



Warwickshire Amphibian & Reptile Team

Newsletter 2018



Toads on Roads project success! By Louise Sherwell

On a rainy night in early March 2015, WART members went to check out roads in Balsall Common for amphibians and found approximately 20 common frog and around 10 smooth newts on the roads, many of them sadly run over while migrating back to their breeding ponds. From talking with residents, about 20 years ago there were many more frogs crossing Meeting House Lane in spring, but apparently numbers have been decreasing in recent years. Several of the amphibians were found trapped in the gully pots along the roads in the area, including Sunnyside Lane and Barretts Lane as well as Meeting House Lane.

We were aware of 'Enkamat', a strong material used to prevent soil erosion on steep banks, and had recently purchased a roll from the Sussex ARG. Enkamat is an open weave material which has been used as an escape "ladder" fitted to road drains and other gullypots where amphibians are known to get trapped. It can also be used in swimming pools and other vertical sided tanks, lagoons etc. With thanks to Highways at Solihull Metropolitan Borough Council for allowing us to do so, we installed amphibian ladders to approximately 20 road drains during March 2016. We then monitored the use of the ladders (as far as possible when time allowed) until October. Frogs were the most commonly found species by far, with small numbers of smooth newt, great crested newt and common toad also seen on the roads or in the gullies. There's a breeding hotspot at the end of Barretts Lane where there is a large garden pond, plus two wet ditches where breeding frogs were seen and great crested newts on the public footpath.

After installation we found a total of 31 amphibians, 19 of which were found in gullies with a ladder installed and 12 in gullies with no amphibian ladder. Although the results are not conclusive, on a positive note we observed on four occasions (including ongoing checks this year) common frog and smooth newts crawling up the Enkamat which is good evidence it is successful. It should also be noted that the ladders were targeted to gullypots where they had been found previously and perhaps more likely to have fallen in. Amphibian ladders have also been shown to work in detailed studies undertaken in the Netherlands and Angus, Scotland (see www.arguk.org/saving-amphibians-in-drains). However, as there is no way of knowing how many amphibians had previously escaped from these gullies it is unfortunately difficult to measure success of the trial and we would need further survey with daily checks and more resources to fully establish this.





We're looking for volunteer gully pot surveyors for each spring – please get in touch! Training will be provided and no previous experience is needed – contact Mariya via mash4ka1@gmail.com.

Overall given that amphibians were seen using the Enkamat we believe that it is a sign of success and we are planning on carrying on the trial this year, replacing some of the ladders with a newly designed amphibian ladder by the British Herpetological Society. In March 2017, BBC West Midlands came along to see what we're doing and helped us raise awareness of the plight of amphibians on our roads with pieces on the local TV & radio!

Please look out for amphibians on the roads in spring and report your sightings! Thanks to WART members who have been monitoring newly recorded toad crossing sites in Norton Lindsey, Snitterfield and Edstone. Volunteer surveyors needed to help toads on roads this spring in these and other areas – please contact Mariya. For more info see the Froglife website: www.froglife.org/what-we-do/toads-on-roads.

Submitting your herp records - Record Pool website now available

Please submit your records! Your records are needed now more than ever as we work towards producing a new distribution atlas for the county.

You can now enter your amphibian and reptile records online using the new website '**Record Pool**', designed by the Amphibian and Reptile Conservation (ARC) and the Amphibian and Reptile Groups UK (ARG UK): <http://www.recordpool.org.uk>

The online recording forms in Record Pool are designed to make it quick and easy to report your reptile and amphibian sightings using your computer, tablet or phone. Simply register and use the forms 'Record a Sighting' or 'Record a Survey' depending on the number of records that you collected for the same site. Identification guides are available to download at the recording page.

Thousands of recorders from across the UK have already recorded their sightings using the Record Pool. All records submitted on this website for Warwickshire, Coventry and Solihull are verified by the WART recorder and exported to add to the WART database. Thanks to a member of the public submitting records on Record Pool last year, a new location for common lizard in the county was discovered. The location was completely unknown before to WART and the site will now be added to the list of WART survey sites.

All records are gratefully received! Please don't forget to record the common species as well e.g. common frog. All species should be recorded in order to maintain up-to-date distributions across Warwickshire, Coventry and Solihull. For any queries about records or if you would like to submit your records by using the WART excel template spreadsheet please email Agni on recordswart@gmail.com.

SNAKE IN THE GRASS by Ian Tanner

The evolution of snakes is rather patchily understood but it is thought that they have been around for at least the last 100 million years. The evolution of mammals however is thought to extend back twice that time, although these early mammals are only thought to have been relatively small. Following the mass extinction period 66 million years ago almost no tetrapods over the weight of around 25 kilograms survived.

The evolution of mustelids, around 11 million years ago, and in particular the arrival of the more voracious weasel group and their ability to enter the burrows of smaller creatures was undoubtedly a major shift of dominance away from reptilian species towards these small aggressive mammals. Birds too would have been directly impacted upon by these creatures that would lie in wait for unwary as well as raiding nests in tree hollows and on the ground.

Scientists tell us that our ability to recognise objects and other people are based upon specific characteristics and research has shown that even if the features of a face are inverted we can still identify that person. Indeed, if you try reading the passage below...

...it can be sohwn taht eevn if ltteers in a sneencte hvae bene rdoreerd we can siltl raed the mssegae.

It stands to reason then that as long as certain characteristic features are present this can be enough for identification to be made – even in error. This is also true in nature and whatever you are looking at it is your brains job, based on your past experiences, to interpret the data your eyes gather. In 2016 a crocodile basking at the docks on the Thames turned out to be a coil of rope. Once you have decided that this is a crocodile you are looking at the brain tries to fit everything else that you see into a crocodile shape rather than rejecting the initial interpretation.



Another example of false recognition is the famous two ages of womanhood, where one image conceals two possible interpretations. It is difficult to perceive both interpretations at the same time because of the way we recognise faces. In this example an ear becomes an eye and a chin becomes a nose.

In terms of mimicry among animals, the key is therefore to produce sufficient doubt in the mind of a predator that escape by the prey is a possibility. This can be readily seen from eye markings in moths and butterflies as well snake tongue appendages and head swelling in their caterpillars.

In 2011 a novel piece of research was released (Valkonen, J., Nokelainen, O., & Mappes, J. (2011). Antipredatory Function of Head Shape for Vipers and Their Mimics) where Valkonen fashioned a variety of plasticine snakes to see whether the shape and designs on the bogus snakes affected the level of predation suffered from birds.

Some of the snakes were designed with triangular heads, some with zigzags down their backs, some with both triangular heads and zigzags and some with neither zigzags nor a triangular head. The results of the study were highly significant showing that the plasticine snakes with either markings or/and triangular heads were less than half as likely to be attacked by birds than those with neither triangular heads or zigzags.

It was concluded that some colubrid snakes mimic the head shape of adders in order to avoid predation but something was not quite right in this conclusion. A grass snake does not bask with a triangular head and this only forms when attacked, in the same way a cobra does, and is therefore an aggressive rather than passive defence mechanism.

The polecat has a particularly vicious mammal with a distinctive appearance. Its white banding around the edge of the ears; its white chin and snout and its thin, sinuous body makes it particularly easy to recognise. The polecat hisses if threatened, often with a series of clicks, and may be why it has 'cat' in its name.



The distribution of the barred grass snake *Natrix helvetica*, a non-venomous colubrid snake from Western Europe falls within the historic distribution of the European polecat. The grass snake is a master of deception and will often feign death if disturbed. However, if disturbance persists the grass snake, despite being harmless to a predator, has found that the best form of defence is attack.



Whilst hissing loudly, the grass snake rears its head several inches from the ground and pulls up the skin where the band of yellow occurs on its neck to form a triangular head. Viewed from above this appears to be an attempt to mimic the behaviour and appearance of an adder but viewed from the ground, the mimicry displayed by the grass snake takes on a far more elevated level of sophistication.

The yellow band across the animal's neck is no longer just an idyllic means of identification for ecologists but has a particular function in this deception and forms an outer edge of what appears to be mammal ears – in fact polecat ears. A rounded head scale, which is generally lighter in colour compared to the top of the head but darker than the neck banding, appears to form the inner part of the ear cone. This is a curious adaptation for an animal that has no ears of its own.



Whether hissing is a defence strategy adopted by cats from observing snakes or the other way round is not in question here but it is apparent that hissing and lunging is practiced by polecat and grass snake alike. However, the defensive tactics of the grass snake are many and no single approach can explain its success but when the odds are down sprouting a pair of mammalian ears might just give the upper edge to this harmless creature.

WART members create new ponds in the county:

Pond Heaven! By Jan Clemons

Thanks to the WART Pond Team amphibians living in the Stoney Road Allotments in Coventry now have another local breeding site. Despite there being over 120 allotments, only a few (very small) ponds exist on the site. When I took on the allotment in January 2016 my plans were to manage half of it for wildlife. This would include a large pond as I had already seen frogs sheltering under refugia. Permission was sought from the allotments committee which granted permission on the premise of increasing the biodiversity of the allotments and also pest control. With the help of the team the pond was created in one afternoon all ready for the 2017 breeding season.



Priory Park Allotments Pond By Agni Arampoglou

WART members assisted the youth group who look after the Packmores Community Garden next to Priory Park allotments, Warwick, to restore an old pond. The site is at grid reference SP 28119 65516.

The pond was dug up and re-lined by WART in October 2015, filled in with rainwater during the autumn/winter months and by February 2016 it already had its first residents, breeding frogs.

Native plants such as marsh marigold, soft rush, brooklime, water mint, purple loosestrife were planted and more native plants will be planted this year along the margins of the pond. Within the surrounding area of the pond wildflower hay was laid in autumn 2016 to set seed. A hibernaculum made up of rubble, logs and earth was also installed within a few metres of the pond.



Get involved!

If you are interested in being in one of the survey teams please contact the organiser:

- Amphibian surveys – please contact our Amphibian Coordinator Louise Sherwell for further details lsherwell10@gmail.com
- Reptile surveys – please contact our Reptile Coordinator Camille Newton for further details camillenewton1@gmail.com
- Gully pot project – contact Mariya: mash4ka1@gmail.com

If you'd like to get more involved with WART or join the committee email Jan for more details: clemonsj@btinternet.com