MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1983 CHARTER VESSEL PROGRAMME

REPORT: MV TJELDØY

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

G P Arnold (SIC)
M H Beach
B F Riches
B H Holford (Diving project leader)
M R Vince (Diver)
A E Howard (")
K A Tucker (")

DURATION:

Commenced Falmouth, 30 August
Concluded Brixham, 14 September

(All times are Greenwich Mean Time)

LOCALITY:

Start Bay

AIMS:

1. To investigate the orientation and behaviour of plaice in relation to bottom topography and near-bed currents under the combined influence of tide and swell.

2. To test the deployment and operation of the MAFF autonomous near-bed velocity recorder.

3. To search for juvenile scallops and to determine local distribution, density and size composition as appropriate.

NARRATIVE:

Scientific staff arrived in Falmouth during the afternoon and evening of 30 August. Loading was completed by 1000h the next morning and MV TJELDØY sailed at 1055h, arriving in Plymouth at 1710h. Live fish were brought out from the MBA Laboratory early the next morning by RV GAMMARUS and TJELDØY arrived on station in Start Bay at 1200h 1 September. A toroid buoy and mooring and two Plessey recording current meters were deployed and the vessel moored with four anchors by 1500h. But with a forecast of force 9-10 south to southwesterly winds the anchor station was abandoned and TJELDØY arrived off Brixham at 2142h.

TJELDØY remained weatherbound in Torbay until 0330h 5 September when she steamed back to Start Bay arriving on the Skerries Bank at 0600h. A three-point mooring was achieved by 0740h on the end of the flood tide but a connection in the stern anchor assembly broke at the beginning of the ebb tide and the vessel swung rapidly round dragging the remaining single fluke anchor.

During the rest of the day the divers serviced the Plessey current meters and deployed a seabed wave recorder, while the fish cage was rigged in preparation for deployment. On the morning of 6 September the divers reorganised the stern anchor assembly on the seabed adding two extra sea claw anchors, while the television cameras and a Braystoke current meter were attached to the fish cage. Three unsuccessful attempts were made during the day to achieve a three-point mooring but this was finally realised on the tail end of the flood tide on the morning of 7 September. Despite a near perfect deployment the stern anchors again failed to hold and the vessel swung broadside to the ebb tide. The divers attached recovery lines to the various anchors and cables and most were retrieved during the afternoon. Bad weather prevented work on 8 September and the remaining two anchors and chains were therefore recovered on the following morning. With the onset of more bad weather TJELDØY steamed to Torbay for shelter arriving off Brixham at 1325h, 9 September.

TJELDØY remained weather bound in Torbay throughout 10 and 11 September, during which time repairs were made to the engine/gearbox coupling. She was due to sail again in the early hours of the morning of 12 September but in moving to Brixham oil jetty to collect a larger stern anchor further damage was sustained in the coupling. The cruise was then abandoned and the two Transit vans recovered from Falmouth and Beesands, respectively. Scientific equipment was off-loaded in Brixham on 13 September, while the divers went to Start Bay on the Devon Sea Fisheries Inspectorate's patrol boat "Spirit of Devon" to attempt to recover the current meters and seabed wave recorder. This proved to be impossible because of the prevailing weather conditions and the diving team therefore returned to Hallsands remaining there until 15 September, while the remaining scientific staff returned to Lowestoft by train on 14 September. The divers recovered the Plessey current meters and seabed wave recorder on 14 September and went to Salcombe on 15 September to recover and measure scallops surviving from spat seeded there in 1981 and to inspect sand ridges in the outer estuary. The diving team returned to Lowestoft on 16 September.

RESULTS:

1. None of the three main aims was achieved.

2. A DNW-5 seabed wave recorder was deployed on the Skerries Bank for 9 days.

3. Nineteen artificially seeded scallops were recovered at Salcombe, measured and replaced.

4. It was shown that an underwater amplifier used in conjuction with a LICOR underwater quantum cell would overcome the signal-to-noise ratio problems encountered at higher gains with the standard ship-board amplifier.

G P Arnold
22 September 1983

SEEN IN DRAFT: S J R

INITIALLED: D J G