P17/15

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

FRV *Scotia*

Cruise 0804S, Part 2

REPORT

1-4 June 2004

Personnel

David Bruno	(In Charge)
Alistair McIntosh	
Anna Turnbull	
Campbell Pert	
Rachel Kilburn	
Stuart Wallace	
Gill Packer	
Kelly Ferguson	
Mary O'Dea	
Pamela Steenson	
Patricia Noguera	Visitor

Fishing Gear

BT 101 (48' Aberdeen trawl) with tickler chain and small mesh cod-end.

Objectives

To perform a fish disease survey in the Moray Firth, east of Orkney, Bell Rock and St Abbs using standard ICES protocols. Tissues will be collected from common dab for mixed function oxidase activity and PAH bile metabolites. Grab samples will be obtained from each station and analysed for PAH. A variety of species will be sampled to test as vectors for IPNV and the role of wild marine and freshwater fish in the maintenance and spread of this disease. The distribution and prevalence of this virus will be determined and the genetic relatedness of isolates will form future work. Cod, haddock, turbot, halibut and whiting will be sampled for bacteriology, parasitology and virology to record base line pathogens to model possible interactions with farmed salmonids in terms of disease transfer. *Caligus* will be collected for the molecular biology group.

Procedure

FRV *Scotia* will work in the Moray Firth, east Orkney, Bell Rock, St Abbs, Wee Bankie and Marr Bank obtaining fish samples by trawling. The cruise will start and terminate in Aberdeen.

Out turn Days Per Project: 2.7 days AE11a; 1.3 days AE08o

Narrative/Results

FRV *Scotia* sailed from Aberdeen on 1 June at 9 am and commenced trawling in the vicinity of the Beatrice oil platform during the afternoon. *Scotia* worked south east of Fair Isle early on 2 June. Sampling was started at Bell Rock on 3 June followed by St Abbs Head. Sampling at Marr Bank and Wee Bankie was completed on 4 June. *Scotia* docked in Aberdeen on 4 June pm.

A total of 13 trawls were successfully completed and 4990 common dab, *Limanda limanda* examined for disease by standardised ICES methods. Sufficient fish were present in the middle length classes for a full data set to be completed for the long term monitoring positions. No neoplastic lesions from livers from common dab (>25 cm) were recorded. Where possible fifty haddock equal to or greater than 26 cm were sampled from individual hauls and examined for vertebral deformities. Prevalence ranged from 1.7–6.5%. There were no lesions involving the pseudobranch of cod. (n=57). Selected material was collected for histological assessment in the laboratory. Sea lice were found at one station and collected for later analysis. A left-sided (sinistral) common dab was located at Wee Bankie (41E7).

Within each area, 20 common dab (10 male, 10 female) were sampled for mixed function oxidase function activity, PAH bile metabolites and PAH concentration in liver and flesh. Liver and flesh was collected from 25 fish (common dab or plaice) per area. These tissues will be examined for brominated flame retardants in the laboratory.

Kidney from 1866 fish were also sampled to determine the prevalence of infectious pancreatic necrosis virus (IPNV) from common dab, haddock, whiting, long rough dab, lemon sole and plaice in the laboratory. The genetic relatedness of the virus isolates will form future work. Fish kidney was pooled from 5 fish, one sample was placed in RNA later for molecular analysis and a duplicate sample placed in liquid nitrogen. In addition haddock, cod and whiting were sampled for viral haemorrhagic septacaemia virus (VHSV), infectious haematopoietic necrosis virus (IHNV) and IPNV, and for bacterial infection by plating onto TSA +2% NaCl, and then frozen for parasitology examination in the laboratory.

The objectives of the sampling programme were successfully achieved thanks to the excellent co-operation of the officers and crew of the FRV *Scotia*.

David Bruno
28 June 2004

Seen in draft: Captain Peter Barratt, OIC *Scotia*