



# FISHERIES & CONSERVATION SCIENCE GROUP

## NEWSLETTER

ISSUE 1 DECEMBER 2012

Welcome to the first issue of our newsletter for the Fisheries & Conservation Science Group.

With only 10% of Welsh fishers working offshore, the Welsh fishing industry is primarily an inshore fleet. It is therefore reliant on the sustainability of its local stocks.

There is little information on the distribution, abundance and biology of target species. This is needed for sustainable management plans.

This project aims to provide a platform for scientists and fishermen to work together to gather the data necessary to ensure the future of the Welsh fishing industry.

The project will also collaborate with Welsh Government, the Countryside Council for Wales, CEFAS and Aberystwyth University.

## LATEST NEWS:



### PATERNITY TESTS FOR LOBSTERS

Are European female lobsters as promiscuous as their American counterparts?

Pilot project underway to collect lobster eggs for genetics to test if European lobsters show multiple paternity.

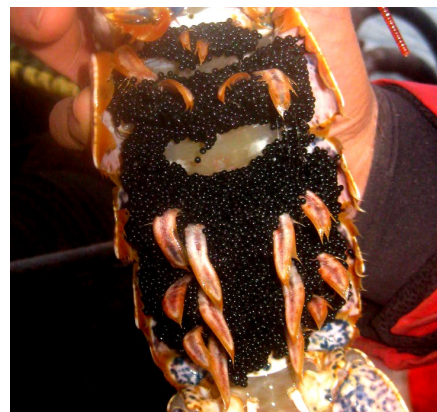


Image - Berried female *H. gammarus* (Harriet Salomonsen)

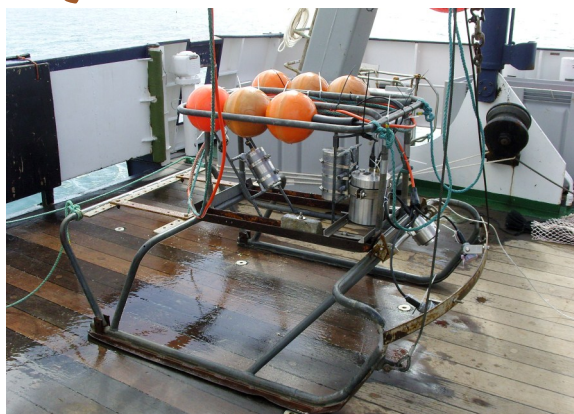


Image - Camera sled ready to be deployed (Hilmar Hinz)

### MAPPING HABITATS OF SCALLOP FISHING GROUNDS

Scallop habitat surveys carried out by fishers and scientists using a newly developed versatile underwater camera system aim to fill knowledge gaps in Cardigan Bay.

### SKIDS FOR SCALLOP DREDGES

Can scallop dredges be improved to reduce their environmental impact? Sea trials of skids attached to NH-dredges have been carried out to test their commercial performance.



Image - Steel skids attached to scallop dredges (Harriet Salomonsen)



PRIFYSGOL  
**BANGOR**  
UNIVERSITY

### FIND OUT MORE:

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



## FOREWORD



The Welsh Fisherman's Association – Cymdeithas Pysgotwyr Cymru Ltd (WFA-CPC) are pleased to be associated with Bangor School of Ocean Sciences and the EFF Project "Sustainable Use of Fisheries Resources in Welsh Waters". The scientific surveys outlined within the Project work packages are essential to inform the future management of fisheries and the Welsh marine environment.

In these uncertain times scientific evidence will be the foundation on which we can collaboratively future proof our industry. The WFA-CPC fully supports Bangor School of Ocean Sciences in this project, the aims and objectives, including the innovative methods being developed to collect valuable data on a variety of species of importance to Wales. This includes the participation of fishermen in collecting data for stock assessments, with remote methods that capture the data necessary without impacting on their working day. This work will be a keystone to the successful management of Welsh marine resources, an area which has historically been data deficient in Wales.

The WFA-CPC would strongly encourage industry participation in this unique opportunity to actively contribute to an extremely valuable data set that will ultimately be owned by industry and added to beyond the project term. The project has its own website ([fisheries-conservation.bangor.ac.uk](http://fisheries-conservation.bangor.ac.uk)) which is full of useful information, videos and reports generated by the science. Fishermen can sign up for email alerts of news and reports as they arise.

We would like to wish Mike Kaiser and the Bangor School of Ocean Sciences Project Team every success with this challenging undertaking.

Jim Evans



## SCALLOP FISHERIES

### SKIDS FOR SCALLOP DREDGES

Scallop dredging can damage non-target species and habitats. Besides the tooth bar, the belly bag causes damage while being dragged along the seabed. Ewout Costerus of Cyclone Marine Ltd. with Dr Hilmar Hinz through the SEACAMS project have been developing a potential solution to mitigate the impacts of the belly bag. By attaching sets of steel skids to the underside of the bag it is lifted clear of the ground, potentially reducing damage on benthic fauna. Additional potential advantages are the reduced wear on bellies and decreased fuel consumption due to lower drag.

The first set of sea trials have now been carried out to test the commercial performance of these attachments thanks to Mark Roberts, Len Walters and their crews. In these trials the performance of standard dredges were compared to dredges with skids. Data collected included the amount and size of scallops caught, by-catch composition and warp tension. While these initial tests were successful further testing will be required. If you want to participate in the next trials please get in touch. The results of the first trials will shortly be available on our website.



# SCALLOP FISHERIES

## FISHER UNDERWATER CAMERA SLED SURVEYS

Habitat information over fishing grounds is often incomplete and can cause conflicts of interests with other marine stakeholders. To increase our knowledge of habitats it is vital that more information is being collected with the involvement of the industry. Currently we are developing an underwater video system that can be deployed from small boats by fishers. A first trial of deploying this new underwater camera system mounted on a small sled was conducted in Cardigan Bay. A total of 16 sites have been surveyed so far thanks to help from Len Walters closing some of our knowledge gaps.

## HABITAT SURVEY & STOCK ASSESSEMENT

The first scallop stock assessment and habitat monitoring surveys have been successfully carried out. Areas from Liverpool Bay down to Cardigan Bay were surveyed. The initial results for the scallop stock assessment carried out in June are now available in Report No. 18 (downloadable on our website). The data for the habitats survey are currently being processed and will be available on the website once completed .

## HOW TO GET INVOLVED:

If you want to participate in any of these activities

1. Conduct skid gear trials to reduce by catch and increase efficiency of dredges
2. Carry out habitat surveys using our new underwater camera sled
3. Collect data for scallop stock assessments/fishing intensity—Red Bag Scheme

Please Contact: **Dr Gwladys Lambert** ([g.lambert@bangor.ac.uk](mailto:g.lambert@bangor.ac.uk)).

Several initial meetings have been held to introduce ourselves, the work we are planning, and how you can get involved with the science. A meeting in Cardigan Bay is still outstanding but should be underway shortly.



# ALL WELSH FISHERIES

## FISHER SURVEYS

### What are we doing?

We are planning to conduct a fisher survey to learn about present and past fishing patterns as well as learn about the local ecology of the target species.

### Why are we doing this?

The data collected should provide a baseline to assess the spatial activity of fishing around Wales and should give us more of an insight into the local ecology of target species. The precise extent of fishing grounds for example is important for the design of appropriate stock assessments with the industry. Additionally the results of the questionnaire should provide the industry with an activity inventory throughout Wales and highlight the importance of different fishing grounds.

### HOW TO GET INVOLVED:

Surveys will be held across Wales starting in January and continuing for a few months until spring. The times and dates will be available on the website.

Please email [fisheries@bangor.ac.uk](mailto:fisheries@bangor.ac.uk) with the subject title **Fisher Survey** if you have any questions or want further information.

# POTTING

## PATERNITY TESTS FOR LOBSTERS

### What are we doing?

We are currently collecting tissue samples from berried females along with samples of their eggs. We will carry out genetic tests to reconstruct paternities and estimate the number of males contributing to the fertilisation of the females in an area. This will also allow us to see if females mate with more than one male - multiple paternity.

We are hoping to compare the number of males fertilising females from commercially fished areas to the number of males fertilising females in areas closed to commercial potting, such as Lundy Island.

### Why are we doing this?

Understanding the reproductive and mating behaviour of a species is vital for fisheries management decisions.

V-notching of females protects the reproductive females. However it can also result in a bias with a higher number of male lobsters being landed.

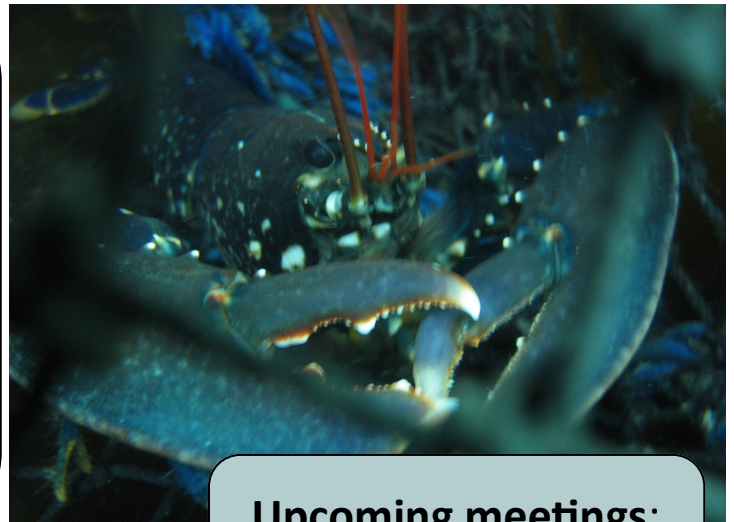
This study will enable us to understand if V-notching changes the mating behaviour of lobsters when it alters the ratio of large females to large males.

### In the future...

This is a pilot study using samples collected from the Llyn Peninsula. We hope to have the results in the New Year. We will then roll it out across Wales in spring and summer 2013.

## On board camera catch composition monitoring

Traditionally to conduct stock assessments for pot fisheries on board observers are required. We are currently looking at the possibility of using an on board camera system to gather catch data as we realize that having observers on board is often unfeasible and only provides limited temporal and spatial coverage. The camera system trialled should provide us with information on catch, undersized catch and the ratio of male and female crabs or lobsters in pots.



### Upcoming meetings:

January 2013—Science Advisory Group Meeting

### HOW TO GET INVOLVED:

If you want to get involved in:

1. Providing berried females for egg collection
2. Volunteering to take part camera monitoring

Please contact Dr Natalie Hold ([n.hold@bangor.ac.uk](mailto:n.hold@bangor.ac.uk)) or Dr Jodie Haig ([j.haig@bangor.ac.uk](mailto:j.haig@bangor.ac.uk)).





# MEET THE TEAM...



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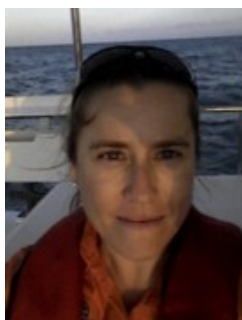


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