

The Froglife Trust: Working for amphibians and reptiles in the UK and beyond

KATHY WORMALD*, J. ROGER DOWNIE, SILVIU PETROVAN & REBECCA NEAL

Froglife, 1 Loxley, Werrington, Peterborough, PE4 5BW

*Corresponding author email: kathy.wormald@froglife.org

INTRODUCTION

The Froglife Trust is a national wildlife conservation charity with a specific focus on reptiles and amphibians. Froglife began as Herpetofauna Consultants International in 1988, which evolved into Froglife in 2002. Today Froglife employs around 20 people and has an annual turnover in the region of £900,000. Froglife Trust's vision is strong, yet simple. We want to see a world in which reptiles and amphibians flourish as part of healthy ecosystems. Our strength is that we encourage people from all walks of life to get involved in wildlife conservation. Our aim is to make a real difference; which we do through our education and conservation teams working on-the-ground to inspire people and create and restore vital reptile and amphibian habitats.

The Key Strategies in our business plan are to:

1. Work internationally with relevant partners on reptile and amphibian conservation.
2. Continue to expand our learning and conservation project work both geographically and through programme development.
3. Extend links with universities, research institutions, and key technological centres to support external research, and expand Froglife's internal research capacity.
4. Build on communicating our messages to diverse audiences, and continue to demonstrate the positive impact our work has on wildlife and people.
5. Raise sufficient funds to continue and expand our work. Froglife collaborates actively with a range of partners within the wildlife conservation sector including a range of organisations in the UK and Europe, along with British government departments and statutory conservation agencies.

We collaborate extensively with organisations operating in other areas of the charitable sector including health, education, environment and social deprivation. Froglife is actively involved in forums including Scottish Wildlife LINK, a collective of organisations that lobbies the Scottish Government on conservation and environment issues; and The Cambridge Conservation Forum, which works on strengthening links between practitioners and researchers based in the Cambridgeshire area. Additionally Froglife is founding member of the European Network for the Protection

of Amphibians and Reptiles from Transport Systems (ENPARTS), working with many partners on promoting best mitigation and prevention practice and collaborative research across Europe on road crossings. Froglife is also a founding member of Peterborough PLUS, a group of organisations drawn from across the charitable sector, which aims to ensure that local government tendering procedures recognise the ability of the charitable sector to deliver high quality service contracts. Froglife works closely with a number of UK Universities, primarily University of Glasgow, University of Hull, University of Leeds but also Salford University, Exeter and Anglia Ruskin.

Froglife operates a policy of placing all the data we collect in the public domain. We have data sharing agreements with most of the biodiversity records centres in the UK where we regularly submit our data. In 2001 Froglife produced the Great Crested Newt Conservation Handbook (Langton et al. 2001), which is still the main reference for both conservationists and ecological consultants working with this species in the UK. It has almost 10,000 downloads as a pdf as well as thousands of printed copies. We are preparing an update of this publication.

Hands-on conservation

Froglife's work centres on delivering on-the-ground actions for the benefit of reptiles and amphibians and as such we work extensively across the UK on creating and restoring standing water and terrestrial habitats.

Since 2010 we have worked on 410 sites improving their biodiversity value. A total of 391 species surveys have been completed on these sites involving an amazing 2,308 volunteers (Fig. 1). We do not have the in-house capacity to maintain all of these sites so in order to ensure that the work that we do is sustainable all of our projects include an extensive volunteer training package.

This includes training in species identification, surveying methodology and practical habitat maintenance.



Figure 1. Volunteers working on a habitat restoration project at Cardowan Moss Woodland, Glasgow, UK.

Traditionally, Froglife's work has focused on the more widespread UK species - great crested newt (*Triturus cristatus*), Smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helveticus*), Common frog (*Rana temporaria*), Common toad (*Bufo bufo*), Viviparous lizard (*Zootoca vivipara*), Slow worm (*Anguis fragilis*), Adder (*Vipera berus*) and Grass snake (*Natrix natrix helvetica*). Although these are still relatively common some have undergone significant declines and have been listed as priorities within national biodiversity strategies. Our work to conserve these species is therefore crucial and all of our projects are delivering positive actions to achieve this. Froglife has produced a number of publications to aid others to deliver beneficial work such as the highly esteemed Great Crested Newt Handbook and our practical advice booklets Just Add Water and Urban Tails.

Froglife manages Hampton Nature Reserve (HNR) in Peterborough on behalf of landowners O&H Hampton Ltd. HNR is designated as being of European importance for wildlife (SSSI, SAC and Natura 2000 site) and has potentially the largest population of great crested newts in Europe. In addition to Froglife delivering substantive habitat work on the reserve to ensure that this important population is protected, the reserve also provides excellent research opportunities (more under Applied Research).

In 2015 Froglife will take on the management of the Boardwalks Local Nature Reserve in Peterborough. This used to have a healthy population of common toad; however, it has drastically declined in recent years. Froglife will deliver a comprehensive habitat improvement and management strategy in order to rescue the toad population and also other amphibian and reptile species on the site. We have secured substantial external funding from Heritage Lottery Fund and SITA Trust to carry out this work (see section on Froglife UK Wide for more information about our River Nene Dragon Finder project).

Although the sites that we work on are chosen for their amphibian and reptile interest, our work on these habitats delivers for a wide range of other important species. HNR is home to several rare invertebrate and plant species and many mammals including badgers and bats.

Toads on Roads

 Froglife has for several years coordinated the Toads on Roads project. This involves supporting hundreds of volunteer groups across the UK aiming to stop toads being killed by vehicles during their migration season. In 2013 dedicated patrollers reported rescuing 85,997 toads.

Froglife keeps the official UK registry for crossing sites (<http://www.froglife.org/what-we-do/toads-on-roads/>) and we are using the database to try and understand more about the trends of toad populations (Carrier and Beebee, 2003) as well as spatial ecology projects.

Road mortality can have devastating effects on toad populations (Cooke, 2011), and it is important that in addition to assisting toads across roads, we also find alternative approaches to avoid toads having to cross busy highways. Thanks to grants from Patagonia, the Tides Foundation (grant making trust fund) and Biffa Awards (distributors of

the Landfill Tax Credit Scheme) we have carried out habitat creation work and implemented strategies to encourage toads to use new ponds avoiding the necessity to cross a road as well as improvements to existing infrastructure to allow safe crossing of amphibians using road tunnels. We are currently monitoring this work to gauge its success. We provide an interactive map to allow very rapid contact with existing patrols and encourage more volunteers. Froglife also provides free insurance to all registered toad patrols, which can be vital for people working in the proximity of roads. We also help with providing specific equipment for night patrols, such as buckets, high visibility vests, torches, etc.

In order to streamline the coordination of the Toads on Roads patrols Froglife has, with the help of John Heaser, toad patroller and IT expert, developed an online facility on our website putting people interested in becoming patrollers directly in touch with the patrol coordinator. We will be developing an on-line database that we hope will be ready for the 2016 season. This will enable patrollers to carry out all administration for the patrols on-line.

In March 2012, Froglife hosted a conference to bring together 14 organisations from across Europe whose work focuses on protecting amphibians and reptiles from vehicles. As a result of the conference, ENPARTS was formed and currently has members from 17 European countries. The network is active through delivering research findings at conferences aiming to influence wider European policy.

Amphibian Disease

Froglife has for a number of years worked in partnership with the Zoological Society of London (ZSL) on amphibian diseases, primarily Ranavirus, through the Frog Mortality Project. Froglife has acted as the public portal for amphibian disease enquiries with ZSL carrying out vital research to establish the reasons, extent and impact on amphibian populations of the disease (Teacher et al. 2010). In 2012 Froglife's Amphibian Disease Project was incorporated into the new Garden Wildlife Disease Project. This is a partnership between Froglife, ZSL, The British Trust for Ornithology (BTO) and the Royal Society for the Protection of Birds (RSPB). This citizen science project asks people to report amphibians, reptiles, hedgehogs and birds that have died, been killed, or appear diseased. Those reporting mortality incidents are encouraged to enter their data onto a database through the BTO website. Reports are analysed by veterinary scientists at ZSL with some carcasses collected for further analysis.

Froglife UK wide

Froglife manages a number of projects operating in regions across the UK. These reflect the dynamic nature of Froglife, as an evolving organisation that is addressing the most pressing issues, whether it is on-the-ground conservation actions or through our learning programme to engage a wide range of individuals. Our Living Water Programme started in 2008 in London and as a result of its success it has expanded to Cambridgeshire, Northamptonshire, Sheffield, Glasgow, and North and South Lanarkshire. The programme focuses on standing water creation and restoration on wildlife sites, many of which are designated for their wildlife importance (Fig. 2).

We incorporate a strong volunteer training programme to assist with species surveying and habitat management.

The Living Water project in London lead to the Great Crested Newt Revisited project (2010-2012). Surveys carried out in 1984-1990 had identified sites in London with good crested newt populations. This project revisited those sites to establish the current status of the newts and where necessary to carry out habitat restoration to ensure that the sites continue to support these important populations. The findings were fairly bleak and although we found two new GCN sites six sites had also been lost.



Figure 2. Habitat creation at Fooths Cray Meadow, Bexley, London, UK. Completed in 2009 part of the London Living Water project.

Froglife has a strong presence in London and has delivered a number of public education projects. Following a strategic meeting in 2010 we took the decision to consolidate all the different elements of our London work and to develop one substantial project to deliver activities across all boroughs of London. This culminated in the London Dragon Finder project, main funder being the Heritage Lottery Fund. We have also been supported by City Bridge Trust and several landfill tax credit scheme funders. The project runs from 2012 - 2016.

Following on from the London initiative we decided to take a similar approach to Scotland. Heritage Lottery Fund were very supportive and have provided us with a substantial grant, several other donors providing additional support. The programme (2014-2018) is operating across mainland Scotland and on some of the islands. These two projects have been followed by River Nene Dragon Finder (2015-2019) which is working all along the River Nene and its tributaries from its source in Northamptonshire through to it joining the sea at the Washes. These projects have attracted a total of £2.5m to date and will collectively be working on 93 sites and on most sites we will be carrying out multiple pond creation/restoration work meaning that this will result in a minimum of 500 new and restored ponds and substantial improvement in terrestrial habitats. This work runs alongside an engaging education programme including novel approaches to public engagement such as hosting Swimming with Dragon sessions, Dragons on



Figure 3. Artists' impression, Lilian Taylor, of the Mapestry.

the Move roadshow, Life Under the Surface exhibitions, Dragon Boat tours and races and the creation of a Mapestry (tapestry) depicting the natural heritage along twelve sections of the River Nene (Fig. 3). The programme is also delivering wildlife gardening workshops and a volunteer training programme. During 2011-2013 we investigated the variations in wildlife experiences between different generations. This involved young people interviewing older people about their wildlife memories and comparing these to the experiences of a younger generation. An output from the work is a booklet (unfortunately due to demand this is now out of stock) and a DVD that was shown at prestigious events organised by Froglife in London, Peterborough and Glasgow. It became evident that the older generation definitely had a more close up and complete experience with British wildlife than our younger generations, many of whom have never seen frogspawn! We found that this reminiscence work is a good way to engage with individuals who may not have the physical ability to get involved in wildlife actions but can share their past experiences. We have therefore incorporated a reminiscence element into the Dragon Finder programme through placing reminiscence seats at venues with high public footfall.

Froglife has been working with Peterborough City Council Youth Offending Services (YOS) since 2006. In 2012 we successfully secured a three year contract through a competitive tendering process. This work involves all young offenders in the Peterborough area attending Froglife conservation sessions to deliver their community service orders. The young people have contributed enormously to our conservation efforts from helping with habitat management tasks on HNR to building outdoor classrooms at schools. Last year these young people contributed a total of 762 hours to nature conservation. A recent Ofsted inspection of the YOS gave it an outstanding rating, even nominating it as the best service in the country with the report commending Froglife's contribution towards the success of the YOS. A few years back we noted a desire by many of the young people to continue working with Froglife after completing their community service orders but we did not have any suitable projects at that stage. This lead to the development of our Green Pathways Scheme, funded by BBC Children in Need and working with disadvantaged young people aged 10-15 within Peterborough. We also developed the Wildlife Ambassador project to work with any age group suffering from disadvantage. Our Green Pathways Scheme has proved so successful that BBC Children in Need have provided a further three year funding until 2018. The previous project worked with over 3,000 young people and transformed many green spaces around the city into wildlife havens (Fig. 4).



Figure 4. A group of young people involved in the Green Pathways Scheme doing some habitat management work at Hampton Nature Reserve, Peterborough, UK.

Thanks to grants from Young Start, Scottish Natural Heritage and The Robertson Trust in 2014 the scheme was expanded into Glasgow. It is working with young people in some of the highest socially deprived areas of Glasgow on improving local green spaces. We are often asked about vandalism of ponds and it is most certainly an issue that we do sometimes have to deal with. We find that the main issue is litter (trolleys, road signs, bottles left on site) but despite these issues our monitoring programme shows that generally the ponds are still functioning well for the species. Following the success of our Wildlife Ambassador project we have developed the Natural Achievers project and we are currently fundraising to get this work off the ground and working on-the-ground. Our Leapfrog Schools programme is creating and enhancing outdoor classrooms for a number of schools and once again we found Froglife being mentioned in an Ofsted report when the outdoor classroom at one school was reported as an excellent example of delivering educational lessons.

In keeping with Froglife's ethos all of our projects are working with a wide range of partners and particularly with partners who can refer individuals who are often excluded from taking part in wildlife conservation. For example, in Scotland we are working with TRELLIS, an organisation providing therapeutic gardens for individuals with a range of mental and/or physical health issues; in London we are partnering several borough Youth Offending Services and in the East of England we are working with a wide range of community groups.

Applied Research

A grant from the Esmee Fairbairn Foundation has enabled Froglife to benefit from having a Conservation Coordinator in post since autumn of 2011. This has greatly strengthened our research and monitoring capacity with Froglife managing several research projects. Wildlife road tunnels are increasingly being advocated in the UK and worldwide as a means of mitigation for development and are installed where new developments and roads will segment wildlife habitats in order to reduce roadkill and maintain connectivity. However, there has been little actual research into the effectiveness of these tunnels and which specifications are most effective and



Figure 5. New tunnel at Hampton Nature Reserve, Peterborough, UK.



Figure 6. Landscape at Hampton Nature Reserve.

for which species. Froglife developed an innovative project using specially adapted cameras to monitor the wildlife using these tunnels. This has resulted in Froglife supporting a PhD student since 2013 and from 2015 also a Master by Research student. Three scientific publications are expected for 2015. As these tunnels are used by other wildlife the collected data will also inform wider conservation and mitigation practices (Fig. 5 & 6).

Since 2012, with funding from Natural England, Froglife has been working on using an improved and more robust method for estimating presence and abundance trends for GCN in a superabundant population using Hampton Nature Reserve, Peterborough, UK as a model. The site has the largest known population in the UK for this protected species but the reserve has over 350 ponds spread over 145 hectares and therefore quantifying what constitutes the most suitable pond habitat for newts and also trying to measure abundance trends can be extremely difficult. As a consequence we have been running a Masters by Research project using repeated newt surveys and occupancy modelling for understanding the distribution and abundance patterns of GCN on the reserve. We expect two publications describing the results.

In 2015 we are co-supervising one intern, an Erasmus Masters student from Belgium.

Our international reach is extending this year to Trinidad where we will have an association with the University of Glasgow's Trinidad Expedition, focusing on basic research and conservation work with the island's many amphibian species, several of which are listed as endangered by IUCN.

Our Learning Programme carried out research on public perception with reference to herpetofauna compared with other wildlife species. The Scale of the Problem research, funded through the Lottery Catalyst Fund, found a lack of appreciation of the importance of our species amongst the general public, highlighting a need for conservation organisations to give a higher priority to these species when promoting conservation needs. This is particularly the case for snakes, however not for all reptiles, as out of those that completed our survey, lizards proved the most popular of all the species.



Figure 7. Wildlife Gardening Workshop hosted in London as part of London Dragon Finder.

Species and habitat monitoring

In order for us to direct our conservation work it is important to have as much data as possible on our species. With the development of our London Dragon Finder project we were able to launch a free to download species recording and identification App. All of our projects are using the App alongside project participants to record species data. The wildlife workshops that form part of the London Dragon Finder project have proved very successful in not only training volunteers but also in assisting them to use the App (Fig. 7). The data will be analysed to enable us to map species distribution across the UK. To download the App visit <http://www.froglife.org/dragonfinder/app/>. We receive data from circa 160 toad patrol sites and this data is used for analysis into trend estimations as well as collaborations with other research projects, such as currently with Salford University, looking at infection rates and genetic background for common toads in different size populations and degree of isolation.

All of our on-the-ground conservation work incorporates a habitat monitoring programme. Surveys carried out at habitats after completion of the work often include surveys for aquatic invertebrates and plants providing us with a substantial body of evidence to establish the level of success of the work (Ramsay, 2014).

Spreading the word

Froglife manages a very active enquiry service with enquiries received through our website, on social media and by phone. The majority of our enquiries are from people wanting to help amphibians and reptiles and as such we put great store on answering every single enquiry and directing individuals to further information and our App. We are very popular on social media with over 12000 followers on Twitter and 2800 Facebook likes. Our website is packed with information and is very engaging and we receive many positive comments: visit www.froglife.org. Froglife produces a newsletter, Natterchat twice a year. Each edition is themed to cover a topical issue and we often feature guest writers.

We are passionate about getting out and about and over the past two years we have delivered 1,570 educational talks, training events and project sessions reaching a total of 18,000 people. We have also delivered 227 public events with 5,300 people attending.

As a result of the findings from the Scale of the Problem research Froglife has revamped the Just Add Water and Urban Tails publications to reflect comments received from those who took part in the survey (Fig. 8). Froglife staff frequently contribute to television and radio programmes and deal with a substantial number of press enquiries.

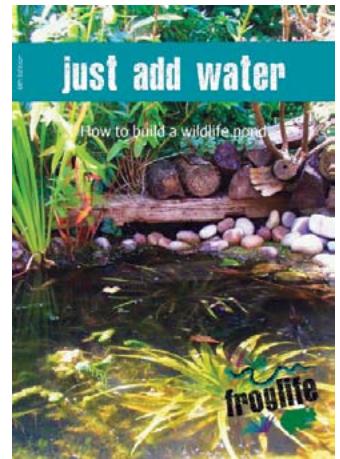


Figure 8. Just Add Water a booklet on how to build a wildlife pond and other wildlife gardening tips.

Evaluation

It is important that we know that our work is making a positive impact to the conservation agenda. It is easier to evaluate physical habitat work and the impact on species, and we do this through our monitoring programme. However, evaluating the impact of our work on people can be trickier but equally as important. We collect a lot of data on project participants but finding ways in which to evaluate these data to provide quantitative assessments has been the subject of much discussion at Froglife. This led us in 2014 to set up a partnership with the University of Hull, whose specialists are assessing the data from our Green Pathways Scheme. They will be drafting a report and plan to submit two articles to educational journals.

Friends and supporters

Froglife relies heavily on grants from grant making bodies and we are fortunate to have attracted these from a wide range of Trust funds, including those that fund social inclusion and health. We have also more recently received support from statutory bodies such as Natural England, Scottish Natural Heritage and Defra. This support is extremely valuable. However it is almost always restricted to a specific project. This means that we need to find additional resources to cover our core costs and also unfunded project work such as Toads on Roads, Amphibian Disease and our Enquiry Service. We cover these costs through our Friends scheme and through trading activities. Details on how to become a Friend are on our website and are open to anyone to join. Friends receive a welcome pack, copies of our newsletter, Natterchat, invites to events and other special offers as they occur. We have been very fortunate in that a number of celebrities have helped to promote our work (Fig. 9).



Figure 9. UK television presenter Charlie Dimmock with a group of Wildlife Ambassadors working at the Green Backyard, Peterborough, UK.

Future Aspirations

Froglife will continue to deliver the full range of work that it is currently involved in whilst also continuing to expand our successful Dragon Finder programme and Green Pathways Scheme. Our Living Water programme will be moving into phase 2 in Sheffield and in South Lanarkshire. We are keen to secure funding for our new Natural Achievers project that will provide opportunities for young people 17-25 years old and will complement our Green Pathways Scheme.

We will continue to expand our applied research capacity with our immediate target being to carry out research on 15 wildlife tunnels, and we will further develop partnerships with our European counterparts through ENPARTS (Fig. 10). Finding a long term solution to toad mortality is a top priority and we will further develop our initiatives on this front.

We are keen to be more active at a European level and we will be seeking opportunities to develop work with partners in other European countries.



Figure 10. European Toads on Roads workshop hosted by Froglife in 2012 in Peterborough. The workshop lead to the formation of ENPARTS.

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