

NE England

Crayfish Action Sheffield - Lead Organisation: Sheffield City Council

This project aims to maintain and increase Sheffield's important white-clawed crayfish population through habitat enhancement, awareness raising and education and the creation of a bio-secure ark site.

Conservation of the White-clawed crayfish (*Austropotamobius pallipes*) in the UK, through translocation - Lead Organisation: Leeds University

Through this 3 year PhD project a range of issues around the current ark strategy for White-clawed crayfish will be investigated. One focus is the use of restored quarries as potential ark sites, including what habitat restoration measures are most effective and how best to monitor post-translocation. Other research questions address potential impacts on macro-invertebrate communities in ark sites and impacts of high suspended sediment loadings on white clawed crayfish, which may be significant in quarry situations.

Project title: Conservation of the white-clawed crayfish <i>Austropotamobius pallipes</i> in the UK, through translocation
Date the form was completed: 13 th August 2010
Organisation managing project: University of Leeds (PhD project)
Project Partners: Tarmac
Funders: NERC, Tarmac
Project type: Desktop study/review, field project, outdoor experimental and laboratory study
Key Topics: Ark site area/site assessment, ark site protection, ark site establishment, impacts on ecology- macrophytes/macrobenthos/amphibians/fish and other diseases of crayfish
Species: White-clawed crayfish and Signal crayfish
Project Location:
Coverage Type: Single waterbody and multiple waterbodies
Project timescale: Oct 2009 – Oct 2012
Project contact: Paula Rosewarne (supervisor Alison Dunn)
Website link: http://www.fbs.leeds.ac.uk/staff/profile.php?tag=Rosewarne_P
Contact details: IICB, Faculty of Biological Sciences, Miall Building, Clarendon Way University of Leeds, Leeds, LS2 9JT Email: bspjr@leeds.ac.uk

Project Summary:

Through this 3 year PhD project a range of issues around the current ark strategy for white-clawed crayfish will be investigated. One focus is the use of restored quarries as potential ark sites, including what habitat restoration measures are most effective and how best to monitor post-translocation. Other research questions address potential impacts on macro-invertebrate communities in ark sites and impacts of high suspended sediment loadings on white clawed crayfish, which may be significant in quarry situations.

More detailed project description:**Research rationale and key objectives:****1) Inform quarry restoration strategy regarding the best type of habitat creation to carry out for ark sites.**

To avoid wasting valuable resources it is important to only undertake habitat creation measures where needed, and provide the best habitat for the population both as it is at the time of translocation and projected population. Outcomes will include best practice guidelines for habitat creation in quarry ark sites based on empirical investigations into habitat use, and presentation of Threshfield as a case study within the 'nature after minerals' initiative.

2) Work towards developing a practicable method for post-translocation monitoring in still-waters

Some level of post-translocation monitoring should be planned for in all ark-site projects, yet with no quantitative monitoring methods available for still waters this is difficult to budget for and carry out effectively. This work is aimed to help develop a standardised, and at least semi-quantitative, cost-effective monitoring protocol that can be applied to a range of stillwater sites.

3) Identify potential impacts of *A.pallipes* on existing benthic communities in ark sites

Crayfish comprise over 80% of the invertebrate biomass and, as omnivores, consume at a range of trophic levels. Evidence suggests they exert a strong structuring force on littoral communities in stillwaters. Very little work has been carried out on *A.pallipes* within this context, yet as a precautionary approach we need to be able to predict potential impacts on the existing fauna in ark sites.

4) Assess how responses to one aspect of environmental change (increasing suspended sediment loadings) varies between native and invasive species, and parasite prevalence

Differing abilities to cope with environmental change may help explain how species become invasive, and why native populations decline. Increasing our understanding of what makes populations of *A.pallipes* vulnerable to invasives will inform remediation measures and aid assessment of the status of a population i.e. whether it is suitable for translocation.

Bradley Golf Course Ark Site Huddersfield - Lead Organisation: Environmental Alliance Ltd

Pond at above site identified as potential for ARK site. Feasibility study carried out using Stephanie Peay methodology 2008/2009 and some habitat improvements made. Donor site identified as Huddersfield Narrow Canal where population threatened by spread of signal crayfish within River Colne catchment. Alternative donor site Leeds Liverpool Canal. Test trapping of Huddersfield Narrow canal September 2010. Introduction to take place 2011. Monitoring ARK site over 5 year period.

Project title: Bradley Golf Course Ark Site Huddersfield
Date the form was completed: 03/09/2010
Organisation managing project: Environmental Alliance Ltd
Project Partners: Kirklees Council and Environment Agency
Funders: SITA Trust and Kirklees Council.
Project type: Feasibility study and field project
Key Topics: Ark site establishment
Species: White-clawed crayfish
Project Location:
Coverage Type: Single waterbody
Project timescale: Start September 2010; end September 2011 (plus ongoing annual monitoring for 5 years).
Project contact: Jeff Keenlyside Environmental Alliance 07813880568 and Darran Sharp supervising ecologist 07903886264
Website link:
Contact details:
<p>Project Summary:</p> <p>Pond at above site identified as potential for ARK site. Feasibility study carried out using Stephanie Peay methodology 2008/2009 and some habitat improvements made.</p> <p>Donor site identified as Huddersfield Narrow Canal where population threatened by spread of signal crayfish within River Colne catchment.</p> <p>Alternative donor site Leeds Liverpool Canal.</p> <p>Test trapping of Huddersfield Narrow canal September 2010.</p> <p>Introduction to take place 2011.</p> <p>Monitoring ARK site over 5 year period.</p>
More detailed project description:

Wansbeck 100 - Lead Organisation: Northumberland Rivers Trust

Improvement of the Wansbeck and its key tributaries in order to reduce diffuse rural pollution. The Wansbeck is home to a number of valuable populations of White-clawed crayfish.

Project title: Wansbeck 100
Date the form was completed: 28 th January 2013
Organisation managing project: Northumberland Rivers Trust
Project Partners: National Trust, Environment Agency
Funders: Catchment Restoration Fund
Project type: Catchment and Habitat improvement. Community monitoring elements.
Key Topics: Diffuse pollution prevention. Improvement of bankside habitat. Fish pass improvements.
Species: White Clawed Crayfish
Project Location: Upper Wansbeck, Font, Hartburn, Delf Burn, Ray Burn
Project timescale: Nov 12 – Mar 15
Project contact: Pete Kerr – p.kerr@tiscali.co.uk
Website link: www.northumberlandriverstrust.co.uk
Contact details: Pete Kerr - p.kerr@tiscali.co.uk
Project Summary (500 words): This is a project funded by the Catchment Restoration Fund to improve the water-body status of 100km of the Wansbeck and key tributaries. A key focus will be to reduce rural diffuse pollution to the catchment that is home to valuable population of native white clawed crayfish. Community and angling clubs are to be involved in the monitoring and assessment elements.
More detailed project description (1000 words):