

Provisional: not to be quoted without reference to the writer

R.V. CLIONE

Report for Cruise 9/67

Staff:

- E. Reynolds
- A. K. Steele
- I. H. Huggins
- R. Read
- D. Denoon

Duration:

22 September-6 October, 1967

Aims:

1. To carry out a major radiological survey of the Irish Sea.
2. Further trials of gamma spectrometric equipment to monitor in situ the seabed and seawater in the Windscale and Clyde areas.
3. To carry out a radiological survey of the Clyde area.
4. To carry out trials between Van Veen Grab, Craib corer and in situ gamma spectrometry of the seabed, in conjunction with the M.O.D. Naval Radiological Protection Service.
5. Collection of seabed samples off the west coast of Scotland for determination of background levels of radiation.
6. Collection of seawater samples at stations in the North Sea and English Channel, for the determination of weapon test fallout levels in seawater.
7. To fish off Windscale for up to 100 of the marked plaice released during CLIONE 4b/1967.

Narrative:

Departing northwards at 1100 hrs on 22 September 1967, the ship arrived in Loch Ewe at 1200 hrs on 24 September, having taken North Sea water samples in the Firth of Forth area en route. In Loch Ewe, background grab sampling and in situ gamma probe measurements were successfully completed, the vessel then proceeding to the Clyde area in the face of a southerly Force 8 gale.

Work in the Clyde commenced on arrival at 0830 hrs, 26 September, and was completed by 0200 hrs, 29 September. During this time grab samples were taken at 54 stations, with in situ gamma probe seabed measurements at selected stations. Work in the Clyde area also included comparative grab sampling with the M.O.D. Naval Radiological Protection Service (Miss A. Goodair and team) and two short trawl tows (total 67 minutes) which provided adequate samples of Nephrops, cod, haddock, hake, pollock and dogfish. Additionally, measurements of the shielding effects of increasing depths of seawater on the gamma probe's response to cosmic radiation were made whilst anchored overnight in deep water (42 fathoms, Loch Goil).

CLIONE left the Clyde at 0200 hrs, 29 September, for the Irish Sea. The Windscale outer radial, grab and water, stations were sampled first, and twelve stations along the Irish coast-Kish-Holyhead-Liverpool Bar route were completed in spite of S.W. winds of between 15 and 30 knots. The last station (40200) on this route, some 20 miles east of the Isle of Man, was abandoned and the ship sheltered during 1 and 2 October in Ramsey Bay (S.W. gale, Force 8).

On 2 October, with the wind still S.W. 28 knots, an attempt was made to sample the Windscale radial station line, 30000 series, but the first and most sheltered station (30200) proved unworkable for grab sampling and in view of the dismal weather forecast, it was decided that the remaining Irish Sea stations would be abandoned in order to return to Lowestoft by 6 October.

CLIONE crept south in the lee of the Irish coast, and after sheltering in Wexford Bay on 3 October, made steady progress to Lowestoft, docking at 1030 hrs on 6 October, having steamed a total of 2080 miles during the cruise. Water samples were collected in the English Channel and southern North Sea on the way home.

Comment:

CLIONE proved to be ideal for this type of work, having all the necessary services and good inter-station steaming power.

During the Clyde sampling period, it was clear that it would not be possible to complete the cruise programme as planned, so four minor grab stations and all least-remunerative gamma probe stations were abandoned, so that the programme could be re-arranged to add two days to the Irish Sea survey. In spite of this, weather conditions prevented completion of the inshore Wind-scale stations by either grab sampling or in situ seabed monitoring.

The original cruise programme listed 100 stations, with 2000 miles steaming. Since the average station required 1 hour, 12½ days of continuous effort in ideal weather would have been required to complete the programme. In the Clyde area, 24-hr working was not possible, and cruising speeds could not be maintained. In the Irish Sea, autumnal weather conditions are not likely to be ideal. These factors will be allowed for when planning future cruises in this area.

Finally, any radiological survey work in the Clyde area will usually require some prior arrangements with the H.O.D. (Navy) and whilst the necessary arrangements were completed, in this instance well before the cruise and, in general, worked well, there was some evidence that the naval authorities at Quaymaster level were not warned of the CLIONE's visit.

Fisheries Note

On 27/28 October, 1967, CLIONE anchored overnight in 42 fathoms in Loch Goil, three miles from the loch head. During the hours of darkness there was a continuous disturbance of the water by a large number of pollock. Some of the ship's crew, who were line fishing for whiting, had great difficulty in lowering tackle to deep water without taking pollock. In some cases, pollock removed from the line and returned to the water were immediately recaptured. During the night, not less than 100 pollock were taken, with a few cod and whiting.

Two local (Campbeltown) boats were encountered, fishing for herring, during the same night.

E. Reynolds (N.I.C.)
13 October, 1967

Seen in draft: A.P.

Distribution:

Dr. Cole
Mr. Lee
Captain Aldiss
Dr. Cushing
Mr. Burd
Mr. Garrod
Mr. Hill
Mr. Bolster
Mr. Cattley
Mr. Corlett
Dr. Harden Jones
Mr. Margetts
Mr. Trout
Mr. Ilos
Mr. Holden
Dr. Jamieson
Dr. Purdom
Mr. Bridger
Mr. Mitson
Mr. Tungate
Mr. Williams
Mr. Wood
Mr. Adams
Mr. Mills
Mr. Kay
General Lab.
Lab. Registry
Library (2)
Mr. Whiting
N.I.C. next cruise
Mr. Simpson
Dr. Reynolds
Chief Inspector

All D.I.'s
Fisheries Registry
Captain Sutton
CLIONE file (Captain Sutton)
Mr. Postill
Mr. Sutcliffe
Skipper Button
The British Trawlers' Fed. Ltd.
Mr. Buchanan Wollaston
Mr. W. Baird, D.A.F.S.
Director, Dublin
Mr. Glover
Hydrographic Department
Dr. Lucas
Director, N.I.C.
Dr. Peachey
Mr. Shelbourne
White Fish Authority
Director, Charlottenlund
Director, IJmuiden
Mr. H. Dunster
Dr. E. Birse
Mr. A. Quinton
Miss A. Goodair
Capt. B. Broomfield
Mr. Preston

Mr. E. Reynolds
Mr. A. K. Steele
Mr. I. H. Huggins
Mr. R. Road
Mr. D. Donoon