

ADDERS, GRASS SNAKES AND SLOW WORMS

Adders

Adders are often seen at Bovisand, particularly on the cliff side of the road down to the beaches. However, they can be seen almost anywhere on the estate.

The adder, also known as the common European viper, is the UK's only native venomous snake and spends its days in woodland, soaking up the sun and swallowing its prey whole.

The adder's scientific name is *Vipera berus* and its common name comes from a mispronunciation of an old English word 'næddre' (pronounced nadder) meaning serpent. With its highly distinctive, pattern of diamonds on its back, the adder is one of Britain's most exotic native species and is the only venomous snake in the UK

Adders are the smallest snake species found in the UK. They are slightly smaller than [smooth snakes](#) and half the size of [barred grass snakes](#), the other two snake species found in the UK.

They are sexually dimorphic meaning that males and females appear differently. Males are light grey or silver in colour with a black zig-zag running down their back.



In contrast, females are light brown or copper colour with a dark brown zig-zag running down their back.



Both may have a 'V' or 'X' mark on the back of their head and possess vertical pupils. There is of course the chance that you may encounter a black adder, which are usually female.

Adults grow to a length of 60 to 80cm - around 24 inches.

The young are almost perfect replicas of adults and measure around 17cm in length at birth.

Your best chance of seeing an adder is in spring, when they are emerging from hibernation and spend the early part of the day basking in sunlight. They are sensitive to vibration and quick to slip away when they feel footsteps approaching.

Adders are found throughout much of England, Scotland and Wales (but absent from Northern Ireland and the Republic of Ireland), and throughout most of Europe. It is remarkable for being the world's only snake found within the Arctic Circle. They are associated with open habitats such as heathland, moorland and woodland edges.

The diet of the adder can be varied depending on what habitat they are found in but it mainly consists of small mammals such as voles and mice, however larger adders may even take rats. Other reptiles such as lizards and slow worms are often on the menu too.

Generally speaking, larger ones will take larger prey but this also gives them the ability to reach food sources that smaller snakes may not be able to, including nesting birds and eggs. On rare occasions adders have been recorded to eat amphibians such as frogs and newts. As an opportunist, they will eat whatever comes their way.

For small mammals, the sight of a hungry adder flicking its forked tongue is the stuff of nightmares. But adders, like many other snakes, use their tongues for finding sex as well as dealing death.

In spring, a male adder locates a female by homing in on the scent trails she leaves behind as she moves, he may travel many hundreds of metres in a single day, excitedly licking the air as he moves. By flicking out his tongue, he mops up from the air molecules of female scent (pheromones) that are then carried by the tongue to the Jacobsen's (or vomeronasal) organ at the back of the mouth. These molecules excite special receptor cells by which the snake registers the smell.

If more pheromone molecules are detected by one prong of his forked tongue, the male changes its direction until the scent arrives in equal quantities at both prongs.

Far from being something sinister, the adder's tongue is a feature that has probably been shaped during evolution by sex as much as by death.

Surprisingly, adders are mainly preyed on by birds such as crows, jackdaws, rooks, ravens, jays, magpies, choughs as well as birds of prey (like the buzzard) and pheasants. Other predators include mammals such as badgers, foxes and feral cats.

Adders like all of our native reptiles [hibernate](#) between around October and March. During this time, they congregate in areas known as hibernacula such as sheltered, dry spots like old rodent burrows or within fallen trees that act as a frost-free refuge until the following spring.

Following hibernation, males are the first to emerge. It is crucial that males bask in the sun if they want to successfully breed that year. They spend up to two months basking in order to maintain their metabolism so that they can start to produce sperm after the winter slumber. Females will then emerge in late April-May with reproduction on their agenda, by which time the males should be ready.

At this time, snakes may be seen 'dancing' with pairs of snakes entwining themselves around one another. This isn't part of the courtship but is instead males fighting territorial disputes over females by wrestling, with the stronger and larger snakes winning over the smaller ones. The victor of the duel will then mate with the female and may spend a couple of days with her.

Unlike some snakes, adders do not lay eggs and instead give birth to up to 20 live young in late summer. The name 'viper' is actually derived from the Latin for 'live birth.' The species has been known to live for more than ten years.

Neonate adders are usually born in late August or early September and can be seen around this time. Most will not have their first meal until the following spring, which sounds like a long time to go without dinner. This behaviour is common in temperate reptiles. Shortly after birth, they find a location to hibernate to wait out the winter (just like the adults).

Adders are the only venomous snake found in the UK. This often creates a sense of fear and animosity surrounding them, which is completely misplaced. Adders are much more likely to flee from a fight than envenomate a person, due to the expensive metabolic cost of producing the venom. They're extremely unlikely to attack people just for the sake of it and are more likely to flee than attack unless they are stepped on or feel very threatened.

For those that are unfortunate enough to be bitten, it tends to be on the feet and ankles where snakes have accidentally been disturbed as people are walking through a habitat and stood on one. This can also happen to dogs that are off the lead in areas where adders are known to occur.

In both cases the fatality rate due to adder bites is low with the last death in the UK recorded in 1975. The young and old are at particular risk but if medical treatment is sought immediately after an envenomation (both human and canine), then the damage caused can be minimalised.

In most cases the bites cause no more pain or damage than a bee or wasp sting, however some people can have an allergic reaction. The same can't be said for their prey, that often succumbs to the venom fairly quickly due to their much smaller body size.

Like other vipers, adders have hollow fangs that they use to deliver their venom deep into tissues and blood vessels where it can set to work. These are connected to their venom glands which help to deliver venom when the snake attacks prey.

The UK's adder population is in decline, habitat loss is thought to be the leading factor in this, with intensive agriculture destroying suitable habitat and causing adder populations to become fragmented and isolated. As Great Britain is an island, snakes can't naturally recolonise from continental Europe and have unfortunately been declared extinct in a number of counties in England.

Adders are extremely sensitive to disturbance, particularly if they are males basking early in the season or females basking to incubate their internally developing young.

At no time should adders be handled or approached, this only increases the risk of being bitten. It is also illegal to kill, injure, harm or sell adders under the Wildlife and Countryside Act 1981.

GRASS SNAKE (*Natrix natrix*)



Grass snakes do not have the dark zigzag down their backs like adders, making them easy to tell

apart. They are grey-green coloured with black bars down their sides and a yellow and black 'collar' around the neck. They have round pupils, can reach over a metre in length and live for 25 years,

Grass snakes are found across most of England and Wales but not in Scotland and Ireland. They can occur in a variety of habitats, including woodland, but is normally found close to water as they feed on amphibians and fish, consequently may be found in gardens with ponds and plenty of vegetation. They are totally harmless, but it's fair to say the majority of people would be shocked and scared to see one swimming across the pond or disappearing into the flower border.

Grass snakes aren't venomous and are very shy. If cornered they have a number of tactics to try to deter predators. These include hissing, releasing a foul-smelling secretion and playing dead.

They are the UK's only egg-laying snake. Eggs are normally laid in a sheltered location within rotting vegetation. Compost heaps are often a favoured spot. Up to 40 eggs may be laid, hatching in late summer or early autumn. Only a minority of the young will reach adulthood, with many falling prey to predators such as herons, birds of prey, pheasants and even hedgehogs.

Frogs, toads and newts are a grass snake's favoured prey, but they will also take fish, small mammals and birds. With no venom, grass snakes rely on the element of surprise to hunt. A snake will strike out and grab its unsuspecting prey, swallowing it whole. Often, the prey is still alive when swallowed.

As cold-blooded reptiles, grass snakes spend the coldest part of the year in hibernation. A variety of hibernation sites may be used, provided they are warm and humid. Tree root systems, fallen trees, compost heaps and rabbit warrens are some of the places that may be utilised. Snakes will normally begin to hibernate in October or November, emerging in March or April.

Grass snakes are shy creatures and will quickly retreat into cover after detecting a human. Your best chance of seeing one is to visit a suitable habitat early in the morning. This is when the snakes have to bask in the sun to generate warmth. If you disturb a snake, it's worth quietly revisiting the spot as the same basking points are often used regularly.

Slow worm (*Anguis fragilis*)

Slow worms are widespread throughout Britain, although they are absent from Ireland. They prefer humid conditions and shaded areas, such as rough grassland, woodland edges, gardens, meadows and heathland.

They are legless lizards but are often mistaken for snakes. If it blinks it's a lizard, as snakes don't have eyelids. They have a smooth, glossy, bronze, grey or brown cylindrical body and, unlike snakes, a flat forked tongue, eyelids and a tail which sheds when under attack. The tail will carry on moving even when it has been shed in order to distract the predator.

Males are grey or brown, sometimes with bright blue spots, whilst females are golden brown, often with a thick dark line down their back. They only reach 50cms fully grown and may hide under logs or in compost heaps using its warmth to heat up their bodies rather than basking in the sun.

Slow worms burrow underground or find a crevice in a rotting tree stump to hibernate in over the winter, usually from October to March. Their diet is made up of invertebrates, including slugs, worms, snails and spiders. Their backward curving teeth are perfect for securing slippery or wriggly meals.



Slow worms are ovoviviparous, which means that they lay eggs internally. The eggs hatch inside the female slow worm's body, and the young stay there for a while, living off the yolk of the egg. The female will then go on to give birth to live young.

The breeding season, which can be quite a hostile time for slow worms, takes place from May to June. Males become aggressive during this time, competing with each other for a mate. As part of the mating process, the male slow worm takes hold of the female by biting her neck or head. Mating can then go on for as long as 10 hours.

Slow worms are protected under the Wildlife and Countryside Act, 1981, meaning it is an offence to kill, injure or sell them. Like much of the UK's wildlife, they are threatened by habitat loss.