

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

1994 RESEARCH VESSEL PROGRAMME

REPORT : RV CIROLANA : CRUISE 7
(PROVISIONAL : Not to be quoted without prior reference to the author)

STAFF : R J Law (SIC)
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DURATION : Left Lowestoft 2100h 10 June
Arrived Lowestoft 2306h 26 June
(All times are Greenwich Mean Time)

LOCALITY : North Sea, English Channel, Irish Sea.

- AIMS :**
1. To conduct monitoring studies at stations established under the UK National Monitoring Programme (NMP). This involved both physical measurements, and the collection of samples for chemical analysis and biological effects studies. Chemical measurements in water concentrated on the less routine elements of the NMP; Cr, Hg, PAH, volatile organic compounds, HCB and HCBd.
 2. To collect water samples for analysis of HCHs and triazine herbicides (atrazine and simazine) in selected estuaries.
 3. To collect water samples for the analysis of HCHs along a transect through the Channel, as part of the continuing monitoring following the loss of MV Perintis in 1989.
 4. To collect samples of fine surface sediments from a number of offshore and estuarine locations in Cardigan Bay for chlorobiphenyl analysis, as a component of the marine mammal programme.

(Aim 4 was an additional aim not included in the original cruise programme.)

NARRATIVE :

CIROLANA sailed at 2100h on 10 June and made directly for the River Tweed, where work began at 0750h on 12 June in fair weather. Sampling was undertaken both from the ship at anchor, and within the estuary using the ship's Searider. After sampling at the Tweed CIROLANA moved to the River Blyth, which was sampled on the evening tide, before continuing to anchor off the River Tyne. Sampling within the Tyne was conducted on both the high and low

waters of 13 June, after which an offshore station was worked at 1636h before moving to anchor off the River Wear. High and low water sampling was conducted within the River Wear on 14 June, and within the River Tees on 15 June, the Searider being recovered just outside the approach channel to the Tees in deteriorating weather and with a stiff westerly wind. CIROLANA then proceeded to a series of offshore stations, the offshore Tyne/Tees station being worked at 2245h. Stations in the Outer Silver Pit, and at Smith's Knoll and the Outer Gabbard were completed during 16 June, and at the Warp anchorage (River Thames), South Varne (Dover Strait), and off Selsey Bill during 17 June. CIROLANA then proceeded to anchor off Poole Harbour, where sampling from the Searider was conducted on the morning of 18 June. After sampling the Searider called at the Town Quay in Poole to collect fresh biological material supplied from Burnham. After leaving Poole, three further stations were worked in the Channel (at 1435h, 1840h & 2210h) before CIROLANA continued to Plymouth Sound, anchoring off Drake's Island on the morning of 19 June. High and low water sampling was undertaken within the Tamar during the morning and early afternoon, and two offshore stations were worked at 1430h and 1646h after leaving the anchorage. CIROLANA then continued to the SW, arriving at the reference station in the Western Approaches at 1033h on 20 June. After sampling was completed CIROLANA made for the Bristol Channel, where the Nash Point station was reached at 0928h on 21 June and sampling conducted in poor weather. This developed into a southwesterly gale, and sampling at the inshore stations off the South Wales coast was postponed. CIROLANA then made for the eastern Irish Sea, where the offshore stations to the south and east of the Isle of Man were worked on 22 June between 0747h and 1910h, before proceeding to anchor near the Burbo Bight. High and low water sampling were conducted within the River Mersey on 23 June, the final station by the C1 buoy in the Queen's Channel being completed by 2000h. Sampling at two stations within the River Dee was undertaken on the morning of 24 June, after which it was decided to terminate the cruise due to problems with the steering gear. The last station was sampled on passage to Lowestoft, in the Celtic Deep at 0338h on 25 June. CIROLANA docked in Lowestoft at 2306h on 26 June rather than on 1 July as originally planned.

RESULTS :

In total 94 stations were worked before the cruise was curtailed. A cruise track is appended to this report.

Aim 1 : The majority of the planned stations were worked successfully, the areas in which sampling could not be conducted following curtailment of the cruise were Cardigan Bay (including the Rivers Dyfi, Mawddach, Rheidol and Teifi), and off the South Wales coast (Carmarthen and Swansea Bays).

The number of samples collected for analysis were :

Seawater		Sediment	
Bioassay	94	Bioassay	44
Volatile organics	88	Trace organics	46
PAH	80	Trace metals	48
HCHs	77		
HCB & HCBd	69		
Triazine herbicides	69		
Chromium	48		
Mercury	56		

In addition, extracts of 8 seawater samples from stations within industrialised estuaries were saved for scanning GC/MS identification of unknown organic compounds.

Aim 2 : Samples were collected within the estuaries of the Blyth, Tyne, Wear, Tees, Tamar and Mersey. No samples were collected from the River Humber as a result of changing priorities.

Aim 3 : Samples were collected from all 12 stations of the planned Channel transect for laboratory analysis of HCHs (including γ -HCH - lindane).

Aim 4 : No samples could be collected as a result of the curtailment of the cruise. Alternative arrangements will be made to collect these samples during summer 1994.

R J Law
26 June 1994

INITIALLED : JEP

SEEN IN DRAFT : Capt. R Jolliffe (Master) :
M Reynolds (Senior Fishing Mate) :

DISTRIBUTION :

Basic list + RJ Law
CR Allchin
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Vanessa Dawes
Yvonne Waddell
PM Hudson
Ruth Hamer
S Morris
Sorrel Bifield
JE Portmann
A Franklin
JM Davies (SOAFD)

CIROLANA 7/94

SHOWING :
STATION POSITION
STATION NUMBER
COASTLINE

