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amphibian and reptile
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To: Kevin Johnson
Taxon Officer, Amphibian Ark
KevinJ@amphibianark.org

27 July 2018

Dear Kevin,

Application for an Amphibian Ark Extension Grant: Head-starting pool frogs for the UK reintroduction

Project Overview: In 2005 ARC collaborated with Natural England (NE) to successfully translocate northern clade pool frogs from Sweden back to the UK, following their extinction in 1995. Significant breeding success was achieved at the first reintroduction site, and in 2015 ARC began the process of head-starting pool frog tadpoles to enable the species to be established at a second site, thereby increasing the resilience of the UK population. The site chosen for this second release was Thompson Common (Thetford, Norfolk), the last recorded location for the species prior to extinction in the 1990s.

After small-scale trials of head-starting methods in 2015 and 2016, ARC decided to look for funding to purchase, equip and staff a bio-secure head-starting unit, in order to accelerate population establishment at this second reintroduction site.

An Amphibian Ark (AArk) seed grant was awarded to this project in April 2017, as a contribution to the overall resources required.

Summary of project progress to date: achievements supported by Amphibian Ark Seed Grant

- **Establish a second population of northern clade pool frogs via head-starting:** Population monitoring at the second reintroduction site suggests that a number of tadpoles released in 2015 and 2016 metamorphosed and have subsequently been recruited into the adult population. Over-wintered froglets were first recorded on site in 2016; juvenile and adult-sized pool frogs were first recorded in 2017. A single spawning event was recorded at the site in 2017, although no metamorphs were detected.
- **Literature to benefit wider conservation:** In 2017, ARC continued to work with the Institute of Zoology (IoZ) to develop a Disease Risk Assessment (DRA) for pool frog head-starting and translocations. ARC also contributed a paper on the first pool frog reintroduction to the IUCN book "Global Reintroduction Perspectives 2018" (see: <https://portals.iucn.org/library/sites/library/files/documents/2018-006-En.pdf>.)
- **The UK conservation status of the northern pool frog is considerably improved, via the establishment of a second viable population:** In spring 2017, breeding was recorded at Thompson Common for the first time in over three decades. This is a major achievement and indicates that the survival and development of head-started tadpoles from the releases carried out in 2015 was successful. The viability of this small population remains uncertain, however,

and ARC believes that further releases are needed to ensure the best chances of long term survival.

- **Head-starting methods for northern pool frogs are deployed and evaluated, with the results documented in the literature in order to assist with reintroduction efforts for this species and other amphibians with a similar life history.** The full sum of money needed to set-up and run a dedicated head-starting unit is yet to be secured; this part of the project will go ahead as soon as appropriate funding is in place. Fundraising is ongoing and ARC is planning for head-starting to commence in 2019. ARC is committed to the use of head-starting in this reintroduction. We continue to monitor the establishing population of pool frogs at Thompson Common and the outcomes will be documented to inform other species reintroductions.
- **The first release via head-starting will be in summer 2018, with a second in 2019. Subject to evaluation of population data, we may undertake a third head-starting release in 2020:** Taking account of the need to extend the fund-raising period, ARC has re-scheduled its plan for head-starting and releases. ARC expects to implement head-starting in 2019, with further releases as described above, in subsequent years.
- **Species action plan:** A detailed draft Species Action Plan was submitted to AArk as part of the final project report, no further updates have been made but ARC remain committee to updating the document as the project progresses.

Why an extension grant is requested

Outline project plan: We propose to secure the establishment of a second UK population of northern pool frogs using head-starting. The release site Thompson Common is a nature reserve in the county of Norfolk in Eastern England and is the last known native location of the species before its UK extinction. We have worked with the site owners, Norfolk Wildlife Trust, to prepare the habitat to reach optimal condition for this species. In 2015-6 we trialled head-starting methods on a small scale, collecting spawn, rearing and releasing late-stage larvae. This resulted in the release of 590 individuals at Thompson Common. This has been sufficient to generate a small population, but requires reinforcement for a robust population with long-term viability to be secured. Building on this experience, and with additional resources we will enhance husbandry methods, biometric measurement and project management to generate a larger number of high quality founders. This will, in turn, increase the likelihood of establishing a self-sustaining population. We have consulted the literature and taken advice on head-starting methods from a range of authorities, including the Zoological Society of London, who have been especially helpful. Detailed husbandry protocols are in development, along with project management standards. The design of a dedicated head-starting facility was completed in 2017. On application to AArk for the Seed grant in 2017 we had envisioned purchasing a cabin, shed or similar and then adapting it, ARC has now been offered the use of a rental unit and as such we are looking to adapt rather than construct a head-starting facility. The adaptation and equipping of this head-starting facility will be the largest element of expenditure in the project.

Summary project plan:

- Prepare release site and ensure measures are in place to ensure continued maintenance of good habitat condition (completed)
- Secure all permissions for capture and release of founder stock (completed)
- Design dedicated head-starting facility in collaboration with experts (completed)
- Develop protocols and guidance on collection of spawn, transfer to head-starting facility, captive management, release of founders, disease risk assessment, disease risk management and post-release health surveillance (in progress/ongoing)
- Recruit and train staff member (planned)
- Construct and equip head-starting facility (planned)
- Undertake head-starting and release according to protocols and guidance (planned)

- Undertake monitoring and evaluation (planned)
- Document activities and results (planned).

The first release via head-starting will be in summer 2019, with a second in 2020. Subject to evaluation of population data, we may undertake a third head-starting release in 2021. We are working with a range of partners to develop these plans.

The project involves a significant capital investment to develop a specialist head-starting unit and ensure that all operation complies with international standards of good practice. The complex and specialist nature of this project and the current economic environment have both made fundraising for the project quite challenging. ARC is engaged in substantial fund-raising efforts to secure the outstanding funds required to complete the project. Whilst we appreciate that AArk cannot meet the bulk of the costs of our project, an extension grant of \$4000 would assist significantly for two main reasons. Firstly, it would allow us to make modest yet important steps with lower-cost expenditure. Secondly, it would assist with ongoing fund-raising. Given AArk's specialist nature and global reach, an extension would likely be viewed favourably by other funders that we approach, thereby helping to lever the remaining resources required.

In 2017 ARC sought funding from a variety of sources including letters to potential donors, grant applications and ARCs newly created Sponsor a Species web page <https://www.arc-trust.org/appeal/sponsor-pool-frogs>.

Over the past 12 months, ARC has secured funding from the following organisations:

Organisation Name	Funds GBP (£)	Funds USD (\$)
AArk Seed Grant	3808	5000
Clark Bradbury Charitable Trust	2000	2633
BHS Captive Breeding Committee	1000	1310
Natural England	4500	5897
Sponsor a Species Charitable donation	250	328
Total	11558	15168

Letters of support: Letters of support are attached with this application from three contributing donors to the project Anglian Water, the British Herpetological Societies Captive Breeding Committee and Natural England. We also enclose a letter of support from Professor Richard Griffiths, an internationally recognised authority on amphibian conservation, who has visited the project and offered advice.

We hope that Amphibian ARK will wish to continue to contribute support to this exciting UK reintroduction project and look forward to hearing from you. If you require further information, please do not hesitate to contact me.

Kind regards,

Yvette Martin,
Amphibian Conservation Officer.