

# Smooth snake: European protected species

The smooth snake *Coronella austriaca* takes its name from the smooth, polished feel of its skin. Colours vary between grey, brown and reddish. Males tend to be more reddish brown while females are more likely to be greyer. Juveniles are darker than adults. Small paired dark spots run down its back and there is a dark mark on the head, which can sometimes resemble a V, and cause the snake to be mistaken for an adder. However, the eye of a smooth snake has a round pupil while an adder's is vertical. The maximum length for a fully grown snake is around 60 cm.

## Biology and distribution

### Location

The smooth snake has a highly restricted distribution in England. The majority of populations are in Dorset and Hampshire, with smaller ones in Surrey, West Sussex and Berkshire.

### Habitat

Smooth snakes are found almost exclusively on lowland heathland. The main habitat requirements are open, sunny areas to allow basking but with adequate ground cover to allow predator avoidance and thermoregulation. They may be found in wet as well as dry heath. They are found less often in habitats that provide little cover (eg large extents of bare ground), and conversely in very shaded habitats that offer limited thermoregulation opportunity. Generally smooth snakes favour a small-scale mosaic of low-level vegetation, bare ground and limited scrub.

### Lifecycle

Adult smooth snakes emerge from hibernation around March (though this is subject to wide local variation), and courtship and mating takes place in April-June. Females give birth to 4-15 live young in August-September. Snakes then take around four years to reach sexual maturity. Hibernation occurs in small mammal burrows, or in crevices under the ground. They feed on other

snakes and lizards, as well as small mammals and young birds. They appear to favour reptile prey, especially as juveniles.



Photograph by Jim Foster

## Legislation

The smooth snake is strictly protected under the Wildlife & Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c.) Regulations 1994 (as

## Smooth snake: European protected species

amended). Capturing, disturbing, injuring and killing smooth snakes is prohibited, as is damaging or destroying their breeding sites and resting places (note that this is a simplified summary of the legislation; see other texts for details).

### Issues

The smooth snake has undergone serious declines in England since the middle of the twentieth century. These have been due to:

- The loss of habitat through agricultural intensification and development.
- Reduction in habitat suitability (notably through shading after scrub invasion).
- Fragmentation of habitats.
- More recently, fires on heathland.

### Smooth snakes and farming

Common farming operations can have both positive and negative effects on smooth snakes. Reduction of scrub can assist in maintaining an open aspect. Conversely, many farming activities would inevitably kill individual smooth snakes or damage resting places if they are not taken into account. As long as there is no large-scale loss of high quality habitat (particularly south-facing heathy banks and slopes, or some wet heath areas, favoured for basking and feeding), small-scale losses are unlikely to compromise populations.

If an activity is likely to result in an offence (such as disturbing snakes), there are several options to proceed lawfully:

- Avoid carrying out the activity.
- Alter the methods or timing of the activity.
- Obtain a licence to allow otherwise unlawful activities.

A licence application would need to demonstrate all of the following:

- The authorised activities are for a specified purpose (most commonly over-riding public interest or conservation).
- There is no satisfactory alternative.
- The activities would not compromise the favourable conservation status of the species.

Some activities would require habitat creation to offset damage or destruction, in order to meet the third test.

### Smooth snakes and agri-environment schemes

For agri-environment agreements (eg Environmental Stewardship), ensuring the optimal timing of work will generally be the best approach (as avoidance may not be compatible with the aims of the agreement). As a general guide, works that do not disturb the soil are best done during October to February (consistent with restrictions on timing included in your agri-environment agreement), as smooth snakes will be hibernating below ground at this time.

In suitable habitats and locations, works that involve disturbing the ground should only be carried out after a survey has confirmed the likely absence of smooth snakes or after a licence has been obtained.

Common activities that might involve offences include:

- Groundworks to areas used by foraging or basking snakes (typically heathland, particularly south-facing banks and slopes).
- Removal of materials (dead wood, rubble etc) piled on the ground.
- Renovation of buildings where ground excavations are involved.

Where smooth snakes occur, Environmental Stewardship options and capital items that require careful timing and planning to minimise the risk of committing an offence include:

- Mechanical bracken control (BMA).
- Preparatory work for heathland recreation (LHX).
- Maintenance and restoration of lowland heathland (HO01 and HO02).
- Creation of lowland heathland on worked mineral sites (HR05).

## Smooth snake: European protected species

Common activities that are very unlikely to result in offences include:

- Tree surgery, pollarding and coppicing.
- Standard hedge, fence and stone wall management.
- Mowing grassland that has minimal tussock or thatch structure.

### Further information

If you have Internet access please read:  
European protected species: frequently asked questions

[www.naturalengland.org.uk/conservation/wildlife-management-licensing/habsregs.htm](http://www.naturalengland.org.uk/conservation/wildlife-management-licensing/habsregs.htm)

### Contact details

For questions regarding Wildlife Licensing please telephone 0845 6014523 (local rate) or email: [wildlife@naturalengland.org.uk](mailto:wildlife@naturalengland.org.uk)

If you have any concerns about your agri-environment agreement and its impact on smooth snakes please contact your local Natural England adviser. If you do not know your local adviser or for any other enquiries please contact the Natural England Helpline on 0845 600 3078 or email: [enquiries@naturalengland.org.uk](mailto:enquiries@naturalengland.org.uk)

Natural England Information Notes are available to download from the Natural England website: [www.naturalengland.org.uk](http://www.naturalengland.org.uk).