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MFV Altaire (LK429)

Survey 0222H: Mackerel Egg Survey Period 4 2022

PROGRAMME

12-27 April 2022

Ports

Loading: Peterhead, 12 April 2022

Unloading: Peterhead, 27 April 2022

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: 16 – MACEGG/20674

Fishing/Sampling Gear

Vessel's own pelagic trawl

Gulf VII plankton sampler with mounted RBR Concerto³ CTD

Objectives

1. To carry out Atlantic mackerel (*Scomber scombrus*) and horse mackerel (*Trachurus trachurus*) egg survey (ICES Triennial Survey), on the western shelf and shelf edge in the area from 54.5°N to 61.5° N (Figure 1).
2. To collect fish samples, by trawling, for atresia and fecundity analysis back at the laboratory

Procedure

After sailing from Peterhead, the vessel will proceed to the first plankton station line at 58° 45'N 8°15'W. Subsequent stations will be taken along the same line west at 30' intervals. Thereafter, transects will be separated (to the north or to the south as appropriate) by 1° with stations at 30' E/W intervals. Plankton samples will be taken using the Gulf VII sampler with mounted CTD to record salinity and temperature parameters during the tow.

The plankton tows will require the vessel to deploy the sampler at a constant four knots then proceed to tow it at the same speed. While towing, the sampler will be lowered at a steady rate (10m/min) from the plankton 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 from the sampler net, fixed in formalin following which target eggs will be identified, staged and scored for abundance. Trawl samples will be taken at the discretion of the scientist in charge in conjunction with the skipper, and will usually be taken at the shelf edge during the hours of darkness to obtain samples of mature mackerel and horse mackerel. It is expected that there should be a maximum of twelve trawls for the whole survey.

As well as those of Atlantic mackerel and horse mackerel, eggs from european hake (*Merluccius merluccius*) and white ling (*Molva molva*) will also be identified, staged and scored for abundance.

Note that the precise length of each transect cannot be defined in advance as this survey uses an adaptive design, where sampling along a line will continue until there are no eggs or very small numbers of eggs encountered. The overall survey plan will be dictated according to the results that are recorded as the survey proceeds.

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

Submitted:
J Drewery
06 April 2022

Approved:
I Gibb
11 April 2022

Figure 1: Nominal overall survey area for 0222H. The exact extent of survey will be heavily dependent on egg catch.

