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## **MFV Altaire**

Survey 0219H

## **PROGRAMME**

16-29 April 2019

## **Ports**

**Loading:** Ullapool, 16 April 2019

**Unloading:** Ullapool, 29 April 2019

In setting the survey programme and specific objectives, etc the Scientist-in-Charge needs to be aware of the restrictions on working hours and the need to build in adequate rest days and rest breaks as set out in Marine Scotland's Working Time Policy (Lab Notice 34/03). In addition, the Scientist-in-Charge must formally review the risk assessments for the survey with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Survey Report, to I Gibb and the Survey Summary Report (old ROSCOP form) to M Geldart, within four weeks of a survey ending. In the case of the Survey Summary Report a nil return is required, if appropriate.

**Out-turn days per project:** 14, RV1604.

**Fishing/Sampling Gear:** Gulf VII plankton sampler

## **Objectives**

1. To carry out mackerel egg survey (ICES Triennial Survey), on the western shelf and slope in the area from 55° N to 60° N (see Figure 1).
2. To collect fish samples, by trawling, for atresia and fecundity analysis back at the laboratory.

## **Procedures**

Loading will be completed upon arrival into Ullapool late on the morning of 16 April. Most of the scientific equipment was retained on board from the previous survey (0119H) and so once on board, time allocated for vessel preparation should be minimal. Upon completion of this, and after flowmeter calibrations are undertaken in outer Loch Broom, *Altaire* will proceed to the first plankton station due North of the Butt of Lewis at 58° 45N, 6°15W. A further station will be undertaken due west of here at 58° 45N, 6°45W before taking a SW course down as far as 58° 15N, 7°15W from where a westerly transect will be taken west until zero eggs are found. Thereafter, *Scotia* will be required to undertake some stations on and around the Rockall Trough and Bank before heading back onto the shelf edge west of the Hebrides to resume surveying northwards for the remainder of the survey. The progress of the German survey south of us may also have an impact on the overall survey plan. Although Figure 1 provides a likely survey outline it must also be accepted that this is highly provisional and as always the final extent and survey route will be dictated by the behaviour of the mackerel as well as the progress of the adjacent survey. Irrespective of the final survey route *Altaire* will arrive back in Ullapool for first thing on 29 April. Unloading will take place shortly after with both Gulf VII samplers together with a large proportion of the scientific equipment being

unloaded, as it is will be required on *Scotia* during the next mackerel egg survey on the 8 May (0719S).

Survey transect spacing will typically be at 30' intervals latitudinally with stations on the transects at 30' E/W intervals. Plankton stations will be taken using the Gulf VII sampler with mounted Seabird 19+ CTD which will record salinity and temperature during the deployments. The plankton tows will require the vessel to deploy at and maintain a steady speed of 4 knots. The sampler will be lowered at a steady rate (6m/min) from the crane to within 5 m of the seabed or 200 m – whichever is shallower. The sampler will then be recovered at the same speed. Once aboard, plankton samples will be washed into the sampler net before being removed, fixed in formalin and scored for egg abundance. Trawl samples will be taken at the discretion of the scientist in charge. There should be a maximum of eight trawls for the whole survey, and will usually be taken at or adjacent to the shelf edge. The precise length of each transect cannot be defined in advance as this survey uses an adaptive design, where sampling on a transect will continue until zero or very small numbers of eggs are found.

Normal contact will be retained with the laboratory throughout, and with other vessels taking part in the survey.

Submitted:  
F Burns  
8 April 2019

Approved:  
I Gibb  
15 April 2019

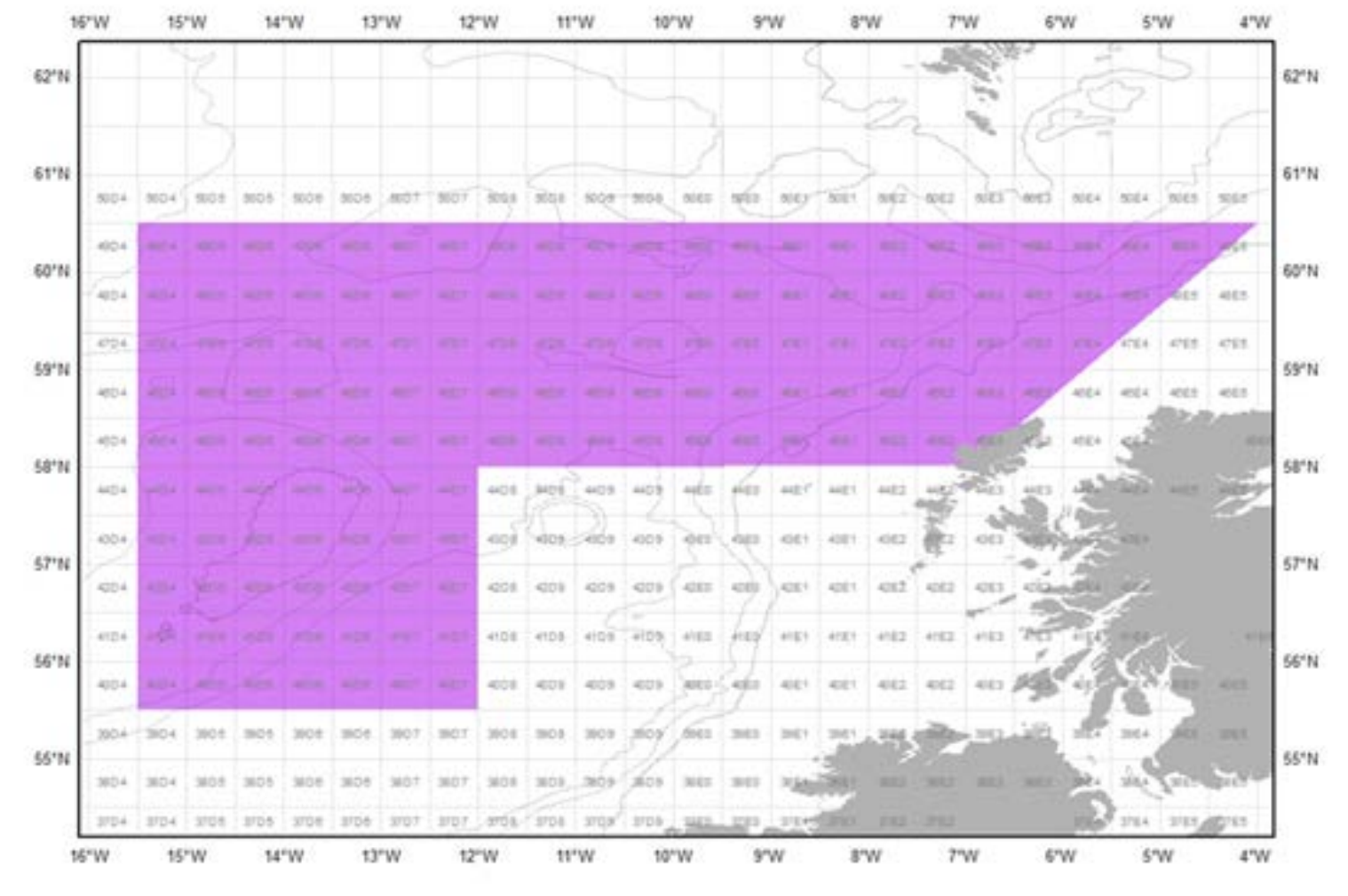


Figure 1: Map showing proposed survey area for 0219H.