

UK crayfish projects

International projects (relevant to the UK)

Sampled Red List Index - Global Status of the worlds crayfish species

Assessing the conservation status of each species through application of the IUCN categories and criteria (version 3.1). By repeating assessments through time we develop a trend that measures the extinction risk of a taxa/ taxon over time as it moves through the categories.

Project title: Sampled Red List Index - Global Status of the worlds crayfish species
Date the form was completed: 9 th of August 2010
Organisation managing project: Institute of Zoology, Zoological Society of London.
Project Partners:
Funders: Esmee Fairbairn Foundation, Biodiversity Synthesis Center
Project type: Desktop study/review
Key Topics: Assessing the conservation status of each species through application of the IUCN categories and criteria (version 3.1).
Species: All 591 species of crayfish.
Project Location: Global
Project timescale: August 2008 – August 2010
Project contact: Ben Collen (ben.collen@ioz.ac.uk), Nadia Dewhurst (nadia.dewhurst@ioz.ac.uk)
Website link: http://www.zsl.org/science/research-projects/indicators-assessments/crayfish-lobsters,1264,AR.html
Contact details: Ben Collen/ Nadia Dewhurst Institute of Zoology, Regent's Park, London, NW1 4RY 0207 449 6642
Project Summary: Assessing the conservation status of each species through application of the IUCN categories and criteria (version 3.1). By repeating assessments through time we develop a trend that measures the extinction risk of a taxa/ taxon over time as it moves through the categories.
More detailed project description: The conservation status of crayfish shall be re-reviewed again in 5 years with new data acquired over this period. In the interim, we aim to publish a number of articles documenting the status of crayfish both globally and regionally with a review of dominant threats.

UK wide projects

Implementation, enforcement and advice on legislation relating to the keeping, farming, importation and diseases of crayfish - Lead organisation: Cefa

Implement, enforcement and advice on the Aquatic Animal Health Regulations (England and Wales) 2009, The Alien Species in Aquaculture Regulations (England and Wales) 2010 the Prohibition of the Keeping of Live Fish (Crayfish) Order 1996.

Project title: Implementation, enforcement and advice on legislation relating to the keeping, farming, importation and diseases of crayfish
Date the form was completed: 27/08/10
Organisation managing project: Cefas
Project Partners: We will potentially work with a number of government agencies as well as NGOs as part of the ongoing enforcement of the relevant legislation
Funders: Defra
Project type: Implementation and enforcement of legislation
Key Topics: Farming, holding of non-native crayfish, diseases and disease control
Species: All
Project Location: England and Wales
Project timescale: Indefinite
Project contact: Mr. Alasdair Scott and Dr. Paul Stebbing
Website link: www.efishbusiness.co.uk
Contact details: Cefas Weymouth Laboratory Barrack Road The Nothe Weymouth Dorset DT4 8UB e-mail: FHI@Cefas.co.uk tel: 01305 206673
Project Summary: Implement, enforcement and advice on the Aquatic Animal Health Regulations (England and Wales) 2009, The Alien Species in Aquaculture Regulations (England and Wales) 2010 the Prohibition of the Keeping of Live Fish (Crayfish) Order 1996.
More detailed project description: We are responsible for the implement and enforcement of three pieces of legislation relating to crayfish: The Aquatic Animal Health Regulations (England and Wales) 2009- covers the legal requirements of people wishing to farm or import crayfish either for aquaculture or the aquarium trade. All unexplained reported mortality events of crayfish (both in aquaculture and the wild) are

investigated for possible disease issues.

The Prohibition of the Keeping of Live Fish (Crayfish) Order 1996- we cover the licensing of the keeping of crayfish in England and Wales.

The Alien Species in Aquaculture Regulations 2010- we will provide licensing for people wishing to farm alien species, once UK implementing legislation is in place. This is in addition to the controls implemented under the Aquatic Animal Health Regulations.

Advice is provided to both government and stakeholders on these as well as a much broader range of subjects, such as the control of non-native and the conservation of native crayfish, the reporting of sightings of crayfish, and legal trapping requirements. We also advise industry on opportunities for, and restrictions on aquaculture of crayfish.

Scoping study to provide evidence for an integrated approach to native crayfish conservation - David Rogers Associates

Objective 1. Using existing information the distribution of crayfish plague outbreaks, native and signal crayfish in the UK will be mapped in a GIS. The underlying data supporting the mapping will be collated in a database.

Objective 2.(a) Identify and investigate all possible pathways of transmission of crayfish plague. (b) Undertake a risk assessment to determine the likely importance of each pathway and recommend areas for research

Objective 3. Development of improved method(s) and strategies for the control and elimination of signal crayfish. A signal crayfish population model will be used to assess efficacy and compare competing strategies

Objective 4. (a) Using the results from Objective 1 and Objective 2, a risk assessment strategy to assess and rank the vulnerability of native crayfish populations throughout the UK will be developed. (b) Based on a sound scientific approach, recommendations will be made for the application of appropriate cost-effective biosecurity measures to the most important populations.

Project title: Scoping study to provide evidence for an integrated approach to native crayfish conservation

Date the form was completed: 26/08/2010

Organisation managing project: David Rogers Associates

Project Partners:

Funders: Defra Aquatic animal health requirements 2009-2010

Project type: Desktop study/review, feasibility study and scoping study

Key Topics: Catchment risk assessment for crayfish, invasion non-native crayfish, ark site area/site assessment, ark site protection, ark site establishment, barriers against crayfish, improving biosecurity, control measure, trapping programme, wild harvest, opinion survey and national strategy for conservation

Species: White-clawed crayfish, Signal crayfish, Spiny-cheek crayfish, Virile crayfish, Turkish

crayfish and Red swamp crayfish
Project Location: Single waterbody, multiple waterbodies, catchment, region/river basin district, administrative district England and Wales
Project timescale: 01/07/2009 – 30/06/2010
Project contact: David Rogers
Website link: http://website.lineone.net/~d-rogers/
Contact details: 9 The Moat, Castle Donington, Derby, DE74 2PD d-rogers@lineone.net
Project Summary: Objective 1. Using existing information the distribution of crayfish plague outbreaks, native and signal crayfish in the UK will be mapped in a GIS. The underlying data supporting the mapping will be collated in a database. Objective 2. (a) Identify and investigate all possible pathways of transmission of crayfish plague. (b) Undertake a risk assessment to determine the likely importance of each pathway and recommend areas for research Objective 3. Development of improved method(s) and strategies for the control and elimination of signal crayfish. A signal crayfish population model will be used to assess efficacy and compare competing strategies Objective 4. (a) Using the results from Objective 1 and Objective 2, a risk assessment strategy to assess and rank the vulnerability of native crayfish populations throughout the UK will be developed. (b) Based on a sound scientific approach, recommendations will be made for the application of appropriate cost-effective biosecurity measures to the most important populations.
More detailed project descriptions: Data from all existing databases was collated and verified to produce a GIS database, which can be interrogated to show the decline in distribution and abundance of <i>A. pallipes</i> over time, the establishment and spread of <i>P. leniusculus</i> since its introduction in the 1970's, the location of <i>P. leniusculus</i> farms and implants throughout England and Wales before 1990, the location of crayfish plague outbreaks in England and Wales from 1980 – 2009 and the proximity of fish farms to <i>P. leniusculus</i> . All known historic plague outbreaks in England and Wales were examined to identify which potential pathways were relevant at the time of the outbreak (80 sites including some control sites). Statistical analysis of the data showed that the most significant pathway of transmission of crayfish plague is where there is a hydrological link between <i>A. pallipes</i> populations and <i>P. leniusculus</i> . A review of all eradication methods was undertaken to determine if any advances had been made and which methods, if any have a potentially achievable application in the field. Recommendations were made for future research in eradication/control methods. Current crayfish distribution was examined to assess the vulnerability of remaining <i>A. pallipes</i>

populations at a sub catchment level in England and Wales, based on whether they have a hydrological link to *P. leniusculus*. A review of policy, working practices and responsible organisations was undertaken in an attempt to identify the reasons why the decline of *A. pallipes* has continued at a rapid rate over the last 30 years.

The project provides a baseline from which to formulate future planning for the conservation of *A. pallipes* in England and Wales. Recommendations include:

- SAC designation of all valuable *A. pallipes* sites
- development of “native crayfish areas” on a national scale
- a review of the criteria for the selection of ark sites
- adopt the precautionary principle to the 24 most valuable *A. pallipes* sub catchments, e.g. stop fish movements from fish farms with a hydrological link to *P. leniusculus*, increase bio-security during field work
- review Environment Agency trapping policy with a view to maximise exploitation of *P. leniusculus*.

The control of non-native species of crayfish - Lead organisation: Cefa

To investigate various methods of controlling non-native species of crayfish, particularly the signal crayfish.

Project title: The control of non-native species of crayfish
Date the form was completed: 27/08/10
Organisation managing project: Cefas, Newcastle University, Portsmouth University
Project Partners:
Funders:
Project type: Feasibility study, field project, outdoor experimental and laboratory study
Key Topics: Barriers against crayfish, improving biosecurity, biology, behaviour and control measures
Species: Signal crayfish
Project Location: Various
Project timescale: On going
Project contact: Dr Gordon Watson, Principal Lecturer and Manager Institute of Marine Sciences School of Biological Sciences University of Portsmouth Ferry Road Eastney Portsmouth P04 9LY UK Tel 023 92845798

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Tel 01305 206621

Website link:

Contact details: See above

Project Summary:

To investigate various methods of controlling non-native species of crayfish, particularly the signal crayfish.

More detailed project description:

Currently we are investigating:

- Potential use of male sterilisation as a form of controlling and potentially eradicating populations of signal crayfish
- The adaptation and development of trapping regimes to control populations of non-native crayfish
- The use of pheromones to enhance trapping programmes