

# Razor clam trial fishery – science update



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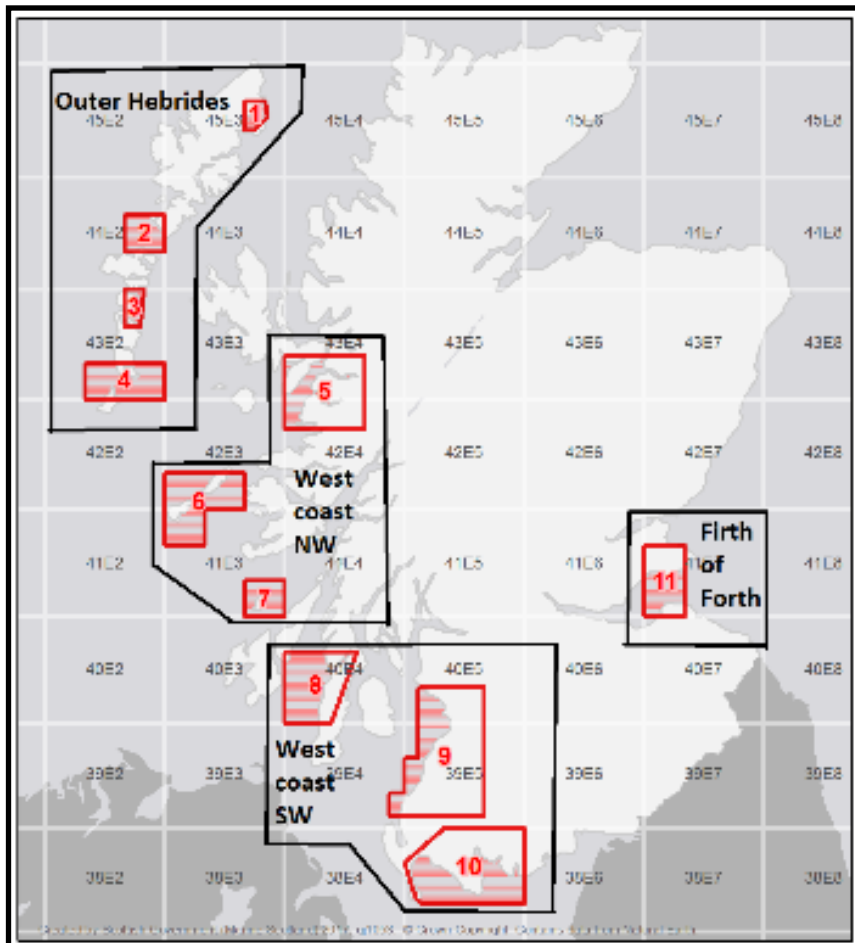
# Objectives of the trial

## Biological and Ecological Goals:

- to gather **local level information on razor clam populations and stocks**, including accurate data gathered by trial participants to supplement stock survey work
- to ensure **sustainable harvesting** levels
- to gather further information about the **impacts of the electrofishing method** on target and non-target species

# Overview

- Started in 2018
- Up to 28 vessels
- Trial areas around Scotland



Photograph courtesy of Clive Fox

## Biological information

- Live samples
- Self sampling
- Surveys
- PhD projects

## Fisheries data

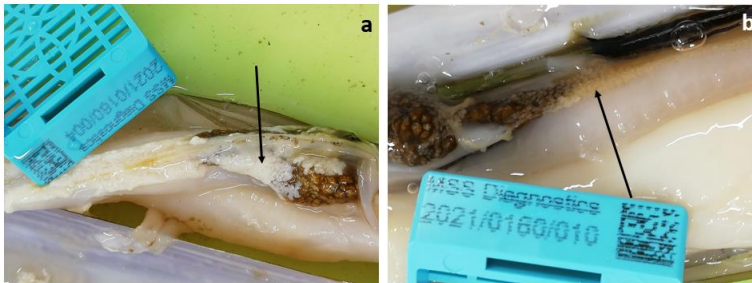
- Remote electronic monitoring
- Landings and effort
- Spatial analysis
- Fishery footprint



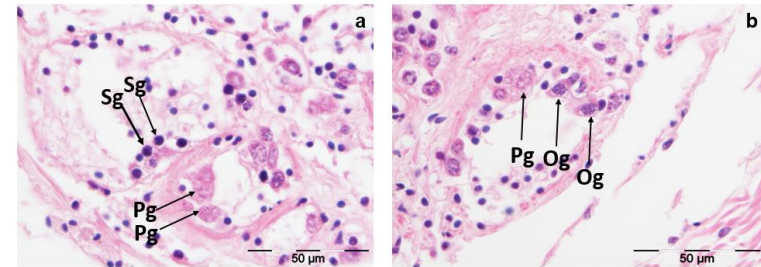
Photographs used with permission and thanks to trial participants

To gather local level information on razor clam populations and stocks, including accurate data gathered by trial participants to supplement stock survey work

# Spawning Times

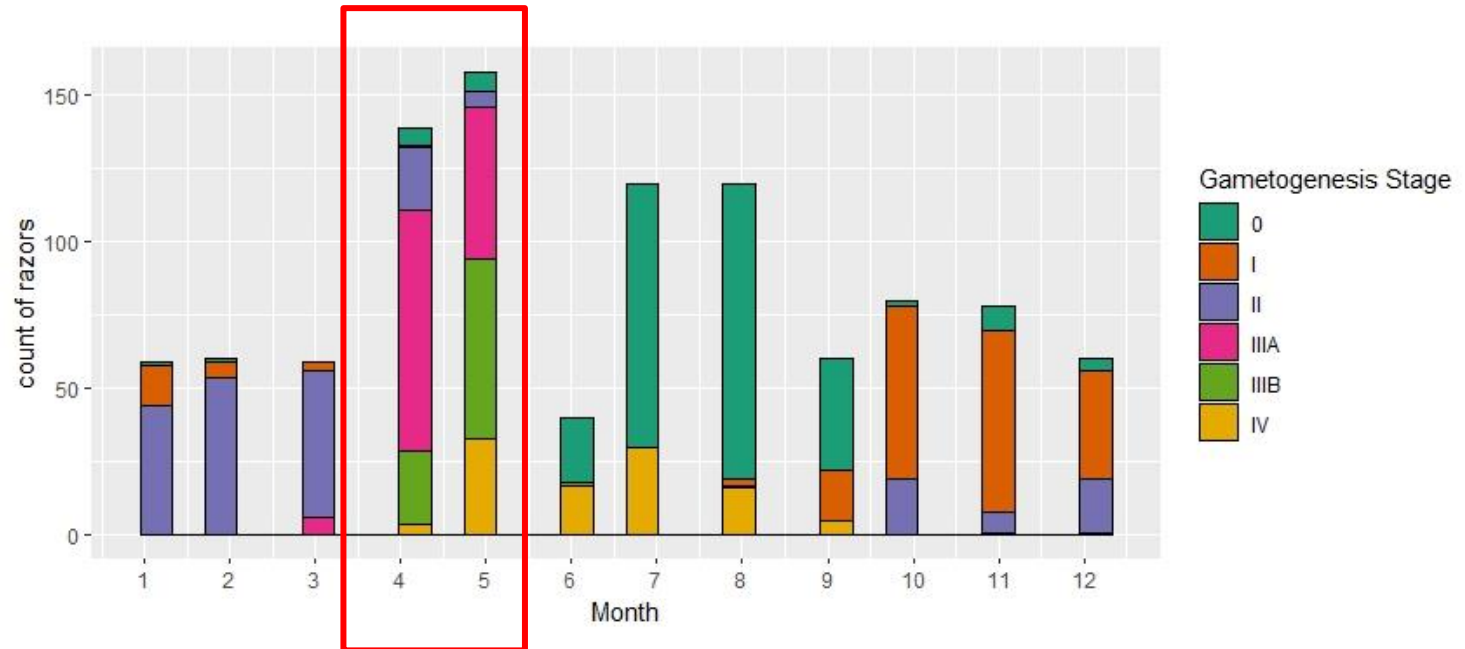


a) Female gonad; b) Male gonad



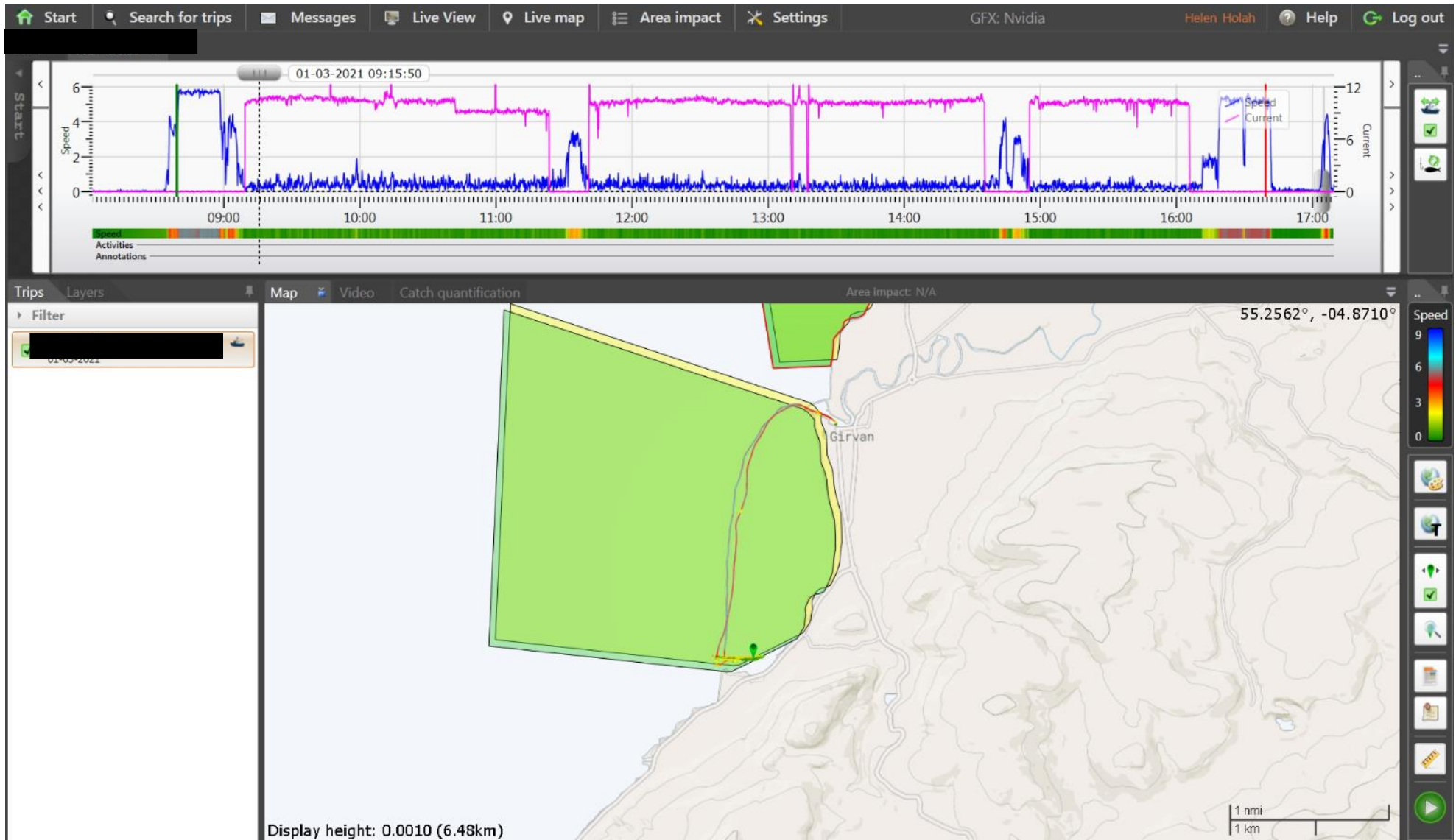
a) Male gonad; stage '0'; b) female gonad; stage '0'. Pg: protogonia; Sg: spermatogonia; Og: ovogonia.

Potential  
time of  
closure?



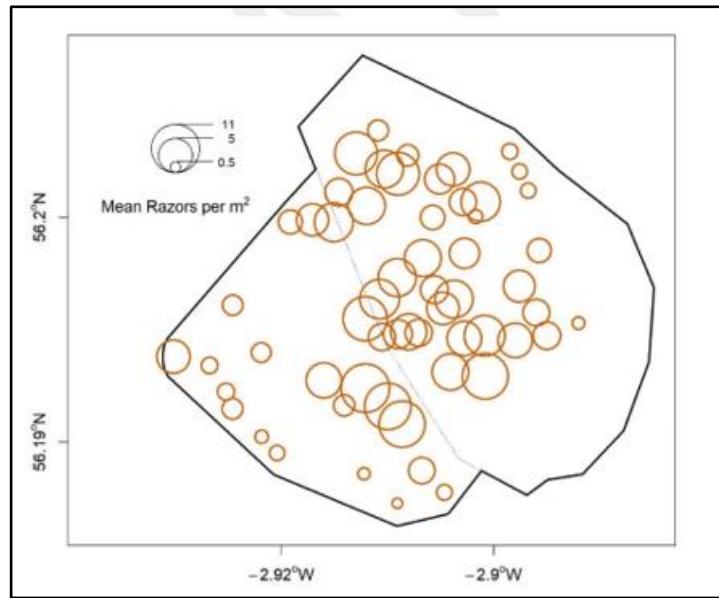
The gametogenesis stages of razors as estimated by histological sampling by the month of sampling. Gametogenesis stage IIIA and IIIB is the ripening and spawning stages of razor clams which equate to sexually mature razor clams.

# Remote Electronic Monitoring

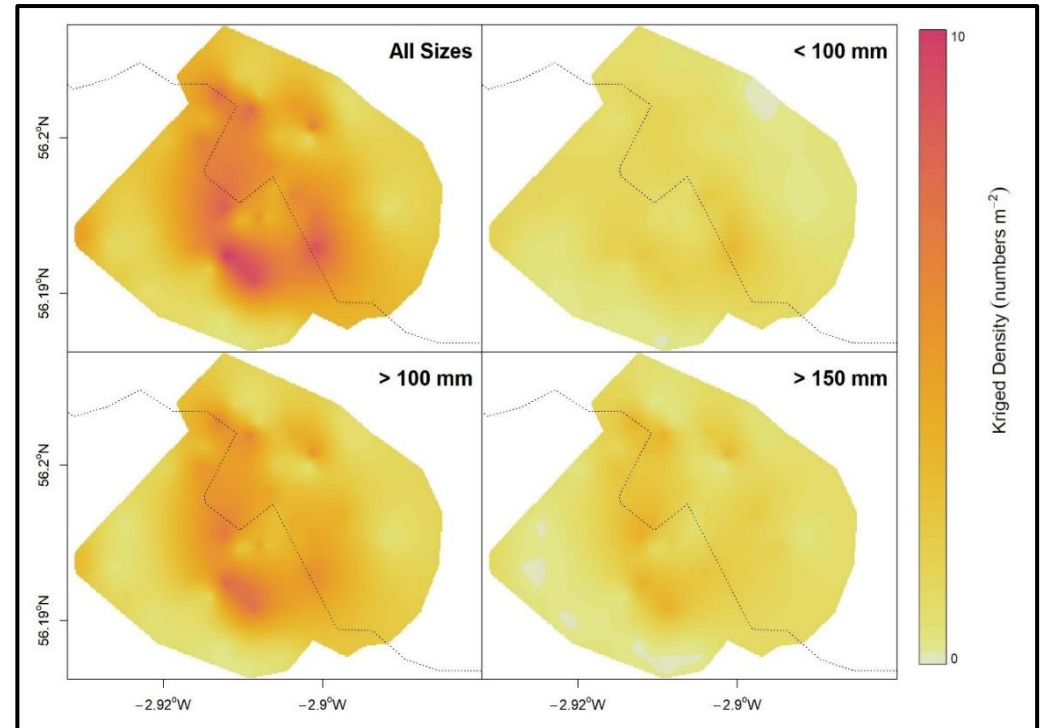


- To ensure sustainable harvesting levels

We can use geostatistics to generate **survey-based estimates of abundance.**



Swept-area razor clam density estimates, by size category (from survey data).



Kriged surfaces of density and a kriged mean abundance (numbers m<sup>2</sup>).

# Next steps

- Further collection of self sampling data
- Complete stock assessments
- Continue supervision of PhD study
- Advice and support for potential future surveys
- Collate data into one database
- Report on science objectives

## Thank you

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