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MRV *Alba na Mara*

Survey 0921A

PROGRAMME

21-27 July 2021

Loading: Fraserburgh, 20 July 2021

Unloading: Fraserburgh, 27 July 2021

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.

Scientific gear:

1. Drop frame video and digital camera, cable (deepest site expected to be 120 m)

Objectives

1. To undertake a video and camera survey of the extent and distribution of *Sabellariaspinulosa* (Sabellaria) reef in the Southern Trench and off the Aberdeenshire coast.

Estimated Days per Project: 7 days (RE01E0, 20408)

Procedure

All scientific equipment will be transported to Fraserburgh harbour on the 19/20 July. The *Alba* will sail on 21 July and make passage to the survey area. The survey order will be depicted according to a prioritized list (high, medium, low) but can be varied according to sea conditions. The survey will finish in Fraserburgh on the evening of 26 July with all staff, video gear and grab sampling equipment returning to the Marine Laboratory on 27 July.

Purpose

This survey will aim to build on existing records of the reef in order to establish the spatial extent of Sabellaria in the Southern Trench MPA and off the northeast Aberdeenshire coast (off Buchan). It will also investigate the temporal continuity of the species and change at sites where it is known to exist in the past. Sabellaria is an ephemeral species that may come and go naturally and is highly sensitive to pressures in the region such as fishing and habitat removal/disturbance for cables, pipelines and wind farm foundations. This survey will re-visit sites where Sabellaria reef is known to exist in order to investigate whether it is still present and to better understand the extent of the reefs. Secondly, the survey will aim to investigate

its distribution across a wider area across the region. Some of these sites are truly speculative and some are replicating known records from industry that are not in the public domain.

The existing records were collected from a number of sources. Fugro carried out a benthic video survey in 2011 along a discontinued cable route between the Moray East Windfarm and Fraserburgh & Rattray Head (Fugro), Nature Scot carried out a survey in the Southern Trench region, and Oceana carried out an ROV survey on the east Aberdeenshire coast. The Fugro records showed extensive Sabellaria reef but the full extent of this reef could not be determined and whether or not the reef extends beyond the narrow cable corridor that was surveyed (Figure 1, Inset 1). The Oceana survey from the east Aberdeenshire coast (Figure 1, ROV points) found a new clumped variety of Sabellaria reef (termed a Sabellaria bommie) with an exceptionally high biodiversity value. This new subtype has not been recorded previously in the literature. However, the Oceana survey used an ROV which just focused on the bommies themselves, but did not conduct line transects and so it was not possible to establish the spacing between individual bommies. Information on the spacing is essential to establish whether or not it fits the Gubbay (2007) reefiness criteria used to define whether or not it is officially classed as Annex I reef. Only when in reef form does it warrant protection under OSPAR or under the Habitats Directive.

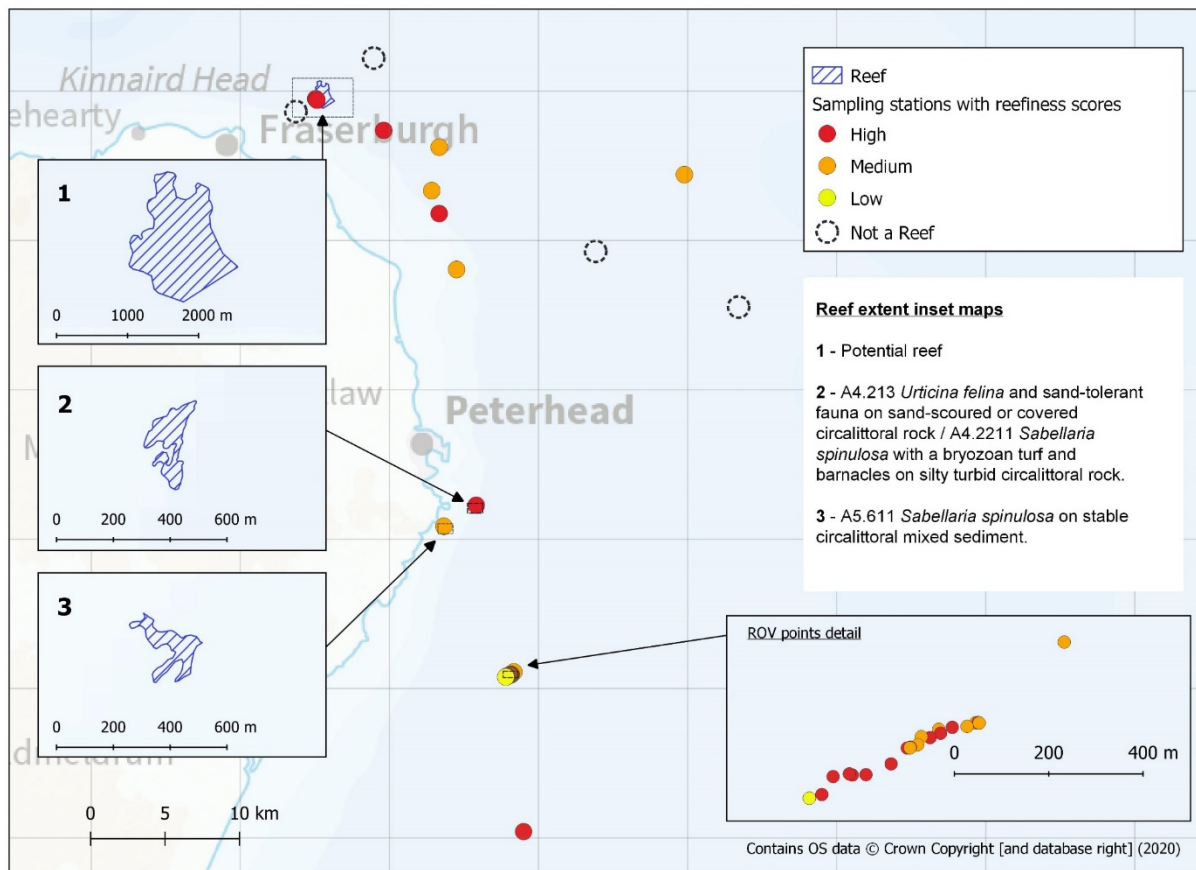


Figure 1: Previous data showing the known extent of Sabellaria reef in the region.

The video and grab survey

The survey will be working in depths of between 30 and 120 m in the Moray Firth and off the east Aberdeenshire coast. At each station (Figure 3, Table 1), the drop frame video system with camera will be towed behind the vessel for approximately five minutes at a speed of ~0.3 knots. The video will be running continuously and photos taken approximately every 30

seconds (or on any interesting reef features). If Sabellaria reef is observed, the transect should be extended to ten minutes or further if the reef is still present. The scientist should record the start and end point of each tow and the path of the tow track on ArcGIS. The video and digital stills should be copied onto an external hard drive.

If other reef features are observed we would also advise continuing the video transect, for example stony reef or outcrops of Filograna/Salmacina (this also forms biogenic reef and was found north of Rattray Head).

Figure 2: Salmacina / Filograna

A photo and video reference collection is available for reference purposes (on external drive).

For each video transect, the scientist should provide a written record of the start and end times, depths, along with a brief description of distinct habitat types (e.g. Sabellaria reef on sand, Sabellaria reef on rock, Sabellaria bommie, Sabellaria crusts, flat sand/gravel with little life apparent). Note, it is more important to record positions of video and photographs than to record detailed notes.

Station	Start, finish time	Start, finish depth	Habitat description 1	Habitat description 2	Habitat description 3	Notes

The video and stills images will be analysed under an external contract after the survey.

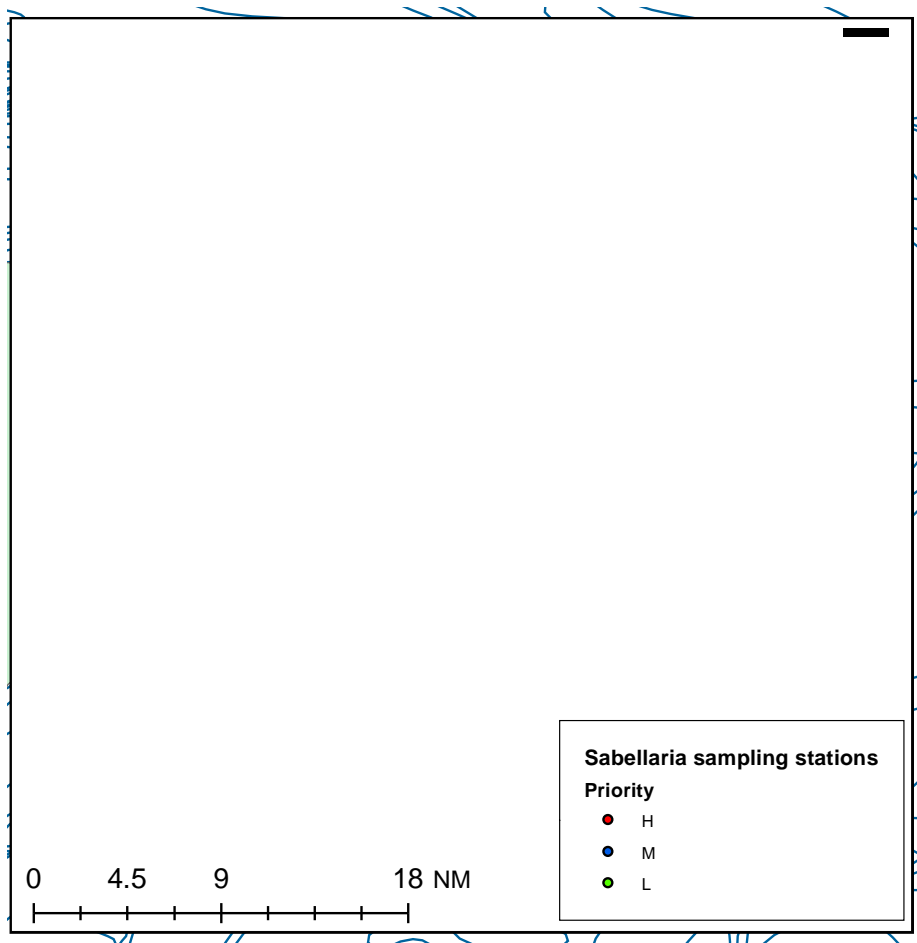


Figure 3: Prioritised (high, medium and low) *Sabellaria spinulosa* sampling stations

Background information

- A comprehensive video and photographic reference guide is available to guide the survey on Sabellaria reef and other benthic species. Note, this has not yet been published due to copyright issues but it can be accessed here, G:\Env_Protection\Marion\CRF bid\Sabellaria\draft\Final drafts\Photo and Video Reference Collection (see the Sabellaria examples folder).
- [The Status of Sabellaria spinulosa Reef off the Moray Firth and Aberdeenshire Coasts and Guidance for Conservation of the Species off the Scottish East Coast](#) (report, research summary and appendices)

Normal contacts will be maintained with the laboratory.

Submitted:
E Edwards/ Watret
20 July 2021

Approved:
I Gibb
20 July 2021

Table 1: Sabellaria spinulosa sampling stations

OBJECT ID	Station	Priority	Lat	Lon	LATITUDE	LONGITUDE	Comments
1	NE01	H	57.71497582	-1.916675595	57° 42.899' N	001° 55.001' W	Repeat 2011 - Intermittent reef on boulders – one North South, one East West
2	NE02	M	57.64535671	-1.780563319	57° 38.721' N	001° 46.834' W	Repeat 2011 - Small areas of reef on sediments
3	NE03	H	57.65944498	-1.787538326	57° 39.567' N	001° 47.252' W	Repeat 2011 - Thick crust on pebbles and cobbles
4	NE04	L	57.72708043	-1.881617665	57° 43.625' N	001° 52.897' W	Repeat 2011 - Low lying thick crust on pebbles and cobbles
5	NE05	H	57.68634011	-1.779557333	57° 41.180' N	001° 46.773' W	Repeat 2011 - Low lying reef on pebbles and cobbles
6	NE06	M	57.75594974	-1.818351388	57° 45.357' N	001° 49.101' W	Repeat 2011 - Low lying thin crust on pebbles and cobbles
7	NE07	M	57.61281567	-1.761421762	57° 36.769' N	001° 45.685' W	Repeat 2011 - Thick crust on boulders and rock
8	NE08	M	57.72100034	-1.910676099	57° 43.260' N	001° 54.641' W	Repeat 2017 - CR.MCR.CSab.Sspi.ByB – one north south, one east west
9	NE09	H	57.7171411	-1.907265642	57° 43.028' N	001° 54.436' W	New - Predictive high potential reef
10	NE10	M	57.71183714	-1.910289974	57° 42.710' N	001° 54.617' W	New - Predictive high potential reef
11	NE11	M	57.71382612	-1.901177585	57° 42.830' N	001° 54.071' W	New - Predictive high potential reef
12	NE12	H	57.84431084	-1.798034197	57° 50.659' N	001° 47.882' W	Repeat 2011 - Salmacina or Filograna thickets
13	NE13	M	57.73089698	-1.913065665	57° 43.854' N	001° 54.784' W	New - Predictive high potential reef
14	NE14	M	57.73589188	-1.884705974	57° 44.154' N	001° 53.082' W	New - Predictive high potential reef
15	NE15	M	57.73477844	-1.86567576	57° 44.087' N	001° 51.941' W	New - Predictive medium potential reef
16	NE17	H	57.69545675	-1.839842342	57° 41.727' N	001° 50.391' W	Repeat 2015 - CEFAS Sabellaria
17	NE18	H	57.36759998	-1.704257009	57° 22.056' N	001° 42.255' W	Repeat 2019 - Oceana bommie search - East West direction preferred
18	NE19	H	57.369885	-1.696606651	57° 22.193' N	001° 41.796' W	Repeat 2019 - Oceana bommie search - East West direction preferred
19	NE20	M	57.49101514	-1.736018576	57° 29.461' N	001° 44.161' W	Repeat 2013
20	NE21	L	57.67880016	-1.816497109	57° 40.728' N	001° 48.990' W	New - speculative/inventory
21	NE22	L	57.51033787	-1.716930052	57° 30.620' N	001° 43.016' W	New - speculative/inventory
22	NE23	L	57.55231307	-1.729815133	57° 33.139' N	001° 43.789' W	New - speculative/inventory
23	NE24	L	57.59092197	-1.751358281	57° 35.455' N	001° 45.081' W	New - speculative/inventory
24	NE25	L	57.62890891	-1.768376125	57° 37.735' N	001° 46.103' W	New - speculative/inventory
25	NE26	L	57.44412699	-1.741720679	57° 26.648' N	001° 44.503' W	New - speculative/inventory
26	NE27	L	57.4056047	-1.721889187	57° 24.336' N	001° 43.313' W	New - speculative/inventory
27	NE28	H	57.27405833	-1.68663	57° 16.443' N	001° 41.198' W	Sabellaria bommie - repeat of Oceana ROV point
28	NE29	L	57.31614681	-1.727958031	57° 18.969' N	001° 43.677' W	New - speculative - MH
29	NE30	L	57.23048621	-1.723199109	57° 13.829' N	001° 43.392' W	New - speculative - MH
30	NE31	L	57.23286568	-1.641107704	57° 13.972' N	001° 38.466' W	New - speculative - MH
31	NE32	L	57.32328519	-1.657763932	57° 19.397' N	001° 39.466' W	New - speculative - MH
32	NE34	L	57.59692321	-1.713681265	57° 35.815' N	001° 42.821' W	New - speculative - MH
33	NE35	L	57.4482069	-1.698214769	57° 26.892' N	001° 41.893' W	New - speculative - MH
34	NE36	L	57.80393632	-1.810049436	57° 48.236' N	001° 48.603' W	New - speculative - MH
35	NE37	L	57.68853246	-1.876674344	57° 41.312' N	001° 52.600' W	New - speculative - MH
36	NE38	H	57.4444405	-1.312806925	57° 26.664' N	001° 18.768' W	Nort w est direction recommended
37	NE39	H	57.46212722	-1.322291456	57° 27.728' N	001° 19.337' W	South east direction recommended
38	NE40	H	57.41347676	-1.272408436	57° 24.809' N	001° 16.345' W	North east direction recommended
39	NE41	H	57.4238988	-1.249280075	57° 25.434' N	001° 14.957' W	South w est direction recommended
40	NE42	M	57.66857894	-1.502121237	57° 40.115' N	001° 30.127' W	Repeat 2011 - Sabellaria reef
41	NE43	L	57.6286873	-1.524726502	57° 37.721' N	001° 31.484' W	New - speculative
42	NE45	L	57.59810371	-1.557304679	57° 35.886' N	001° 33.438' W	New - speculative