

The Vanishing Viper: Priorities for adder conservation
8th / 9th October 2016

**Land Management in the English uplands
and the consequences for adders**

Chris Monk Derbyshire ARG



Eastern Peak District Moors SSSI

also part of designated SPA and
SAC



Adder population concentrated on two moorland blocks covering 1,450ha, just under 18% of the 8,193ha SSSI, plus 48ha of non-designated private land under HLS until 2019.

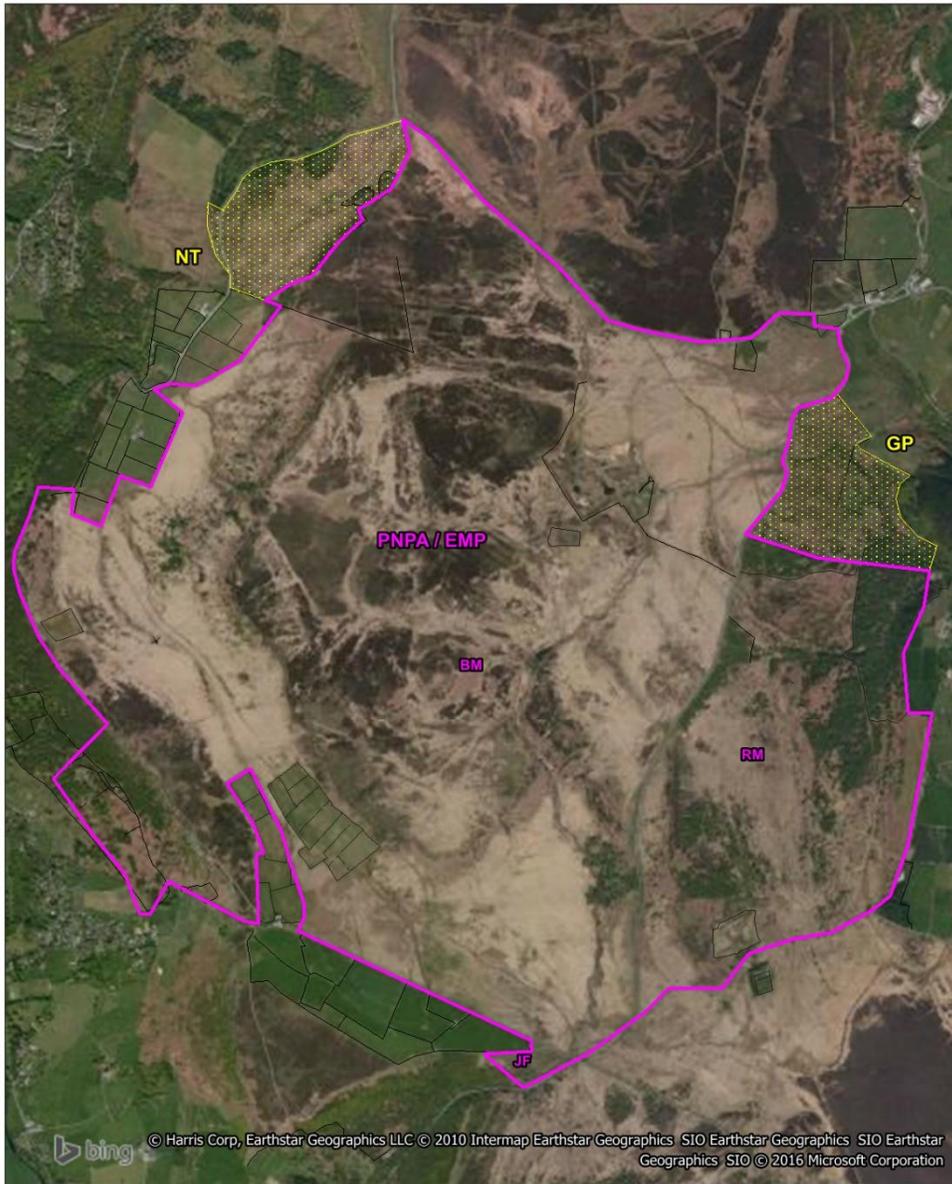
Adder population mentioned in SSSI citation.

Adders here have been known about since the late 1940's. First widespread search for adders in mid 1970's by John Newton and Derek Whitely due to threat of sale of the area.

Bought by Peak District National Park Authority who carried out an adder survey on a very small part (10ha) in 1994/95.

Eastern Moors Estate management leased by the PDNPA to the National Trust & RSPB Eastern Moors Partnership in 2010 for 15 years.

Adder Survey areas



PNPA/EMP - Eastern Moors Partnership

NT - National Trust

GP - Private Estate ownership



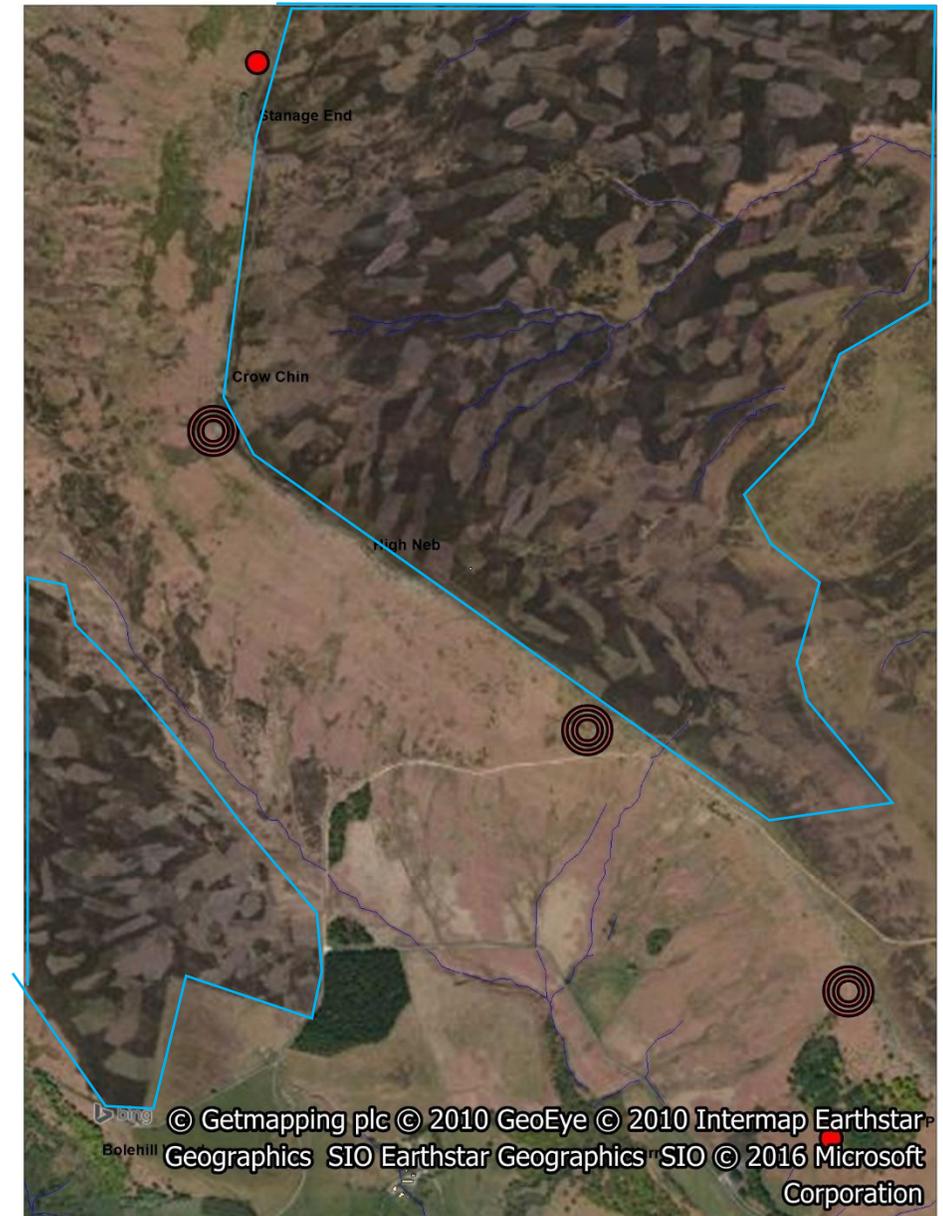
**DERBYSHIRE AMPHIBIAN
AND REPTILE GROUP**

Map produced on
2 Oct 2016

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Derbyshire ARG started adder surveys in 2005 and they have continued every year up to 2016. In recent years have been assisted by NT and EMP volunteers.

Currently the next nearest know adders are a few kilometres to the north & these need to be confirmed in the future



Derbyshire ARG

- Precise location of records
- ⊙ Approximate location of records

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Management History

- 1885 After the 1823 Enclosure Award the moorland was bought by Duke of Rutland for a shooting estate.
- Early C20. Big Moor and Ramsley Moor became reservoir protection areas for Chesterfield Water Company
- 1975. Waterworks at Barbrook Reservoir discontinued, estate then purchased by Peak District National Park Authority. Management by extensive sheep grazing, also some small scale burning of heather and grass areas. Majority of area declared a Wildlife Sanctuary & public confined to public rights of way & concessionary paths except for open access agreement on the gritstone edges.
- 2000. following SSSI condition survey report for Natural England, large reduction in stocking density of sheep to address overgrazing adversely affecting vegetation. Some summer grazing of very low numbers of cattle. The Countryside and Rights of Way Act 2000 (CROW Act) passed, eventually gives open access across whole area.
- 2001. Both reservoirs decommissioned, habitat creation schemes installed inside former reservoirs.
- Around 2003 burning stopped after burn escaped control and wildfire destroyed a large area at Barbrook
- November 2010. 15 year Management Lease to Eastern Moors Partnership, new agricultural grazing tenancies established for 2011, sheep removed from majority of the estate apart from one small area on Ramsley Moor. New grazing regime using several hundred cattle, which are let out on the moor from 1st April to late autumn.
- 2013. Site entered into Higher Level Environmental Stewardship Agreement. Management of some areas by burning or herbicide spraying re-instated.
- 2015 Reduction in cattle numbers & cull of red deer to reduce damage to some habitats. Tree planting scheme on dwarf shrub heath approved by Natural England and Forestry Commission, despite objections from Peak District National Park Ecology Manager & Derbyshire ARG.

What have been the effects of the 2010/2011 management changes?

Some instant deleterious effects from the cattle that could have been prevented with foresight but actually took time to correct. Old stock fencing not repaired or renewed before cattle knocked it down & got into restricted areas

Photo © Tracy Farrer



Several adder basking sites quickly damaged by cattle trampling.

“The gorse bush site looks devastated and unless someone else has seen snakes there this year I doubt there will be any, what were very good ditches and banks with good cover are now effectively bare or having only sparse cover.”

Ben Wyke, Derbyshire ARG adder surveyor



Preferential use by cattle of some areas and herd behaviour concentrating effect, rather than spreading out over whole site. Where this co-incided with adder basking or mating areas it disturbed the snakes, particularly as cattle were out on the moor from April 1st and adder mating is usually around mid to late April here.



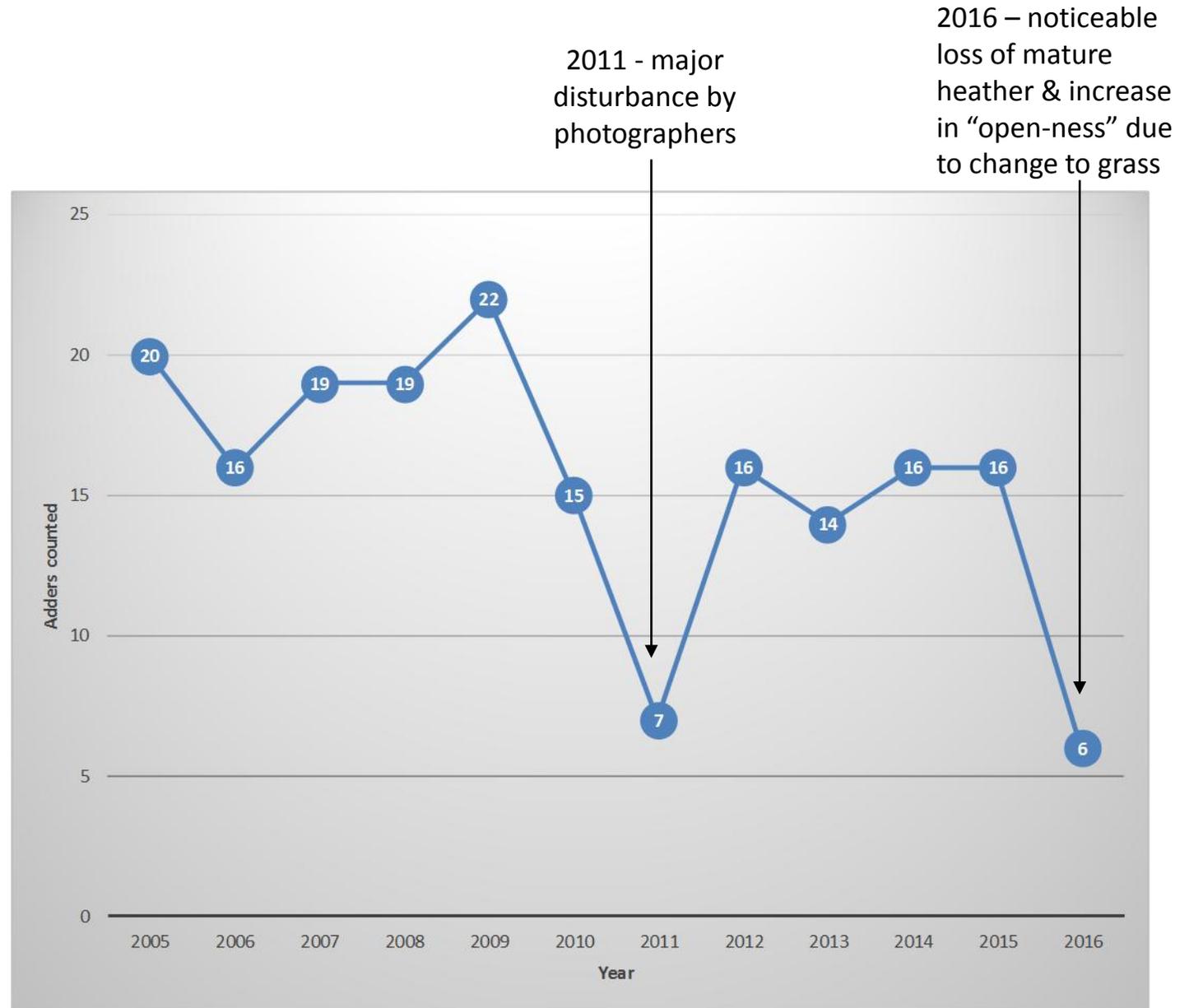
Accumulating damage to mature heather stands over the years, resulting in lack of cover as heather is opened up and becomes short acid grassland



Possible long term effects starting to appear in one area where the heather stands have opened up considerably in the past couple of years. Composite totals for 3 basking sites around adder mating area.



Habitat before start of the new cattle grazing regime





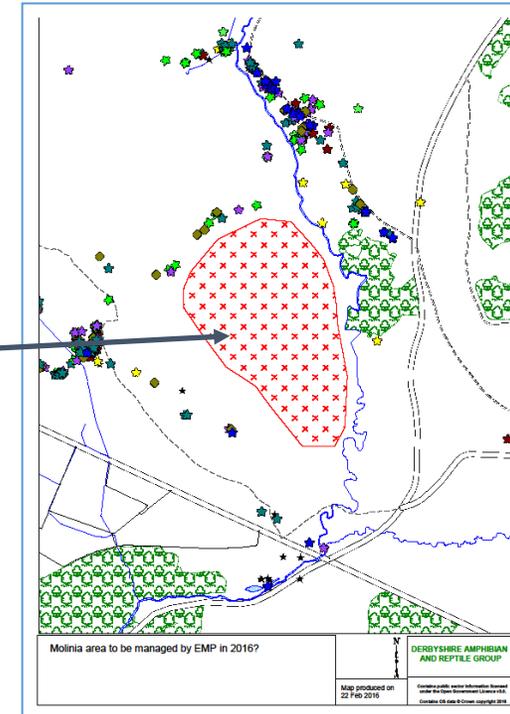
Obtained a Forestry Commission Woodland Creation grant to plant up dwarf shrub heath SSSI compartment used by adders. Thought a “good idea” by NE’s local team advisor



Attempts to break up the domination of Molinia over large areas by re-introducing burning.

2016 March burn area

It avoided adder hibernacula or basking sites but probably was summer feeding area



What lessons have we learnt?

- Likely distribution of effects of change of grazing were unknown at the start and with such a large area (1,450ha) it would have been difficult to select monitoring sites.
- We concentrated on surveying adders during the years after the change, whereas we should have set up monitoring of habitat changes so they could be related to effect on adders. Examples might have been fixed point photography of important locations, fixed point vegetation assessments such as height of heather / bilberry & vegetation composition in quadrats. Now all we have is our personal opinions and remembering what the vegetation was like before the cattle were introduced.
- Lack of recognition initially that the burgeoning red deer population was having an effect on the vegetation structure and composition and their grazing pressure added to the alterations brought about by the cattle. (There was a significant cull of red deer early this year).
- More involvement in trying to persuade the Eastern Moors Partnership to change some of the management that was damaging the adders. They are proposing to concentrate on conservation measures for the adder population this coming year.
- The higher public profile of the estate now and the public involvement events has resulted in much greater disturbance of adders at certain locations , where everyone with a phone, tablet or digital camera now wants their own pictures of adders

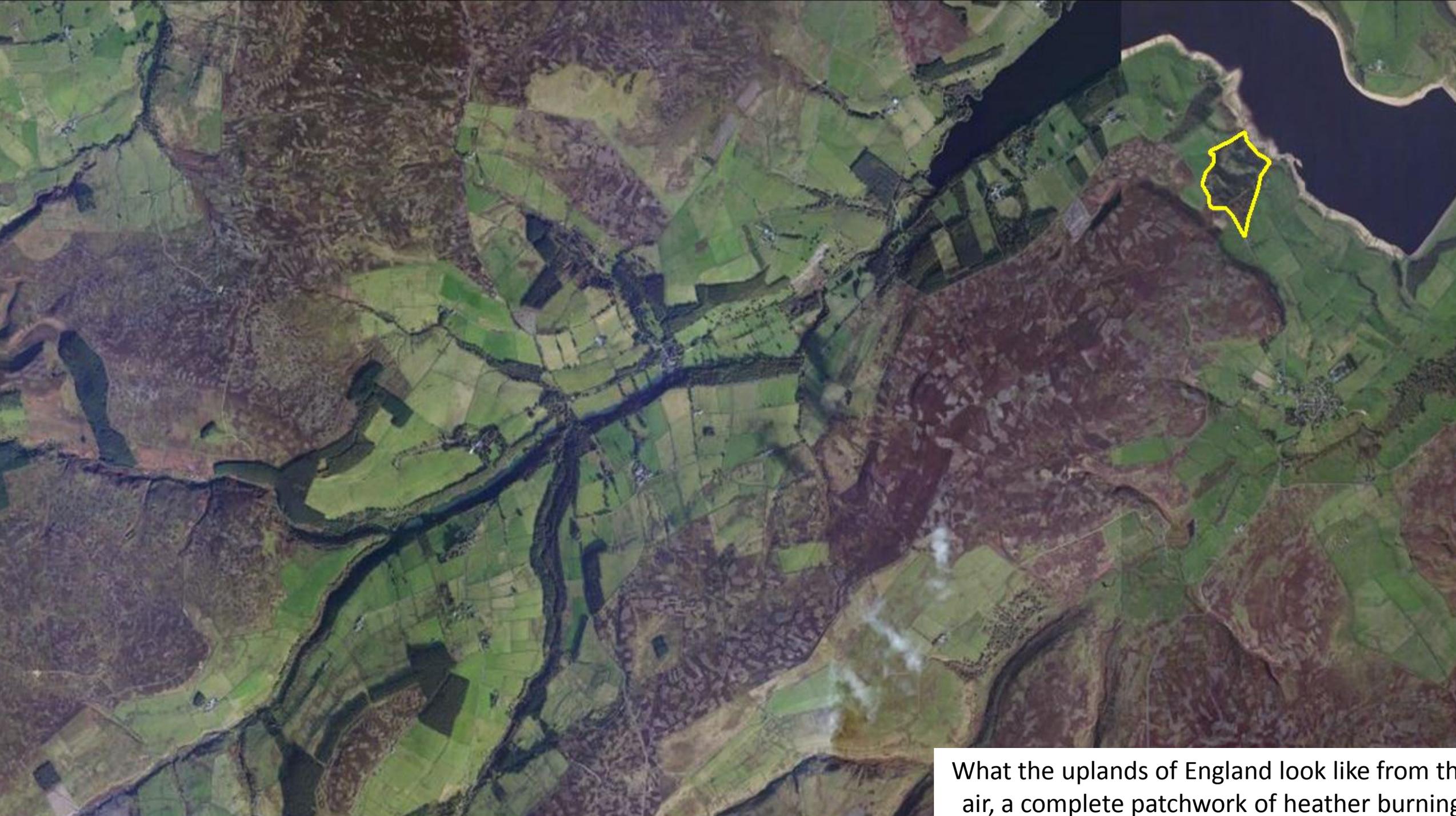
Habitat management in the English Uplands

The Vanished Viper



The Pennines, known as the spine of England, an upland area extending north from the Peak District to the Scottish border. However adder sites are extremely scarce in these uplands.

One of the few recorded adder sites - in County Durham & an adder photographed there in 2014 by one of our Derbyshire recorders.



What the uplands of England look like from the air, a complete patchwork of heather burning

The Committee on Climate Change in their written submission to the Environmental Audit Committee inquiry into soil health this January wrote:



‘The area of burned moorland has increased significantly in recent decades across much of northern England. A comparison of aerial photography from the 1970s and 2000 of over 200 km² of the English uplands found that the extent of new burns had doubled (from 15% to 30%) over this period.

A recent study found that the annual number of burns between 2001 and 2011 increased by 11% per year, with an accelerating trend in more recent years.’

The regulations for burning allow it to be undertaken in the uplands between 1st October to 15th April. The Peak District adders emerge from hibernation from mid February so while we are surveying them we can see the smoke from the surrounding moors as they are burnt. The regulations also say heather should be burnt when it reaches a height of 12 inches, just when it is gaining structure that is good for adders.

Appearance of a heather burn site the following year



Finally what else is happening in the uplands that could affect adders?

1) A history of predator control on the upland shooting estates, where anything that could take grouse chicks was legally allowed to be killed. Foxes, stoats, weasels, badgers, corvids, adders. A century and a half of “Brusher Mills” activities by game-keepers will have severely depleted or exterminated adder populations.

2) Adders not protected until added to the Wildlife & Countryside Act in 1991 – so they are alright now?

3) Wildlife crime. The illegal killing of legally protected species is now rife across the UK uplands and National Parks are no exception with The Peak District, North York Moors & Cairngorms National Parks being particular hot spots. As predators* that have much more strict protection than adders are regularly being found dead** or radio-tagged ones disappear*** and all their electronic tags mysteriously fail in these areas, a whack with a stick or stamp of a boot would easily get rid of an adder with no chance of it being reported.

*Hen Harriers, Peregrines, Goshawks, Red Kites, Golden Eagles, White-tailed Eagles, Buzzards, Ravens

** 23 Sept 2015 Red kite found dead at Edmundbyers near Pow Hill, poisoned by Carbofuran (a banned substance)

6 Sept 2016 juvenile peregrine found in Peak District NP, critically injured from gunshot died a few days later

***22 August 2016 - satellite-tagged hen harrier Brian ‘disappeared’ in the Cairngorms National Park just a few weeks after fledging, the radio signal, ‘suddenly and without warning’, stopped abruptly.

Photo of Brian being fitted with his tag



Sorry to leave you depressed about the English uplands



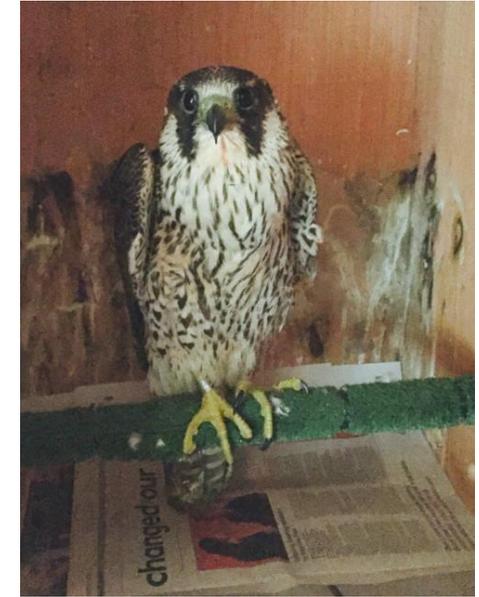
RIP

2014 dead adder found in our surveys. Garden Wildlife Health Project post-mortem found it died from internal injuries probably due to being trod on (by wildlife photographers as was before cattle were let out in April)



Proud of their slaughter
of mountain hares

This photo from Scotland but it is also happening in the Peak District



RIP – Juvenile peregrine
died from gunshot
wounds in Peak District NP

Dismayed at the
senseless slaughter
of wildlife

Nina (played by Olivia
Vinall) in The Seagull
by Anton Chekhov
(C) Johann Persson

