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MRV *Scotia*

Survey 1622S

PROGRAMME

6-11 November 2022

Loading: Aberdeen, 03 November 2022

Sailing: Aberdeen, 06 November 2022

Half landing: N/A

Unloading: Aberdeen, 11 November 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.

Estimated days by project: 6 days, 20724

Gear

2 x towed UWTV sledges

2 x 600m copper umbilical towing cable and associated TV equipment, plus back up

1 x Scotia BT175 80mm prawn trawl

USBL transponder

2 sets SS4 Scanmar door sensors and chargers

Objectives

1. To obtain estimates of the abundance and distribution of *Nephrops* burrow complexes in the Firth of Forth and at Devils Hole.
2. To use the TV footage to record the occurrence of other benthic fauna as well as evidence of commercial trawl activity.
3. To collect sediment samples at each UWTV station.

Procedure

After sailing the vessel will head south to the Firth of Forth. On route approximately 300 m of the UWTV umbilical cable will be spooled off the winch and towed behind the vessel using a large buoy (ship's equipment) to apply back tension - this avoids the build-up of loose turns during the survey. Once in the Firth of Forth, a calibration deployment will be carried out and there after surveying the UWTV sites will begin. The most efficient and/or appropriate route in which to survey the sites will be dependent on the local weather and sea conditions at the time.

Once all the Firth of Forth sites have been surveyed, the vessel will head towards the Devil Hole where a number of fixed stations will be surveyed before the vessel returns to port ahead of unloading in Aberdeen.

Some amendments maybe required to this plan during the survey as a result of poor weather or other uncontrollable factors.

UWTV Objectives

Throughout the survey, sledge deployments and TV observations will be carried out 24 hours a day, weather permitting.

There will be three teams with two staff on each team, with each team will work an eight hour shift on deck and will be involved in deploying and recovering the TV equipment, recording data and liaising with the ship's compliment. Additional work involving data entry and video reviewing will be conducted outwith this eight hour shift and during long transit periods. These tasks will not require working on the deck.

All work will be carried out in accordance with WTR regulations.

At each TV station a video camera mounted on to the sledge which will be towed along the seabed for approximately ten minutes at approximately 0.7 knot and in to the tide – the ship's dynamic positioning will be required for this. Observed *Nephrops* burrows, individual *Nephrops* and other benthic fauna will be recorded onto DVD for later analysis. The depth and distance travelled by the sledge, as well as camera height from the seabed will be recorded automatically.

The location of each UWTV station will be provided prior to sailing.

Sediment Objective

Obtaining sediment samples will be attempted using a van Veen sampler mounted on the sledge, to be deployed at the end of each sledge run. Samples will be frozen and no chemicals will be involved.

Trawling

The *Nephrops* trawl will be loaded and used as an alternative to UWTV work only when the weather is deemed unworkable for camera equipment yet safe enough for trawling to be undertaken. Although trawl data is of high importance and valuable for advice purposes, due to the limited time on this survey, the camera work takes precedence.

Trawl caught samples of *Nephrops* will be collected and information on size composition, maturity and morphometrics will be recorded. Trawls will be no longer than one hour and carried out at either dawn or dusk.

Any litter collected in the trawl will be recorded as set out in the SOP and placed in bags to be disposed of on return to port.

Any catches of skate will be recorded, measured and photographed.

If used, there will be a requirement for the trawl to be cleaned by 'streaming' it behind the vessel at the end of the survey.

No chemicals for scientific work will be required during this survey.

During the survey, normal contacts will be maintained with the Laboratory.

Submitted:
A Weetman
19 October 2022

Approved:
I Gibb
03 November 2022