



Ymddiriedolaethau Natur  
**Cymru**  
Wildlife Trusts  
**Wales**

# Spot a Beaver!

Be a Citizen Scientist  
for Beavers in Wales

PROSIECT  
**AFANCOD  
CYMRU**



**WELSH  
BEAVER  
PROJECT**





## Contents

Be Aware! .....	3
Spot a Beaver! Introduction .....	4
Beaver Basics .....	5
Beaver or Otter? .....	6
In the Water: Beaver or Otter? .....	7
Prints.....	9
Recognising Beaver Territories.....	12
Dams.....	13
Lodges .....	15
Feeding Signs .....	17
Species that Live in Beavers' Ecosystems .....	19
Glossary.....	20



A swimming beaver

Come back to the Contents any  
time by clicking here on any page





## Be Aware!

When on the lookout for beavers, please be mindful of the following advice:

- Wear warm clothes and sensible closed shoes. Carry waterproof clothing (and extra clothing) as conditions can change rapidly even in the warmer, drier months.
- Do not approach the beavers and be sure to observe them from a safe distance to avoid disturbing them or other wildlife.
- Keep quiet and avoid sudden movements.
- Dogs will make it trickier to spot a beaver. If your dogs are joining you, please be sure to keep them on a lead at all times.
- Take a phone, binoculars and a camera so that you can take photographs and report beaver sightings.
- Beavers are especially active at sunrise and sunset so aim to be out early or late.
- Late spring and summer are ideal periods to spot a beaver because of the longer periods of daylight.



**A pair of beavers**





## Spot a Beaver! Introduction

The North Wales Wildlife Trust (on behalf of the Wildlife Trusts in Wales) is working to re-establish beavers in Wales. Eurasian beavers used to occur across the country but they were hunted to extinction 400-500 years ago. The Wildlife Trusts support the return of beavers to the wild because they can provide many environmental benefits which will considerably improve our freshwater ecosystems. However, beavers need your help to become re-established in the wild. We are running a citizen science scheme so that you can play a crucial role in reporting beaver sightings and field signs. Read on to hear how to identify a beaver.

Further information about beavers can be found on the [Welsh Beaver Project web page](#).

**A beaver feeding on a willow branch**



## Beaver Basics

- Beavers are semi-aquatic rodents that live in family groups. Young beavers are called kits. Beavers are territorial and, commonly, the beavers in a territory include a breeding pair of adults, their offspring from the current year as well as their kits from the previous year. Adulthood is reached after about 24 months and the young disperse to found their own territories after about two years.
- Eurasian beavers have the scientific name of *Castor fiber*. (Although they look very similar, they are distinct from the North American beaver species, *Castor canadensis*.)
- Long bodies that, in adulthood, measure just over a metre long and 30–40 cm wide. Adults can weigh 20–30 kg which makes them similar in size to a medium dog such as a spaniel!
- Thick brown fur over all of their bodies (but not their tails). The fur is usually mid brown but can range in colour from light or reddish brown through to black.
- Hind feet that are webbed for swimming.
- On land, they walk with an undulating gait.
- Broad, hairless tails that help with swimming. Beavers slap their tails against the water to warn family members when danger is near.
- Two large protruding incisor top front teeth. (Their bottom incisors are less obvious.) These teeth absorb iron from the environment. The iron means that the teeth are usually bright orange and it gives them great strength for chewing trunks and branches.







**A Eurasian otter, *Lutra lutra***

## Beaver or Otter?

Beavers are distinctive and unlike most other animals you might encounter in their habitats. However, they bear some superficial resemblance to the Eurasian otter (*Lutra lutra*).

Here are some of the key differences between otters and beavers:

- Otters are much smaller than beavers. Otters weigh around 10 kg and are around 90 cm long (not counting their 40 cm tail). On the other hand, beavers are 20–30 kg with a body length of around 100 cm (plus a 35 cm tail).
- Otters are slimmer than beavers. Otters have long, narrow and tapered tails whereas beavers have large, flat, hairless tails.
- Otters live in simple dens called holts which are very hard to spot whereas beavers can build very elaborate dams and lodges out of branches and mud which are hard to miss!
- Otters are more likely to be active during the day (diurnal) whereas beavers may be easier to spot at dawn, dusk and night (crepuscular and nocturnal).
- Otters are carnivorous (eating fish, crustaceans and even insects and small mammals) whereas beavers are strictly herbivorous (eating leaves, twigs and bark).
- The face of an otter is narrower than the blunter snout of a beaver.
- When in the water, a beaver's fur often appears scruffier than the slick fur of an otter.
- Territory sizes are highly variable. However, beaver territories along a river tend to be smaller (perhaps around 1.8 mi or 3 km) than otter territories (which may be 13 mi or 20 km).



**An otter, *Lutra lutra***



**A beaver, *Castor fiber***





**Beavers swimming**

## In the Water: Beaver or Otter?

Because otters are slimmer than beavers, they appear sleeker when swimming. Whereas beavers often leave a somewhat curved and broad wake in the water behind them, otters' wakes are straighter and narrower.

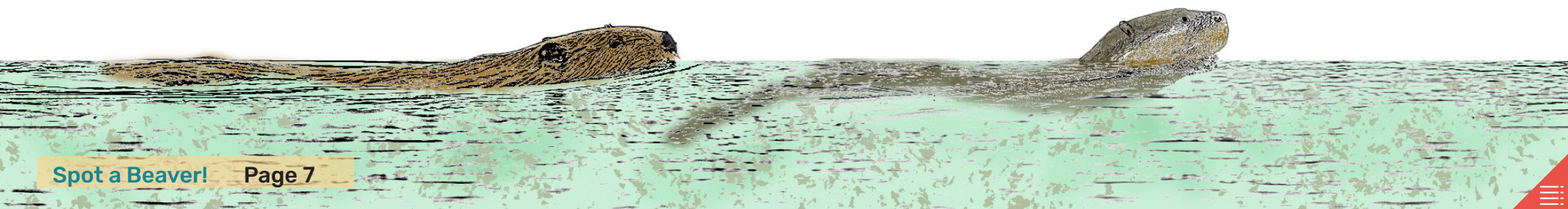
Only the head is visible above water when an adult beaver swims. On the other hand, when a beaver kit swims, its back often projects above the water surface too.

Of course, both beavers and otters also swim under water and, when they're doing this, they're much harder to spot!

Image courtesy of Chris Robbins

**Example of a beaver swimming**

**Example of an otter swimming**





## Beavers in the water



Image courtesy of Chris Robbins

## Otters in the water



Image courtesy of Andy Rouse



Image courtesy of Chris Robbins



Image courtesy of Andy Rouse

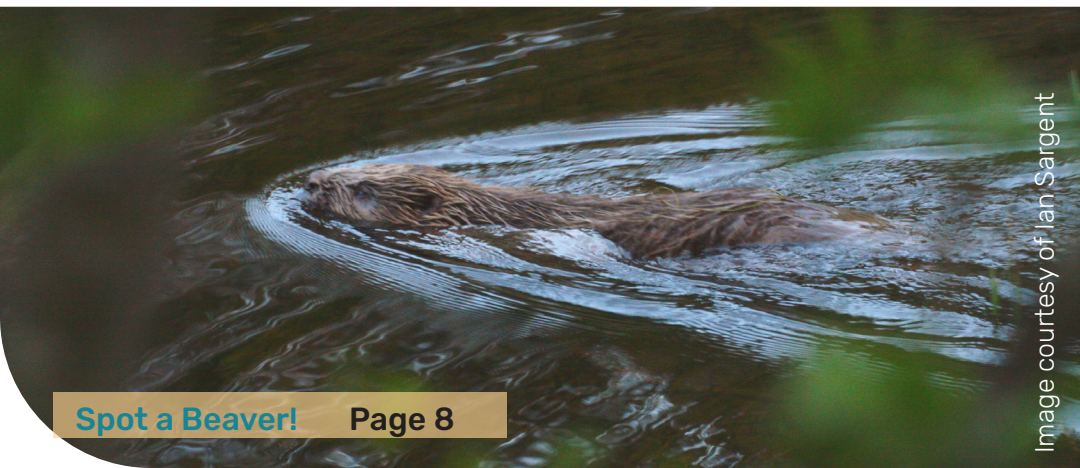


Image courtesy of Ian Sargent



Image courtesy of Andy Rouse



## Prints

The footprints of beavers' front paws are usually 5–7 cm long and around 5 cm wide. Sometimes, only four of the five front toes are distinguishable in the print. Beavers' hind footprints are usually 12–17 cm long and around 10 cm wide and all five toes can usually be seen. Note that beavers' broad tails can brush over and deform the footprints that they leave behind.

Here, we have beaver prints as well as the prints of other animals with which they might potentially be confused. Where the front and hind prints are significantly different, both are shown.

Provided that the scale bar below is 2 cm long, all the prints are also their actual size.

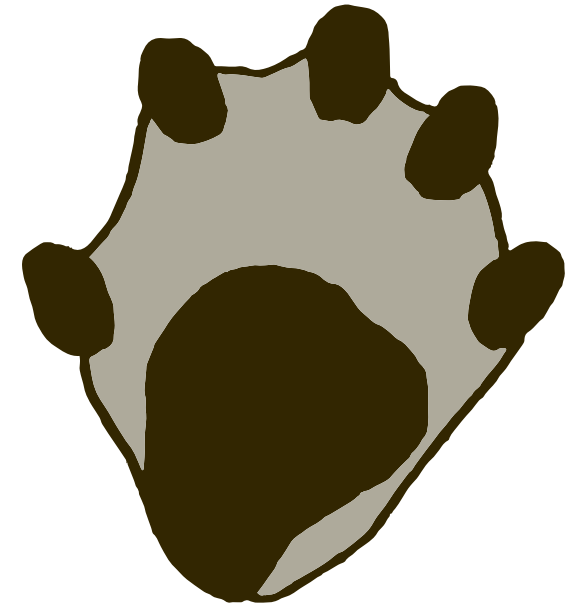
2 cm



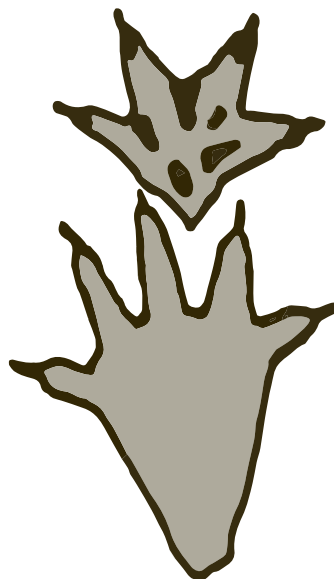
Beaver  
Front Left



Beaver  
Hind Right



Otter  
Front Right



Water vole  
Front and Hind



Mink  
Front Right



Badger  
Front Right



Fox  
Front Left  
(Note that dog prints are similar)



A beaver's webbed hind paw



Beaver prints



Note that animal footprints in mud and soft sediment can be highly variable in appearance and sometimes look significantly bigger than the foot that made the print.



Beaver hind prints





**Otter front and hind prints**



Image courtesy of Karen Lloyd



Image courtesy of Wildlife Trusts

**Beaver hind prints**



Image courtesy of Roisin Campbell-Palmer

**Beaver front prints**



Image courtesy of Roisin Campbell-Palmer



Image courtesy of Roisin Campbell-Palmer



# Recognising Beaver Territories

Beavers build large dams out of wood, mud and stones. Much of the wood is made up of sticks and smaller tree stems which beavers fell with their sharp incisors. These dams slow the flow of water and can thus help to reduce downstream flooding in times of rain whilst keeping beaver ecosystems wet whilst maintaining stream flow during dry periods. Because dams filter sediments, they can also improve downstream water quality.

The dams can create sizeable ponds which are very attractive to fish, amphibians, water voles, otters, invertebrates and other animals. (Note that none of these animals are eaten by the beavers which are strictly herbivorous!)

A lodge is a resting and breeding place for beavers. Lodges are usually built on the banks of rivers, lakes or ponds, but sometimes they are built in the middle of a lake or pond. A lodge usually takes the form of a mound of sticks and mud with internal living chambers accessed via underwater entrances.







## Dams

Dams are prime evidence of beavers' skill in ecosystem engineering. They are mainly seen only on small streams and tributaries in which water needs to be retained and depths managed. This management creates a stable water level which allows beavers to build protected lodges and also provides new feeding resources.

Beavers are semi-aquatic and they rarely venture more than 20 m from the water's edge. Being in or near water helps them to avoid predators.

**A beaver dam**





## Beaver dams



Image courtesy of wildlife Trusts



Image courtesy of wildlife Trusts



Image courtesy of wildlife Trusts

Beaver dams can come in a large range of sizes depending on the landscape



Image courtesy of wildlife Trusts



Image courtesy of wildlife Trusts

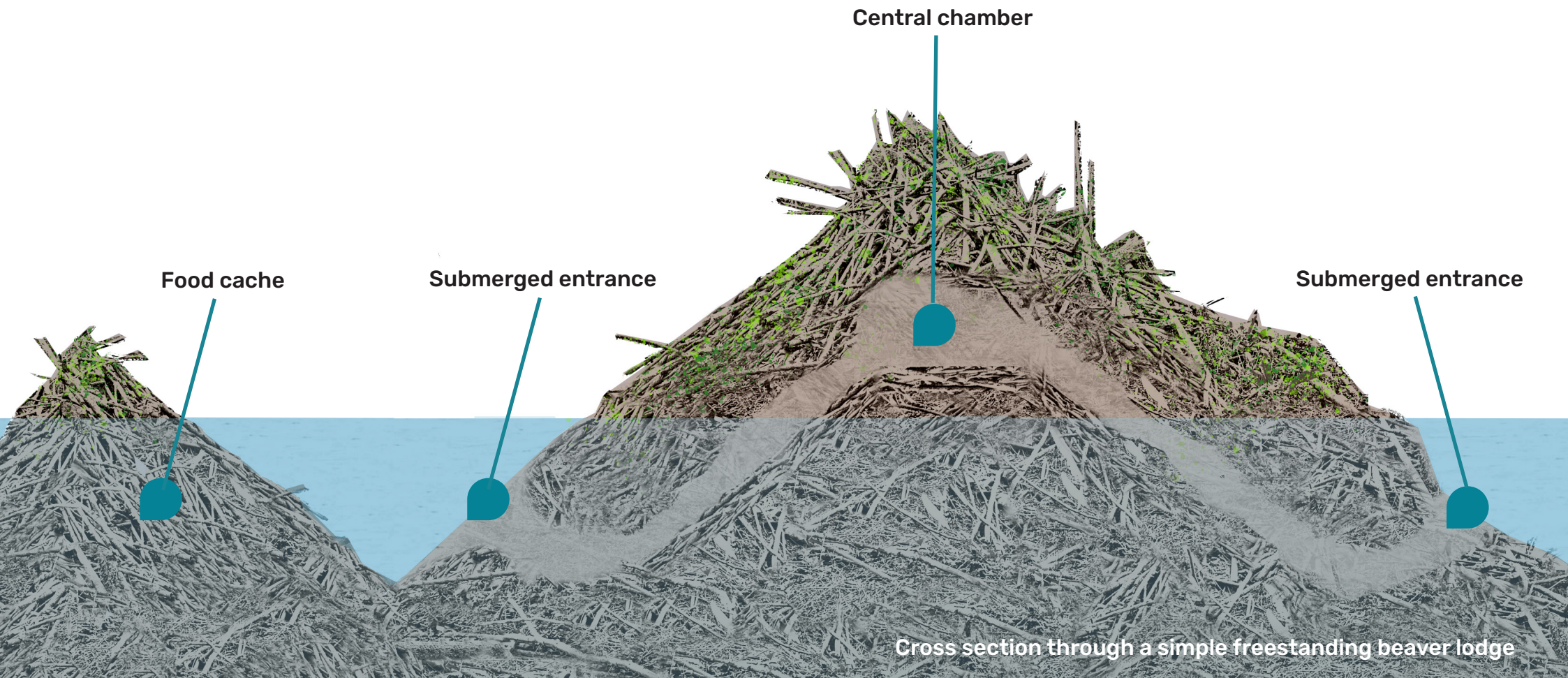


# Lodges

Beavers often live in carefully built lodges that are made from mud, branches and other vegetation. However, they may also dig and use supplementary burrows in the same territory.

Where a watercourse allows large burrows to be built safely away from predators, beavers may not even need to build a lodge. Instead, burrows will be maintained and sometimes roofed with sticks.

Some lodges are **freestanding lodges** while **bankside lodges** are built into the banks along the water's edge. Lodges usually have at least two entrances and some may have several internal chambers.





**Examples of bankside and free-standing beaver lodges.**  
These usually range between 0.5 m and 2 m in height.



Image courtesy of DJ Hailey



Image courtesy of Wildlife Trusts



Image courtesy of Wildlife Trusts



Image courtesy of AW Martinus



Image courtesy of Wildlife Trusts



Image courtesy of Wildlife Trusts



## Feeding Signs

- Beavers prefer to eat deciduous trees like willow and birch.
- They have a seasonal diet. In summer they prefer softer and greener vegetation. In winter, when greenery is scarcer, they tend to feed on the woody parts of trees.
- Beavers can gnaw through even very large tree trunks. Equally, they will gnaw on slender and medium branches and trunks. Gnawed trunks are often left with a characteristic pointed shape.
- It is often possible to make out the parallel teeth marks left by their large incisors. Plenty of wood chips will also be apparent underneath a freshly gnawed tree or branch.
- Gnawed tree stumps which are light in colour are fresh feeding signs (that are days or weeks old). Gnawings which are dark or even black are old feeding signs (that are months old).



**Side view of the characteristic pointed shape of a gnawed tip.**

**Freshly gnawed tree stumps. Beavers' characteristic teeth marks can be seen on the gnawed sections and fresh wood chips are scattered on the ground.**



**A beaver feeding**



Image courtesy of Wildlife Trusts

**Teeth marks on a freshly gnawed tree trunk**



Image courtesy of Wildlife Trusts

**A newly felled tree. Teeth marks and woodchips can be seen.**



Image courtesy of Wildlife Trusts

**An old feeding sign with regrowth visible.**



Image courtesy of Wildlife Trusts

**A tree that has been ring-barked by beavers.**



Image courtesy of Wildlife Trusts

**An old feeding sign with abundant regrowth visible.**



Image courtesy of Wildlife Trusts



## Species that Live in Beavers' Ecosystems

As beavers are such amazing ecosystem engineers, it's not surprising that many other species like to live near them. More information can be found in our guide *Wildlife Facilitated by Beavers*. We mention but a few here:

**A water vole *Arvicola amphibius***



Mammals including water voles and water shrews.

**Mallard ducks *Anas platyrhynchos***



Birds including kingfishers, wagtails, dippers, flycatchers, ducks, grebes, coots and moorhens.

**A frog *Rana temporaria***



Amphibians including frogs, toads, newts (and their eggs and spawn).

**A roach *Rutilus rutilus***



Fish including lamprey, salmonids, stickleback and roach.

**Whirligig beetles *Gyrinus natator***



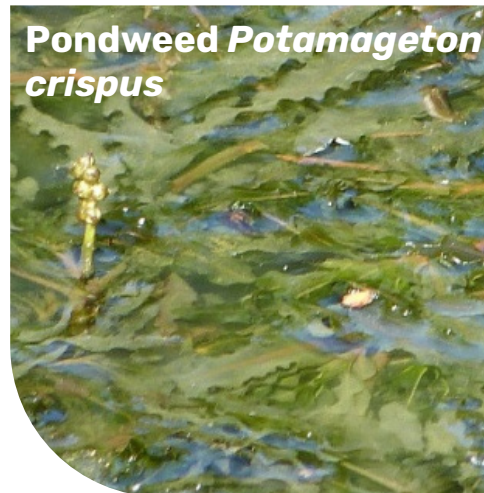
Insects such as beetles, dragonflies and water bugs.

**A water snail *Viviparus* sp.**



Other invertebrates including spiders, molluscs, and crustaceans.

**Pondweed *Potamogeton crispus***



Aquatic plants such as *Potamogeton*.

**Aspen *Populus tremula***



Beavers' favourite broadleaved trees including willows, birch and aspen.



# Glossary

## **Carnivorous**

Feeds on other animals such as mammals, insects and crustaceans.

## **Crepuscular**

Active at dawn and dusk

## **Deciduous**

Plants that lose all of their leaves during part of the year

## **Diurnal**

Active mostly during the day

## **Gait**

The way an animal walks

## **Herbivorous**

Feeds on vegetable matter including plants and algae

## **Invertebrate**

An animal which lacks a backbone. These include insects, spiders, crustaceans, worms, snails (and other molluscs) and many others.

## **Holt**

An otter's den

## **Kit**

A young beaver

## **Lodge**

The beavers' home which is made mostly out of sticks and mud. *Bankside* lodges are built into the bank adjoining the lodges while *freestanding* lodges are built in a pond or lake.

## **Nocturnal**

Active mostly during the night

## **Riparian**

Living or occurring near rivers

## **Semi-aquatic**

Living in or near water



**A swimming beaver**





**Ymddiriedolaeth Natur  
Gogledd Cymru**  
**North Wales  
Wildlife Trust**

This resource has been produced by the North Wales Wildlife Trust on behalf of the Wildlife Trusts in Wales.



**Ymddiriedolaethau Natur  
Cymru**  
**Wildlife Trusts  
Wales**



**Ymddiriedolaeth Natur  
De a Gorllewin Cymru**  
**Wildlife Trust of  
South & West Wales**



**Ymddiriedolaeth  
Natur  
Gwent**  
**Wildlife Trust**



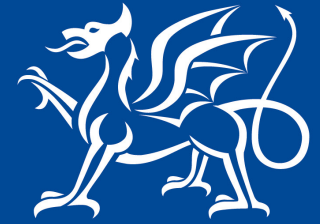
**Ymddiriedolaeth Natur  
Maldwyn**  
**Montgomeryshire  
Wildlife Trust**



**Ymddiriedolaeth Natur  
Sir Faesyfed**  
**Radnorshire  
Wildlife Trust**



**Cronfa Amaethyddol Ewrop ar  
gyfer Datblygu Gwledig:**  
Ewrop yn Buddsoddi mewn Ardaloedd Gwledig  
**European Agricultural Fund for  
Rural Development:**  
Europe Investing in Rural Areas



**Llywodraeth Cymru  
Welsh Government**

This project has received funding through the Welsh Government Rural Communities – Rural Development Programme 2014–2020 – Enabling Natural Resources and Well-being Scheme, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

**PROSIECT  
AFANCOD  
CYMRU**



**WELSH  
BEAVER  
PROJECT**





**A beaver kit**



**Ymddiriedolaeth Natur  
Gogledd Cymru**  
**North Wales  
Wildlife Trust**

North Wales Wildlife Trust, together with members, volunteers and supported by a growing network of thousands of people in diverse communities, is committed to bringing wildlife back, empowering people to take action for nature, and to create a society where nature matters.

We're part of a national network of 46 Wildlife Trusts across the UK. We campaign to protect wildlife and habitats both locally and nationally.

North Wales Wildlife Trust is a driving force for nature conservation – and we want you to be part of it!

EMAIL	<b><a href="mailto:info@northwaleswildlifetrust.org.uk">info@northwaleswildlifetrust.org.uk</a></b>
PHONE	<b>01248 351541</b>
FACEBOOK	<b><a href="https://www.facebook.com/northwaleswildlifetrust">northwaleswildlifetrust</a></b>
WEBSITE	<b><a href="https://www.northwaleswildlifetrust.org.uk">northwaleswildlifetrust.org.uk</a></b>
TWITTER	<b><a href="https://twitter.com/North_Wales_WT">@North_Wales_WT</a></b>
INSTAGRAM	<b><a href="https://www.instagram.com/northwaleswildlifetrust">@northwaleswildlifetrust</a></b>

North Wales Wildlife Trust  
Garth Road  
Bangor LL57 2RT

Registered Charity Number: 230772  
Company Number: 773995

© 2023 North Wales Wildlife Trust

