

## The conservation status of the Adder *Vipera berus* in London in 2016

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### Summary

In a city of over eight million people, is there still room for adders? In spite of their continuing poor reputation and the potentially dangerous consequences of a bite (a very rare event), the answer at present is 'yes'. However the status of adders in Greater London is **widespread but rare**, and their future is by no means guaranteed in the Capital. Since 2000 more efforts have been directed at the conservation of this iconic species, often co-ordinated through the London Reptiles Species Action Plan administered by English Nature and its successor Natural England. Details of this work can be found in the 2005 English Nature Research Report 'Evaluation of the Conservation Status of the Adder *Vipera berus* in Greater London' which was produced by the London Essex and Hertfordshire Amphibian and Reptile Trust (LEHART), a charity which acts to conserve native herpetofauna in these three counties. However, the London Reptiles Species Action Plan is now defunct, and this lack of coordination combined with a lack of funding for habitat management as well as catastrophic flooding in the winter of 2012/13 at two of the four sites have combined to jeopardise the future of the species in London once again.

### Historic status

Whilst adders were probably never numerous within the area of present day Greater London, showing a dislike of habitats based on clay substrates, there are reasonable numbers of historical records from the drier, sandy or chalk areas within the boundary of the Capital, the majority of which disappeared during the first half of the twentieth century, often as a consequence of loss of traditional habitat such as heathland and chalk grassland through succession to woodland and development, as well as through direct persecution. As an example of the former situation, the adder was last recorded on Hampstead Heath in north London at the start of the twentieth century, as the 'heath' was lost to woodland and parkland. In small populations, arson and persecution led to the extinction of one population in the borough of Croydon as late as the 1980's.

### Present day status

Today's adder populations are restricted to four sites only, each one widely separated from the others, on the outer margins of the Capital. Indeed three of these populations would not comprise 'London' adders were it not for the expansion of London into parts of Middlesex, Kent and Essex when Greater London was formed in 1965. Each population is relatively small, and the possibility of inbreeding depression (although yet to be confirmed) is a strong one at some point in the future. There have been intensive recent efforts to identify any remaining adder populations through the Reptiles Species Action Plan, involving LEHART and also organizations such as the Surrey Amphibian and Reptile Group (SARG), the

Kent Reptile and Amphibian Group (KRAG) and the Essex Amphibian and Reptile Group (EARG), but to no avail – these ‘wild adder chases’ invariably resulting in no positive identification of the species, usually turning out to be grass snakes or slowworms. Hence, although the possibility of another population turning up in London cannot be rejected, it is essential that we conserve – and where possible expand the local range of – the four known populations, the last one of which was ‘discovered’ as recently as the late 1990’s.

### **Site specific status**

At the **northernmost** site in London, the adder population is critically low, consisting of fewer than a dozen adults, restricted to a small area. Sympathetic management of the area by enlightened managers led to an increase in breeding success and the beginnings of a range expansion; however this progress was short-lived as the core population was drowned by winter floods in 2012/3 illustrating the vulnerability of an isolated population of animals in general and snakes in particular. Plans exist to restore nearly secondary woodland to a more open heathy compartment, to which adders may migrate in the future, though the Council is disinclined to be positive in this regard, showing a wilful neglect of biodiversity obligations.

At the **westernmost** site, a reintroduction of adders took place in 2000 to boost a population which was either extinct or virtually so. A large area of scrubland is available for animals to colonise and breeding is an annual event. Emergence counts of around ten to fifteen animals in the following decade suggested a larger population of at least fifty adults, and in the last 5 to 6 years the population has expanded its range, forming a true metapopulation which is now producing emergence counts of up to 40 animals and perhaps representing a total population of at least 200 adults. Several rather wet summers paradoxically benefited the reptiles, allowing them to breed and expand their range on site with no significant losses to fire which could have been critical in determining the future of the population in the first few years after its restocking.

At the **southernmost** site, there is a high density of animals on a small piece of relict heathland. Following intensive and sympathetic micromanagement the densities of adders on the site are very high, with tens of adults being present, but in common with many adder sites in the UK this population is at risk of extinction through chance events such as arson (deliberate or accidental) and its isolation from other suitable areas of habitat makes natural colonization to significant blocks of habitat impossible.

the **easternmost** site there is a population which produced high emergence counts of almost fifty adults contained within several hectares of old quarry workings. Breeding was confirmed annually with at least half a dozen gravid females being seen in a typical year. This site benefitted from several years of grant-funded management through the SITA scheme, resulting in scrub clearance and ongoing opening up of sunny embankments which characterize the site. However, once again the wet winter of 2012/13 resulted in the failure of many adults to emerge from hibernation, partly caused by lack of habitat management when funding ran out, meaning that adders were forced to overwinter in unsuitable sites prone to flooding. Recent counts in single figures suggest that this population is also now threatened with extinction in the short to medium term.

In summary, London's four remaining adder populations are isolated, and range from a handful to several hundred adults. Each population is now closely monitored and conserved by specialists and volunteers, though the possibility of loss of a population due to chance events such as arson, persecution and even inbreeding remains. A return to a coordinated strategy of survey and management is urgently needed, to ensure adders remain a part of London's fauna.

### **Introduction vs Reintroduction**

To increase the number of populations of adder in London, reintroduction to previously occupied sites has been considered but is currently not favoured; this is because these sites have either been built on, have developed an entirely unsuitable habitat such as dense secondary woodland, or are too frequented by people and dogs, to justify the release of adders. The possibility of releasing adders into 'new' habitats such as worked out quarries or newly planted woodlands (with glades and rides for basking opportunities) is an exciting but controversial one, raising some difficult questions such as where the donor population should come from (none of the extant populations could sustain acting as a donor population), whether the longterm safety and security of the adders and the habitat could be guaranteed, and the political 'fall out' if a member of the public (or even their dog) were to suffer from an adder bite. These difficult questions have special relevance in the UK's most densely populated area, so for the moment it seems that the future of adders in the Capital rests with only four sites, each one subject to its own threats. It is to be hoped that London's adders don't go the same way as those in neighbouring Hertfordshire, where they are presumed to be extinct.

### **References:**

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