

**CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE,
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK NR33 0HT**

CRUISE REPORT: CORYSTES 03/0303

STAFF:

C Fox (SIC)
N Bunn (CRP)
P Davison
M Shaw
A Nicholls

K Sullivan
C Burt
M Eade
C Satchell

DURATION: 15 February - 4 March 2003

LOCATION: Irish Sea (VIIa)

AIMS:

1. To carry out a plankton surveys in the Irish Sea to determine cod and plaice egg spawning. The identification of gadoid eggs (cod, haddock and whiting) will trial newly developed genetic identification method.
2. To collect zooplankton samples for copepod production and fish larval feeding studies.
3. To undertake calibration runs for the high-speed plankton sampler pup net system.
4. To collect comparative zooplankton samples using ring nets and the high-speed plankton sampler pup net system.

NARRATIVE:

Equipment was loaded during Friday 14 February. All gear requested was delivered except for two formalin dispensers that appear to have been mislaid. A spare dispenser was obtained from the laboratory. Staff embarked by 07:00 on 15 February and Corystes set sail at 08:30. The vessel made good time on passage to the Irish Sea due to calm weather conditions.

Corystes arrived at the first sampling station on the morning of 17 February. Permission to enter southern Irish waters was finally received being faxed through from the laboratory. The first station in the western Irish Sea was begun on schedule at 10:30. We managed to continue working until 19:00 on 18 February when deteriorating weather necessitated making a run for more sheltered waters. Around 12 hours working time were lost but sampling re-commenced on 19 Feb at 13:00. We were able to work continuously after this completing the first grid on 24 Feb at 23:00. Unfortunately two of the crew went down with gastric problems and an early run into Douglas was considered to seek medical assistance. In the event, Corystes proceeded to Douglas for a mid-cruise break on schedule entering port at 08:00 on 25 February. The affected crew were able to receive medical attention during the break.

Following this, the ship departed Douglas at 08:50 on 26 February. There was insufficient time remaining to completely re-work the sampling grid so it was decided to re-sample the eastern half of Area VIIa.

RESULTS:

Task 1. In total 103 plankton stations were sampled on grid 1 and 48 on grid 2 (see attached cruise tracks). A total of 3,236 cod-like eggs were sorted at sea from grid 1 and 1,751 eggs from grid 2 and fixed in ethanol for subsequent gene-probe analysis. Sorting eggs at sea is undoubtedly a difficult and tiring task and all scientific staff are to be commended for the effort and care they exercised in undertaking this task. A breakdown of eggs collected by developmental stage is given below.

Stage	Grid 1	Grid 2
1A	1021	532
1B	399	135
Total 1	1420	667
2	745	360
3	765	480
4	241	192
5	65	52
Total	3236	1751

The rates at which stations were worked and eggs collected on each grid are shown in the accompanying control charts. These may be of use in planning further egg sampling surveys.

Task 2. A zooplankton sample using the pup-sampler equipped with an 80 µm mesh net was collected at each station.

Task 3. Following completion of the second sampling grid, six calibration runs at varying speeds were undertaken with the sampler in free-flow mode.

Task 4. Following completion of the second sampling grid, Corystes steamed to Cardigan Bay where a series of four inter-comparison tows between the Gulf VII and ring-nets were made.

Overall only 12 hours were lost to weather down-time.

Upon completion of these tasks, Corystes departed the sampling area at 20:30 on 1 March making passage for Lowestoft. Corystes docked at 09:30 on 4 March, 2003.

Most equipment functioned satisfactorily. One pup cable failed during a dive and was replaced. One Guild-line unit failed, possibly associated with the cable failure, but was swapped for a spare unit. A tear was sustained to one main net when the sampler tangled with a Dan-buoy marker. During the final deployment the 1 m ring-net was torn off, probably as a result of snagging an underwater obstruction. The ring and flow-meter were recovered.

During the cruise several improvements that should be made to sampling equipment were noted. These include replacement of the plywood tail fins on the Gulf VIIIs with metal and construction of new 1 m ring-nets along the design of the 0.5 m ring-nets. Suitable bottom weights for the ring-nets should also be obtained.

C Fox
3 March 2003 (at sea)

INITIALED:

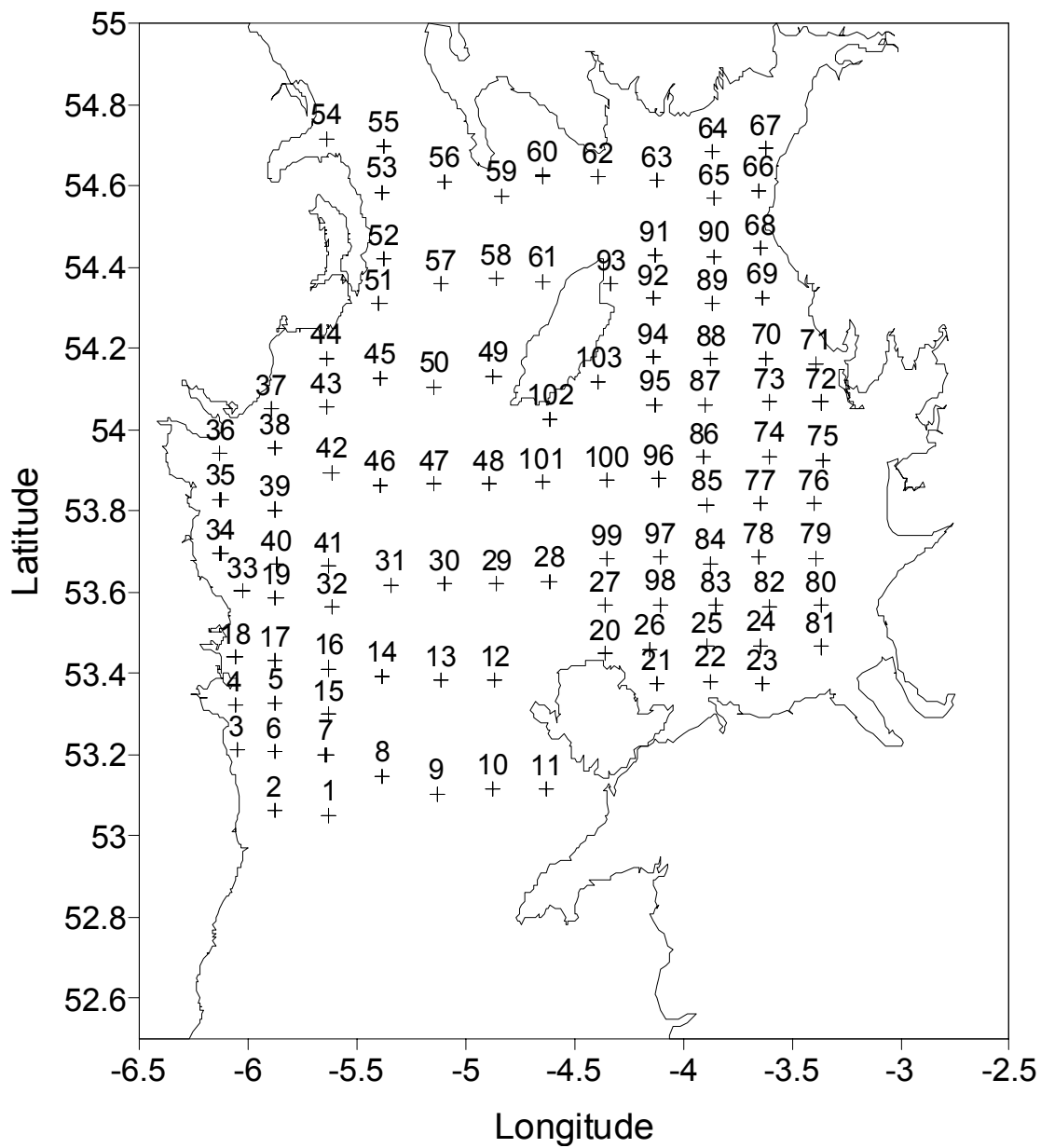
DISTRIBUTION:

Basic list +
Staff on cruise
Dr C Bannister
Mr S Milligan
Dr R Nash (PEML)
Dr M Armstrong (DARDNI)
Dr R Officer (Dept of Marine, Dublin)

Sea Fisheries Committees:
North Western and North Wales
Cumbria

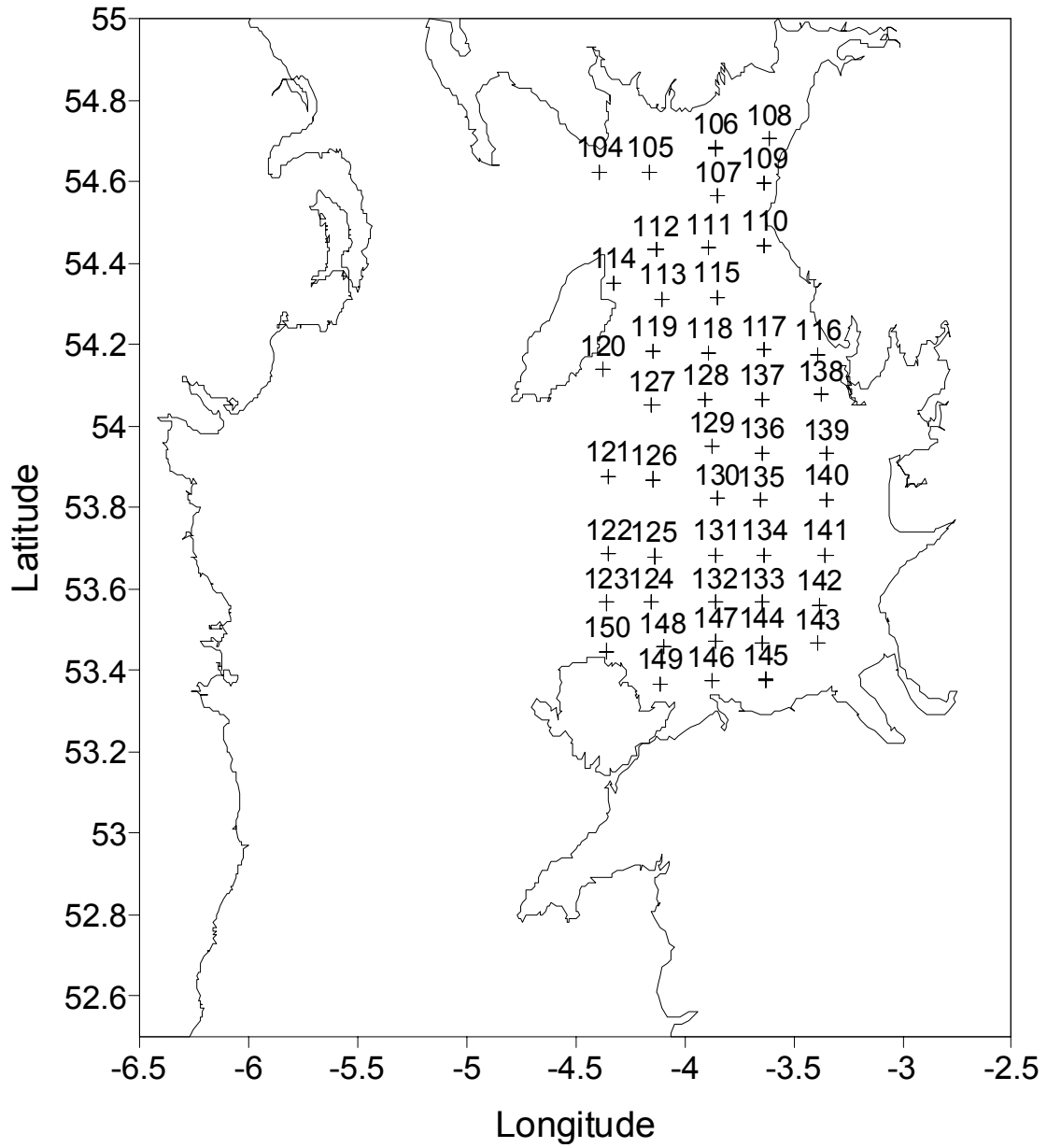
Corystes 3/03

Grid 1 station positions

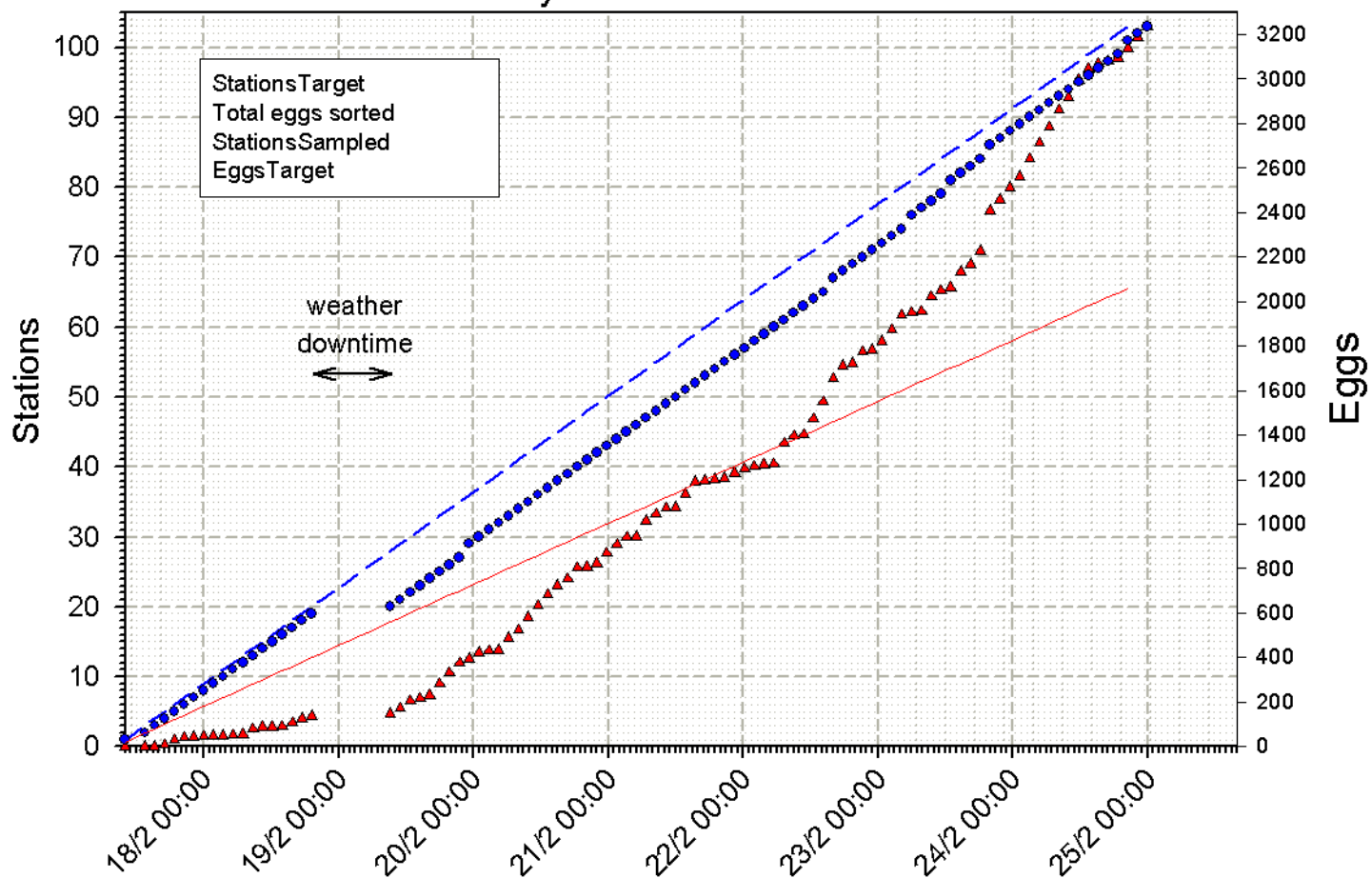


Corystes 3/03

Grid 2 station positions



Corystes 03/03 Grid 1



Corystes 03/03 Grid 2

