

Index cores & sediment sampling (also c-m)
MAFF CHARTERS

Indexed

23/12 AR/

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

1984 RESEARCH VESSEL PROGRAMME

REPORT: R V PRINCE MADOG

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

STAFF:

Part a

S Rowlatt (SIC)
H Rees
D Limpenny
E I S Rees (UCNW)
L Hummerstone (MBA)
G Burt (MBA)

Part b

S Rowlatt (SIC)
D Limpenny
N Shakspeare
M Poole
R Rycroft

DURATION:

Part a Left Menai Bridge 0900h 10 September
Arrived Menai Bridge 1200h 14 September

Part b Left Menai Bridge 0930h 17 September
Arrived Menai Bridge 0800h 21 September

All times are Greenwich Mean Time

LOCALITY:

Liverpool Bay

AIMS:

Part a 1. To conduct a routine monitoring survey of the Liverpool Bay Sewage sludge dumpsite by use of grabbing, coring and trawling.

2. To collect samples of benthos for chemical analysis at MBA.

3. To collect grab and core samples from the relatively uncontaminated area to the west of the sewage sludge dumpsite.

Part b 1. Carry out a detailed sedimentological survey of the dredged spoil dumpsites (new and old sites Z), the mouth of the Mersey and the Burbo Bight by coring and grabbing.

2. Carry out a seismic survey of the area to the south and east of the sewage sludge dumpsite and around site Z.

3. Sample near bed suspended particles for chemical and mineralogical analysis.
4. Collect samples of Pectinaria and Abra for chemical analysis from the vicinity of site Z, the Burbo Bight and Redwharf Bay.
5. Make current meter measurements in Burbo Bight area using a DRCM.
6. Determine the distribution of animals with depth at the dredged spoil dumpsite, the Burbo Bight and Redwharf Bay.
7. Determine the downcore distribution of acid volatile sulphides at site Z, the Burbo Bight and Redwharf Bay.

NARRATIVE:

Part a

PRINCE MADOG sailed from Menai Bridge at 0900h on 10 September and proceeded to the survey area. A routine sediment monitoring survey of the sewage sludge dumpsite (Aim 1) was then started but had to be abandoned due to bad weather after only 4 stations. Work recommenced on the morning of 11 September but grabbing had to be abandoned after 2 stations. Two beam trawl stations were then worked but a further deterioration in the weather meant that all work had to be stopped.

On 12 September the weather improved slightly and the remaining 29 grab stations of the routine dumpsite survey were completed. Samples of benthos were collected from most stations for chemical analysis at the MBA (Aim 2). On 13 September a grid of 48 grab stations was completed in the vicinity of the dredged spoil site Z (Aim 1 of part 2). Samples of near-bottom plankton and ppibenthos were collected from this site using a Macer sludge and a beam trawl. The latter retained very large numbers of cockles (5000 in one 10 minute trawl). Many of these were gaping and in poor condition. On 14 September a transect of grab stations was worked to the north of Anglesey in poor weather conditions and Prince Madog docked at 1200h.

Part b

PRINCE MADOG sailed from Menai Bridge at 0930h on 17 September to carry out the second part of the cruise. The ship proceeded to the Burbo Bight where 6 cores were collected.

Subsamples of some of these cores were analysed on board ship for acid volatile sulphides (Part 2 Aim 7) while subsamples of others were stored for later chemical, radiochemical and faunal analysis.

On 18 September 28 sediment samples were collected from the Burbo Bight and an anchor station worked; current meter readings and near bed suspended particulate matter samples being taken. (Part b, Aims 3 and 5). At 2100h PRINCE MADOG had to leave the station as high winds were causing the vessel to strain at her anchor.

The ship moved to Redwharf Bay for shelter and on the 19 September grab and core samples were collected and a current meter station worked. A short-lived improvement in the weather on 20 September allowed four cores to be collected from the New and Old site Z area. With north-westerly gales forecast and weather conditions deteriorating rapidly the PRINCE MADOG steamed towards the Menai Straits for shelter, making brief detours firstly to complete the seismic work, which had been proceeding at various times during the cruise, mostly at night

(Part b Aim 2) and secondly to complete the sediment sampling exercise to the north of Anglesey (Part a, Aim 3). The vessel anchored in Menai Strait overnight and berthed at 0800h on 21 September.

RESULTS:

All aims were successfully completed.

S Rowlatt
26 September 1984

INITIALLED: P C W

H W H

DISTRIBUTION

Basic list+

H Rees

D Limpenny

E I S Rees (UCNW)

L Hummerstone (MBA)

G Burt (MBA)

N Shakspeare

M Poole

R Rycroft