

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

1991 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES, CRUISE 12

STAFF:

S.M.ROWLATT (SIC)
R.G.LEES
D.LIMPENNY
P.HUDSON
L.A.MURRAY } 11-14 December
H.L.REES }
M.LAMBERT } 14-20 December
A.KENNY }

DURATION:

(all times are Greenwich Mean Time)
sailed 0900h 5 December
docked 1900h 19 December

LOCALITY:

North Sea, English Channel, Irish Sea

AIMS:

1. To carry out an environmental survey of the Barrow-in-Furness dredged material disposal site. Samples will be collected for physical, chemical and infaunal analysis.
2. To collect core and grab samples for the JMG survey of sediments in UK coastal waters.
3. To collect sediment samples from various sewage sludge disposal sites.
4. To sample the benthic fauna at the Isle of Wight aggregate extraction area.
5. To collect samples of benthos at the proposed aggregate extraction area off Cromer, as a baseline for the MAFF/CEC recolonisation experiment.

NARRATIVE:

CORYSTES sailed at 0900h on 5 December. She steamed to the Blyth dredged material disposal site where samples of sediment and fish were collected for PCB analysis (additional aim). Kasten core stations were worked en route at the Silver Pit and off the Tyne (NSTF 14).

By the morning of 7 December this work had been completed and CORYSTES had returned to the Outer Thames Estuary for the start of the scheduled programme.

Grab samples and cores were collected in the Thames Estuary, English Channel and south-western approaches (aim 2) as CORYSTES steamed to Barrow-in-Furness to survey the new dredged material disposal site D (aim 1). Following the collection of a series of grab samples on 11 December Drs Rees and Murray joined the ship via the Barrow pilot vessel. A bathymetric/sidescan survey was carried out, being completed on 12 December. Further grab samples were then collected followed by beam trawling.

CORYSTES steamed to an area off Sellafield where Kasten and Craib core samples were collected for Pb-210 and Th-234 measurement respectively. This is part of an AEP2/AEP4 collaborative study of metal fluxes to sediments carried out for the JMG/NMP.

CORYSTES returned to Barrow to carry out a video survey around the disposal site D on 14 December. Following this Drs Rees and Murray left the ship and Mr Kenny and Ms Lambert joined.

In the evening of 14 December Kasten and Craib core samples were collected from the mud patch to the west of the Isle of Man (joint AEP2/AEP4 work). CORYSTES then steamed to the Isle of Wight aggregate extraction area, cores and grabs being collected en route from Lyme and Weymouth Bays on 16 December.

The Isle of Wight aggregate extraction areas 213, 240 and 351 were surveyed on 16 and 17 December using Hamon Grab, anchor dredge, sidescan sonar and scallop dredge (aim 4). The weather deteriorated during this period and it was not possible to deploy the U/W video sledge. A grab survey of the Nab Tower sewage sludge disposal site was started on the evening of 17 December.

On 18 December a series of JMG samples was collected from the Solent (aim 2) together with a sample from the Hurst Fort dredged material disposal site. The Nab Tower survey was completed that evening.

CORYSTES steamed to Lowestoft, a sediment sample for D. Lees of Weymouth laboratory being collected off Dungeness on the way. CORYSTES docked at 1900h on 19 December.

RESULTS:

Aim 5 was not attempted on this cruise, it had been rescheduled for CIROLANA 1/92 prior to sailing.

All other aims were successfully achieved.

In addition 15 sediment grab and 4 fish (3m beam trawl) samples were collected from the area of the Blyth dredged material disposal site.

No evidence of dredged material accumulation was found at the Hurst Fort disposal site and it became clear that due to the restricted channel, a small charter vessel should be used if further work is necessary.

Figure 2 shows some results of preliminary benthic analysis at the Barrow-in-Furness dredged material disposal site. However, most results will not be available until after laboratory analysis.

S M Rowlatt
19 December 1991

SEEN IN DRAFT:

M J Willcock (Master)
R Graham (S.F.M)

INITIALLED:

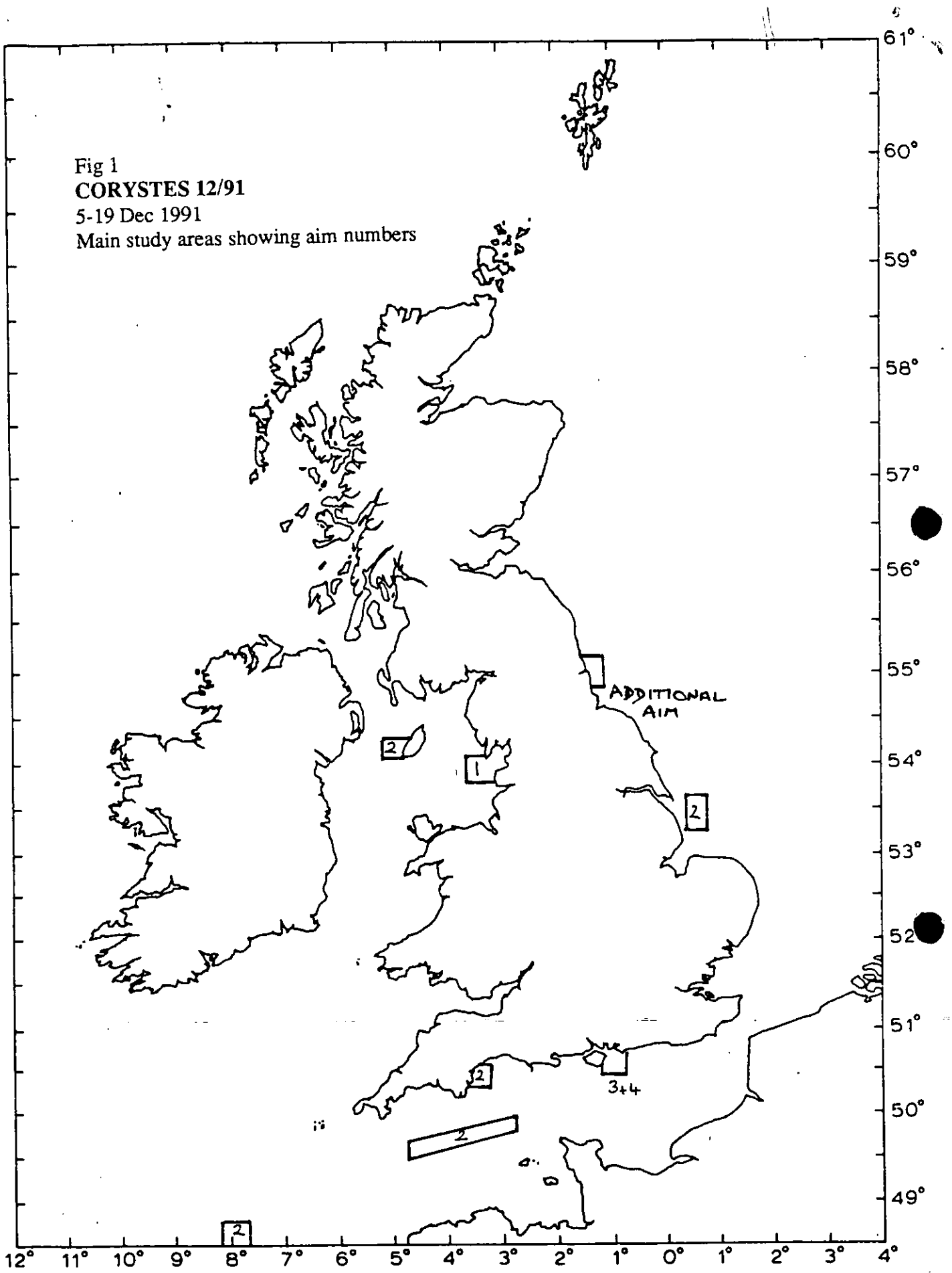
SR

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A KENNY

Fig 1
CORYSTES 12/91
5-19 Dec 1991
Main study areas showing aim numbers



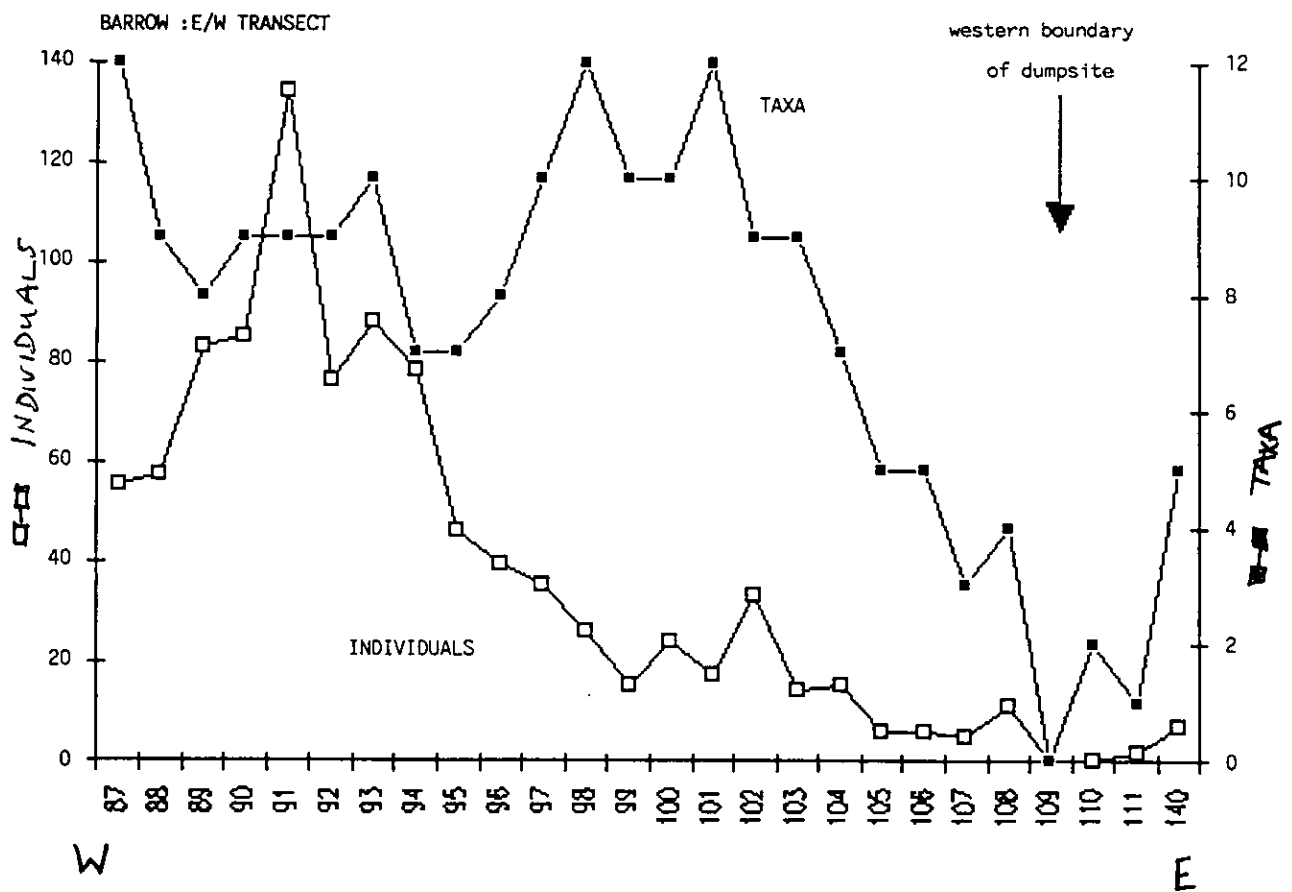


Fig 2 Number of benthic taxa and individuals along a transect west from the Barrow-in-Furness disposal site D (>5 mm fraction).