

## SW England

### **The South West Crayfish Partnership – Phase 2 Crayfish in Crisis.**

Buglife are working in partnership with the Environment Agency, Avon Wildlife Trust, Bristol Science and Conservation Foundation, Nicky Green and Paignton Zoo Environmental Park in the second phase of The [South West Crayfish Project](#).

The White-clawed crayfish (*Austropotamobius pallipes*) is a UK BAP priority species subject to UK and international legislation. Subject to a range of pressures; in the last decade many of the most important native crayfish populations in the South West have been lost. The White-clawed crayfish is still at risk in southwest England, largely due to the spread of the invasive Signal crayfish. Many populations in the region have been lost or are at risk of extinction. This project is the next phase of work carrying on from; the Bringing aggregates sites to life – creating Ark sites for crayfish project and the South West Crayfish Project. Phase 2 aims to find additional Ark sites for the threatened populations in the southwest (in both aggregate and non-aggregate sites), to monitor existing Ark sites and to monitor populations in the wild.

In addition Bristol Conservation and Science Foundation are continuing their captive breeding programme based at Bristol Zoological Gardens. For more information on the captive breeding programme click [here](#).

### **The South West Crayfish Project - Phase 1**

The first phase of the South West Crayfish Project aimed to identify remaining populations in the South West and implement a programme of intervention with those at the highest threat of extinction. A series of translocations took place to prioritised refuge sites across the region. In addition Bristol Zoo Gardens established a viable breeding population ex-situ. The translocation protocol followed published guidelines for crayfish introductions, including rigorous ecological assessment of potential new habitat.

<b>Project title:</b> The South West Crayfish Project
<b>Date the form was completed:</b> 23 <sup>rd</sup> Aug 2010
<b>Organisation managing project:</b> Bristol Conservation and Science Foundation
<b>Project Partners:</b> Bristol Conservation and Science Foundation, Bristol Zoo Gardens, Avon Wildlife Trust, Environment Agency, Buglife
<b>Funders:</b> Natural England, Biffaward, Bristol Water
<b>Project type:</b> Field project, public awareness campaign and education programme
<b>Key Topics:</b> Base line surveys, monitoring populations, predicting invasion non-native crayfish, ark site area/site assessment, ark site protection, ark site establishment, habitat enhancement, habitat management, captive breeding, education and awareness campaign, angling, crayfish plague, biosecurity and trapping legislation

**Species:** White-clawed crayfish

**Project timescale:** Sept 2008 – June 2011

**Project contact:** Jen Nightingale [jnightingale@bristolzoo.org.uk](mailto:jnightingale@bristolzoo.org.uk) Tel: 0117 974 7376

**Website link:** <http://www.bcsf.org.uk/bcsf/white-clawed-crayfish>

**Project Summary:**

The white-clawed crayfish (*Austropotamobius pallipes*) is a UK BAP priority species subject to UK and international legislation. Subject to a range of pressures; in the last decade many of the most important native crayfish populations in the South West have been lost.

The project aims to identify remaining populations in the South West and implement a programme of intervention with those at the highest threat of extinction. A series of translocations will take place to prioritised refuge sites across the region. In addition Bristol Zoo Gardens will undertake to establish and maintain viable breeding populations ex-situ. A communication programme will be implemented. Translocation protocol will follow published guidelines for crayfish introductions, including rigorous ecological assessment of potential new habitat.

**More detailed project description:**

The white-clawed crayfish ('WCC' - *Austropotamobius pallipes*) is a UK BAP priority species subject to UK and international legislation. It is listed on Schedule 5 of the Wildlife and Countryside Act 1981 and included in the IUCN Red Data List. It is designated in Appendix III of the Bern Convention 1979 and Annexes II and V of the European Habitats Directive 1992. WCC are found in still and running waters and should be considered a 'flagship species' for rivers, a UK priority habitat.

The species is subject to a range of pressures, notably those arising from the introduction of non indigenous crayfish species and their pathogens since the 1970s. In the last decade many of the most important native crayfish populations in the South West have been lost including three of the four most abundant in the Bristol Avon catchment alone (since 2005).

The project aims to identify remaining populations in the South West and implement a programme of intervention with those at the highest threat of extinction. Following work pioneered by the Environment Agency and Avon Wildlife Trust (Sibley et al, 2007)\* a series of translocations will take place to prioritised refuge sites across the region. Further to this Bristol Zoo Gardens will undertake to establish and maintain viable breeding populations ex-situ. The translocation protocol will follow published guidelines for crayfish introductions and include rigorous ecological assessment of potential new habitat.

Critical success factors required for translocation and captive breeding will be identified and disseminated to stakeholders responsible for the maintenance of the species and its habitat. The issues affecting conservation of crayfish and their habitat will form part of a targeted education campaign to highlight key threats and publicly promote factors for their mitigation.

Continued, post-project monitoring will be undertaken by the Environment Agency. The project partnership aims to secure further funding to extend the timescale of the project.

- Sibley, P. J., Clarkson, M., Frayling, M & Stenson, C. (2007). Translocating the White-Clawed Crayfish *Austropotamobius pallipes*. In: Fisheries \* Conservation Successes & Failures, (eds P. Hickley & S. Axford). Institute of Fisheries Management Conference Proceedings, pp. 42-51.

**Exmoor American Signal Crayfish Survey 2010 - Lead organisation: Environment Agency (Devon Area)**

25 trained volunteers are surveying the Exe and Barle rivers on Exmoor. We aim to identify the distribution of signals on these watercourses to prepare for a more detailed future project assessing habitat and fisheries impacts of Signals. The survey also promotes good practice regarding spread of crayfish and plague and allows local people interested in their river to be involved in a valuable conservation project. The results of the survey will be mapped and analysed and help us work on the next steps in protecting the wildlife of these rivers.

<b>Project title:</b> Exmoor American Signal Crayfish Survey 2010
<b>Date the form was completed:</b> 24 August 2010
<b>Organisation managing project:</b> Environment Agency (Devon Area)
<b>Project Partners:</b> Exmoor National Park Authority (Conservation Volunteer Partnership)
<b>Funders:</b> Environment Agency (time in kind, no money involved)
<b>Project type:</b> Field project and public awareness campaign
<b>Key Topics:</b> Base line surveys, predicting invasion non-native crayfish and improving biosecurity
<b>Species:</b> Signal crayfish
<b>Project Location:</b> Rivers Exe and Barle, within Exmoor National Park boundary
<b>Coverage Type:</b> Multiple waterbodies
<b>Project timescale:</b> July – November 2010
<b>Project contact:</b> Mary-Rose Lane, FRB Technical Specialist, Environment Agency
<b>Contact details:</b> Mary-Rose Lane, FRB Technical Specialist, Environment Agency Devon Area, Exminster House, Miller Way, Exminster, Devon, EX6 8AS Tel:01392 316036 <a href="mailto:mary-rose.lane@environment-agency.gov.uk">mary-rose.lane@environment-agency.gov.uk</a>
<b>Project Summary:</b>  25 trained volunteers are surveying the Exe and Barle rivers on Exmoor. We aim to identify the distribution of signals on these watercourses to prepare for a more detailed future project assessing habitat and fisheries impacts of signals. The survey also promotes good practice regarding spread of crayfish and plague and allows local people interested in their river to be involved in a valuable conservation project. The results of the survey will be mapped and analysed and help us work on the next steps in protecting the wildlife of these rivers.

**More detailed project description:**

Exmoor's rivers support some of the South West's most valuable salmonid fisheries and freshwater wildlife habitats. Both the Exe and Barle support regionally important salmon and brown trout populations which are both interest features of the River Barle SSSI designation. With brook lamprey, bullhead, grayling, stone loach and eel the rivers support a typically rich fish community for a SW unpolluted, fast flowing, upland river. The Barle also supports a nationally important UKBAP species, the river jelly lichen population (*Collema dichotomum*).

The EA monitoring teams have found well established populations of signal crayfish that have been confirmed by local anglers. Exmoor has one known small population of white-clawed crayfish on an adjoining catchment and the Exe catchment as a whole is a trapping no-go zone because of white-claws further down the catchment. We want to know the distribution of signals in the headwaters, and then develop a project to assess any impacts they are having on the freshwater ecology of these rivers. As well as these wildlife impacts Exmoor's economy is closely tied to activities such as angling and the reputation of the river as an unspoilt fishery is important.

25 volunteers were trained by the EA in June to take part in this signal crayfish survey. Contiguous river reaches over 80 km of the Exe and Barle were allocated by the EA and are being surveyed from July to October using pan-pipe artificial refugia. We are using these to allow volunteers to monitor traps when it is convenient for them and landowners, rather than the onerous re-visits required for trappy traps. We have found they work very well if left in the river for 2 weeks plus. Landowners and riparian owners permission has been obtained. Exmoor National Park Authority's Conservation Volunteer Partnership is helping the EA by co-ordinating the volunteers with the EA giving technical advice as the survey progresses.

Results will be assembled and mapped by the Somerset Environmental Records Centre. This data will also be sent to the National Crayfish Database.

There are no direct costs involved in this survey – all staff time is offered in kind and volunteers are using EA owned refugia.

The information will be used over the winter of 2010-11 to help plan an impacts study. We have no funds for this but hope to progress this project development work through an MSc project. We will develop this using others experience from similar studies and ensure that it is QA'd by relevant experts in the field. We then plan to work in partnership with other organisations to bid for funds to carry out the study in the near future.

**Creedy Yeo white-clawed and signal mixed population monitoring - Lead organisation:**  
**Environment Agency (Devon Area)**

The Creedy Yeo supports one of two native crayfish populations in Devon. Signal crayfish were first recorded in a trib in 2003, and we have monitored ever since. This is the first year we have found a mixed population in the main river so we are identifying how far into the White-clawed reach they have spread, and what impact they are having on the White-clawed population. This native population is a potential source for an ark site so we need to understand what is happening and roughly work out how long we may have before potential extinction in the river.

<b>Project title:</b> Creedy Yeo white-clawed and signal mixed population monitoring
<b>Date the form was completed:</b> 24 August 2010
<b>Organisation managing project:</b> Environment Agency Devon Area
<b>Project Partners:</b> None
<b>Funders:</b> Environment Agency
<b>Project type:</b> Field project
<b>Key Topics:</b> Monitoring populations and predicting invasion non-native crayfish
<b>Species:</b> White-clawed crayfish and Signal crayfish

<b>Project Location:</b> Creedy Yeo, Exe catchment, Devon
<b>Coverage Type:</b> Multiple waterbodies
<b>Project timescale:</b> 2003 – 2010 ongoing
<b>Project contact:</b> Mary-Rose Lane
<b>Website link:</b> None
<b>Contact details:</b> Mary-Rose Lane, FRB Technical Specialist, Environment Agency, Exminster House, Miller Way Exminster, Devon, EX6 8AS <a href="mailto:mary-rose.lane@environment-agency.gov.uk">mary-rose.lane@environment-agency.gov.uk</a>
01392 36036
<b>Project Summary:</b> The Creedy Yeo supports one of two native crayfish populations in Devon. Signal crayfish were first recorded in a trib in 2003, and we have monitored ever since. This is the first year we have found a mixed population in the main river so we are identifying how far into the white-clawed reach they have spread, and what impact they are having on the white-clawed population.  This native population is a potential source for an ark site so we need to understand what is happening and roughly work out how long we may have before potential extinction in the river.
<b>More detailed project description:</b>  The project is now monitoring the extent of species mixing in a white-clawed river on the Exe catchment in Devon. The Creedy Yeo supports one of two small native crayfish populations in Devon, sparsely distributed over about 15km of river. Signal crayfish reached the main river from a tributary within the last 18 months and this year we are monitoring their spread and trying to determine whether white-claws are surviving amongst them or are being wiped out.  We are using pan-pipe artificial refugia to reduce the risk of trapped white-claws being vulnerable to predation or damage by signals. A non-mixed population of white-claws is still found downstream. Monitoring following a sewage treatment works failure showed good populations at all age classes.  Results should be in by autumn 2010 and we should then have an estimated rate of invasion by signals. This gives us a timescale in which to prepare an appropriate ark site to translocate this native population to. The ark site project is described

### **Cotswold Water Park Crayfish Project - Lead Organisation: Cotswold Water Park**

Work to date, since 2000 includes:

- 1.Awareness-raising with local angling community (which is vast) regarding biosecurity etc.
  - 2.Coordination and support of surveys in 2000 (EA, Thames) and 2004 (local consultants) for native crayfish.
  - 3.Spring 2010; working with Andrew Whitehouse, Buglife regarding establishing an ark in the CWP, since our remaining native crayfish are restricted to only 1 in 150 lakes!
- Currently lack of funds is preventing further work but the vast prevalence of Signal crayfish across the area is overwhelming.

<b>Project title:</b> Cotswold Water Park
<b>Date the form was completed:</b> 23/8/10
<b>Organisation managing project:</b> Cotswold Water Park Society

<b>Project Partners:</b> EA, NE, Local Authorities,
<b>Funders:</b> Varied
<b>Project type:</b> Feasibility study
<b>Key Topics:</b> Ark site area/site assessment
<b>Species:</b> White-clawed crayfish and Signal crayfish
<b>Project Location:</b>  <b>Coverage Type:</b> Multiple waterbodies and catchment
<b>Project timescale:</b>
<b>Project contact:</b> Gareth Harris, Biodiversity Officer, Cotswold Water Park Society
<b>Website link:</b> <a href="http://www.waterpark.org">www.waterpark.org</a>
<b>Contact details:</b>  Cotswold House, Manor Farm, Down Ampney Estate, Cirencester GL7 5QF Tel: 01793 752413  <a href="mailto:Gareth.harris@waterpark.org">Gareth.harris@waterpark.org</a>
<b>Project Summary:</b>  Work to date, since 2000 includes: <ol style="list-style-type: none"> <li>1. Awareness-raising with local angling community (which is vast) regarding biosecurity etc.</li> <li>2. Coordination and support of surveys in 2000 (EA, Thames) and 2004 (local consultants) for native crayfish.</li> <li>3. Spring 2010; working with Andrew Whitehouse, Buglife regarding establishing an ark in the CWP, since our remaining native crayfish are restricted to only 1 in 150 lakes!</li> </ol> <p>Currently lack of funds is preventing further work but the vast prevalence of Signal crayfish across the area is overwhelming.</p>