

## Snakes at Hohenfels

Two snake species are known in the Hohenfels area - the European Grass Snake and the Smooth Snake. Both are widespread, the Grass Snake preferring the surrounding of water bodies, the Smooth Snake is found in dry and hot places with low vegetation. Both are non-toxic.

Another snake, the venomous European Adder, is not recorded in the Hohenfels Training Area. The next known populations are e.g. around Schwandorf area and in the Grafenwoehr Training Area. It never can be excluded that a specimen occurs in Hohenfels, but up to now we don't have any reliable knowledge about it.

Usually the species can be easily determined, especially the Grass Snake. The color and the patterns may change, so misinterpretation is possible. Also other signs (e. g. size or the shape of head, color of the eyes, etc.) can be unreliable for determination.

Often mistaken for a snake, the completely harm- and defenseless European Slow Worm is widespread in Hohenfels. It is a copper colored limbless lizard species without any patterns.

*Main information source: Wikipedia. Local situation was assessed by personnel of the DPW Environmental Division.*

*For further research the scientific names of the species could be useful:*

Grass Snake (*Natrix natrix*),

Smooth Snake (*Coronella austriaca*)

European Adder (*Vipera berus*)

## European Grass Snake (“Ringelnatter“)



The Grass Snake (*Natrix natrix*), sometimes called the ringed snake or 'water snake', is a Eurasian non-venomous snake. It is often found near water and feeds almost exclusively on amphibians.

The grass snake is typically dark green or brown in color with a characteristic yellow collar behind the head, which explains the alternative name *ringed snake*. The color may also range from grey to black, with darker colors being more prevalent in colder regions, presumably owing to the thermal benefits of being dark in color. The underside is whitish with irregular blocks of black, which are useful in recognizing individuals. In Western and Central Europe the grass snake is the largest reptile, reaching up to 190 centimeters (6 ft 3 in) total length, though such large specimens are rare. Females are considerably larger than males, typically reaching a size of 90–110 centimeters (2 ft 11 in–3 ft 7 in) when fully grown. Males are approximately 50 centimeters (20 in) shorter and significantly smaller in girth. Weight is about 240 grams (8 oz).

### Habitat

Grass Snakes are strong swimmers and may be found close to fresh water, although there is evidence individual snakes often do not need bodies of water throughout the entire season.

The preferred habitat appears to be open woodland and "edge" habitat, such as field margins and woodland borders, as these may offer adequate refuge while still affording ample opportunity for thermoregulation through basking. Pond edges are also favored and the relatively high chance of

observing this secretive species in such areas may account for their perceived association with ponds and water.

## **Defense**

Not being venomous, the snake's only defense is to produce a garlic-smelling fluid from the anal glands, or to feign death by becoming completely limp. They may also perform an aggressive display in defense, hissing and striking without actually opening the mouth. They rarely bite in defense. They may also secrete blood from the mouth and nose whilst playing dead. When caught they often regurgitate the contents of their stomachs.

Bites of the snakes are extremely rare. Though they are not toxic, the proteins in the saliva can cause sepsis (as any animal bite can do!!). Medical treatment is recommended.

## Smooth Snake (“Schlingnatter”)



The Smooth Snake (*Coronella austriaca*) is a non-venomous colubrid species found in northern and central Europe, but also as far east as northern Iran.

Both sexes grow to an average length of about 60 cm (24 in) to 75 cm (30 in). The color pattern consists of a brown, grey or reddish ground color with two rows of small, rather indistinct dark spots running down the back towards the tail. In some cases, each pair of spots may be united toward the neck area, forming a series of cross-bars over the back. There is also a very indistinct series of dark spots running along each of the flanks. These four series of spots along the body overlay four parallel, rather shadowy stripes that also run down the back and flanks.

On the top of the head is a dark marking which is often in the shape of a crown, giving rise to the generic name *Coronella* (which means coronet). A relatively thick dark stripe extends from each nostril, over the eye, and along the side of the head to a little beyond the neck. Sometimes the dark marking makes them mistakable for the venomous European Adder (“Kreuzotter”).

### Habitat

The Smooth Snake prefers dry areas, as dry turf with rock outcrops (anywhere in the JMRC Hohenfels) or short mown grassland (e.g. in the Garrison area). They feed on smaller animals, especially other reptiles. It subdues larger prey by constriction, although unlike true constrictors it does not actually kill by this method. It reproduces by laying eggs, which are buried in a warm place.

## Defense

When threatened, the snakes may perform an aggressive display in defense, hissing and striking without actually opening the mouth. As an ultimate measure, they bite in defense.

Bites of the snakes are extremely rare. Though they are not toxic, the proteins in the saliva can cause sepsis (as any animal bite can do!!). Medical treatment is recommended.

## European Adder (“Kreuzotter”)



The common European Adder or Common European Viper (*Vipera berus*), is a venomous viper species that is extremely widespread and can be found throughout most of Western Europe and as far as East Asia. They are not regarded as especially dangerous; the snake is not aggressive and usually bites only when alarmed or disturbed. Bites can be very painful, but are seldom fatal.

Adults grow to a total length (including tail) of 60 to 90 cm (24 to 35 in) and a mass of 50 to 180 g (1.8 to 6.3 oz).

### Habitat

Sufficient habitat complexity is a crucial requirement for the presence of this species, in order to support their various behaviors—basking, foraging, and hibernation—as well as to offer some protection from predators and human harassment. It is found in variety of habitats, including: chalky downs, rocky hillsides, moors, sandy heaths, meadows, rough commons, edges of woods, sunny glades and clearings, bushy slopes and hedgerows, dumps, coastal dunes, and stone quarries. They will venture into wetlands if dry ground is available nearby and thus may be found on the banks of streams, lakes, and ponds.

### Defense

Adders are not usually aggressive, tending to be rather timid and biting only when cornered or alarmed. People are generally bitten only after stepping on them or attempting to pick them up. They will usually disappear into the undergrowth at a hint of any danger, but will return once all is quiet, often to the

same spot. Occasionally, individual snakes will reveal their presence with a loud and sustained hissing, hoping to warn off potential aggressors. Often, these turn out to be pregnant females. When the adder is threatened, the front part of the body is drawn into an S-shape to prepare for a strike.

## **Venom**

The venom toxicity is being relatively low compared to other viper species. Relatively speaking, bites from this species are not highly dangerous. In Britain there have been only 14 known fatalities since 1876; the last a 5-year-old child in 1975, and one near fatal bite of a 39-year-old woman in Essex in 1998. An 82-year-old woman died following a bite in Germany in 2004, although it is not clear whether her death was due to the effect of the venom. Even so, professional medical help should always be sought as soon as possible after any bite. Very occasionally bites can be life-threatening, particularly in small children, while adults may experience discomfort and disability long after the bite. The length of recovery varies, but may take up to a year.

Local symptoms include immediate and intense pain, followed after a few minutes (but perhaps by as much as 30 minutes) by swelling and a tingling sensation. Blisters containing blood are not common. The pain may spread within a few hours, along with tenderness and inflammation. Reddish lymphangitic lines and bruising may appear, and the whole limb can become swollen and bruised within 24 hours. Swelling may also spread to the trunk, and with children, throughout the entire body. Necrosis and intracompartmental syndromes are very rare.

Systemic symptoms resulting from anaphylaxis can be dramatic. These may appear within 5 minutes post bite, or can be delayed for many hours. Such symptoms include nausea, retching and vomiting, abdominal colic and diarrhoea, incontinence of urine and faeces, sweating, fever, vasoconstriction, tachycardia, lightheadedness, loss of consciousness, blindness, shock, angioedema of the face, lips, gums, tongue, throat and epiglottis, urticaria and bronchospasm. If left untreated, these symptoms may persist or fluctuate for up to 48 hours. In severe cases, cardiovascular failure may occur.

Medical treatment is strictly recommended!

**Not a snake: European Slow Worm (“Blindschleiche”)**



The Slow Worm (*Anguis fragilis*) is a limbless reptile native to Eurasia. It is also sometimes referred to as the blindworm or blind worm. Adult slow worms grow to be about 50 cm long.

Slow worms are semifossorial (burrowing) lizards, spending much of the time hiding underneath objects. The skin of slow worms is smooth with scales that do not overlap one another. Like many other lizards, slow worms autotomize, meaning that they have the ability to shed their tails to escape predators. While the tail regrows, it does not reach its original length. They can be found anywhere in the Hohenfels area, they are common in any type of grasslands, seldom in forest areas.

The species is not able to bite humans. The animals are completely harmless!