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FRV *Alba na Mara*

Cruise 1611A

PROGRAMME

8-21 November 2011

Ports

Loading:	Ullapool	(4 November 2011)
Scientists Embark:	Greenock	(7/8 November 2011)
Unloading:	Leith	(21 November 2011)

In setting the cruise 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 cruise with staff on-board before work is commenced.

In the interest of efficient data management it is now mandatory to return the Cruise Report, to I Gibb and the Cruise Summary Report (old ROSCOP form) to M Geldart, within four weeks of a cruise ending. In the case of the Cruise Summary Report a nil return is required, if appropriate.

Personnel

C Robinson (SIC)
G Packer
K MacNeish
T Bean (Cefas; 8 November only)
M O'Reilly (SEPA; 1 day in the Firth of Forth, 20/11)
S Reid (SEPA; 1 day in the Firth of Forth, 20/11)
S Nowacki (SEPA; 1 day in the Firth of Forth, 20/11)

Fishing gear: BT 158; 2m beam trawl both with 50 mm cod-ends

Objectives

1. To undertake flatfish and sediment sampling in the Clyde and Minch areas in support of the temporal trend and integrated assessment of contaminants monitoring studies.
2. To sample flounder from the upper Clyde at Bowling in support of SEPA CSEMP and MSS integrated assessment monitoring.
3. The *RV Sir John Murray* - to sample fish and sediment from the Outer Clyde and the Solway Firth CSEMP stations.
4. To undertake sampling of flounder in St Andrews Bay and the Firth of Forth in support of the integrated assessment of biomarker monitoring programme and for the CSEMP.

Flounder from the upper Forth estuary (Alloa) to be collected by Stirling University and delivered to *Alba na Mara* at an agreed location, probably Ardrossan (Rosyth or Montrose are alternative possibilities).

5. To collect sediments at the fishing localities for subsequent determination of organic and inorganic contaminant concentrations and of supporting determinands.
6. To undertake fishing at three sites in the Firth of Forth for SEPA (Water Framework Directive) monitoring purposes (20/11)

Estimated Days per Project: 9 days ST03r; 5 days ST002

Procedure

Fishing and scientific gear will join the *Alba na Mara* in Ullapool on 4 November, and after all gear has been stowed and the crew change completed, the vessel will make passage to the Clyde from Ullapool on 6 November. The scientific staff will join the vessel on the evening of the 7 November, to make an early start on 8 November. The cruise programme will be followed, with any amendments (due to weather, etc.) made as required and *Alba na Mara* is expected to berth in Leith on the evening of 20 November.

In the Clyde area flatfish and sediments will be sampled from: the outer Firth of Clyde at Pladda (plaice); the inner Firth of Clyde at Garroch Head, Irvine Bay, Hunterston, Skelmorlie (plaice), Holy Loch (plaice, dab and flounder), and the upper Clyde estuary (Bowling; flounder). *Alba na Mara* will then make passage north to samples plaice and sediments from Colonsay. If weather and time permit, she will also sample plaice and sediments from Broad Bay as she makes passage to the east coast where flatfish and sediments will be sampled from St Andrews Bay (flounder), and the inner Firth of Forth at Tancred bank (flounder). Additional fishing trawls will be undertaken in the Firth of Forth for investigations in to the composition of the fish assemblage at Port Edgar and Beamer Rock for SEPA. Figure 1 shows the fishing locations; Table 1 shows the fishing requirements.

Associated with this cruise, flounder from Alloa will be collected from Stirling University on 9 or 10 November and transported by road to Ardrossan (or other suitable port) for transfer to *Alba na Mara*.

SEPA staff will join the vessel for one day to conduct sampling in the Firth of Forth. SEPA staff will be embark in Rosyth then disembark in Leith the same day.

Additionally, the SEPA vessel *RV Sir John Murray* will sample flatfish from the Solway Firth (plaice and dab) and sediments for chemistry and benthic macrofauna from the Solway Firth and the outer Firth of Clyde. The *Sir John Murray* will sail from Troon on the evening of 14 November to fish the Solway, and is expected to return to Troon on 16 November. Fish from the Solway will then be road transported for transfer to *Alba na Mara* at Rosyth, or other suitable port. In the event of bad weather, the *Sir John Murray* may be delayed. The latest that fish from the *Sir John Murray* can be transferred to the *Alba na Mara* is the 19 November (Rosyth) or 20 November (Leith)

On completion of this survey, passage will be made to Leith where all scientific gear and samples will be transferred to the ML Aberdeen.

General Arrangements

Liquid nitrogen and other chemicals will be carried abroad for the preservation and storage of biological material.

Normal contacts will be maintained with the Laboratory.

Submitted:
Craig Robinson
20 October 2011

Approved:
I Gibb
31 October 2011

1611A proposed sampling sites

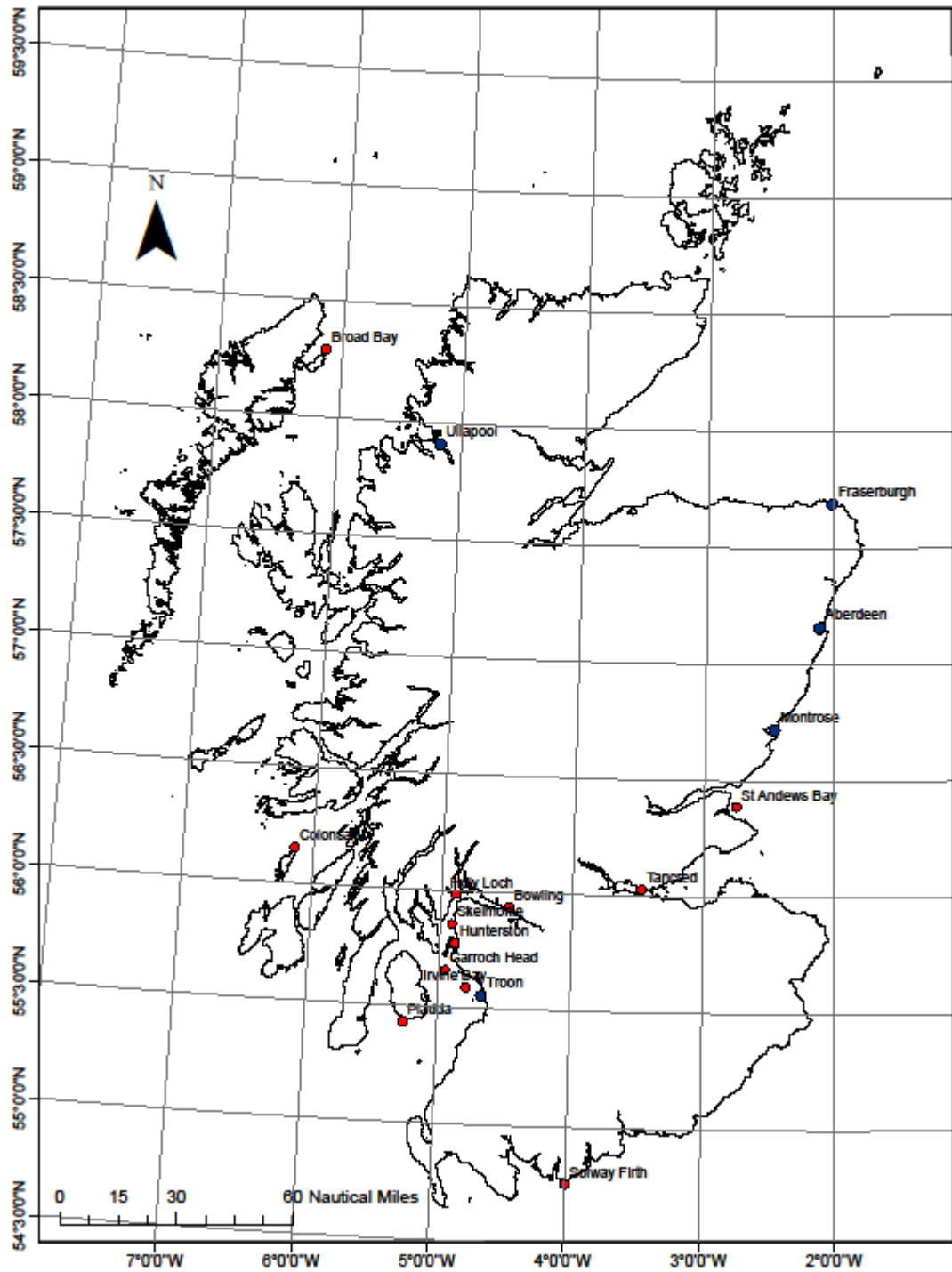


Table 1: Proposed fishing locations and fish requirements

		START		END		FLOUNDER		COMMON DAB		PLAICE	
		Lat	Long	Lat	Long	Effects	Chemistry	Effects	Chemistry	Effects	Chemistry
Clyde	Bowling	55.9283	-4.5008	55.9286	-4.4843	50	Y				
Clyde	Holy Loch	55.1240	-4.8964	55.1651	-4.8828	50	Y	50	Y	25	Y
Clyde	Skelmorlie	55.1607	-4.9164	55.0396	-4.9053					-	25
Clyde	Hunterston	55.1191	-4.8836	55.0844	-4.8903					-	25
Clyde	Garroch Head	55.1488	-4.9481	55.0158	-5.0224					25	Y
Clyde	Irvine Bay	55.0566	-4.7519	55.1009	-4.8092					-	25
Clyde	Pladda	55.0889	-5.1665	55.0854	-5.2552					25	25
Minches	Colonsay	56.1355	-6.0659	56.0854	-6.0825					-	25
Minches	Broad Bay ⁽¹⁾	58.2980	-6.1930	58.3370	-6.1462					-	25
Forth	Alloa ⁽²⁾	-	-	-	-	50	Y				
Forth	Tancred Bank	56.0223	-3.5253	56.0290	-3.5612	50	Y				
Forth	Blackness ⁽³⁾	56.0140	-3.5070	56.0088	-3.4803						
Forth	Tancred Bank	56.0248	-3.5235	56.0287	-3.5547						
Forth	Port Edgar	56.0118	-3.5062	56.0082	-3.4815						
Forth	Beamer Rock	56.0133	-3.4541	56.0085	-3.4198						
Firth of Forth fishing for SEPA WFD purposes											
East Coast	St Andrews Bay	56.3596	-2.7473	56.4008	-2.7413	50	Y				
East Coast	Tay ⁽⁴⁾					(50)	(Y)				
Solway ⁽⁵⁾	Southernness Point	54.0065	-4.0306	54.0055	-4.1416			50	Y	25	Y

¹If time and weather permit

²Live fish collected by Stirling University, road transported from Alloa by MSS to meet *Alba na Mara* (Ardrossan?)

³Alternative site, only fished if few fish are found at Tancred Bank

⁴Contingency site – only fished if spare time allows

⁵Live fish collected by *Sir John Murray*, road transported from Troon by MSS to meet *Alba na Mara* (Rosyth?)