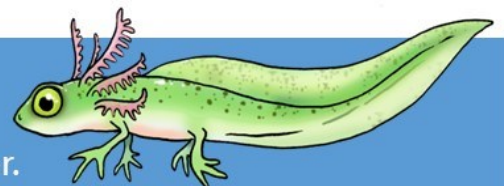
A long, tail is used to propel the newt through water,



## SPOTTING YOUNG NEWTS

Smooth newts lay individual eggs on leaves underwater.

The leaf is folded over to give extra protection. The young newt has feathery gills either side of their head with which to absorb oxygen from the water.





Sometimes mistaken for one another, both birds have predominantly dark plumage and found in the same habitats. They do however, have distinct differences which help us identify between the species...

# MOORHEN

LENGTH = 35cm

WEIGHT = 350g

WINGSPAN = 55cm

LIFESPAN = 3 years

*Gallinula chloropus*

The moorhen has **brown tinge** to feathers on its back, and **bold white markings** at the tail and on each wing.

Moorhen will also spend time away from the water to forage.



**AMBER**  
THREAT STATUS

Red beak with a yellow tip.

## DIET



Both species diet is varied including plants and seeds, snails and small fish (omnivores)

Both birds are very common sights, although a decline over time in the moorhen population has seen it moved to 'amber' status (coot are 'green').



**GREEN**  
THREAT STATUS

All **black plumage** with a **white beak**.

Will spend more time on the water than moorhens.

LENGTH = 40cm

WEIGHT = 800g

WINGSPAN = 75cm

LIFESPAN = 5 years

# COOT

*Fulica atra*

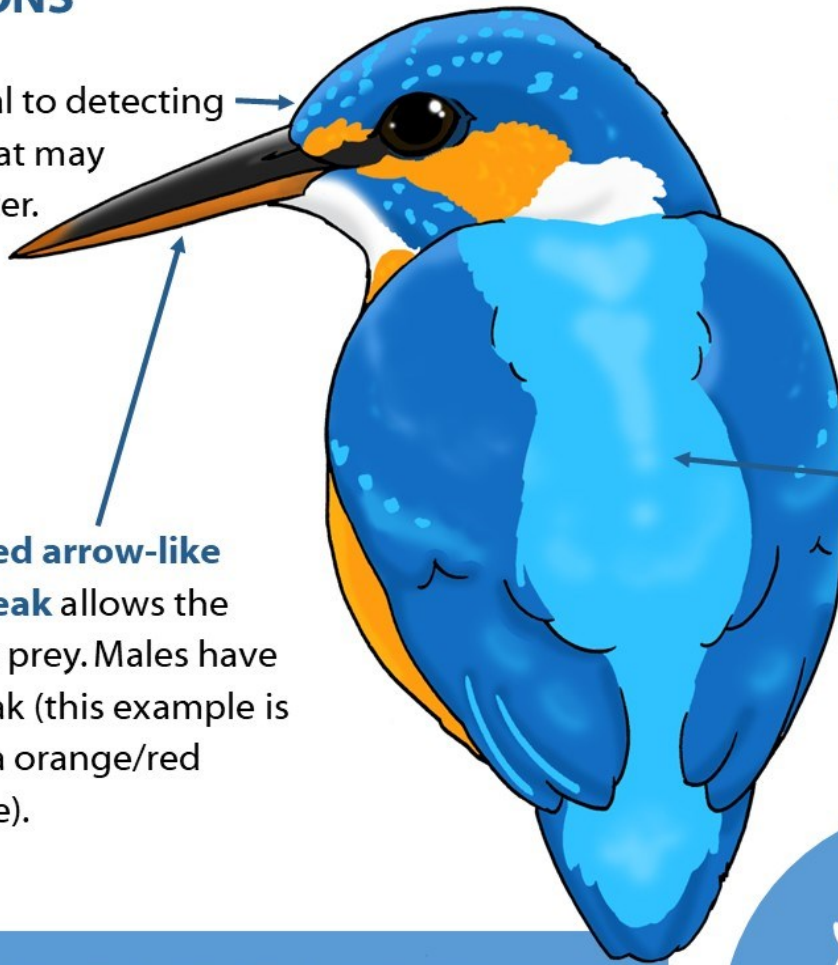
# KINGFISHER

The electric blue and bright orange plumage of the kingfisher make it one of the most easily recognised of UK birds. On average kingfishers live for only a couple of years, breeding after a single year, although some may reach a grand old age of 15!

## ADAPTATIONS

**Eyesight** is vital to detecting prey under what may be moving water. Kingfishers have excellent **colour vision**.

The **streamlined arrow-like** shape of the **beak** allows the bird to capture prey. Males have an all black beak (this example is a female, with a orange/red lower mandible).



**LENGTH = 18cm**  
**WEIGHT = 70g**  
**WINGSPAN = 28cm**  
**LIFESPAN = 2 years**

Preening **feathers** waterproofs the bird and prevents it becoming water-logged after diving.



## HOW TO SPOT A KINGFISHER

Kingfishers are often seen as a fleeting, colourful flash, darting along areas of water as they look for perching opportunities. A little patience can be rewarded with excellent views if you find a frequently used site.

## DIET

Various species of fish plus tadpoles and some aquatic invertebrates

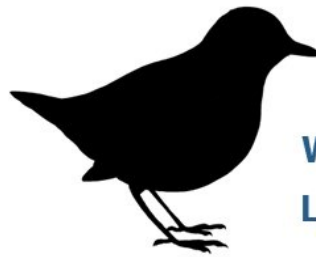


**GREEN**  
THREAT STATUS

Recently moved from 'amber' the kingfisher remain highly vulnerable. Their dependence on our waterways for means that pollution and flooding incidents may have a rapid negative impact on numbers.



# WHITE-THROATED DIPPER



LENGTH = 18cm  
WEIGHT = 70g  
WINGSPAN = 28cm  
LIFESPAN = 3 years

This small bird is found only by the edge of rivers and streams, into which they plunge and search for invertebrate prey beneath the water. Dippers may be easily identified by their habit of dipping up-and-down and a distinctive, snow-white bib.

## ADAPTATIONS

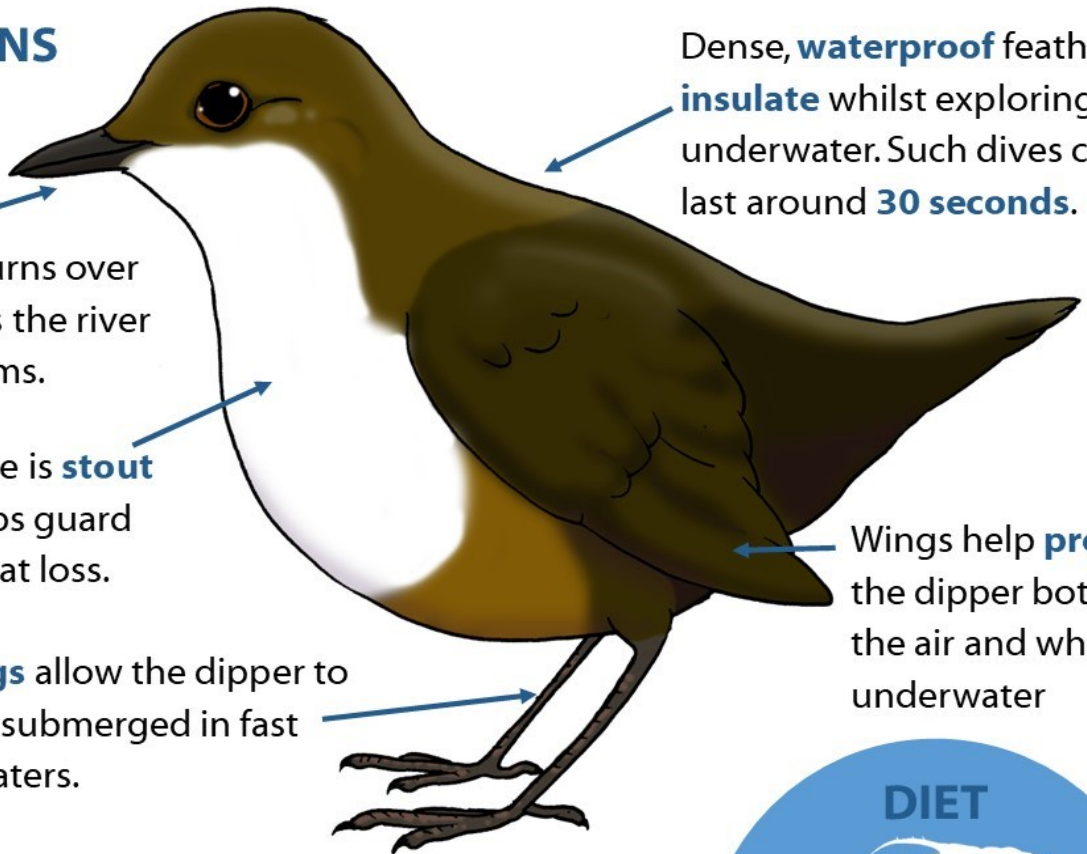
**Narrow beak** turns over rock and probes the river bed for prey items.

Body shape is **stout** which helps guard against heat loss.

**Strong legs** allow the dipper to run whilst submerged in fast flowing waters.

Dense, **waterproof** feathers **insulate** whilst exploring underwater. Such dives can last around **30 seconds**.

Wings help **propel** the dipper both in the air and when underwater



## HOW TO SPOT A DIPPER

Look for dippers flying low over fast flowing fresh water streams and rivers. They rest on rocks between dives, which may have a covering of white droppings, suggesting such sites are used often.

## DIET



**Aquatic invertebrates and small fish**

**AMBER**  
THREAT STATUS

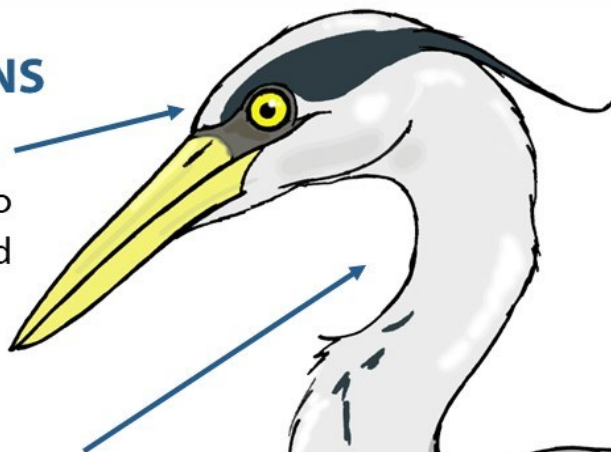
Threats to habitat include pollution of waterways. Dippers need clear water in which to hunt, so human influences on the environment (e.g. soil erosion) can have a massive impact.

# GREY HERON

The grey heron is an imposing bird with a yellow dagger beak, elongated neck and legs. Often seen hunched over the edge of the water, they also range on to land in search of other prey, including domestic gardens where ponds are stocked with fish.

## ADAPTATIONS

**Binocular vision** allows distance to prey to be judged accurately.



The herons long, **muscular neck** powers predatory strikes with their **large bill**. Fish are swallowed head-first to prevent avoid any damage from spines.

**Long legs** allow the heron to wade through water without getting wet



## HOW TO SPOT A GREY HERON

Whether stalking on land or in flight, grey herons have a prehistoric appearance! You may spot them along the edge of water as they search for prey. Check out your local nature reserve may have a viewing hide.

**GREEN**  
THREAT STATUS

With a wide range and highly adaptable nature, the grey heron is classed as the 'least concern'. They can be affected by water pollution and are vulnerable to entanglement in discarded fishing lines.

LENGTH = 1m  
WEIGHT = 2kg  
WINGSPAN = 2m  
LIFESPAN = 5 years

# BROWN TROUT

Found in many streams and rivers, the brown trout is an athletic predator, capable of rapid bursts of speed which may see them launch clear of the water.

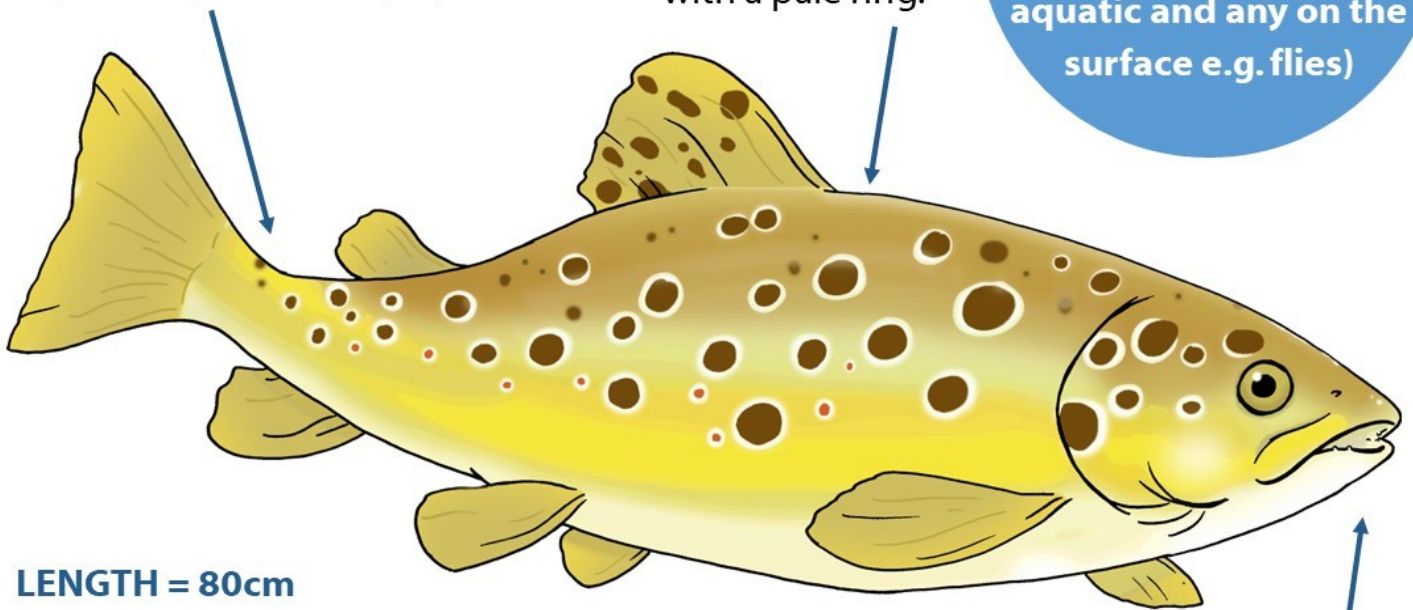
## ADAPTATIONS

**Powerful tail muscles** propel the trout prey in explosive sprints after prey.

**Streamlined body** is golden brown and covered in large **spots** that are surrounded with a pale ring.

## DIET

Small fish and various invertebrates (both aquatic and any on the surface e.g. flies)



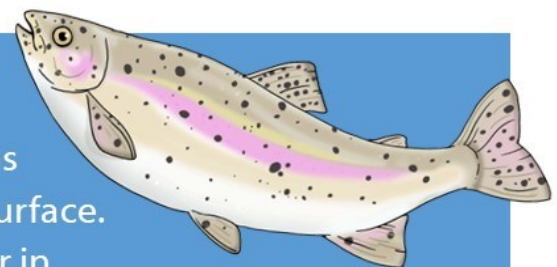
**LENGTH = 80cm**  
**WEIGHT = 14kg**  
**LIFESPAN = 20 years**

**Teeth** are small, but are very **sharp**, ensuring that prey remain trapped!



## BROWN OR RAINBOW TROUT?

Both species of trout are spotted in the summer months leaping out of the water as they snatch prey from the surface. Rainbow trout are not a native UK species, and are silver in colour with a distinct pink/purple strip along each flank.



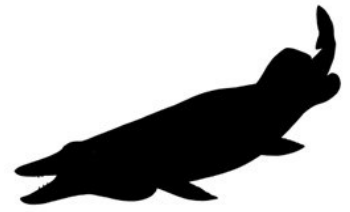
**RAINBOW TROUT**



Whilst common in British waters, the brown trout, as with many aquatic species, is susceptible to changes in water quality. They require clean, well-oxygenated water and a bed of gravel in which to lay their eggs.

LENGTH = 150cm  
WEIGHT = 25kg  
LIFESPAN = 20 years

# PIKE



With jaws lined with numerous sharp teeth, this awesome ambush predator lunges after a variety of prey which could include just about anything that it could swallow. Even waterfowl can be taken and swallowed whole by larger specimens.

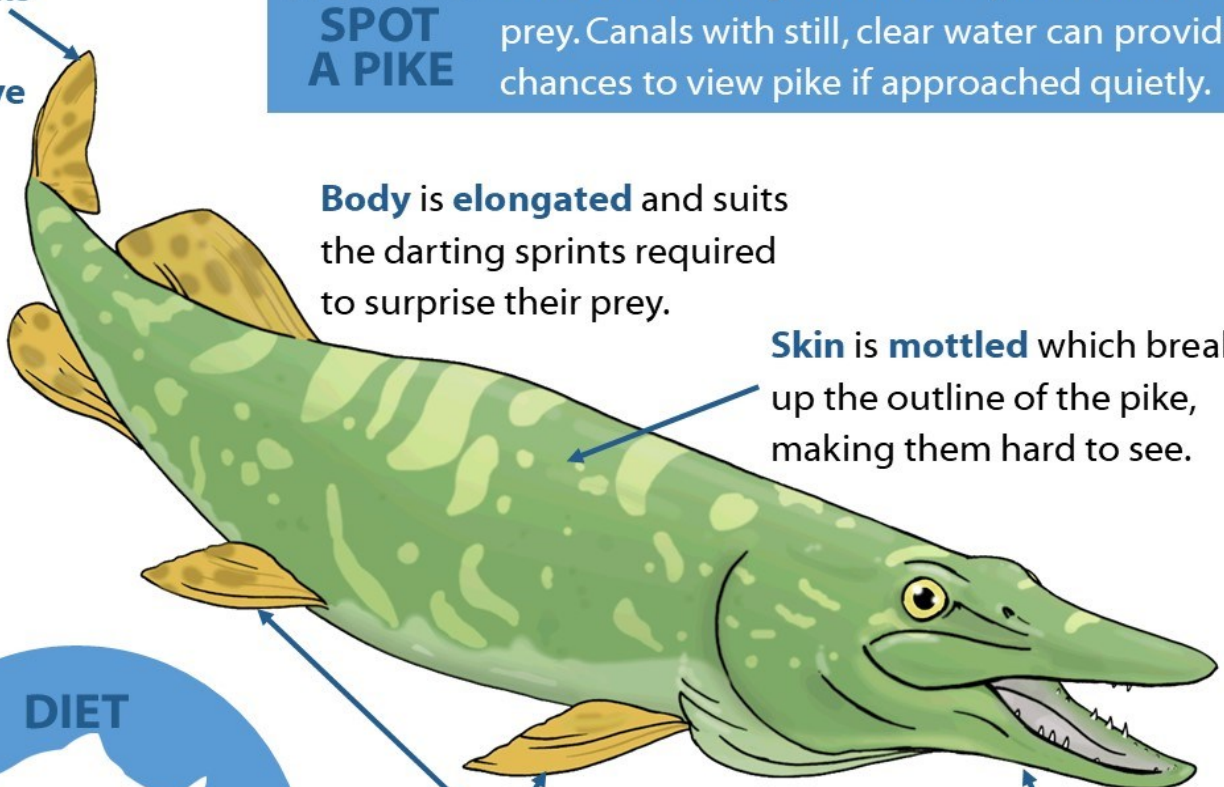
## ADAPTATIONS



### HOW TO SPOT A PIKE

The patchy colouration of pike mean that they are not easy to notice, but they do have a habit of waiting motionlessly to ambush prey. Canals with still, clear water can provide chances to view pike if approached quietly.

Caudal fins provide **propulsive force**



**Body is elongated** and suits the darting sprints required to surprise their prey.

**Skin is mottled** which breaks up the outline of the pike, making them hard to see.

### DIET



Fish, frogs and some waterbirds

**Pairs of fins stabilise** the pike.

Broad, flattened **head** with many **backward-facing teeth** in a **wide mouth** that maintain purchase on prey.

**GREEN**  
THREAT STATUS

Pike are common and well distributed. As an apex predator, the largest have no fear of significant natural predation, however, declining water quality could impact on the food chains they depend upon.