Heathland management for reptiles

Heathland is a key habitat for reptiles. Of the six reptiles native to Britain, two of them, (the sand lizard and the smooth snake) are rare species, with a limited distribution and are almost exclusively dependent on heathland in Dorset, Hampshire and Surrey.

The four species that occur in Suffolk are:

- Common/viviparous lizard
- Slow-worm
- Grass snake
- Adder

Bill Stevenson

Adder

These reptiles, although having a widespread distribution, are absent from many areas of Britain and have experienced declines. These declines are primarily driven by habitat loss. Reptiles are also susceptible to the effects of habitat fragmentation.

The widespread reptiles occur in a range of habitats, but heathland is of particular importance to them, too. Suffolk's heaths are a vital resource for reptiles, as they provide areas of habitat that are relatively well interconnected. This connectivity allows reptiles to move between patches of habitat, which is essential to the long-term health of populations.

Heathland management and restoration can be positive forces for reptile conservation, but care should be taken to ensure that reptile populations are not inadvertently harmed during these operations.

Surveys

Surveys should be carried out prior to implementation of habitat management. This allows the identification of areas of a heath of particular importance to reptiles. For advice on surveys contact Suffolk Amphibian and Reptile Group, or refer to Froglife Advice Sheet 10 (Froglife, 1999).

Survey information can then be used to guide a management plan.

Reptile habitat preferences

Reptiles appreciate warmth and places to hide from predators. So, they like south-facing slopes and embankments, or even, at a smaller scale, the south-facing sides of anthills. They also appreciate a varied vegetation structure that creates sheltered pockets, such as may be found within an opening among stands of heather, or at a heath/woodland edge.

Open heathland can provide a warm habitat beneficial to reptiles. If this is allowed to disappear, becoming overgrown by scrub and trees, then it may become less suitable. So, on the whole, reptiles benefit from heathland management and restoration, especially if this is carried out making use of information on reptile distribution gained from surveys.

Heathland management and restoration

The trend towards creating continuous tracts of open heath may not provide optimal reptile habitat. Patches of gorse or scattered stands of trees create shelter and a more diverse habitat, preferred by reptiles. To help reptiles on heathland:

- Do not strip vegetation from areas used by reptiles
- Do not remove trees and/or shrubs sheltering reptile sites (e.g. trees/scrub to the north of a hibernation site.)

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- Leave the roots of trees/scrub that have been felled. Gaps in the soil, created by roots (dead or alive) may be used by reptiles as shelter or hibernation sites.
- Stack cut timber and/or brashing in a warm sheltered spot, such as the southern edge of a woodland, to provide shelter or hibernation sites.
- Do not burn vegetation to manage sites supporting reptiles.
- Create fire breaks to limit the potentially disastrous effects of a heathland fire.

Special features for reptiles

Hibernacula

A heath managed with structural diversity in mind, will probably already contain features that reptiles will use as hibernation sites (sunny banks or embankments, piles of brash or the roots of trees - standing and fallen). In cases where such features are lacking, construction of hibernacula might be considered.

A hibernation site can be constructed by covering a long pile of cut timber or brashing with a layer of soil, to create a south or south-east facing bank. The bank may be linear in structure, or curved to create a south-facing bay, or south-east facing section. A hibernation bank should be a large structure, best created with machinery rather than by hand.

Grass snake egg-laying sites

Grass snakes lay eggs in heaps of rotting material, as the heat of decomposition facilitates successful development. Waste vegetation produced by management activity, such as cut grass, can be used to make a grass snake egg laying site. These heaps can be loose, or held within the confines of a wooden framework, provided that it contains openings to allow the snakes to have access. Gaps, at least 5 cm wide, between timber slats will allow access for the snakes and maintain air-flow through the heap.

- Place in sunny location, but close to cover.
- Include mix of soft and hard material (to allow snakes entry)
- Build large, and replenish every year or two.
- Keep in same location (females may return to the same sites).

Legislation

All native reptiles are protected by law from killing and injury. This can have consequences for heathland management operations, as some of these may harm reptiles.

References

Beebee, TJC and Griffiths, RA (2000). Amphibians and Reptiles. A Natural History of the British Herpetofauna. The New Naturalist Library, HarperCollins.

Froglife (1999). Reptile survey: An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

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