



## June 2013

This summer will see a packed programme of activity on the Sustainable Fisheries in Welsh Waters project. At present we have four MSc students based in Pembrokeshire and the Llyn working on juvenile edible crab and prawn surveys to try and locate key habitats for these species, and a further four MSc students working on other related aspects of the project (e.g. lobster genetics). We hope that this will extend the work we did last year to build a juvenile recruit index that will provide an indicator of the health of the populations in Wales. We have a busy season of sampling at sea with more than 50 days of scientific survey planned.

Professor Michel Kaiser – Head of the Fisheries & Conservation Science Group

### **Fisher questionnaire**

The fishers' knowledge questionnaire software development is complete and will be ready for use next week. The EFF staff need to be trained in how to use it and then interviews can commence. We will be looking to schedule fishers for interviews in the coming weeks. **Please spread the word and contact Julia if there is anything you would like us to know about Welsh fisheries!**

Email – [j.pantin@bangor.ac.uk](mailto:j.pantin@bangor.ac.uk)

Or you can register on our website – just click on the 'Get involved' link at:  
<http://fisheries-conservation.bangor.ac.uk>

### **Economic questionnaire**

We will also be carrying out an economic questionnaire. The general aim is to estimate the economic performance of the commercial fleets operating in Welsh waters, and to relate this with the exploited fishing areas, and to estimate the cash flow generated.

We will be carrying out the fisher questionnaire across Wales from July until October. **We need you to get involved. If you are interested in participating then please register via the website or email Giulia - [g.cambie@bangor.ac.uk](mailto:g.cambie@bangor.ac.uk)**



### **Crustacea**

**Lobster Escape Hatch Study in Cardigan Bay**

As part of her PhD, Research Assistant Julia Pantin is investigating the use of lobster escape hatches in the Cardigan Bay lobster and crab fisheries. This study is in collaboration with the Cardigan Bay Fishermen's Association and aims to:

1. Determine the optimum size of lobster escape hatches that maximises the whole catch
2. Determine the percentage loss of bycatch with lobster escape hatch use and the economic consequences of this
3. Observe the behaviour of targeted species within and around pots with and without lobster escape hatches

This study will trial two sizes of escape hatches; one chosen to retain 87mm lobsters and 130mm brown crabs, and one chosen to retain 90mm lobsters and 130mm brown crabs, and will take place over four weeks. The potting is set to commence in July. The pots and escape hatches have been ordered and on-board camera systems are being built.

In addition to the potting undertaken by the four fishers involved, Julia will also be designing a camera system to film inside the pots to address the following questions:

1. Are undersized target species using the escape gaps?
2. What percentage of individuals entering a pot is actually caught?
3. Is cannibalism occurring on undersized target species in pots without escape gaps?

### **Lobster**

This summer we have two students carrying out projects with us looking at lobsters. Kayla Williams will be looking at the moulting process whilst Niamh Ryan will be looking at size at maturity. Kayla and Niamh have already started their sampling and initial results will be written up by the end of September.



Lobster tagging has started with a small pilot study in which we tagged 121 lobsters. The rate at which we recapture any of these tagged lobsters will allow us to calculate what numbers we will need to tag for the main study. Thanks to Brett Garner for helping us with this. With the slow start to the lobster season we aim to carry out the main tagging study in July when the water temperature warms up a bit more. We have also tagged some lobsters which have been kept in tanks to look at survival and tag retention. So far survival looks good. Thanks to the Lobster Pot Restaurant for their collaboration ([www.thelobsterpotrestaurant.co.uk](http://www.thelobsterpotrestaurant.co.uk)).

### **Brown crab**

Jodie attended the ICES working group for Crab Stock Assessment in Dublin where she met with people who work in various fisheries departments from around the world and the UK to discuss the best methods for assessing crab stocks.

Berried brown crabs: some potters find that a considerable number of berried hens can be caught in pots through the winter. We are very interested in hearing from any fishers that catch berried hens and might want to be involved in a pilot tagging study. Some whole berried hens have already been provided by fishers and these have been processed and will stay in the freezer until we can get a good sample together (with more samples to come from this coming winter) to undertake a paternity (who's your daddy) and maternal provisioning (how much energy does mum put into her eggs) study.

### **Prawns**

Prawn samples are still trickling in. However, it has been difficult to engage with industry and also to obtain prawn samples as the weather has been bad and currently not many people are fishing prawns. We are still interested in having scientific pots out. Jodie would very much like to hear from any fishers that are able to fish scientific prawn pots leading up to the fishing season.

We have two students this summer working on a prawn recruitment study. They are netting and potting inshore around Anglesey, the Llyn Peninsula and Pembrokeshire to assess the population dynamics, sex ratio, habitat specifics and also the timing of recruitment pulses of *Palaemon serratus*.

### **On-board camera**

Natalie and Jodie have visited lots of fishers around Wales to measure up boats for the on-board video system. We're currently completing our trials and validations. Soon the on-board camera will be capturing the sex ratio and size frequency of landed and returned crab and lobsters. Fishers with a camera will also fish 5 scientific pots which will standardise video data and also provide samples for a size at maturity study for edible (brown) crab.



### **Scallops**

The survey for the scallop stock assessment has been planned and a dispensation request for sampling has been sent to Welsh Government. The survey will occur between the 22nd of July and 12th of August, on the main scallop grounds, north-east of Anglesey, off the Llyn Peninsula and in Cardigan Bay, with the RV Prince Madog. Some work will also be conducted on the queenie grounds between Anglesey and the Isle of Man. The scallop survey may further be combined with an elasmobranch survey, targeting skates and rays. Fishers will receive note of the survey as soon as it has been approved and will be asked to get in touch if they have any advice or worries about gear conflict in any of the locations that we are aiming to sample (with dredges and otter trawl).

The report on habitat status of part of the western side of the Cardigan Bay SAC has been completed and is currently under review. It has been submitted to the Welsh Government and emailed to all our contacts in the scallop industry. An appropriate assessment will be carried out to look into the

possibility of conducting a fishing intensity experiment in the area.

Scallop summer sampling from fishing vessels to find out the timing and location of spawning has not started yet but the dispensation requests are with Welsh Government and NRW. They are being reviewed and we hope to be able to get started very soon.



### **Finfish**

Laboratory analysis to look at the male: female ratio and maturity stage of sea bass has been carried out on the first samples of sea bass provided by fishers in North Wales. We have also carried out trials to take blood samples from sea bass for hormone analysis. This proved unsuccessful as an alternative to estimate the male: female ratio and maturity stage. This was due to the difficulties in finding the aorta without externally damaging the fish. Thank you to Anglesey Aquaculture LTD at Penmon (<http://www.angleseyaquaculture.com/>) for the great collaboration.

We are planning a skate and rays survey this July 22<sup>nd</sup> for one or two weeks using the RV Prince Madog. The cruise plan has been prepared. The survey will collect samples along the whole coast from North to South. Fishers will receive note of the survey as soon as it has been approved and will be asked to get in touch if they have any advice or worries about gear conflict in any of the locations which we are aiming to sample. Our MSc student Graham Monkman has written the software specification for the future web diary that will be useful as an electronic logbook for Recreational Sea Anglers (RSA). He is currently investigating what the most useful data entry is for RSAs.

### **Whelks**

Jodie Haig is currently working with Whelk fishermen between Swansea and Anglesey to assess the size frequency, sex ratio, maturity and other biological parameters of whelks and how that changes regionally. She has been in the lab processing the whelks with volunteers and our research assistants. It's a smelly job but someone has to do it! We've been able to feed the biological data back to the individual fishers about their catch. We are still hoping to engage with whelk fishers from Cardigan Bay and anyone who fishes between Fishguard and Swansea to fish two scientific whelk pots to contribute to the study.



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



Llywodraeth Cymru  
Welsh Government