



January 2015

Fishers' Knowledge Questionnaires

The Fishers' Knowledge Questionnaires are now completed and the report will be available this month. Sixty-seven fishers were interviewed, with information pertaining to 77 vessels and 337 current and historical fishing areas. Twenty-nine fishers were interviewed in North Wales, 11 in Mid Wales and 26 in South Wales. Thank you to all the fishers who participated in this project, your contributions were invaluable!



Crustacea

Brown crab – *Cancer pagurus*

New crab forum for science users!



We now are running a *Cancer pagurus* forum. It's an open access, welcoming forum for anyone working on *C. pagurus*. The aim is to create a support network for *C. pagurus* researchers and managers via an internet hub. We hope to make it easier to access knowledge, enhance scientific understanding and facilitate scientific collaboration. At research institutions around the UK, Ireland, France and Norway there are some very exciting projects being undertaken on *C. pagurus*, though there is no single way of knowing what, where and by whom. By using the forum we will be able to let researchers and managers know what work is on-going and what science needs to be done. We

hope to improve communication in the scientific community to move the research forward for this important fisheries species!

To join the forum go to: <http://cancerpagurus.freeforums.net/>

For more information about this forum contact Jodie Haig: j.haig@bangor.ac.uk

Size at maturity study is underway!

We have discussed this study in previous newsletters and now we are well underway, we have collected crabs from around the Welsh coast and they are in the freezers whilst we collect the final few samples. These samples will contribute to the wider study of regional variation in size at maturity for *Cancer pagurus*.

Oliver Tully collected crab samples from Galway Bay, Ireland, in December 2014 and last week we visited the Marine Institute to process them (276 crabs processed for the study). Oliver intends on taking these results for discussion in the next ICES crab working group.



Jodie Haig (Bangor Uni) with Oliver Tully (Marine Institute) talking crabs at the Marine Institute in Galway (left); Julia Pantin and Niamh Ryan measuring and processing crabs in the wet-lab at the Marine Institute (right).

Our current collaborators on the *Cancer pagurus* size at maturity study are as follows:

Matthew Coleman, Kate Walker & Michael Bell, ICIT, Heriot-Watt University, Orkney campus, Scotland.

Laura Johnson, St. Abbs Marine Station, Scotland.

Michael Roach & Mike Cohen, Hull University and Holderness Fishing Industry Group, Yorkshire, England.

Emma Pearson & Paul Hart, GAP 2 Project, Leicester University, Leicester, England.

Oliver Tully, Marine Institute, Galway, Ireland.

Isobel Bloor, Bangor University, Isle of Man.

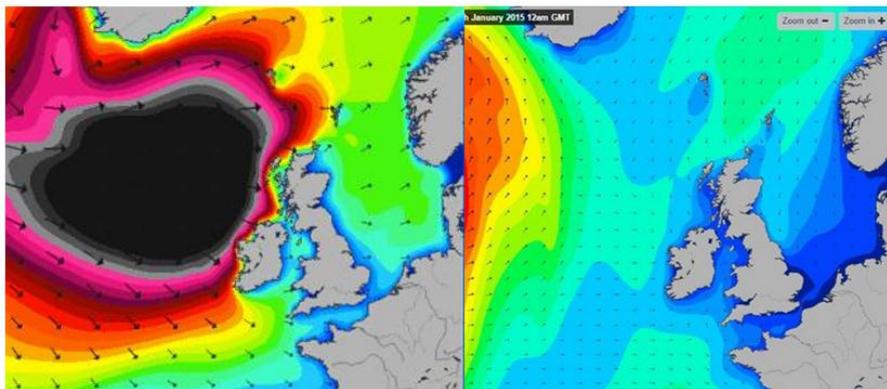
We are excited to work with these amazing researchers from the UK and surrounding countries to create the first collaboration of this kind! The results will inform appropriate minimum landing sizes and provide valuable data for stock assessments. Ideally, size at maturity research should be conducted every 3-4 years on commercially fished stocks. Our in-depth methods combining morphometric, visual assessment and histological validation techniques will ensure that future research is stream-lined, economical and effective. We will also be producing an illustrated laboratory guide: "A protocol for assessing size at maturity for *Cancer pagurus*". This will be a valuable tool for research in the future, making this science easy to undertake and accessible to everyone.

A comprehensive report on the reproductive biology of *Cancer pagurus* will be available online before May 2015.

The visual guide will be available in March 2015.

For more information on this study and the collaboration contact Jodie Haig: j.haig@bangor.ac.uk

Prawn – *Palaemon serratus*



10th Dec '14

19th Jan '15

Data collection for the Cardigan Bay prawn project suffered a series of blows during the December storms, but the new year has brought with it patches of settled weather, meaning offshore sampling in Cardigan Bay has begun for the 2014/15 fishing season. CPUE data from onboard observations will build upon high-resolution catch data being analysed in the Ocean Sciences laboratories in Menai Bridge. The project is beginning to shed light on the key questions and challenges facing the fishery (see Fisheries & Conservation Science report No. 39). The project will inform sustainable fishing practices with a balanced view by combining biological findings with a socio-economic cost-benefit analysis.



A 10mm riddle – what is the optimum riddle size to protect the reproductive potential of the stock? What would this mean for fishing businesses?

January doldrums – The catch (4 kg) from one day's fishing on the 20th Jan. Winter storms meant heavy gear damage and loss of earnings.

The project is also systematically reviewing information in peer-reviewed journals on *Palaemon serratus*, closely related species and their role within the wider ecosystem. The body of knowledge the project is creating will work towards a Marine Stewardship Council (MSC) pre-assessment report, which will be available in May.

For more information please contact the project officers (based in Aberystwyth):

Jack Emmerson j.emmerson@bangor.ac.uk and Georgia Robson g.robson@bangor.ac.uk

Lobster – *Homarus gammarus*

Fecundity and CHN Analysis

Eggs and single pleopods of the European Lobster (*Homarus gammarus*) were collected during the summer months off the Pembrokeshire coast to study the maturity, fecundity (number of eggs) and egg quality of female lobsters.

Egg and pleopod samples were collected from 52 females. The pleopods are yet to be processed and are being retained for further maturity studies. The eggs from each segment (each set of pleopods) of each lobster were weighed separately then subsamples were counted to find estimates of the fecundity of the lobsters with size. A sample of eggs per segment were photographed under a microscope and the eye spot and egg diameter were measured. This is to provide an index of egg development across the summer.

All the lobster eggs collected this summer have now been processed and are currently undergoing CHN (Carbon, Hydrogen and Nitrogen) analysis. This will determine their elemental composition and

provide us with information on the quality of the eggs being produced by the female lobsters.

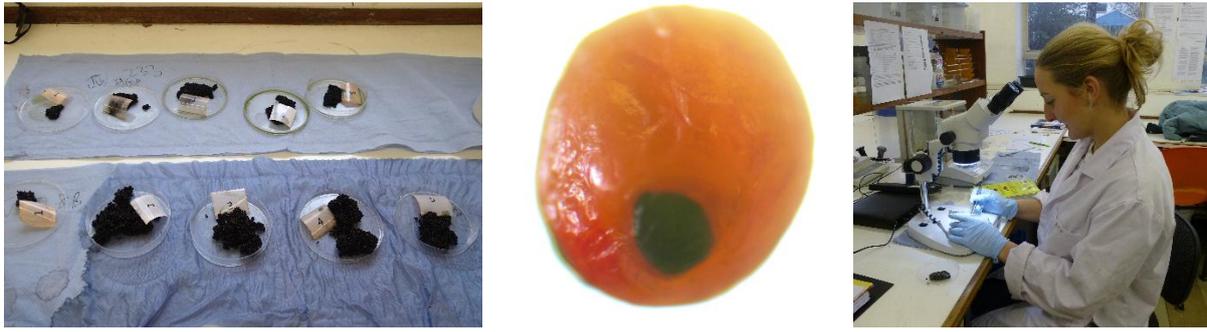


Figure: Lobster eggs laid out ready for processing; a lobster egg under the microscope; Hannah Finch-Saunders processing eggs in the laboratory.



Y Gronfa Pysgodfeydd Ewropeaidd:
Buddsoddi mewn Pysgodfeydd Cynaliadwy
European Fisheries Fund:
Investing in Sustainable Fisheries



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