

P17/8

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

Charter Fishing Vessels *Veracious II* (PD 373) and *Leon* (UL83)

Charters 1004H and 1104H

Project Survival (C741) – Work-Package 5c, Phase II

PROGRAMME

23 August – 17 September 2004

Location: Gairloch, Wester-Ross

***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 FRS' Working Time Policy (which is published on the Intranet). In addition, the Scientist-in-Charge must formally review the risk assessments for the cruise with staff on-board before work is commenced.**

Staff

*M Breen	(In Charge)
G Sangster	(Diving Officer: 23/8/04 - 5/9/04)
D Bova	
J Mair	
C MacKenzie	
K Summerbell	
M Burns	(23/8/04 - 8/9/04)
M Campbell	(28/8/04 - 17/9/04)
N Collie	(23/8/04 - 30/8/04)
N Morrison	(25/8/04 - 27/8/04)
B O'Neill	(31/8/04 - 9/9/04)

Visiting Staff from Partner Institutes

A V Soldal	(Coordinator, IMR)	(3/9/04 - 14/9/04)
I Huse	(IMR)	(23/8/04 - 5/9/04)
N Graham	(IMR)	(23/8/04 - 9/9/04)
R Skeide	(IMR)	(23/8/04 - 30/8/04)
J Nilsson	(IMR)	(23/8/04 - 4/9/04)
K Skaar	(IMR)	(2/9/04 - 15/9/04)
N Madsen	(DIFRES)	(23/8/04 - 8/9/04)
M Andersen	(DIFRES)	(23/8/04 - 8/9/04)
H Flintegaard	(North Sea Museum)	(23/8/04 - 8/9/04)
P Gregersen	(North Sea Museum)	(23/8/04 - 8/9/04)
D Ritchie	(Student, Aberdeen University)	(dates to be arranged)

Objective

This work programme forms part of the EU Project 'Survival' (C741), which aims to investigate the mortality of fish escaping from trawl cod-ends. The purpose of this part of the project (work-package 5) is to investigate seasonal variation in the cod-end selectivity and escape mortality of gadoid fish (cod, haddock and whiting). This work will be conducted at three distinct periods during the year, based on the Gadoid reproductive cycle:

Part a - February/March (pre-spawning)

Part b - May/June (post Spawning)

Part c - August/September (resting)

Each field exercise for this work-package will take place in two phases: Phase I – Site Set-up; and Phase II – Experiment.

In conjunction with this work, and as part of work-package 3 (WP 3), there will be an investigation of the rate of escapes from the trawl cod-end at different phases of the fishing operation, in particular during haul-back. This will include an investigation of the escape mortality of fish escaping from the cod-end during haulback.

Procedure

Phase II of this work-package will begin on Monday 23 August 2004, when staff and equipment will travel to Charleston, Gairloch. On Tuesday 24 August 2004, the chartered fishing vessel (MV *Veracious* PD373) will be prepared for the experiment by loading the scientific equipment and rigging the cod-end covers and multisampler. The fishing gear and RCTV will have been loaded in Peterhead on Friday 20 August 2004, prior to the vessel sailing to Gairloch.

The experiment will proceed once the fishing gear is correctly rigged and the cod-end covers and multi-sampler are tested. Meanwhile, divers still requiring training will undertake work-up and training dives. During the experiment fish escaping from the trawl cod-end will be collected in a cod-end cover. After a predetermined sampling period, the cover will be remotely released from the trawl. During a period of controlled decompression the cover will be raised to ~25 m, where divers will transfer it into the Underwater Fish Transporter (UFT). The UFT is then towed inshore by the work-boat (MFV *Leon*), where divers will remove the cover and transfer the captive fish into a seabed cage. Once in the cage the fish will be monitored and fed by divers, and any dead fish removed for post-mortem examination. Seven days after initial capture, the fish are removed from each cage by divers and a sample taken for post-mortem examination.

There will be an investigation of the rate of escapes from the trawl cod-end at different phases of the fishing operation, in particular during haul-back. This work will be conducted aboard MV *Veracious II* using a cod-end cover rigged with a multi-sampler.

The survival of fish escaping during the haul-back period of the fishing tow will also be investigated (WP3). Fish escaping from the trawl cod-end while it is at the surface during the haul-back period, will be retained in a cod-end cover. Those fish that are able to swim from the surface down to a depth of greater than 6 m will be transferred in to a seabed cage for continued monitoring, as described above. It will be assumed that fish unable to leave the surface will die, due to seabird predation, solar radiation and suffocation. These fish will be removed from the cover and a sample taken for post-mortem examination.

For more details of the diving operations refer to Diving Project Plan 2004/06.

Contacts

Contact Numbers: Mike Breen - 07771 816417
Veracious - 07774 483846

J A Morrison
24 August 2004

Circulation List: Cruise Programmes and Reports

CHARTER VESSEL

Programmes - Mr J A Morrison for approval. Reports - Mr J A Morrison for approval.
Issue two copies of Record of Haul and Station Numbers pro-forma with Scientist-in-Charge's copy of *Scotia* and *Clupea* programmes.
Two xerox copies of track chart for reports to be sent to Dr L Rickards.

PROGRAMMES ONLY

Lab staff	Non-lab staff
Mr J T M Hunter	Island Cmdr Faroes (Faroes only)
Mr T Reid	Flag Officer, Denmark (Danish part of N Sea only)
Mr P J Copland	Coastguard
Mr J Dunn	G Lees
Mr A Beaton	
Mr G Howard	
Security	

PROGRAMMES AND REPORTS

Lab staff	Non-lab staff
Mr J A Morrison	Library, Danmarks Fisk (reports only)
Capt R Denholm	Mr J Mortensen (Faroes only)
Mr R S T Ferro) Fish Man team	Mr A Souplet (Fishing Cruises only)
Mr C Hall) progs only	
Dr R M Stagg	W J McCurdy, Belfast
Dr C Moffat	Technical Director, SFIA (J E Tumilty)
Mr M R Heath	Dr L Rickards
Mr A Macdonald	Dr I Joint
D Lichtman (+ additional copy of track chart of reports only)	Director – Havfor Inst, Norway
Mrs E Morrison	Dr S Ehrich
Library (2)	Monsieur le Chef du dépt, Nantes
File	Mr J C Brabant
	Mrs van Duyvenvoorde
	Dr J G Gordon
	G Kane
	R de Clerck
	Mr B Stewart
	Controller Coastal Ops - A Stewart
	Dr P Grieg-Smith
	Mr H C Boyar
	Dr R J A Atkinson
	Mr H i Jákupsstovu

Laboratory Personnel on Vessel

M Breen	A V Soldal
G Sangster	I Huse
D Bova	N Graham
J Mair	R Skeide
C MacKenzie	J Nilsson
K Summerbell	K Skaar
M Burns	N Madsen
M Campbell	M Andersen
N Collie	H Flintegaard
N Morrison	P Gregersen
B O'Neill	D Ritchie

Fishery Officers at