

## **Report on the Presence of The Adder (*Vipera berus*) Within the Quantock Hills AONB in Somerset.**

**Spring 2022.**

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In Association with

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Scott Passmore 2022.

## **Background**

The adder is the fastest declining reptile species in Britain. Prior to 2008, records of sightings of adders (*Vipera berus*) and data on their distribution within the Quantock Hills AONB had been sparse, with only 24 records submitted to SERC from 2000-2011 and few studies had been conducted into the species on this range of hills.

In 2011 the Quantock Hills AONB Service, together with other interested parties, commissioned Kevin Palmer to undertake a study into the status and distribution of the adder on the Quantocks which identified three spring assemblage areas. From 2011-2015 the Reptile and Amphibian Group for Somerset (RAGS) undertook a survey of adders within the Quantock Hills AONB. This survey confirmed the presence of the 3 known assemblages identified by Palmer and identified a further 9 assemblages.

For the purposes of this report an assemblage is defined as an area in which there have been more than three adders recorded which are likely to represent different individuals. The spring assemblage areas are often indicative of the hibernaculum, as in spring when the adders emerge from their hibernaculum, they will normally bask in close proximity.

## **Introduction**

In Spring 2022 volunteers from the Quantock Landscape Partnership Scheme and the Reptile and Amphibian Group for Somerset (RAGS) undertook a survey of adders within the Quantock Hills AONB.

26 surveyors and 2 community groups with 19 new volunteers were given training in survey techniques for adders. However, for the purpose of this report, the community groups records have been discounted as the same survey rigor as the trained volunteers was not met making the results difficult to compare. Instead, the sightings have been recorded as casual sightings and submitted to Somerset Environmental Record Centre.

The primary aim of the survey was to determine the presence of adders across areas of the Quantock Hills AONB at sites suspected to support adder populations.

A secondary aim was to engage new volunteers and beneficiaries with adder surveying and therefore wildlife surveying more generally. We hoped to increase awareness of adders, the habitats they live in, the increasing threats to populations and encourage people to think about what more could be done to protect them.

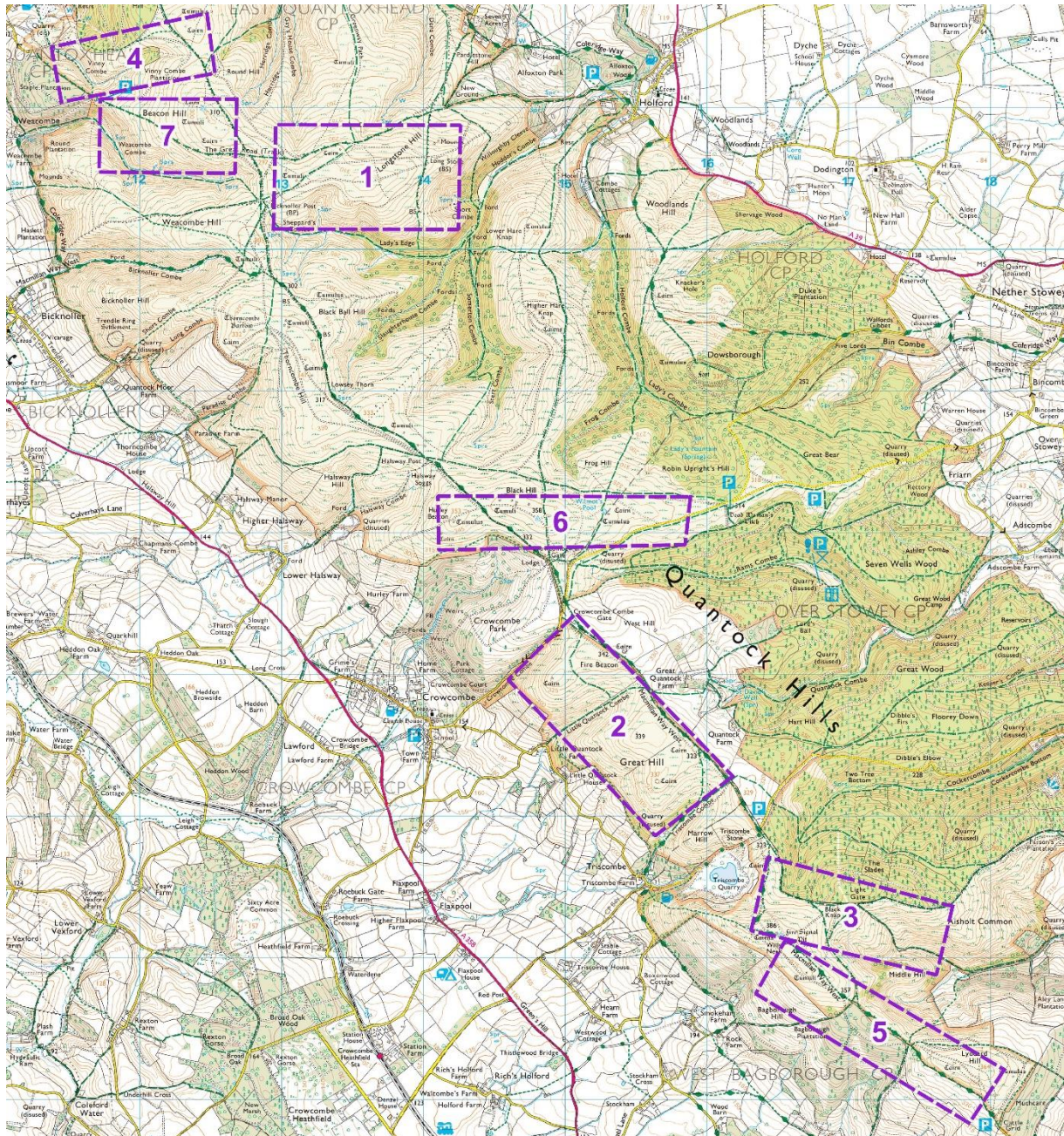
The Quantock Landscape Partnership Scheme hosted an introductory session on the 19<sup>th</sup> of March led by John Dickson from RAGS. 25 participants were trained on the lifestyle of adders, how to identify adders from other snakes and how to sex them. They also learnt about the conservation status, legal protection, habitat and distribution of adders on the Quantocks and wider Somerset. Finally, they were instructed on health and safety procedures surrounding the adders themselves, the survey methodology and the wider survey environment, including tick safety and the lone working policy.



## Materials and Methods

A total of 7 sites of varying sizes, all totalling 5.09 square kilometres, were surveyed. These sites were chosen partially to explore some of the previous know assemblage sites identified by Palmer and the RAGS group, and partially to inform on the work the AONB currently undertake.

**Map 1:** The seven survey areas across the Quantock Hills AONB.



Surveys commenced in late March, when adders emerge from hibernation and terminated in mid - May. During this time the newly emerged adders do not travel very far from their hibernacula, their time being spent basking, sloughing old skins and mating. By late May mating is complete and they then disperse from their hibernation areas to their summer feeding grounds, becoming

less concentrated and more elusive. Where multiple sightings of adders are made prior to this dispersal it is probable that they are occupying one hibernation area.

Surveyors were trained on how to identify adders and how to search for basking adders, and instructed to survey during a period of suitable weather conditions. Once an adder is found participants record its position using the GPS, identify its sex and life stage and record details of the vegetation structure around the basking site. Where possible a photograph is taken of the individual.

26 surveyors were recruited in early spring, several had previously surveyed with RAGS and therefore had a good level of experience. The surveyors were divided into 7 groups and given a survey area, as part of the training the surveyors were advised on identifying potential habitat, therefore effort is concentrated upon areas judged by surveyors to be favourable for the species.

Management of time was delegated to the groups themselves but each group was asked to complete three visits or more to their allocated site before the survey ended on the 31st May.

Area Number	Area Name	Area Size (km <sup>2</sup> )
1	Longstone	0.96
2	Great Hill	1.05
3	Triscombe/Aisholt	0.7
4	Vinny Combe	0.46
5	Lydeard Hill/Triscombe	0.79
6	Wilmot's Pool	0.64
7	Beacon Hill	0.49

**Table 1:** Survey Areas and Size.

## Results

A total of 10 adders were sighted during the survey period, with 4 females and 6 males, all in adult life stage. The ten sightings were across 4 of the survey areas. Area 3 yielded the most sightings.

\*Area 5 yielded no adder sightings however a sloughed skin was discovered.

Area Number	Area Name	Number of Surveys	Searching Time (hours)	Adder Sightings	Hours per sighting	Sex
1	Longstone Hill	5	18.25	1	18.25	M
2	Great Hill	3	5.5	0		
3	Triscombe/Aisholt	5	17.5	4	4.38	2M 2F
4	Vinny Combe	1	2.5	0		
5	Lydeard Hill/Triscombe	2	16	0*		
6	Wilmot's Pool	4	26.5	2	13.25	2F
7	Beacon Hill	2	11	3	3.67	3M

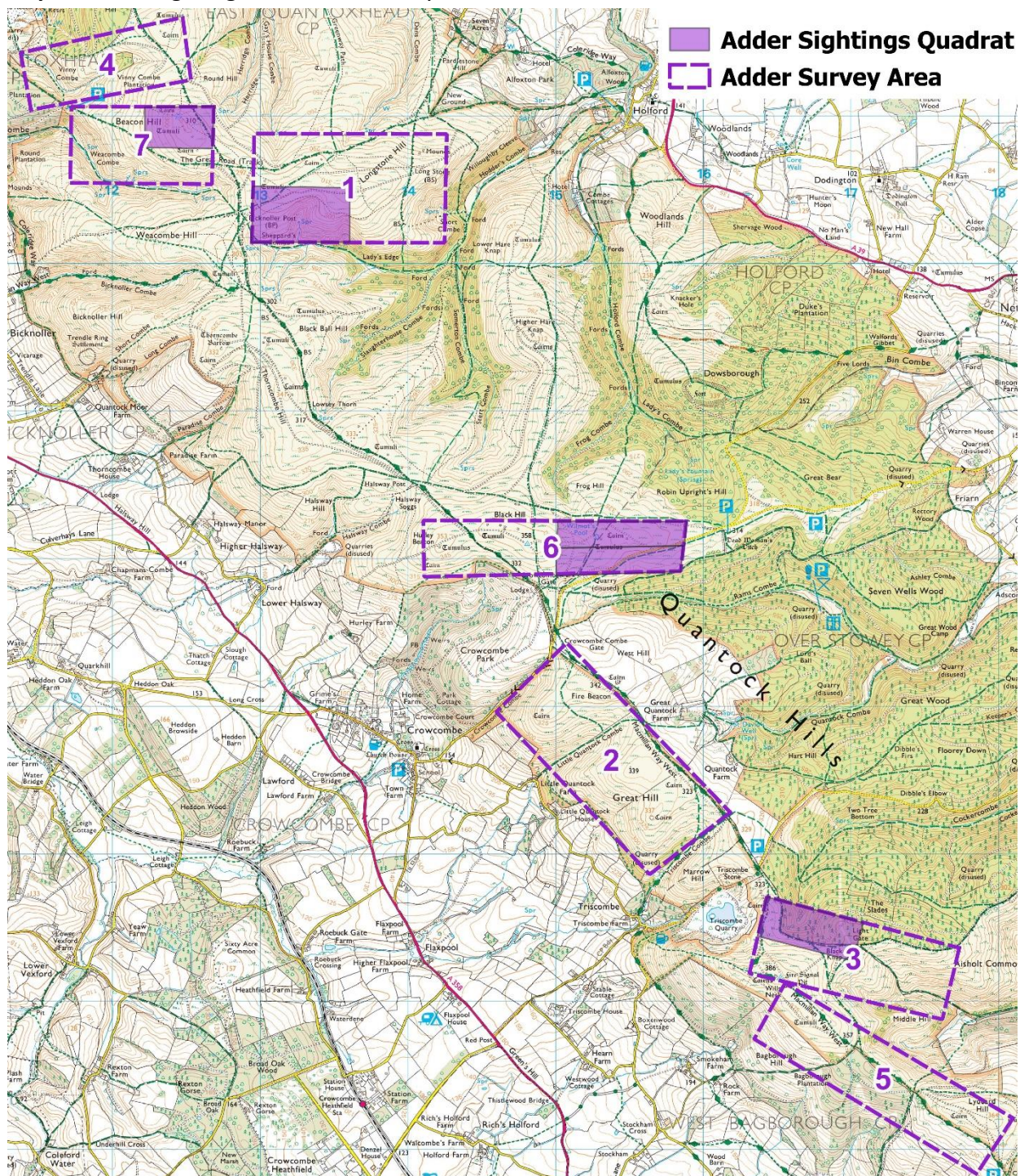
**Table 2:** Survey results and sightings.



22 surveys were conducted across 7 sites. 3 of the 7 sites were surveyed less than the instructed 3 times. The total number of searching hours was 97.25, resulting in an average of 9.89 searching hours per sighting. The searching time varied largely between sites with a maximum of 18.25 hours at Area 1 and the minimum of 2.5 hours at Area 4.

The map below shows the recorded sightings, the exact location has not been displayed for data protection reasons, instead the quadrat in which the adders were recorded has been shaded. Adders are particularly vulnerable to disturbance therefore it is best to discourage repeated visits to the areas believed to contain hibernacula.

**Map 2: Adder sightings within the survey areas.**

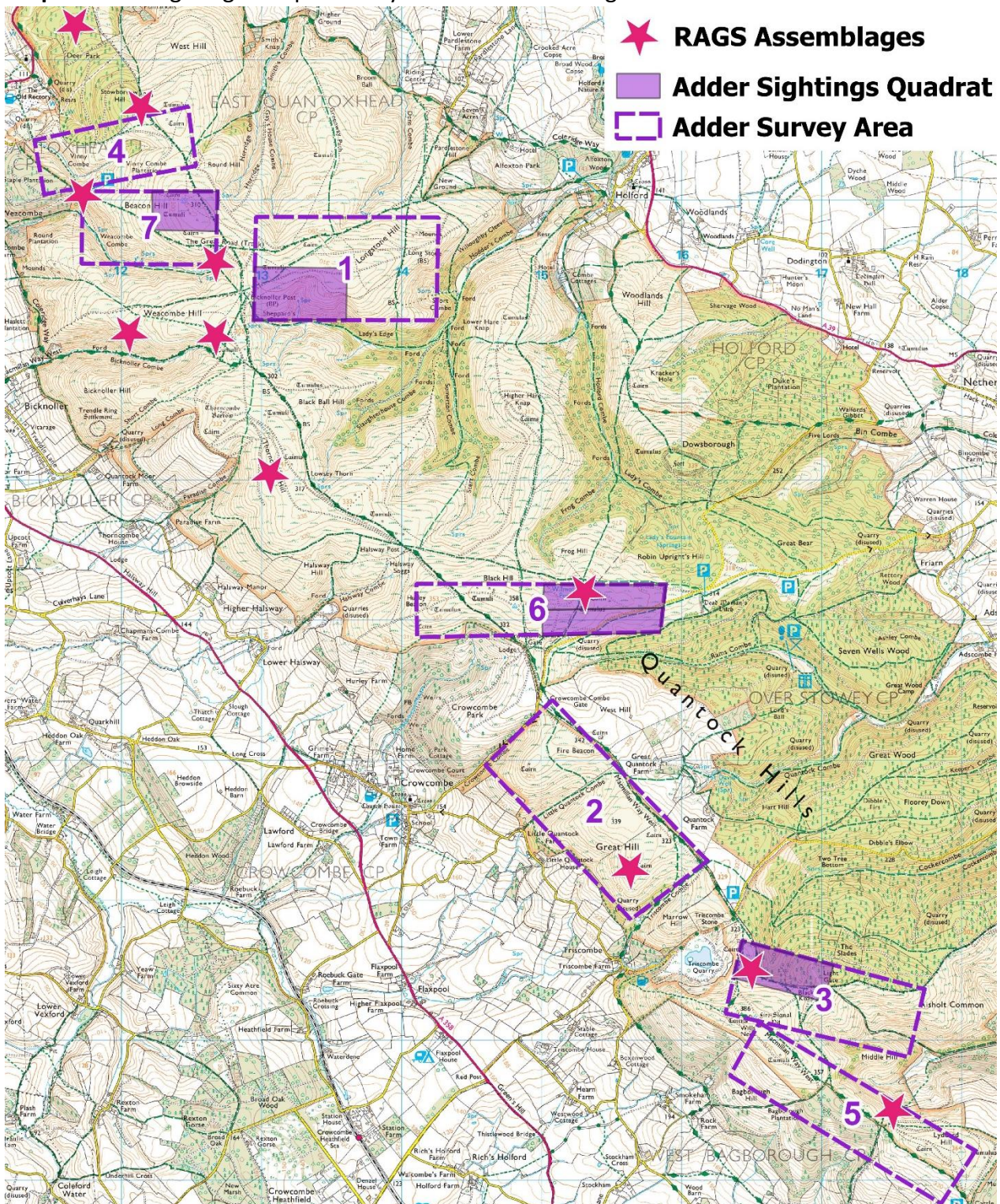




## Discussion

For the purposes of this report an assemblage is defined as an area in which more than three adders have been found that, it is believed, can be assigned to different individuals. The map below shows the assemblages previously identified by RAGS. Several of these are within our survey areas although we intentionally did not inform the surveyors where the assemblages are believed to be, as to not create searching bias.

**Map 3: Adder sightings and previously identified assemblage areas.**





The previously identified assemblage in Area 3 has been reconfirmed with a sighting of 4 adders in the same location at the same time. Although the exact location of the hibernaculum has not been identified, it is believed that it is within the vicinity of area.

The assemblage in Area 6 could still be active although only 2 adders were seen within proximity rather than the required 3 to be classified as an assemblage area.

There were no sightings of adders at the assemblages in Area 2, 4 and 5, this is not to say they're no longer active but that our surveyors did not record any sightings. There were however sightings within 500 meters of known assemblages in Areas 1 and 7.

Five of the ten sightings were recorded on the south or south-westerly facing slopes. The sightings were all within homogenous, immature open stand of heath. As previously documented by Dickson (2015) it is believed that due to the heathland landscape, most adders on the Quantocks are probably using transient holes such as the burrows of small mammals or gaps under the roots of plants, and while they may return to the same vicinity to hibernate each year, they will not necessarily use the same hole each year and neither will they necessarily 'den up' together in large numbers. This means that it is difficult to pinpoint exact hibernacula.

The recorded sightings allow a picture of presence of adders but is in no way a comprehensive illustration of population size or density.

## **Future Works**

QLPS in association with RAGS plan to continue surveying the Quantock Adder populations. In future it may be important to focus more closely on the RAGS identified assemblages with the aim to identify the most valuable habitat and possible hibernacula locations.

Beyond the heathland, on the 'shoulders' of the hills the habitat changes, yet there is a considerable volume of anecdotal evidence that adders are also found in some areas on these lower slopes where the habitat consists of the corners of rough grazing land, bracken covered slopes and the edges of wooded coombes. While not recognised as such typical adder habitat as the heathland on the plateau, it is entirely possible that areas of equal importance for adders could exist at these lower altitudes and it could be beneficial if future surveys were to include such areas.

## **Acknowledgements**

The Quantock Landscape Partnership Scheme would like to thank all those involved in the planning and execution of this survey particularly:

John Dickson and the members of the RAGS group for their enthusiasm for adders and the vast amount of practical assistance they have given. Thanks also to John Dickson and Kevin Palmer the work that informed the renewed survey effort.

Finally, the greatest thanks must go to the surveyors who committed so much of their time and energy to walking across the hills looking for adders.

## References

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