

NARRS AMPHIBIAN SURVEY – PROTOCOLS SUMMARY v. 2013

Aim of the survey – To gather data on the occurrence, status and population trends of widespread amphibian species across the UK. Participants are allocated a randomly-selected 1km grid square where they visit a pond up to four times to survey for amphibians. The survey collects information about the pond habitat, any amphibians detected, and other variables.

Grid square allocation – A square will be allocated randomly within 5km of each surveyor's postcode. If this is totally sea, beach or estuary, select the *nearest* square on land instead. Write your grid square on the form.

Pond selection – A pond is a water body between one square metre and two hectares (100x200m). Identify the pond nearest to the south-west corner of the square. Use a map or the internet, and check if the pond still exists by visiting on foot. If no pond exists, try the next square north (and work clockwise if necessary). Keep good records of pond grid reference and names.

Access permission – Identify the landowner/tenant and ask permission to survey the pond. Simple verbal permission can often be achieved after knocking doors locally. See the advice sheet and show the NARRS letter if it helps. Also ask the landowner about access points, safety issues, the pond and its wildlife. If access is denied or the pond no longer exists, identify the next nearest pond to the southwest corner of your square. If there are no accessible ponds in your square, find the nearest pond in the neighbouring squares. Tell us on your survey form if you had to select an alternative pond.

GCN habitat suitability index (HSI) – These ten questions about the pond to help us predict its suitability for great crested newts. We are trying to gather as much HSI data as we can nationally.

Survey visits – *March-June, ideally the first visit in March and the rest mid-April to May.* Later than this is less effective, though still worth trying. Try to do four survey visits using each of three (or four) different techniques: visual search, netting, torchlight survey (use bottle trapping ONLY if trained, licensed and very confident to do so). Torching must be done after dark, so should only be carried out if you feel it is safe. You can wait for nightfall after a visual/netting visit (a good time for a pub meal) or you can make a separate visit. Torching also needs clear water, so if the water is muddy after netting, it will need to settle for an hour or two. Keep a good record of dates, times, survey conditions and amphibians seen.

Visual search - Walk around the pond edge as far as you can, looking for amphibians and their spawn/eggs. Look especially for submerged aquatic plants with folded leaves where newts have laid their eggs. Carefully unfold a few leaves to see if they contain a white/yellowish egg (great crested newt) or grey/brownish egg (smooth or palmate newt).

Netting – Newts tend to hide in aquatic vegetation by day. If the pond has submerged vegetation, work your way around the edge with a strong net, making vigorous sweeps through the vegetation at roughly two-metre intervals. You may catch newts (especially the smaller species) or tadpoles. Inspect your catch, take care not to harm anything, then release them and continue around the pond.

Torchlight survey – Newts become very active after dark, and a powerful torch is very effective for spotting them in open water. Circumnavigate the pond, stopping every two metres or so to make torch sweeps outwards and back again. Work your way around the bank and keep note of the amphibians you see. Great crested newts are much larger than the other two species, and males are easily recognisable by the white tail flash. Smooth and palmate newts are harder to distinguish, but you might be able to separate them by presence/absence of webbed feet, tail filament and jagged crest in the males. The torchlight survey is optional, as safety allows.

Bottle-trapping – a way to increase the “detectability” of newts in your survey pond but ONLY for use if fully trained, licensed and very confident of the method.

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

Health & safety – Take care and refer to our risk assessment and lone working advice.

Amphibian disease - Chytrid fungus is present in the UK. As a precautionary measure, disinfect footwear and equipment thoroughly between sites with bleach spray or agricultural Virkon solution.

Licensing – Where great crested newts or natterjack toads might be present, you will need a licence accreditation letter from ARC. Always carry this with you, or bring your own licence if you have one.

NARRS www.narrs.org.uk is coordinated by Amphibian and Reptile Conservation.

NARRS REPTILE SURVEY – PROTOCOLS SUMMARY v. 2013

Aim of the survey – To measure occupancy rates for the widespread reptile species across the UK, and measure trends in their conservation status over time. Participants are allocated a randomly-selected 1km grid square where they visit suitable habitat three times to survey for reptiles. The survey collects information about the habitat, any reptiles detected, and other variables affecting the future prospects of reptiles in the area. See also the identification, habitat and survey guides for further help.

Grid square allocation – A square will be allocated randomly within 5km of each surveyor's postcode. If this is totally sea, beach or estuary, select the *nearest* square on land instead. All squares are eligible as long as some accessible reptile habitat exists, however little. If not, try the next square north (and work clockwise if necessary). Write your grid square on the form. New squares will be issued to surveyors each year (though it is OK to survey the same square if you want to) with the aim of obtaining information on as many squares as possible within the "NARRS cycle" (6 years).

Where to survey – You need to identify the areas of habitat most likely to support reptiles. The aim is to detect all reptile species present in the square, so your target areas must be representative. Use an OS Landranger/Outdoor Leisure map or internet (e.g. www.streetmap.co.uk) to locate your square, and then inspect the habitat using aerial photos (www.maps.google.co.uk) or by visiting on foot. Select representative habitat that can be walked in 2-3 hrs and devise a survey route. If no accessible habitat exists, seek the next square north and move clockwise if necessary until you find habitat to survey.

Access permission – Identify the landowner/tenant(s) and ask permission to survey visually and with refugia if appropriate. Simple verbal permission can often be achieved after knocking doors locally. See the advice sheet and show the NARRS letter if it helps. Also ask the landowner about access points, livestock, and known reptiles. If access is denied, seek the next square north (and then clockwise) until you find habitat to survey. Tell us on your survey form if you had to select an alternative square.

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.

Survey 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 or more survey visits following your survey route, searching visually for reptiles, 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. Each visit should last around two (but no more than three) hours. You can make as many visits as you like.

Health & safety – Take care on rough terrain, lift and replace refugia carefully, and be careful where adders might be present. Refer to our risk assessment and lone working advice before you go into the field.

Licensing – Where sand lizards or smooth snakes might be present, you will need a licence accreditation letter from ARC allowing you to survey. These are issued after training events. Always carry the letter with you, or bring your own licence if you have one.

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