Not to be cited without prior reference to Marine Scotland, Marine Laboratory, Aberdeen

MV Bluefin

Survey 1018H

REPORT

01 – 03 August 2018 & 20 – 23 August 2018

Loading: Dunstaffange Marina 01 & 20 August 2018.
Boarding: Dunstaffange Marina 01 - 03 & 20 - 23 August 2018 (disembark overnight at port each day)
Unloading: Dunstaffange Marina 03 & 23 August 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
J. Dodd (SNH)	Field Scientist
A. Naylor (RZSS)	Veterinary consultant
G. Cole (RZSS)	Veterinary consultant

Project: 7 days (return to port each day)

Gear

1 x ultrasound unit
1 x blood gas measurement unit + 30 cartridges.
1 x skate mat
10 x Vemco V16 tags
3 x surgical kits
Surgical supplies including 2% lidocaine
Various field consumables

Background and Objectives

The main aim of the skate project is to see how long individual skate remain within the Loch Sunart to the Sound of Jura Marine Protected Area over an extended time period as this site is designated for the conservation of the flapper Skate. To meet this aim, 1018H involved the surgical implantation of 15 acoustic tags in flapper skate (*Dipturus intermedius*) residing within

the MPA. The tags, which are in some ways analogous to pet microchips, transmit a unique ID that allows the identification of individually tagged skate. Tags communicate with previously deployed receivers (see 0618H cruise report for details) up to approximately 500 m away, recording the presence of the tag in the form of a date and time stamp along with a unique ID number. Each tag last for a minimum of 5 years up to a maximum of 10 years. Surgical insertion prevents external irritation or removal during long deployments. All tagging work was compliant with the Animals (Scientific Procedures) Act 1986, and was carried out by recognised practitioners under the following Home Office licences:

Project licence PE5E95C50
Personal licence: I613ABEE7

Specific survey objective is as follows:

1. Tag 15 flapper skate with acoustic tags (Vemco V16) within the Loch Sunart to the Sound of Jura Marine Protected Area

Narrative

For the duration of each trip, personnel boarded the *Bluefin* daily at 08:00 at Dunstaffnage Marina and returned to the marina at 16:00 each day (expect for bad weather days). On each day four individual hook and lines were deployed at the tagging site on arrival.

From 01 – 03 August, the vessel anchored at 56° 22.79’ N 005° 37.52’ W. Four skate were captured on 02 August, 3 of these were tagged with acoustic tags, one being returned un-tagged due to small body size. No skate were capture on 01 or 03 August.

On 20 August, vessel anchored at 56° 23.65’ N 005° 37.09’ W. One skate was captured and tagged. On 21 August, vessel anchored at 56° 23.17’ N 005° 37.58’ W. Two skate were captured and tagged with acoustic tags. On 22 August, the vessel anchored at 56° 23.04’ N 005° 38.66’ W. Four skate were captured and tagged with acoustic tags. On 23 August, the vessel anchored at 56° 23.65’ N 005° 37.09’ W. No skate were captured.

Acoustic tag deployment.

In total, 10 Vemco V16 acoustic transmitter were deployed within the Loch Sunart to the Sound of Jura MPA (Fig 1, table 1) during 1018H.

Submitted: James Thorburn 03 December 2018

Approved: P Boulcott 11 February 2020

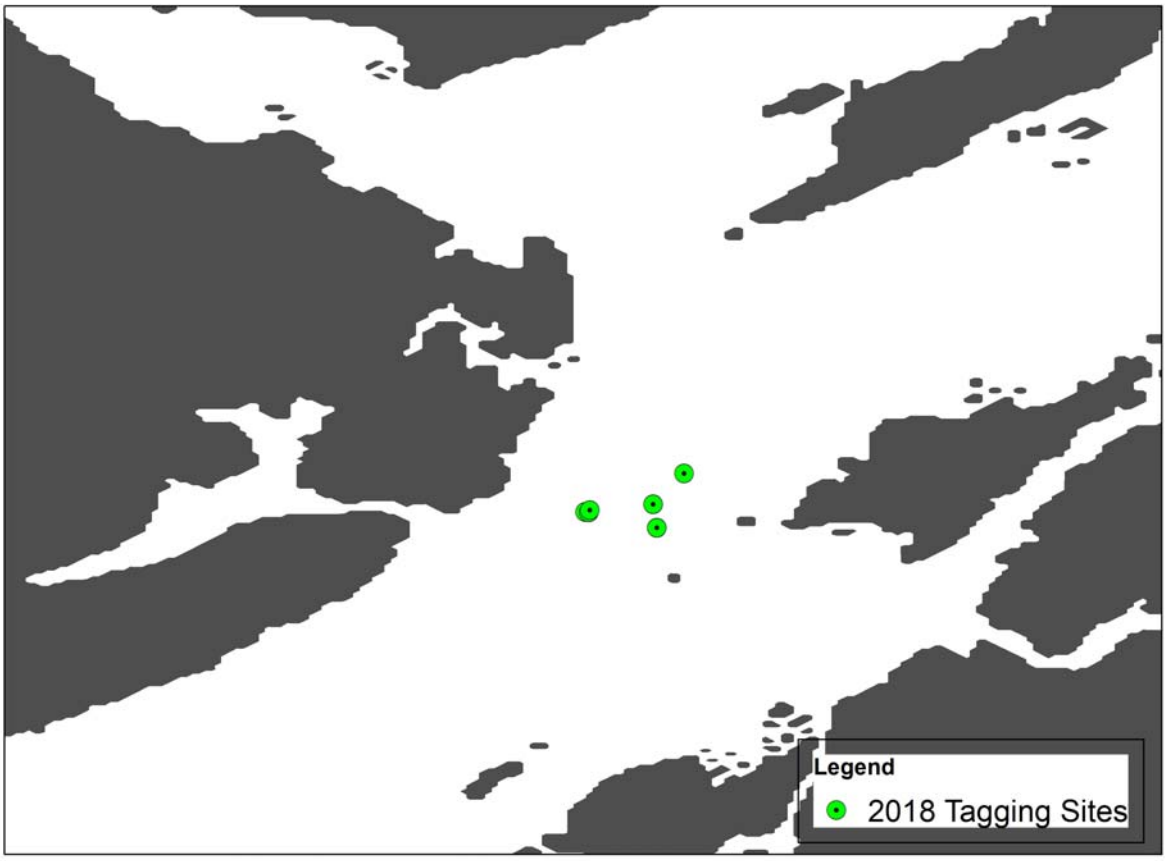

Figure 1: Location of tagging sites during 1018H.

Table 1: Details of tag deployment during 1018H.

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

Species	*Date*	*Sex*	*Length (cm)*	*Width (cm)*	*PIT tag*	*Acoustic tag*	*Location*	*Latitude (N)*	*Longitude (W)*
Dipturus intermedius	02/08/2018	M	162	122	2069335	10509	Firth of Lorn	56°22.79	5°37.52
Dipturus intermedius	02/08/2018	M	168	126	7092883	10506	Firth of Lorn	56°22.79	5°37.52
Dipturus intermedius	02/08/2018	M	151	107	7093028	10507	Firth of Lorn	56°22.79	5°37.52
Dipturus intermedius	20/08/2018	M	191	137	7093231	10510	Firth of Lorn	56°23.65	5°37.09
Dipturus intermedius	21/08/2018	F	226	165	7093338	10513	Firth of Lorn	56°23.17	5°37.58
Dipturus intermedius	21/08/2018	M	201.93	144.78	7093194	10511	Firth of Lorn	56°23.17	5°37.58
Dipturus intermedius	22/08/2018	F	218.44	165.1	7092902	10514	Firth of Lorn	56°23.04	5°38.66
Dipturus intermedius	22/08/2018	M	162.56	116.84	7093359	10512	Firth of Lorn	56°23.04	5°38.60
Dipturus intermedius	22/08/2018	M	199.39	152.4	10991061	10521	Firth of Lorn	56°23.04	5°38.60
Dipturus intermedius	22/08/2018	M	187.96	142.24	7092921	10520	Firth of Lorn	56°23.07	5°38.58