

## NARRS Reptile Survey Protocols (v. 2013)

### Background

NARRS aims to measure changes in the conservation status of reptiles, which is needed to determine conservation strategy and priorities. Our rarest reptiles (sand lizard and smooth snake) are already subject to monitoring programmes. The remaining species (adder, grass snake, common lizard and slow-worm) are more widely distributed and require the involvement of many surveyors to gather sufficient data to allow national population trends to be evaluated. All of these species have experienced declines in recent decades, whether nationally, regionally or locally, primarily due to habitat loss.

NARRS Reptile Surveys focus on reptile habitats within a 1km square, as this is a convenient and meaningful sampling unit for reptiles. The survey will record data on:

- The surveyor
- Square location and ownership
- Information about the reptile habitat
- Variables that might affect the detection of reptiles
- The reptiles themselves

There is not yet a Habitat Suitability Index for reptiles (as there is for ponds). The NARRS Reptile Survey Form asks for some extra information on habitat that will help us assess changes over time. In 2013, the form was simplified to help make recording this information easier.

### Locating your square and its reptile habitat, and arranging access permission

It is important to examine a representative sample of reptile habitats. For those taking part in **NARRS PHASE 1** surveys, one-km squares are selected randomly from a 5x5 km grid centred on the surveyor's postcode. The survey visits will focus on the most promising areas of reptile habitat, using a combination of visual searching and checking refugia. Where appropriate, permitted and safe, you may lay artificial refugia for later checking on your survey visits. Choose numbers and materials that are practical for you. Corrugated iron is most effective at attracting reptiles overall, but roofing felt or bitumen-based roofing sheets are also effective and easier to cut and carry. Make sure refugia are well hidden from public view, livestock and pressed close to the ground in deep vegetation. Ideally leave in place for a few weeks before visiting.

The aim is to try and make sure that survey areas represent the best areas of reptile habitat available in the whole square. If you are unable to survey certain areas (e.g. permission was refused), you must note this, and if more than 50% of your chosen areas couldn't be surveyed, we will allocate you another square. Such reptile habitat features may include: long grass, tussocky grass, heathland, moorland, bog, scrub, bramble, dense herbs, uneven and undulating topography, sunny banks/slopes, forest rides, woodland edges and glades, habitat edges (ecotones), brash piles, manure/compost heaps, rubble/rubbish, derelict/brownfield areas, allotments, private gardens, roadside verges, railway cuttings and embankments, track and path edges, hedgerows, dry stone walls, rock/scree, habitat mosaics interspersed with moss/lichen patches and bare ground patches.

Locate reptile habitat in your square using a combination of map and field work. Use a 1:25,000 scale OS map and/or see <http://www.surrey-arg.org.uk/SARG/02000-Activities/SurveyAndMonitoring/SRS2008/SARG2NARRS.shtml> for an aerial photograph of your square. Other on-line map resources are available to view your square too – use your favourite or try Grab-a-Grid-Reference at <http://www.bnhs.co.uk/focuson/grabagridref/html/index.htm>.

Having located the reptile habitat, you must then find the landowner to request permission to carry out the survey. Often the easiest way of locating a landowner is through making enquiries locally. Hopefully, your local knowledge will help. The land might be in the ownership of a public body (e.g. Forestry Commission), or a private individual. In either case, you will need permission.. For land under private ownership it might be a case of knocking on the door of the nearest home, to ask about ownership. An access request letter is available to demonstrate that your survey is part of NARRS.

Your meeting with the landowner can be a useful opportunity to generate good relations, to gather information about the site and to minimize hazards that may arise during the survey. If a landowner is willing for you to survey reptile habitat on his/her land, then ask about:

- Convenient car parking
- Safety issues
- Permission to lay refugia (if appropriate)

It is essential that you have the permission from the landowner before you visit a site. If a landowner does not agree to grant access then you should not attempt to visit the site. Either:

- Survey reptile habitat from a neighbouring square (see below)
- Request another survey square from the NARRS team.

Confirm the presence of likely reptile habitat in your square with a scoping visit to relate what you can see on maps and aerials to the habitat present on the ground. You can also use this initial visit to lay refugia (if appropriate and permission is granted). If there is no reptile habitat in your square, then please survey a neighbouring square. First check the square immediately to the north of your original square then look at the square to the north-east of your original square, and so on, moving clockwise around the original square until you locate a square containing reptile habitat and for which you can gain access permission.

### **Filling in the survey form**

#### **Data protection and copyright agreement**

Please sign this section to show that you are willing for your survey data to be entered onto a computer database and to share any intellectual property rights that may pertain to the information you are providing. All current biological recording relies on collating information on a computer and using the records appropriately. Your signature is just a means of formally and overtly making it clear that you are happy for information that you provide to be used this way.

#### **Your details**

Please provide your name and contact details, as your name will be part of any biological records you submit and your contact details are helpful for feedback or follow-up enquiries concerning your data. Your address details will not be passed on to any other organizations.

#### **Landowner details**

Experience has shown that landowners are generally willing to allow access for reptile surveys but can become suspicious of an overly bureaucratic approach. In most cases it is sufficient for the survey simply to have a record of the site owner and no follow up will be necessary. However, some landowners will be interested in the results of your findings, and possibly of the survey as a whole. So, for your own feedback purposes, it can be useful to have a postal or email address to which you can send your results.

#### **Square details**

The grid reference of the square should be in the form SP 12 34. If you are not familiar with grid references, then help can be found on the Ordnance Survey's website, under guidance on using the National Grid:

[www.ordnancesurvey.co.uk/oswebsite/qi/nationalgrid/nationalgrid.pdf](http://www.ordnancesurvey.co.uk/oswebsite/qi/nationalgrid/nationalgrid.pdf)

Please estimate and record on the form how much reptile habitat there is in your square and how much you were able to survey. **Estimates to the nearest 5% or 10% are fine.** Record the number and materials of any artificial refugia used (see powerpoints available on the NARRS website).

### **About the square and surrounding habitat**

Habitat isolation is one of the factors which may be impacting reptile populations, please tell us how isolated the habitat you survey is, and estimate its area (patch size) if you can. Tell us if your square is protected or designated in any way (if you know). Estimate the *approximate* extent of each of the main habitat types in your square. This will help us monitor changes in the landscapes surrounding reptile habitat over time. **Estimates to the nearest 5% or 10% are fine.**

### **Surveying the reptile habitat**

The reptile habitat in your square should be surveyed on (ideally) four visits. March-June is preferred as reptiles are more detectable in spring, but you can survey on suitable days throughout the summer and autumn. Try and make four survey visits following your survey route, searching visually for reptiles in appropriate places (e.g. basking spots, see above), and checking any artificial or pre-existing refugia along the way. Keep a good record of dates, times, survey conditions and reptiles encountered. Choose days, times of day, and weather conditions that combine to give a good chance of finding basking reptiles (see powerpoints on the NARRS website). Each visit should last around two (but no more than three) hours. You can make as many visits as you like.

Reptiles are more difficult to detect than amphibians. They are secretive, cryptic (camouflaged), and do not congregate to breed as amphibians do, so spotting them requires a bit of skill and knowledge of where to look for them. Their behaviour, and therefore the chances of detecting them, are also strongly controlled by weather and time of day, as well as season. Targeting survey visits to suitable conditions makes all the difference between seeing lots and seeing none. Survey requires effort over a wide area of habitat, looking for good basking spots, and detection skills improve with experience and knowledge of reptile habitat requirements.

***REMEMBER – your survey results are very valuable to us however many visits you make or how many methods you can use!***

Lastly, you can also tell us if you think you've detected all the reptile species present in your square. This may (for example) be because the landowner/manager has seen lizards in previous years or for another reason (which you can tell us).

### **Data return**

Data should be returned on-line, if possible. An on-line survey form is available on the NARRS website [www.narrs.org.uk](http://www.narrs.org.uk). If this is not possible, then please send completed paper forms to: **NARRS DATA, Amphibian and Reptile Conservation, 655A Christchurch Road, Boscombe, Bournemouth, Dorset BH1 4AP.**

### **Health and safety**

Reptile survey work is a relatively safe activity. However, it may involve crossing unfamiliar terrain, and can entail potential hazards (such as the presence of adders). Refugia should be lifted and replaced carefully. Surveyors should carry out a risk assessment of any area to be surveyed – see the website for guidance on this.

### **Legislation**

If you are likely to encounter sand lizards or smooth snakes while taking part in NARRS surveys, you will need to be licensed. These are strictly protected species which require a licence from Countryside Council for Wales/Natural England to carry out surveys. Some surveyors may be covered by group licences (for example held by ARGs). If this is not the case, surveyors can work under a group licence held by Amphibian and Reptile Conservation. Attending a training course is a requirement for this.

### **Summary of key points**

- Register with NARRS to obtain a one-km square.
- Locate reptile habitat with maps and/or on-line resources.
- Identify landowner and request access permission.
- If access permission is granted, carry out site risk assessment.
- If safe, survey between one and four times
- **Return data to NARRS – EVEN IF YOU DON'T RECORD ANY REPTILES!**

**GOOD LUCK!**