

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.

Inshore Monitoring Work in Wales – Progress Update

Over the past year a collaborative project between the School of Ocean Sciences (Bangor University) and Natural Resources Wales has been examining different strategies for monitoring INNS around Wales. The project focuses on inshore areas, such as marinas and aquaculture sites, that are known to be particular hot-spots for INNS introductions. By assessing the effectiveness of different monitoring methods at these locations, the project hopes to develop an effective monitoring approach that enables early detection of marine INNS. Early detection of INNS is important, as it reduces the likelihood of spread, therefore, minimizing impact on ecosystems.

Recently, experimental settlement panels were deployed at Holyhead and Milford Haven marinas and then successfully collected 3 months later. Rapid levels of colonisation and growth were seen on settlement panels. Laboratory based identification of the native and non-native species on these panels is currently in progress. Data from alternative sampling methods will also be analysed. Based on the outcome of this study recommendations will be made, in the spring of 2015, on the most appropriate monitoring approach to take at these vulnerable inshore locations.

Rapid colonisation of settlement panels in Welsh marina (picture courtesy of Katherine Griffith, School of Ocean Sciences, Bangor University).



Survey Of Feral Pacific Oyster population in Scotland

The Pacific oyster (*Crassostrea gigas*) has become the main species of oyster farmed in Europe. Originally native to Japan and North East Asia, it was first introduced for cultivation in the UK from Canada during the 1960s.

Feral populations have become established in the wild, ranging from France north to Scandinavia, however in the UK, established feral Pacific oyster beds have only been identified in the south east of England. Warming coastal seawaters around the whole of the UK may contribute to further developments in this trend.

A survey funded by the Scottish Aquaculture Research Forum (SARF) started in spring 2014 aims to examine the existence, if any, of feral populations (or 'self settlers' rather than geographically displaced individuals, such as displaced from aquaculture or discarded) in Scotland. Intertidal surveys will be carried out at a variety of potentially suitable locations around Scotland to determine if Pacific oysters are present, and record the biological and physical characteristics of the area surrounding any settlement of oysters found. Surveys will take place throughout 2014, with reporting due in 2015. This project will inform the development of policy and management in Scotland to support the sustainable development of Pacific oyster farming and the maintenance of protected sites.

This work has been led by Scottish Association of Marine Science, Scottish Aquaculture Research Forum & Scottish Natural Heritage.



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:

Pacific oyster (*Crassostrea gigas*)



From: Japan and North East Asia

Impact: alters habitat and outcompetes and displaces native species.

Marine Biosecurity Guidelines Published

Following on from the creation of a [biosecurity plan](#) for the Clyde, the Forum has taken the work a step further by publishing, in partnership with SNH, [guidance on how to structure a biosecurity plan for a marine site or specific marine event](#). Already RYA Scotland has used it to create a biosecurity plan for the Commonwealth Games Flotilla which recently brought 250 boats to the inner Clyde.

Sarah Brown, Project Manager of the Firth of Clyde Forum, said:

"It's a continual struggle to keep invasive species, such as the Chinese mitten crab and the carpet sea squirt, from spreading in Scottish waters. Our seas are important in so many ways for both the environment and the economy and we wanted to make it as easy as possible for businesses and individuals to know what to do in response to the new legislation. It is great to see the guidance already in use by RYA Scotland."

James Stuart, CEO of RYAS said, "Creating a biosecurity plan was actually much simpler than we thought it might be. The risk based approach was familiar and easily showed where the practical control points were. We established what the effective measures would be including pre event communications, hull fouling assessment points and a risk assessment based on the salinity of the destination pontoons so even if something did slip through unnoticed we felt confident that none of the salt water loving species could survive long enough to get established in the new areas."



First Scottish Record Of Chinese Mitten Crab From The River Clyde, Scotland

A Chinese mitten crab found in the River Clyde is the very first record of this alien species in the wild in Scotland.

Dr Willie Yeomans, Catchment Manager for the Clyde River Foundation said "This chance discovery by an angler poses a potentially significant ecological threat to the Clyde system which is still recovering from centuries of poor water quality and structural modification. This finding potentially has very serious implications for river management under the EU Water Framework Directive. Our first priority is to follow up the finding with survey work to determine if there is an established population of mitten crabs in the Clyde and we are appealing for information from anyone who may have encountered these animals on the river."



Picture courtesy of FERA

Dr Paul Clark, Natural History Museum added "Recent research undertaken by Royal Holloway University of London and the Natural History Museum suggests mitten crabs can eat salmon and trout eggs. Environmental authorities need to urgently consider what appropriate actions are required to prevent such introductions happening again in the future."

The mitten crab, native to China, was introduced to Germany in 1912 and subsequently spread throughout Northern Europe. It was recorded in the Thames in 1935 and is now well-established in the Rivers Thames, Humber, Medway, Wharfe, Ouse and Tyne. It is thought they were first brought to the UK in ship's ballast water but the origin of the Clyde specimen is unclear. Mitten Crabs are included in the IUCN's list of "100 of the worst alien species in the world".

The Clyde River Foundation, in partnership with the Mitten Crab Recording Project, is appealing for information relating to mitten crabs in the Clyde catchment. Please report any sightings, along with details (date, location, size) and a photograph if possible to info@clyderiverfoundation.org.

For more info about the Clyde River Foundation visit www.clyderiverfoundation.org. For more on the Mitten Crab Recording Project see <http://mittencrabs.org.uk>.

Marine Pathways Project Webpages

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

Upcoming Events:

End of project Pathways Conference

When: 25th February

2015

Where: Cardiff.

Organised by Natural Resources Wales, the conference will showcase project work carried out during the last two years and focus on how the project could be continued into the future.

More information available soon, if you are interested please contact Pat Wilson (Pat.Wilson@naturalresourceswales.gov.uk).

Pathways Biosecurity Training

When: 17th & 18th

February 2015

Where: Pembrokeshire

Arranged by Natural Resources Wales this workshop will provide training for marina operators on the new [Biosecurity guidance](#)

The training will be focused on the needs of marina operators but will also be suitable for people giving advice on biosecurity plans. The training will be free with food and accommodation also provided. More information available soon, if you are interested please contact Pat Wilson (Pat.Wilson@naturalresourceswales.gov.uk).

Contact us:

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