

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

1991 RESEARCH VESSEL PROGRAMME

REPORT PROGRAMME: RV CORYSTES CRUISE 5a

STAFF:

S M Rowlatt)	
H L Rees)	1-14 May
D S Limpenny)	
M A Lambert)	
R G Lees)	
F Franklin)	1-5 May
M Gee (PML))	
A McEvoy (PML))	
P Hudson)	5-14 May
A Kenny)	
E Shreeve)	5-6 May
P Manning)	

DURATION:

Left Lowestoft 1030h 1 May
Arrived Lowestoft 2030h 14 May
All times are Greenwich Mean Time

LOCALITY:

North Sea

AIMS:

1. To collect sediments by grabbing and coring for physical, biological and chemical analysis at the Tyne sewage sludge disposal site. This work will include CSG-funded studies of meiofauna by Plymouth Marine Laboratory scientists.
2. To assess the quantity of litter, if any, present at the Tyne sewage sludge disposal site.
3. To collect sediment samples throughout the western North Sea for the JMG baseline survey.
4. To examine the sediment and benthos at various North Sea Task Force stations.
5. To carry out benthic surveys and gravel extraction areas around the Humber.
6. To evaluate sector scanning sonar for use in sediment surveys.
7. To collect *Modiolus* and other epifauna off the Humber for biological and chemical analysis.

NARRATIVE:

Corystes sailed from Lowestoft at 1030h on 1 May and proceeded to the North Norfolk-Humber area where samples of *Modiolus* were collected by anchor dredging (aim 7). This work was completed at 0230h on 2 May and CORYSTES sailed to the Tyne sewage sludge disposal site, JMG sediment samples being collected *en route* off the Yorkshire coast.

Sediment sampling in the area of the disposal site was started at 1500h (aim 1). This work continued until 1230h on 5 May, together with beam trawling (aim 2) and an opportunistic inspection of the Northumbrian Water sludge disposal operation (additional aim).

Mr Lees, Mrs Franklin, Dr Gee and Ms McEvoy were put ashore, their places being taken by Mr Shreeve, Mr Hudson, Ms Manning and Mr Kenny. A sector scanner survey (aim 6) was carried out of the Wearmouth disposal site and the area between Sunderland and Blyth. This work was completed at 2200h the same day. The following morning Mr Shreeve and Ms Manning were put ashore.

During the morning of 7 May a series of sediment samples was collected using a rock dredge between the Tees and Blyth. These samples together with the sonar work form the final component of a sediment survey covering the area from Cowbar Nab to Blyth conducted over the last three years as part of the COSEDS project. In the afternoon a core was collected in the vicinity of NSTF station 14 (additional aim).

CORYSTES steamed first to the east (NSTF station 43) and then south where a series of 95 sediment samples were collected for the JMG and NSTF programmes, mostly from the Humber-Wash area (aims 3 and 4). During this phase of the cruise which lasted until 14 May, a series of 28 anchor dredges were also collected from various gravel areas around the Humber (aim 5). Sidescan and underwater TV surveys were carried out in the gravel areas to assess the bottom sediments and epifauna. This work is part of the MAFF contribution to a joint project with CEC to assess the recolonisation of aggregate areas after extraction.

CORYSTES docked at 2030h on 14 May.

RESULTS:

All aims were successfully achieved. In addition 1 core and 8 rock dredge samples were collected from the NE coastal area and the sludge slick deposited by the MV Northumbrian Water was examined visually.

Most data will not be available until the samples are processed in the laboratory. Table 1 lists the results of the Tyne beam trawl survey and shows the presence of sewage-derived litter at the seabed although there was little evidence of litter in the recently-deposited sludge slick.

S M Rowlatt
16 May 1991

SEEN IN DRAFT: M WILLCOCK
R GRAHAM

INITIALLED: JP CEP

DISTRIBUTION:

Basic List +
H L Rees
D S Limpenny
M A Lambert
R G Lees
F Franklin
M Gee (PML)
A McEvoy (PML)
P Hudson
A Kenny
E Shreeve
P Manning

Table 1.

Litter in Tyne beam trawls, May 1991

	DISPOSAL SITE							12 km S OF SITE	
	119	120	121	123	124	125	127	128	
Plastic fragment	*	*	*	*			*		
Cellophane	*	*	*	*	*				
Adhesive tape			*						
Elastic fragment			*						
Rubber washer					*				
Rubber "O"ring	*								
Foam rubber			*						
Corn plaster	*								
Condom packet			*						
Foil fragment	*	*	*						
Glass jar	*								
Glass fragment				*					
Cloth fragment		*	*	*					
Cotton bud		*							
Sanitary towel	3	4	8	4	2				
Tampon	2	4	7	6	2				
Cigarette filter	10	13	21	7					
Hair	*	*	*	*	*				
Paper	*		*						
Tissue	*		*						
Cardboard fragment			*						
Hardboard fragment						*			
Matchstick	2	6	7	1					
Wood fragment		*	*		*				
Vegetable matter (inc. peel)	*	*	*						
Peanut	*				*				
Plant fragment		*	*						
Leaf litter	*	*	*	*		*			
Clinker	*	*	*	*	*	*	*	*	
Coal	*	*	*	*	*	*	*		
Approx. volume of litter (l)	3	1	1	1	0.15	<<0.1	<<0.1	0	
Approx. total sample volume (l)	10	8	13	5	5	7	2	2	

* indicates presence

CORYSTES 5a/91
1-14 May 1991
sampling areas

LATITUDE

55.50
54.50
53.50
52.50
51.50

-2.00 -1.00 0.00 1.00 2.00 3.00

LONGITUDE

