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

RV Sir John Murray

PROGRAMME

5-10 November 2012

Ports

Loading: Troon, 1 November 2012 Sailing: Troon, 5 November 2012 Unloading: Troon, 10 November 2012

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) P Dymond T Betts

Fishing gear: Bottom trawl with 50 mm cod-end

Objectives

- 1. To undertake flatfish sampling in the Solway Firth in support of the Clean Seas Environment Monitoring Programme, including integrated assessment studies.
- 2. To undertake sediment sampling in the Solway Firth and Firth of Clyde in support of the temporal trend and integrated assessment of contaminants monitoring studies.
- 3. To undertake flatfish sampling in the Firth of Clyde in support of contaminant temporal trend monitoring programme.
- 4. To collect samples in support of investigations into whether Amoebic Gill Disease (AGD) is present in Scottish flatfish.

Estimated Days per Project: 51/2 days ST03n; 1/2 day AQ03n

Procedure

Scientific gear will be loaded on to the *Sir John Murray* in Troon on 1 November. Scientific staff will join the vessel on 5 November.

Flatfish (plaice and dab) will be collected from the Solway CSEMP fishing site and tissues sampled for chemical and ecotoxicological analyses; gill samples will be collected for the AGD study. One sediment sample for benthic invertebrates and one for sediment chemistry will be collected from each of the five Solway and five outer Clyde CSEMP sites. In the Clyde, sediment samples will be collected for contaminant analysis from the temporal trend monitoring sites and, depending upon available time, plaice will be collected for Hunterston, and/or Irvine Bay temporal trend sites and tissues sampled for chemical analyses, and for the AGD study.

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

General Arrangements

Liquid nitrogen and other chemicals (e.g. formalin, methanol) will be carried aboard for the preservation and storage of biological materials.

Normal contacts will be maintained with the Laboratory.

Submitted: Craig Robinson 26 October 2012

Approved: I Gibb 30 October 2012

Region	Area	Site	Lat	Long	Benthos	Chemistry
Clyde	Holy Loch	Holy Loch - FRS	55.971	-4.892		\checkmark
Clyde	Holy Loch	NMMP 55 (off Cloch Point)	55.946	-4.894		\checkmark
Clyde	Holy Loch	At Lunderston Bay	55.923	-4.911		\checkmark
Clyde	Holy Loch	At Weymss Point	55.897	-4.926		\checkmark
Clyde	Holy Loch	E of Toward (UIFM 2)	55.868	-4.944		\checkmark
Clyde	Skelmorlie	Skelmorlie - FRS	55.851	-4.907		\checkmark
Clyde	Skelmorlie	Skelmorlie	55.841	-4.952		\checkmark
Clyde	Skelmorlie	NMMP45 (Nth of Cumbrae)	55.822	-4.978		✓
Clyde	Skelmorlie	Skelmorlie	55.812	-4.902		\checkmark
Clyde	Skelmorlie	Skelmorlie	55.746	-4.969		✓
Clyde	Hunterston	Hunterston	55.793	-4.891		✓
Clyde	Hunterston	Hunterston	55.786	-4.892		✓
Clyde	Hunterston	Hunterston	55.776	-4.891		✓
Clyde	Hunterston	Hunterston - FRS	55.764	-4.885		✓
Clyde	Hunterston	Hunterston	55.739	-4.905		✓
Clyde	Garroch Head	NMMP70	55.599	-4.790		✓
Clyde	Garroch Head	Irvine Bay - FRS	55.586	-4.788		✓
Clyde	Garroch Head	Irvine Bay	55.580	-4.752		✓
Clyde	Garroch Head	Irvine Bay	55.578	-4.756		✓
Clyde	Garroch Head	Irvine Bay	55.559	-4.750		✓
Clyde	Irvine Bay	Garroch Head - FRS	55.660	-4.986		✓
Clyde	Irvine Bay	5km SW of Lady Isle	55.507	-4.815		✓
Clyde	Irvine Bay	Middle Offshore	55.507	-4.901		✓
Clyde	Irvine Bay	East of Brodick, mid channel	55.588	-4.960		✓
Clyde	Irvine Bay	Middle Offshore South	55.434	-4.968		✓
Outer Clyde	Outer Clyde	SW Ailsa Craig	55.166	-5.223	\checkmark	✓
Outer Clyde	Outer Clyde	E Johnstons Point	55.323	-5.368	\checkmark	✓
Outer Clyde	Outer Clyde	SE Ailsa Craig	55.224	-5.058	\checkmark	✓
Outer Clyde	Outer Clyde	NMMP35	55.333	-5.083	\checkmark	\checkmark
Outer Clyde	Outer Clyde	NE Ailsa Craig	55.341	-5.039	\checkmark	✓
Solway	Solway	SF7	54.780	-3.800	\checkmark	✓
Solway	Solway	SF4	54.800	3.810	\checkmark	\checkmark
Solway	Solway	SF3	54.810	-3.820	\checkmark	\checkmark
Solway	Solway	SF1	54.800	-3.840	\checkmark	\checkmark
Solway	Solway	NMMP25	54.750	-4.000	\checkmark	✓

 Table 1: Intended sediment sampling locations and purpose.

Table 2: Intended fishing locations and fish requirements.

				COMMON DAB		PLAICE			
		Lat	Long	Effects	AGD*	Chemistry	Effects	AGD*	Chemistry
Clyde	Hunterston	55.787	-4.884					20	20
Clyde	Irvine Bay	55.600	-4.810					20	20
Clyde	Skelmorlie ¹	55.825	-4.917					20	20
Solway	Southerness Point	54.673	-4.031	50	25	25	25	25	25

*Gills to be sampled for Amoebic Gill Disease (histology and qPCR) ¹Skelmorlie is back-up site if weather prevents fishing at Irvine Bay **Figure 1:** Intended sediment (brown diamond) and fish (red star) sampling sites. Skelmorlie fishing site is a back-up in case weather prevents fishing at Irvine Bay.

