Strategic challenges and solutions for adder conservation

The Vanishing Viper: Priorities for Adder Conservation
Cheddar, 8-9 October 2016
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Adder conservation: what’s the problem?

1990-2016

Data courtesy of the NBN Gateway with thanks to all the data contributors. The NBN and its data contributors bear no responsibility for the further analysis or interpretation of this material, data and/or information.
Yet declines are happening, and plenty of them

Reported trends in adder populations
(n=162; data re-plotted from Baker et al, 2004)
Part of a broader pattern?

- Mixed picture across global range, but signs of declines in landscapes comparable to UK

Data re-plotted from Van Delft & Janssen, 2015
Diagnosing decline factors

- A range of factors reported, though causal evidence is lacking for many. Commonly cited factors include:
  - Outright habitat loss and fragmentation
  - Human disturbance
  - Excess mortality via increased predator numbers
  - Reduction in habitat quality via management
  - Reduction in habitat quality via lack of management
• Single prevalent cause unlikely? Factors may interact.

• Remedy decline factors locally?

• Yes, but a strategic approach can help local efforts, and increases chance of wider gains for adders.

• Suggestions for strategic challenges – review after this conference
Strategic challenges to enhance adder conservation nationally

(1) Creating and maintaining suitable habitat

- Mid-successional stage
- Ground-level vegetation structure
- Extent
- Connectivity
Setting target population levels alongside other site objectives

- How many adders do we want, and where?
(3) Vulnerability of small, isolated populations

Estimated population size

- >50 adults
- < 10 adults
- 11-50 adults

n=93; data re-plotted from Baker et al, 2004
(4) Inadequate evidence for status and drivers of change

Buckley et al 2014, Anim Cons
(5) Inadequate awareness of status and needs among conservation managers

• Adders frequently seen as:
  • ubiquitous
  • low conservation priority

• Over-generalised or incorrect understanding of habitat requirements
  • heathland or grassland NVC communities
  • “bare ground”
Solutions

(1) Set landscape-scale and national targets for adder conservation
(2) Revise national biodiversity infrastructure

- Explicit outcomes for species
- Re-distribute resources and approaches to address “widespread decliners” – hedgehogs, water voles, common toads, adders
- Embed Lawton principles on protected sites: more, bigger, better, joined up
- Track actions and outcomes
(3) Increase awareness of status and requirements, and advocate good practice

- Advocacy among key decision-makers and land managers. Examine reasons for misunderstandings and lack of awareness. Red list at country level

- Promote existing guidance, fill gaps

- Select influential “cheer-leaders” to champion adders
(4) Target key land management processes

- SSSI, forestry and agri-environment: outcome vs method, conflict reduction, adder awareness

- Initially, focus on certain habitats harbouring declining populations – easier to target groups of managers
(5) **Improve understanding of status, drivers of change and key issues**

- National and local status through co-ordinated monitoring
- Positive and negative drivers
- Co-ordinate and publish applied research:
  ...population size in representative habitats, demographic viability, genetic viability, historical status, long-term impacts of habitat management, development impacts, mitigation outcomes, dispersal barriers, disease significance, recovery trialling, public attitude impacts, significance of persecution and disturbance, more...
(6) Engagement with and empowerment of volunteers

• Huge interest in adders. More structured programmes could help channel this interest into even more conservation on the ground.

• This conference is a great example!
Thank you for listening

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