

12. Reptiles and People

12.1. Public access and reptiles

Public engagement with the natural environment is undoubtedly key to the success of wildlife conservation programmes. Public access to wildlife sites, however, can create considerable pressures on habitats and their resident species through legitimate and illegal activities (such as unauthorised motorbike scrambling, fly-tipping, arson and persecution of reptiles). A minority of dog-owners can be hostile towards adders (sometimes all snakes) due to the perceived risk of harm to their pets.



Arson is one of the most damaging aspects of illegal public pressure, especially on the urban fringe. Adequate wardening and the installation of fire-breaks are essential (Paul Edgar)

Dogs running loose can cause serious disturbance of reptiles (especially snakes) and ground-nesting birds. They also have adverse impacts on vegetation through fouling.

Not surprisingly, the heaviest impacts on reptiles and their habitats are seen in urban and urban fringe areas, where disturbance can be almost continual. Occasionally, the impacts can be so great that reptile populations decline. In general, however, reptiles are not as severely affected by public access as are, for example, ground nesting birds.

12.2. Reducing negative impacts

On sites heavily used by people, routing of walkers, horse riders and mountain bikes can prevent damage to sensitive habitats and species. Similarly, the careful siting of access infrastructure (tracks, paths, boardwalks, car parks, picnic areas, fencing etc.) can concentrate access to selected areas while minimising impacts on more sensitive habitat.



Fencing to control erosion of sand dunes. Control of public access can prevent damage to sensitive habitats and help reptiles to survive in areas otherwise subject to high visitor pressure (Helen Demopoulos)

Local education and public engagement programmes are also valuable. Presentations to community groups and schools and guided walks can help increase understanding and appreciation of local reptile populations and their habitats. The recruitment of local volunteers as site wardens can assist professional wardening.



Information board on an urban fringe reserve managed by Amphibian and Reptile Conservation. Keeping local people informed and involving communities in conservation activities can greatly reduce the adverse impacts of public access (Paul Edgar)

12.3. Managing people, pet and livestock conflicts with adders

Although adder bites are potentially life-threatening, they are thankfully very rare. It is important that the public is provided with accurate information regarding the risks posed by adders. About 50-100 cases of adder bites on humans are reported each year by British hospitals. Most bites are caused by attempts to pick up adders, far fewer by accidentally placing a hand or foot on one. Typically, around half of adder bites result in no effects or only minor symptoms, about one third moderate, and the remainder severe.

Treatment of adder bite is now well understood and most bitten persons make a full recovery. Deaths and long-term disability resulting from adder bite are rare. In Britain, there have been 12 human deaths attributed to adder bite since 1900, the last being in 1975. However, the effects of adder bite should not be trivialised. Any adder bite, even if no obvious symptoms are apparent, should be treated as medically serious. A bitten person should be rapidly transported to an accident and emergency department where medically qualified assessments can be made.

Bites to dogs occur most frequently when they paw or sniff at adders encountered on walks. An advisory note for dog walkers, *Dogs 'n' Adders*, can be obtained from Amphibian and Reptile Conservation. Vets in areas where adders are common are often experienced in treating bites, and it is rare for bitten dogs to die. However, adder bites may cause considerable suffering to pets and there are occasional fatalities; once again the effect of a bite should not be downplayed. Confirmed cases of adder bites on farm livestock are extremely rare, and serious effects appear to be similarly uncommon. Any bites to pets or livestock should be referred to a vet as soon as possible.



Bites to dogs occur most frequently when they paw or sniff at adders encountered on walks (Tony Phelps)

12.4. Responses to adder conflicts

Adders have a poor public image in some quarters, and media stories often exaggerate threats to people, pets or livestock. However, on closer inspection many claims turn out to be groundless or minor in nature, so it is important to establish whether there is indeed a real conflict. The first step is to establish whether adders are genuinely involved. Many reports of adders are in fact misidentifications of grass snakes or even slow-worms. It is also worth noting that harm to people, pets and livestock is sometimes wrongly attributed to adder bite, even by medical and veterinary professionals. Various other bites, stings, puncture wounds and allergic reactions can cause symptoms that resemble adder envenomation.

Adders usually have a well-defined local distribution so information from local experts can often be helpful when investigating perceived conflicts (See 14. *Sources of Information and Advice*). If the presence of adders is confirmed, the next step, again, is to establish whether there is indeed a genuine conflict, and how serious this is. The likelihood of harm may be very low. Adders occur in many countryside areas frequented by large numbers of visitors and yet bites are extremely rare.

Carefully worded information on site signboards, indoor display panels and leaflets can be extremely useful. Signs that say *Beware adders* or similar should be avoided because they can perpetuate unfounded fears and may even encourage persecution. Wording such as the following may engender a more positive attitude, while still providing useful information: *We are proud to have adders on this site. Adders are becoming rarer in some areas. They are a natural and important part of our wildlife. Adders are timid and will not try to bite unless they feel threatened, and even then they normally try to hide. Please keep to paths, keep dogs on a lead and do not try to handle the adders.*

In some cases *Beware adders* signs are erected irrespective of adder presence, presumably to deter public access. Such practice should be strongly discouraged as it is detrimental to reptile conservation. Interpretation material should not point out exact adder locations within a site, in case the information is misused by those intent on harming the snakes.

In some instances it can be helpful to engage in local publicity to engender a more positive image for adders and especially to counter negative reporting. Local media are often fascinated by reptile stories

and there is ample opportunity to correct common misconceptions. Great care must be exercised, however, to encourage coverage that is genuinely positive, as sensationalist 'killer snake' stories are unhelpful.

Reducing the risk of human or dog and adder interactions can also be achieved by the management of public access to sites, as described earlier to minimise impacts on sensitive areas. Adder hibernation sites or aggregation areas can be identified by spring time visual surveys and public access discouraged from these areas.

In exceptional situations, exclusion of adders from specific areas may be required due to a high risk of bites. This should be pursued only if there is a demonstrable high risk, for example following repeated bites or near-miss incidents. If such areas fall within regularly used habitat, this is very difficult to achieve in practice. There are several options to pursue, but all of them have drawbacks:

- Installation of barriers.
- Negative habitat management.
- Capture and removal.

The installation of barriers is most practical where materials can be fixed to an existing fence or other boundary structure, otherwise a whole new barrier (such as a wall) could be constructed. Note that the barrier must be tightly flush with, or buried in, the ground, so that adders cannot squeeze underneath. Barrier materials include plastic sheeting and overlapping corrugated iron sheets.

However, to be completely impermeable to snakes, a barrier has to be carefully constructed and maintained. In practice, it is often unfeasible to guarantee total exclusion by barriers except within certain confined areas.

The most practical option is negative habitat management. Adders can be dissuaded from using certain areas by reducing the habitat quality. This may entail: keeping grass cut extremely short (< 5 cm), removing scrub such as gorse and bramble, and removing shelter materials such as wood and debris. This type of approach cannot guarantee complete exclusion, rather it aims to substantially reduce the frequency of use by adders. Experience shows this technique works very well. It may be an option, for example, if there were repeated bites in a car park immediately adjacent to a favoured bank; adders could be persuaded to use that area less through negative management. Unfortunately, such negative habitat management is likely to reduce the

value of the site for other wildlife too. Compensatory positive management should be done elsewhere on site to offset the damage.

Capture and removal of adders should be undertaken only as a last resort. It is often a sensible option only when an individual is 'stranded' in an area away from its usual range, where it poses a risk to people (or indeed, vice versa). Translocation may be disorientating to the snakes moved and it is likely to be only a superficial solution to a situation – it does not guarantee that no further adders will move into a particular area.

If removal is necessary it should be carried out by experienced persons. Snakes should be moved to the nearest core habitat area, from which they are most likely to have originated. Translocating adders away from their home range, or moving large numbers of adders, are to be avoided unless there are exceptional circumstances and these actions would not adversely affect local conservation status.