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MV Shjandur

Survey 0618H first part

REPORT

09 -11 July 2018

Loading: Loch Spelvie, Isle of Mull 09 July 2018

Boarding: Loch Spelvie, Isle of Mull 09 July 2018

Unloading: Loch Spelvie, Isle of Mull 11 July 2018

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.

Personnel

J. Thorburn (St. Andrews Uni) SIC

Project: 3 days (return to port each day)

Gear

1 x VR100 + hydrophone
10 x acoustic VR2AR receiver units
10 x 60 kg ballast blocks
10 x Acoustic release rope cannisters
30 x 11 inch hard floats

Background and Objectives

0618H aimed to deploy 10 acoustic receiver units within the Loch Sunart to the Sound of Jura Marine Protected Area (MPA). These units communicate with and record the presence of transmitter tags attached to flapper skate (*Dipturus intermedius*), a designated feature of the MPA. The tags transmit a unique ID, allowing the identification of individual tagged skate, the receivers record the presence of the tag in the form of a date and time stamp along with the unique ID number. Tags communicate with receivers up to a distance of approximately 500 m. The main aim of this project is to see how long individual skate remain within the Loch Sunart to the Sound of Jura MPA over a long period of time as this site is designated for the conservation of the common Skate. The receivers are retrieved via acoustic release from a VR100 unit from a vessel. The range that this can communicate with the receivers varies based on local

conditions. It should be established that the receivers are communicating with the VR100 and at what range this communication is viable over.

Specific survey objective is as follows:

1. Deploy 10 Acoustic receivers (Vemco VR2AR) within the Loch Sunart to the Sound of Jura Marine Protected Area
2. Undertake initial range testing check.

Narrative

Personnel and equipment loaded and unloaded at Loch Spelvie daily during survey

The deployment procedure for all receivers was as follows:

- 1) Vessel steamed to station site (Figure 1, table 1) and positioning itself facing the tidal current.
- 2) Ballast lowered over the side of the vessel to below water line on a rope.
- 3) Receiver and rope cannister (one unit) lowered into the water and set free to drift behind the vessel until leash connecting the unit to the ballast was tight.
- 4) Station location confirmed, if vessel had drifted, return slowly to station site.
- 5) Release ballast to sink the receiver.
- 6) Steam 500m upstream of station.
- 7) Hydrophone (VR100) with tag attached deployed on downstream side of vessel to a depth of 5m.
- 8) Vessel drifts back towards station site.

Stations 10 and 9 deployed and tested on 09 July. Stations 8 – 5 deployed and tested on 10 July. Stations 1 – 4 deployed and tested on 11 July.

Acoustic receiver deployment.

In total, 10 Vemco VR2AR acoustic receivers were deployed and checked within the Loch Sunart to the Sound of Jura MPA (Fig 1, table 1) during the first half of 0618H.

Submitted: James Thorburn 26 November 2018

Approved: P Bouclott 03 February 2020

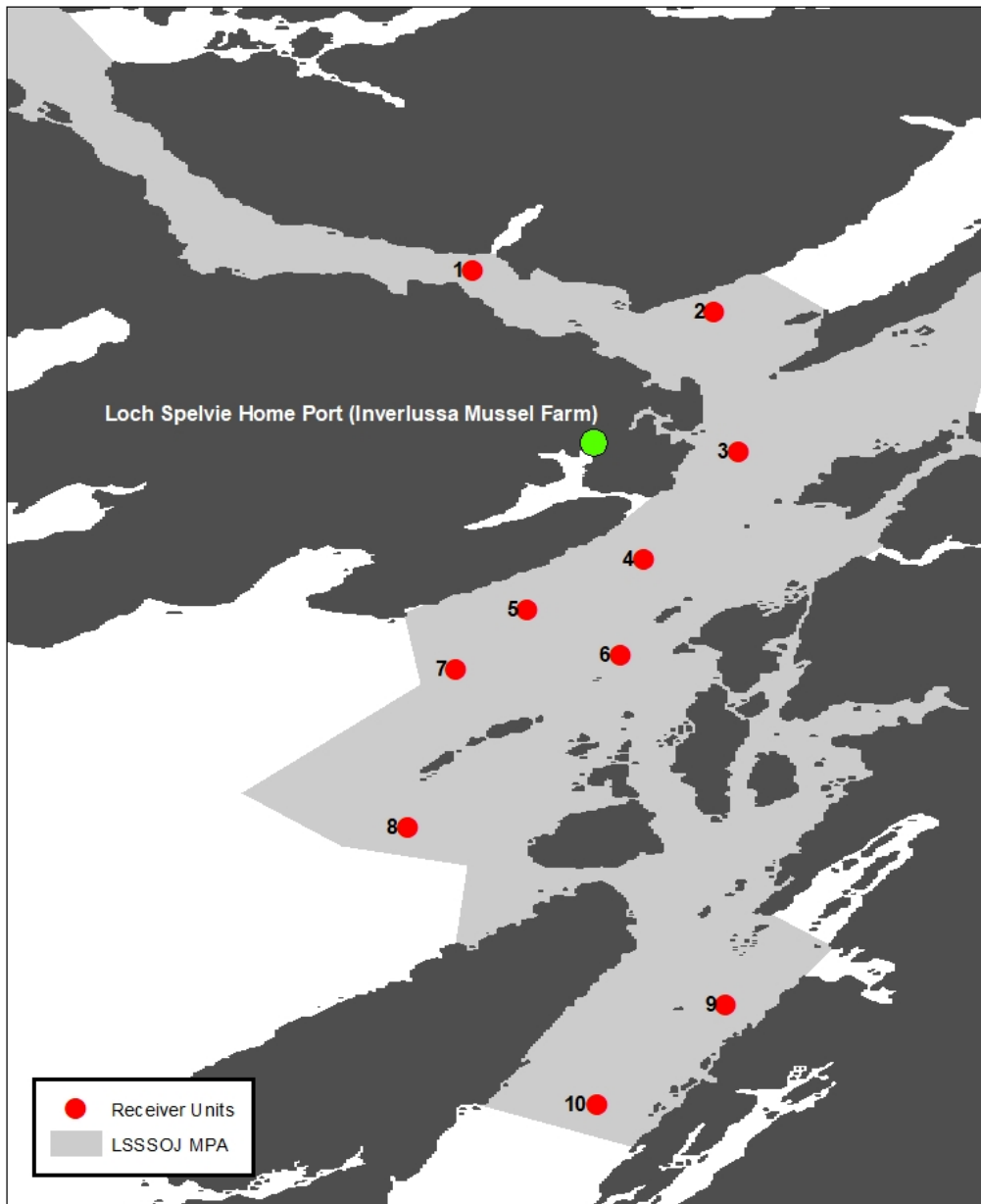


Figure 1: Location of Receiver units in the Loch Sunart to the Sound of Jura MPA as deployed by 0618H.

Table 1: Locations of deployed Receiver units during 0618H

Station number	receiver ID	Lat	Dec Lat	Long	Dec Long
1	546135	56° 31.32N	56.522	5° 47.22W	-5.787
2	546134	56° 29.82N	56.497	5° 38.4W	-5.64
3	546133	56° 24.683N	56.41138	5° 37.536W	-5.6256
4	546132	56° 20.76N	56.346	5° 40.98W	-5.683
5	546131	56° 18.91N	56.31517	5° 45.238W	-5.75397
6	546209	56° 17.263N	56.28772	5° 41.834W	-5.69723
7	546136	56° 16.74N	56.279	5° 47.82W	-5.797
8	546380	56° 10.98N	56.183	5° 49.595W	-5.82658
9	546173	56° 4.48N	56.07467	5° 37.977W	-5.63295
10	546171	56° 0.855N	56.01425	5° 42.666W	-5.7111