

SMOOTH SNAKE

Coronella austriaca

Hampshire Biodiversity Partnership

1 INTRODUCTION

The smooth snake is Britain's rarest reptile with a very limited known range confined to heathland habitats in Dorset, Hampshire, Surrey and West Sussex.

2 CURRENT STATUS

2.1 Ecology and Habitat Requirements

The smooth snake's primary habitat requirements are well known and consist mainly of mature dry heathland habitats growing on a sandy/gravel substrate. A common feature of all successful sites is that they are exposed to the sun for the greater part of the day. Many populations can also be associated with south-facing slopes and especially if they grade into mire habitats.

Populations can be easily lost from these habitats as a result of fires and over-grazing which remove both cover for the animals and food sources.

The females generally give birth to between four and fifteen live young once every two years. Smooth snake feed on various vertebrates, including other reptiles and small mammals, the availability of which may determine the density of populations.

2.2 Population and Distribution

In Hampshire, all known populations are on heathland sites, mainly in the New Forest, though isolated populations remain in some parts of the north-east heaths and Ringwood Forest.

The species is notoriously difficult to survey and is extremely secretive. Extensive habitat and species surveys are urgently required to accurately estimate the species population and distribution.

2.3 Important Sites

Although many important sites for the species are known, a comprehensive survey of the heathland sites in the County is required to fully assess the distribution and status of this species. They occur on ride edges and open spaces in Ringwood Forest and on heathland in parts of The New Forest. In the northeast of the County they can be found at low densities at Woolmer Forest and Weavers Down.

2.4 Protection

The smooth snake is decreasing in Britain and has traditionally been considered as Endangered in a UK context. The species is listed on Annex IVa of the EC Habitats and Species Directive and Appendix II of the Bern Convention. It is protected under Schedule 5 of the Wildlife & Countryside Act 1981 and, Schedule 2 of the Conservation (Natural Habitats & c.) Regulations 1994.

The smooth snake is also a typical species found on Annexe I habitat of the EC Habitats and Species Directive ie, heathland. An underlying aim of the Directive is to restore such species to a Favourable Conservation Status (FCS) across the EC. Conservation measures undertaken in Britain should contribute to this wider objective.

The Habitats Directive states that conservation status will be taken as favourable when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitat, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis.

3. CURRENT FACTORS AFFECTING SMOOTH SNAKE

The main factor affecting the species survival is the degradation of suitable habitat, either by lack of appropriate management or by temporary loss by wild fires. In the New Forest, the traditional practice of cutting and burning heathland vegetation may have caused local losses of the species and limited the spread of animals into adjoining heathland areas.

4. CURRENT ACTION

4.1 National

- A comprehensive survey was undertaken by the British Herpetological Society (Braithwaite *et al*, 1989).

- Habitat management is being undertaken through various heathland projects and The Herpetological Conservation Trust (HCT).
- The feasibility of captive breeding is being investigated by London Zoo.
- A Pilot Study for the smooth snake Recovery Programme has been compiled (Braithwaite, 1995).
- The species is included in English Nature's Species Recovery Programme.
- Part of the National Species Recovery Project (Lead Partner HCT).

4.2 Local

- Comprehensive survey of the New Forest heaths initiated in 2002 by HCT, Forestry Commission and English Nature.
- Regular meetings with English Nature, Forestry Commission, HCT and private land-owners/managers concerning habitat management and the species Favourable Conservation Status (FCS).

5 OBJECTIVES

The overall aim of this Plan is to protect and where appropriate increase the distribution and population size of the Smooth Snake in Hampshire. This broad aim translates into the specific objectives set out below. Where feasible, objectives have been allocated targets against which achievement can be measured.

The 'Proposed Action' table in section 6 identifies the action to be taken to meet these objectives.

	OBJECTIVES	PROPOSED ACTIONS
A	Achieving Favourable Conservation Status (FCS) in Hampshire by 2015	1-17
B	Setting monitoring systems to measure FCS by 2005	2,11,12,13
C	Maintain all breeding populations at current levels and enhance where possible.	1-9
D	Through involvement with heathland Habitat Action Plans, implement habitat re-creation schemes to link populations and overcome the adverse effects of fragmentation where possible.	3,6,9
E	If appropriate, re-establish populations on two sites within the species known/historic range in line with JNCC policy and IUCN guidelines.	6,10
F	Raise awareness of the status of the species and the importance of its habitat.	1,3,5,11,16,17

6 PROPOSED ACTION

The following table lists the actions required to achieve the objectives set out in this Plan. Each action has been assigned to one or more 'Key Partners'. Key Partners are those organisations that are expected to take responsibility for the delivery of the actions assigned to them, according to the targets set in this Plan. Other organisations may also be involved in the delivery of action, and they have been indicated in the 'Others' column.

Key to symbols in Action Table:

- ◆ To be completed by the indicated year. Work can commence at any time before the due date, at the discretion of the Key Partner.
- ◆⇒ Design or production of a plan/strategy to be completed by this year and then followed by its implementation.
- To start by the indicated year and usually followed by ongoing work. A start arrow in year 2003 can indicate a new action, or a new impetus to existing work.
- ⇌ Work that has already begun and is ongoing.

	ACTION	DELIVERY BY		YEAR						MEETS OBJ.
		Key Partner	Others	2003	2004	2005	2006	2010	2020	
◆ = complete by ➤ = start by ⇌ = ongoing ◆⇒ = design by and implement										
Site and Species Policy and Protection										
1	Develop species protection policies for incorporation in Local Plans/Unitary development plans to assist the conservation of the species and to ensure that there are no net losses of sites through development or other "planned" activities.	EN/LAs HWT/ HCT HARG	FC			◆⇒	⇌	⇌	⇌	A,C,F
2	See the development of a data management system that allows the presence of the species to be identified so that it can be given due consideration in site development or site management proposals	JNCC/EN BRC/ HCT HBIC	HWT			◆⇒	⇌	⇌	⇌	A,B,C
3	Ensure that due regard is given to the threatened status of this species when developing Habitat Action Plans, conservation management proposals, agri-environmental incentive schemes and national and local Biodiversity Action Plans	EN/FC MAFF LAs	Heath Projects HCT HWT	⇌	⇌	⇌	⇌	⇌	⇌	A,C,D,F
4	Ensure that key sites are protected by SSSI designation and that boundaries are appropriate to cover the need for this species	EN/HCT	HWT/FC	⇌	⇌	⇌	⇌	⇌	⇌	A,C
5	Promote favourable management on all key sites where the species is known to occur	EN/HCT FC/HWT HARG	MAFF MoD/NT	⇌	⇌	⇌	⇌	⇌	⇌	A,C,F
6	Integrate conservation and management requirements of the species into heathland HAPs and other heathland conservation programmes and projects	EN/HCT/ HCC/HAPs FC	DEFRA HWT/NT LAs	⇌	⇌	⇌	⇌	⇌	⇌	A,C,D,E

Site and Species Management										
7	Ensure smooth snake needs are catered for in programmes of cutting, burning or grazing management on sites supporting populations or likely to do so	EN/FC	HCT	↔	↔	↔	↔	↔	↔	A,C
8	Maintain all breeding populations at current levels and enhance where possible	All land-owners/m anager		↔	↔	↔	↔	↔	↔	A,C
9	Encourage the natural dispersal of the species to new and former sites through habitat management, restoration and re-creation	EN/HCT FC	HWT/NT MoD/LAs		◆↔	↔	↔	↔	↔	A,C,D
10	Subject to the provisions contained in Section 5 Objective E of this Plan, develop a programme of translocations (minimum 2) to former sites following habitat management, restoration or re-creation	EN/HCT FC	HWT/NT MoD/LAs		◆↔	↔	↔	↔	◆	A,E
Research, Survey and Monitoring										
11	Develop a survey programme to assess the current distribution of the species	HCT/FC EN	HWT HARG	↔	↔	◆				A,B,F
12	Develop a monitoring programme to allow assessment of the status of the species throughout the County and to allow comparisons between sites.	HCT/FC EN	HWT HARG	↔	↔	◆				A,B
13	Recording and data management systems need to be established to allow analysis of data and to allow information to be provided to investigate threats	HCT/FC EN	HWT HARG		◆↔	↔	↔	↔	↔	A,B
14	Undertake further studies to better understand range use and habitat requirements of the species	HCT/FC HARG	Volunteer /students		◆↔	↔	↔	↔	↔	A
15	Undertake genetic studies between the three isolated meta-populations	Sussex Uni.	HCT		◆↔	↔	↔	↔	↔	A
16	Investigate the potential for captive breeding and develop captive breeding facilities for re-introduction programmes if appropriate	EN/HCT	Zoos		◆↔	↔	↔	↔	↔	A,F
Communication, Awareness and Promotion										
17	The species is rarely seen and poorly understood and although It is not a good display animal the value of captive breeding collections would be valuable for promoting the conservation of this species	EN/HCT	Zoos		◆↔	↔	↔	↔	↔	A,F

KEY TO ORGANISATIONS:

BRC Biological Records Centre
 DEFRA Department of Environment, Food and Rural Affairs
 EA Environment Agency
 EN English Nature
 FC Forestry Commission
 HARG Hampshire Amphibian and Reptile Group
 HBIC Hampshire Biological Information Centre

HCC Hampshire County Council
 HCT The Herpetological Conservation Trust
 HWT Hampshire Wildlife Trust
 LAs Local Authorities
 MoD Ministry of Defence
 NT National Trust
 JNCC Joint Nature Conservancy Council

REFERENCES

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The Herpetological Conservation Trust / English Nature (2001) *Smooth snake Coronella austriaca* Species Action Plan

This is one of many Habitat, Species and Topic Action Plans being prepared by the Hampshire Biodiversity Partnership.

This species action plan has been prepared by The Herpetological Conservation Trust on behalf of the Hampshire Biodiversity Partnership.

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