

The aim of the Marine Pathways Project is to:

‘Protect marine biodiversity in the UK and Ireland by managing key pathways by which marine invasive non-native species are introduced and spread.’

The marine pathways project work continues throughout Great Britain and Ireland, carried out by a wide range of project partners and contractors. Here are some updates on the subject of non-native species and on specific project components.

Successful Biosecurity Planning Training Course

A Marine Biosecurity Planning Training Course was held in February 2015 at Orielton Field Studies Centre, Pembrokeshire. The Course tutors were Robin Payne and Sarah Brown.

The course, run over 2 days, was set up to help participants to build the skills and awareness to develop and implement marine non-native species biosecurity plans for marine operations. Designed primarily for marina and port managers the course was also relevant to anyone managing marine based assets or events. The course which was extremely popular and well attended, used a combination of presentations, workshops and a site visit to Milford Haven marina. With places limited to 30 a number of applicants had to be turned away and a similar course run in North Wales or England was requested. Attendees of the course were from a wide range of sectors including ports, large and small, marinas and local authorities.



Course tutor Robin Payne providing practical training at Milford Haven marina.



Training at the Orielton Field Studies Centre.

By the end of the course all of the attendees were well on their way to writing a biosecurity plan for their asset. The accommodation and teaching facilities at Orielton (<http://www.field-studies-council.org/centres/orielton.aspx>) were excellent and ideally located close to the busy Milford Haven Waterway and Port. A pack to enable others to run similar courses will soon be available on the Marine Pathways web pages.

The Dee Chinese Mitten Crab Project

The Dee Chinese mitten crab project, undertaken by Natural Resources Wales (NRW) has drawn to a close with completion of the final draft of the report underway. The project started in 2013 and set out to achieve a number of objectives including public awareness raising and outreach as well as investigating a number of techniques for monitoring and potential control of the species. Mitten crabs were first recorded on the River Dee in 2006 and monitoring of the fish trap at Chester weir has indicated a steady rise in population size, raising concerns related to potential future implications of the species. Outside of their native range, mitten crabs are



The River Dee study site.

Definition:

Invasive non-native species (INNS):

‘A species which has been introduced outside its natural, past or present distribution and has a negative environmental, economic or social impact.’

Case Species:

Carpet Sea Squirt (*Didemnum Vexillum*)



(Image from GBINNS, © CCW)

Native range:

NW pacific.

Impacts:

- Can overgrow existing hard substrate communities potentially reducing biodiversity and altering ecosystems.
- Can foul fishing and aquaculture equipment impacting these industries financially.

known to have a number of economic and ecological impacts that include river bank erosion, fisheries impacts and competition with native species.

The mitten crab project team held a number of outreach events with both the commercial and recreational sectors with the aim of raising awareness about the species, encouraging people to record potential sightings (<http://mittencrabs.org.uk/>) as well as prevent further anthropogenic spread.



The Chinese mitten crab.

The project also sought to investigate a number of existing and novel techniques for the monitoring and control of mitten crab with advice and experience derived from the Natural History Museum London and Bangor University. Techniques included

methods for trapping adult crabs (using modified fyke nets) as they move downstream into the estuary for their annual migration as well as recording various environmental parameters in order to better understand habitat preferences and potential indicators driving population dynamics. Sampling for mitten crab megalopae in the estuary was also undertaken which if successful could act as a proxy for population size in the future.

The modified fyke net and megalopa trapping trials yielded negative results during the project, demonstrating that the population size is low (compared to more established populations such as on the Thames) and is most likely still in 'lag phase' after relatively recent introduction. It is also possible that difficult working conditions and nature conservation designations of the site reduced the effectiveness of some of the methods. Environmental data revealed prolonged periods of low temperatures <math><9^{\circ}\text{C}</math> which is outside the range required for successful larval survival. It is possible that the population is being limited by low winter temperatures, however, future monitoring and a longer term dataset is needed to establish this for certain.

Another monitoring technique included developing a methodology for shoreline juvenile searches which can potentially be used to monitor population numbers in the future. This method proved an excellent way of involving members of the public and contributing to raising awareness about the species.

NRW will continue to monitor the mitten crab records at the Chester fish trap in order to track population numbers, as well as seeking to obtain future funding to develop certain aspects of the project into the future.

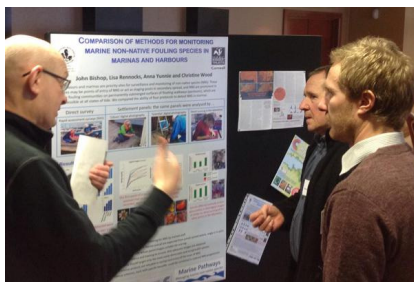
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Marine Pathways Project Conference

A one day conference to share the outputs of the Marine Pathways Project was held on Wednesday 25th February 2015, Cardiff, Wales.

The one day conference focussed on the four main areas of the project – Monitoring, Biosecurity, Management and Control and included talks on:

- The legislative framework underpinning this area of work
- Current monitoring of marine INNS in the UK
- Pathways of introduction hotspots
- Pilot inshore and offshore monitoring networks for marine INNS
- Guidance arising from the project
- Next steps for the project



Conference poster session.

Over 70 people attended from across most of the sectors involved in marine INNS management or industries affected by marine INNS. The morning session was taken up by presentations from the various organisations involved in the Pathways Project with the afternoon focussing of discussion sessions on the main themes of the project. More information on the conference can be found on the marine pathways project webpages (<http://www.nonnativespecies.org/index.cfm?pageid=560>). All the presentations from the day are available on this website and the summaries of the afternoon discussion sessions will be available here soon.



Opening of the conference by NRW Chief executive.

For further information on the Marine Pathways Project please following the link to our web pages hosted on the Non-Native Species Secretariat website: www.nonnativespecies.org/projects/marinepathways

Contact us:

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