Agri-Food and Biosciences Institute
Agriculture, Food and Environmental Science Division
Fisheries and Aquatic Ecosystems Branch

Cruise Report: CO 2406
Vessel: RV *Corystes*
Date: 13th – 23rd June 2006
Area: ICES Div. VIa and VIIa
Survey Type: MESH Cruise 2006 Multibeam Survey

Personnel:

M Service (SIC)	AFBI	13 – 23 June
A Mitchell	QUB	13 – 23 June
D Long	BGS	13 – 23 June
J White	MI	13 – 23 June
N Golding	JNCC	13 – 23 June
M Pliktor	Multi-Beam	13 – 23 June
W Zaleski	Multi-Beam	13 – 23 June
C McGonigle	UU	17 – 23 June
C Bryant	Subseavision	17 – 23 June
C Brown	UU	17 – 23 June

Objectives:

i. Conduct Multi-Beam Survey of N Channel Peaks.

ii. Undertake Targeted Ground Truthing of; N Maidens Peak, Lacuna Bank, Shamrock Pinnacle and Stanton Banks.

Cruise Narrative:

Tuesday 13th
All equipment was loaded and Scientists onboard by 22:00h

Wednesday 14th
Steam from Belfast to North Maidens. The vessel departed Belfast at 06:00h and was on station by 09:00h. This site had previously been surveyed using Multi Beam Sonar by DARD in 2003 and the Marine Institute in 2004. Sites for Ground Truthing were therefore, selected from these datasets.

7 Deployments of the Drop Video Camera Were made successfully.
3 Hammon Grab Samples followed this.
On completion of this work the vessel made passage overnight to Laconia Bank

Thursday 15th
Laconia Bank/Shamrock Pinnacle

DARD, using towed video and multi-beam in 2003 and 2004, had previously extensively surveyed this complex of reefs. In 2004 the Marine Institute collected additional multi-beam data.
9 deployments of the Drop Camera were made followed by 3 Hammon Grab Samples.

The vessel then made passage to Belfast Lough where part of the overnight was spent running Roxanne Lines over the Dredge Spoil Disposal Site.

Friday 16th
The Vessel then berthed in Belfast at 08:30. Multi-Beam Sonar equipment was delivered to the vessel by 09:30 and installation work began. This was completed by 09:00h and the vessel then departed to the North Channel.

Saturday 17th
Multi-beam survey work over reefs within the North Channel began at 04:00h and continued through until 11:30. The vessel then steamed to Ballyhalbert to collect the ROV pilot and University of Ulster staff before returning to survey area. Survey work recommenced at 15:00h and continued overnight.

Sunday 18th
Multi-Beam survey work continued through until 15:00h. An ROV flight was then attempted but was abandoned due to strong currents. Then vessel left the area at 18:00h and steamed overnight to Stanton Banks.

Monday 19th
Arrived on station at Stanton Banks at 13:00h and commenced work with Box Corer. 7 drop camera deployments were completed and 2 Shipek Grab samples collected for sediment characterisation. On the completion of this work one successful deployment of the ROV was undertaken using a technique involving ballasting the umbilical cable with a substantial weight. A small area was covered by multi-beam and following this the vessel made passage to Hemptons Turbot Bank overnight as the weather forecast suggested deteriorating conditions.

Tuesday 20th
The vessel arrived at Hemptons Turbot Bank by 12:00h and began multi-beam work immediately. The Marine Institute had previously surveyed this area in 2004 and 2005. This study presented the opportunity to assess the degree to which the prominent sand wave features move. Following this a small area North of Lough Foyle was surveyed, as this is a site of a potential offshore environmental mooring. Again the prevailing weather forecast was poor so the decision was made to move to NE Antrim Coast where some shelter could be provided which would allow work to continue and the vessel made passage overnight.

Wednesday 21st
The vessel arrived on station at 04:00h and began multi-beam work immediately. Maerl Beds in this area had previously been mapped by AFBI/QUB using AGDS. Multi-Beam, Side-Side Scan and LIDAR. Mapping continued until 13:00 when deployments of the ROV were attempted. After one successful deployment the second deployment when it was revealed that the umbilical had become fouled on the ships propeller, Closer inspection revealed that the tidal flow was strong

enough to turn the propeller exacerbating the problem. Operations ceased for the day to await the arrival of divers.

Thursday 22nd

Divers arrived at 11:00h and very quickly freed the propeller. The vessel then recommenced surveying in the area until 14:00h before moving off back to the North Channel Peaks Area. Survey works here recommenced at 17:00 and continued through the night.

Friday 23rd

Survey work ceased at 04:00h and the vessel returned to Belfast berthing at around 08:30. Demobilisation of equipment began almost immediately and all scientists and equipment were clear of the vessel by 14:00h.

Conclusion:

The cruise was relatively successful despite the weather and delays in the arrival of the multi beam system curtailing some of the objectives. Substantial further blocks of multi-beam data were gathered (figure 1). The North Channel Peaks have now been well covered (figure 2). However, a better separation of cruise objectives may have be more appropriate with ground truth work allocated to a separate leg. It is also clear that further deployment protocols for the ROV need to be developed.

M Service SIC

A Hughes Master

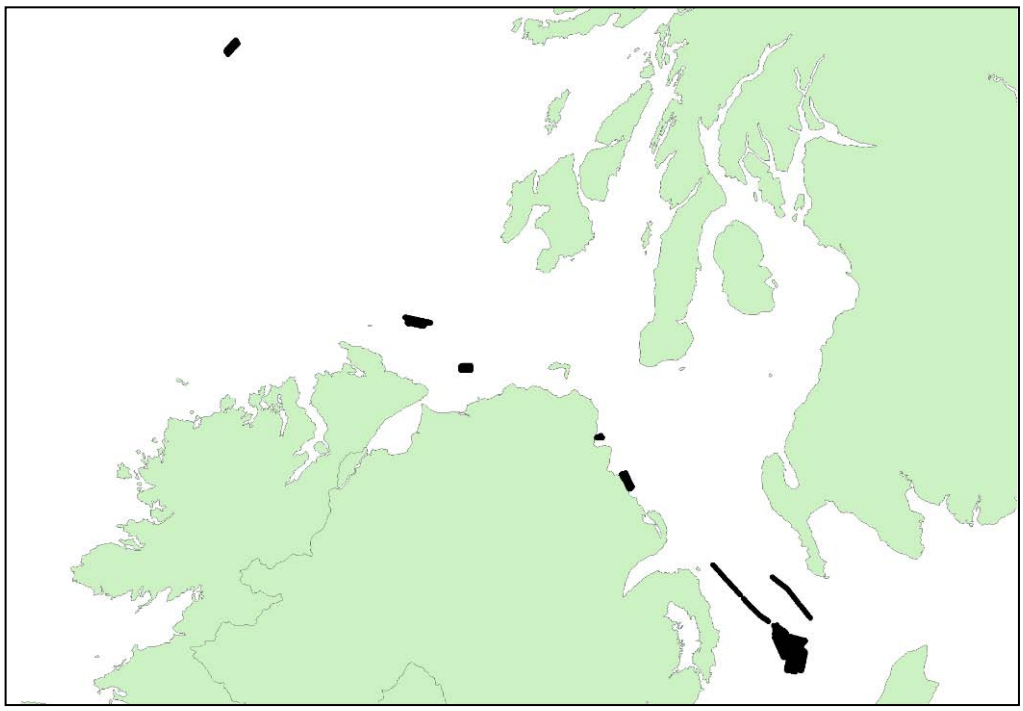

Figure 1 Multi Beam Coverage

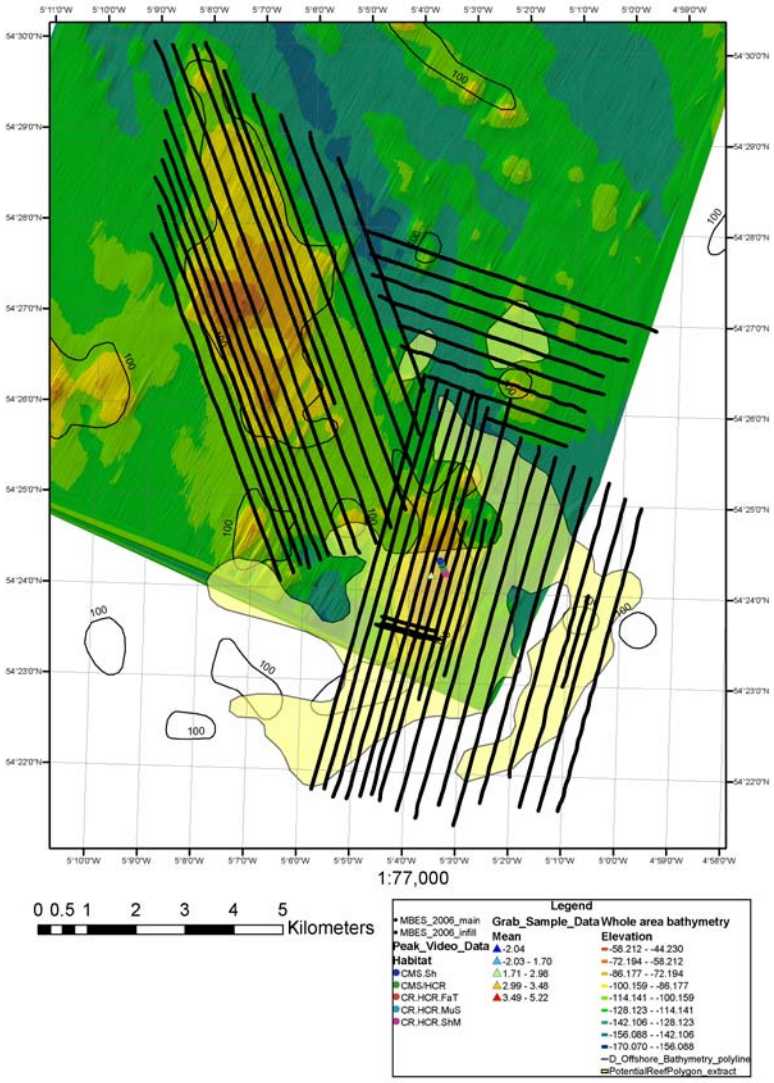

Figure 2 North Channel Peaks