

R1/12

IN CONFIDENCE: Not to be quoted without prior reference to the Laboratory

FRV "Scotia"

12SR85 MB

Cruise 12/85

REPORT

29 November - 19 December 1985

Personnel

P Hopkins	SO
D McKay	HSO
W MacDonald	SO
I Leaver	ASO

Objectives

- i) To carry out an exploratory survey for O and I group mackerel.
- ii) To collect water samples for radio caesium monitoring.
- iii) To collect live skate for behavioural studies.
- iv) To test the efficiency of the plankton winch when used with the Isaacs Kidd net.

Narrative

"Scotia" departed from Aberdeen at 1530 on 29 November. Trawling began using the GOV trawl at 0830 on 30 November. Twelve hauls were made before poor weather forced "Scotia" to shelter off Loch Foyle on 3 December. A further 17 hauls were completed to the west of Ireland before docking at Greenock on 9 December.

At Greenock, fish tanks were loaded to collect live skate. An Isaac Kidd net was loaded for use in testing the plankton winch. A damaged GOV net was dispatched to Aberdeen.

"Scotia" sailed from Greenock at 0930 on 10 December. Four stations were completed before sailing to Donegal Bay, where the GOV trawl was replaced with the PT160 pelagic trawl. Poor weather delayed progress south and only 4 hauls were made with the pelagic trawl on 12 and 13 December. There was some difficulty in maintaining the pelagic net close to the bottom, and in the absence of any fishmarks in the water column it was decided to revert to the GOV trawl.

The plankton winch was tested with the Isaac Kidd net on 13 December. The winch was able to haul the net only when the ship was stationary and arrangements were made for further modifications to the winch when the vessel returned to Aberdeen.

From 14 December, "Scotia" worked northwards, though poor weather hampered work outside of the Minch. Radio caesium samples were taken at Cape Wrath on 17 December, at the Pentland Firth and Buckie on 18 December and at Aberdeen on 19 December before docking in Aberdeen at 0700 hrs.

Surface temperatures and salinities were logged every 10 minutes throughout the cruise.

Results

A total of 54 hauls were made. Damage was sustained to the net in 10 of the hauls. Catches of mackerel were generally small, with significant numbers taken only south of St Kilda and in Donegal Bay. Numbers of probable "0" group mackerel (≤ 23 cm) and probable "1" group mackerel (24-30 cm) per hour trawling are shown in the attached figures. Subscripts represent the number of hauls where this was more than one. Large hauls of herring and horse mackerel (>1000 per hour) were taken as follows.

Herring			Horse mackerel		
Position		Number per hour	Position		Number per hour
58°37'N	3°54'W	25370	55°49'N	7°52'W	2119
57°18'N	8°31'W	8244	54°36'N	8°58'W	3520
53°26'N	10°22'W	2548	52°52'N	10°50'W	1254
			52°15'N	11°4'W	4592

All fish species were measured and otoliths taken as shown in the table below.

NUMBERS OF OTOLITHS TAKEN

Mackerel	Herring	Haddock,	Cod	Whiting	Saithe	Norway Pout
374	783	795	146	563	120	230

Samples of whiting from area ~~0203~~ were brought back to the Laboratory for parasitological studies. Live skate were brought back for behavioural studies.

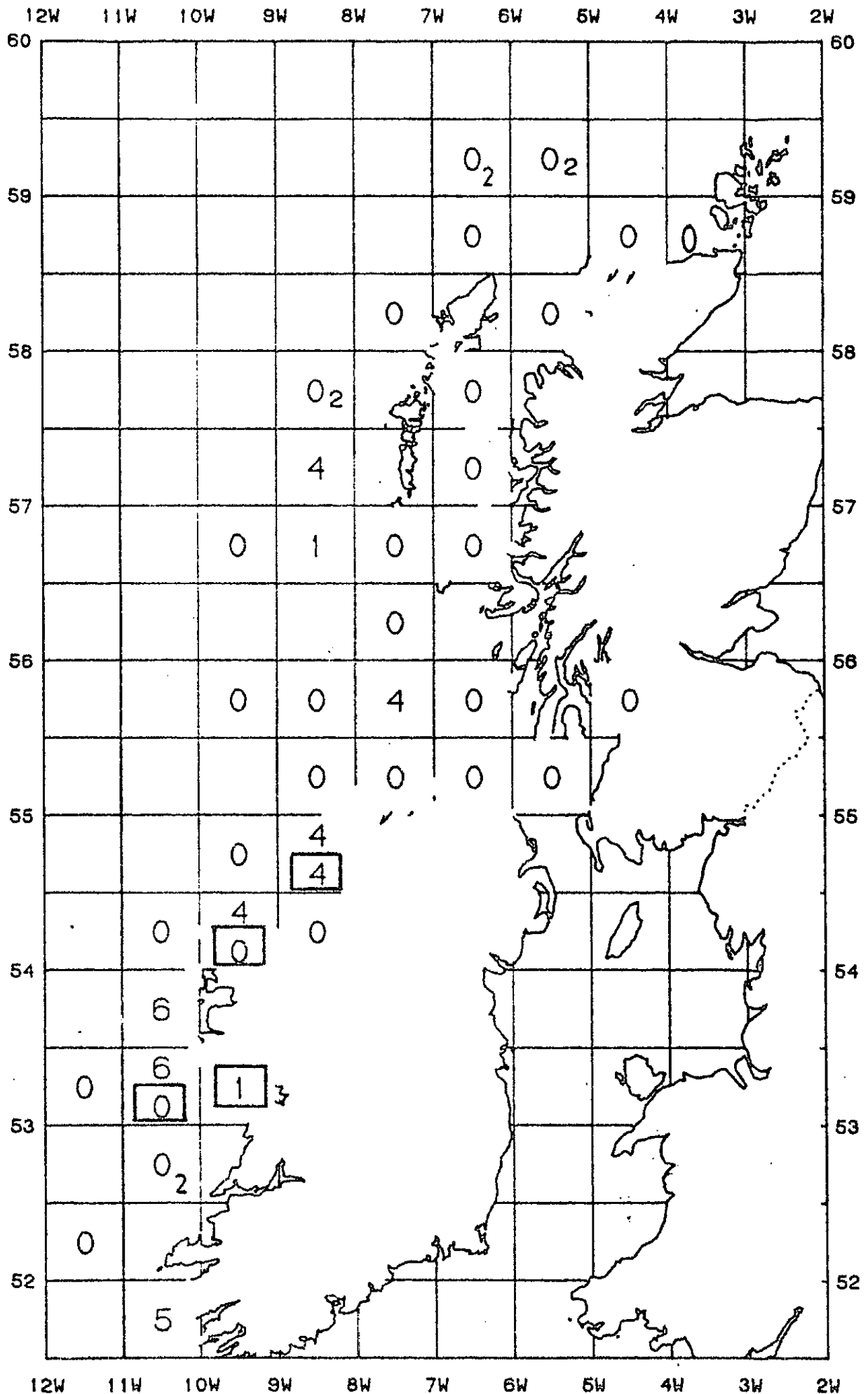
Cruise tracks are attached.

P Hopkins

Seen in draft: N McInnes

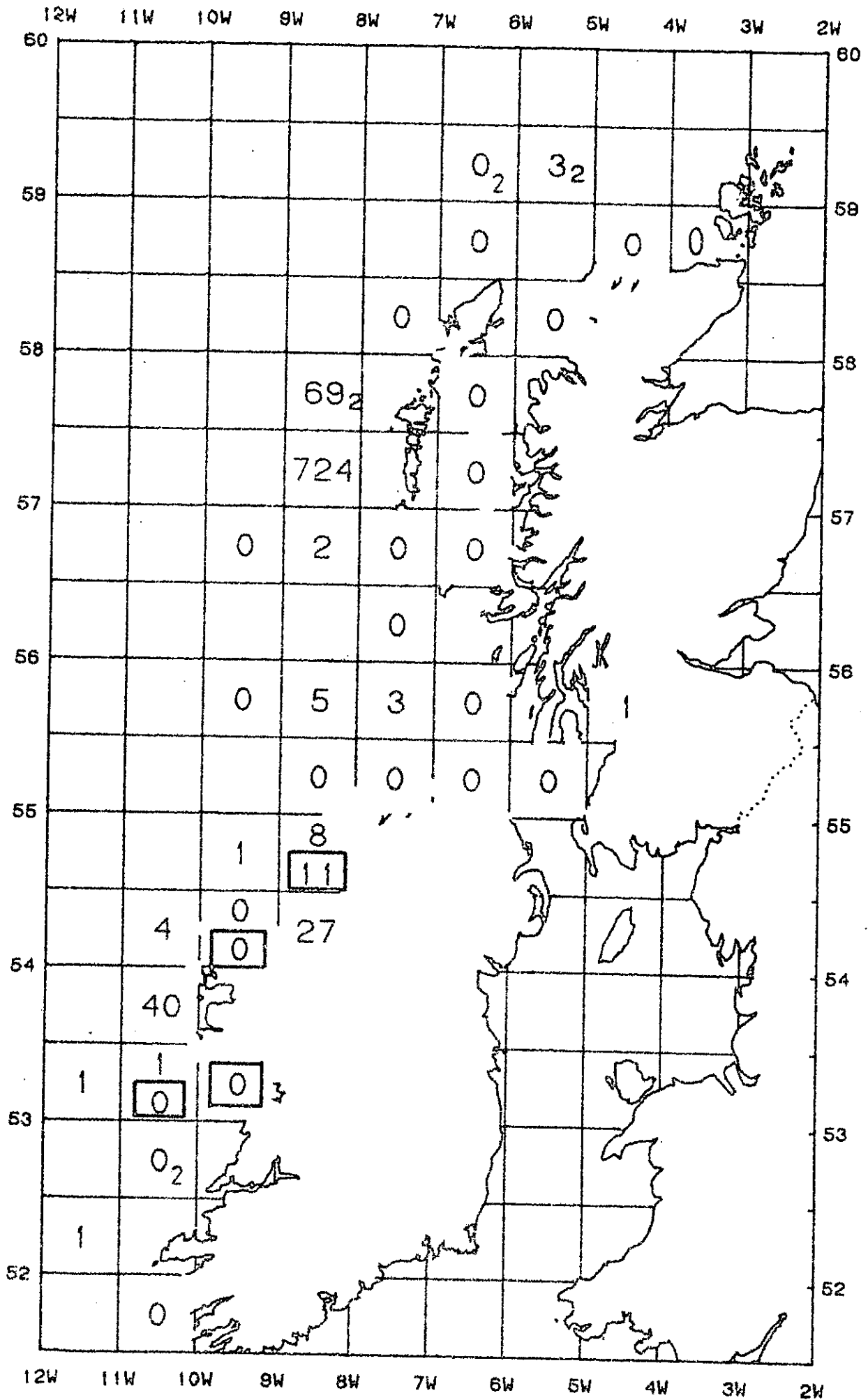
17 January 1986

Estimated numbers of 0 group mackereel per hour trawling

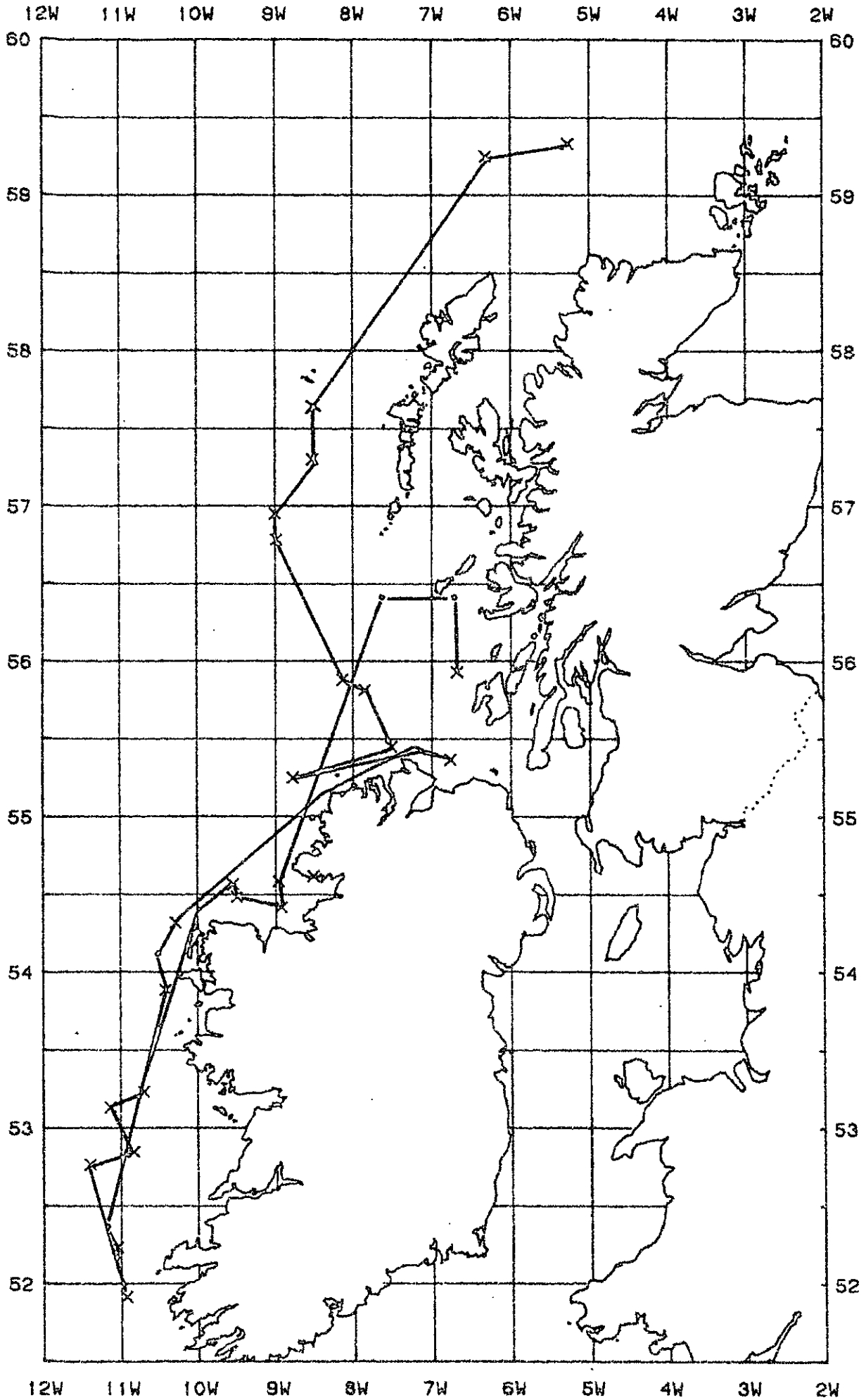


Pelagic trawl

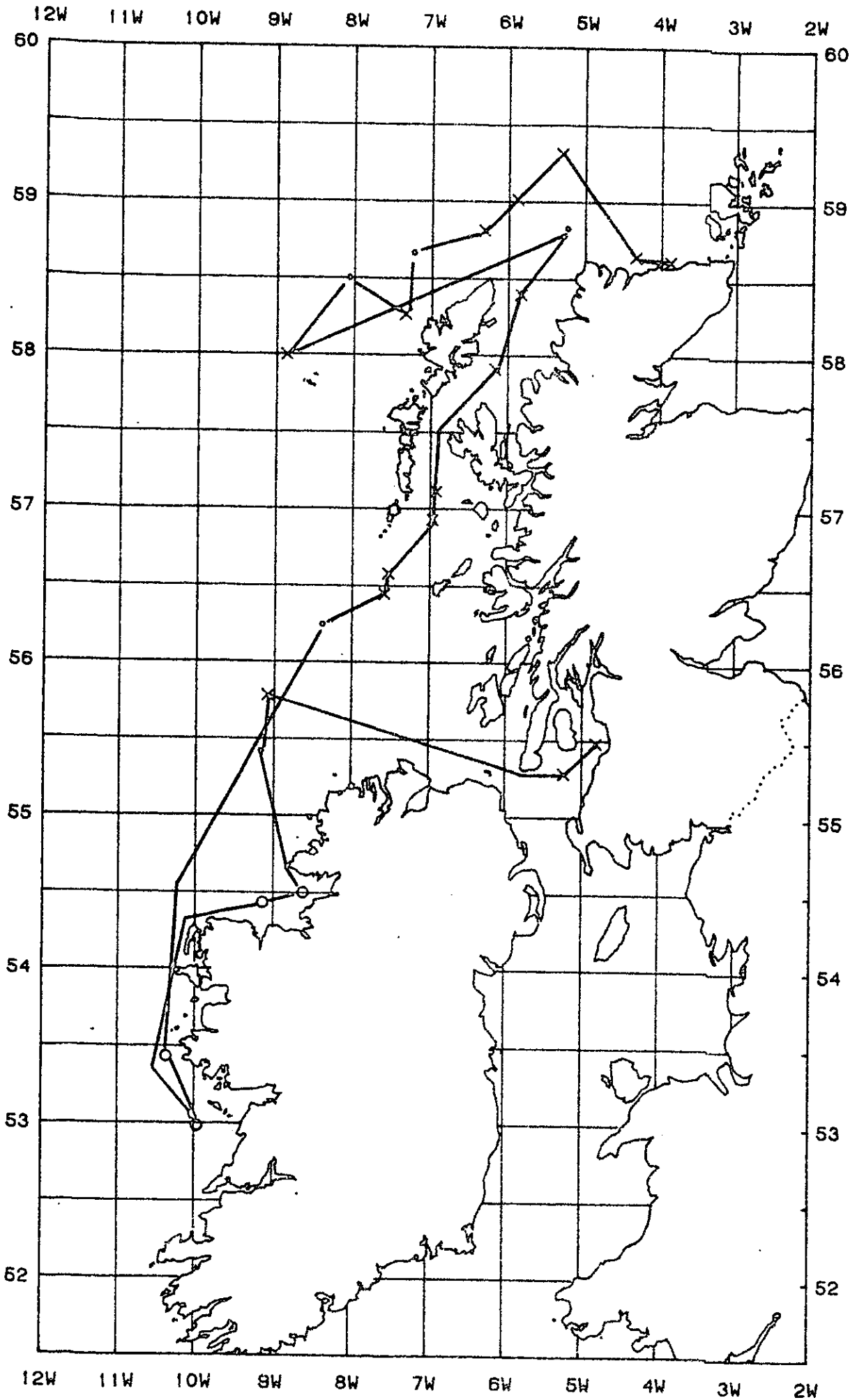
Estimated numbers of 1 group mackerel per hour trawling



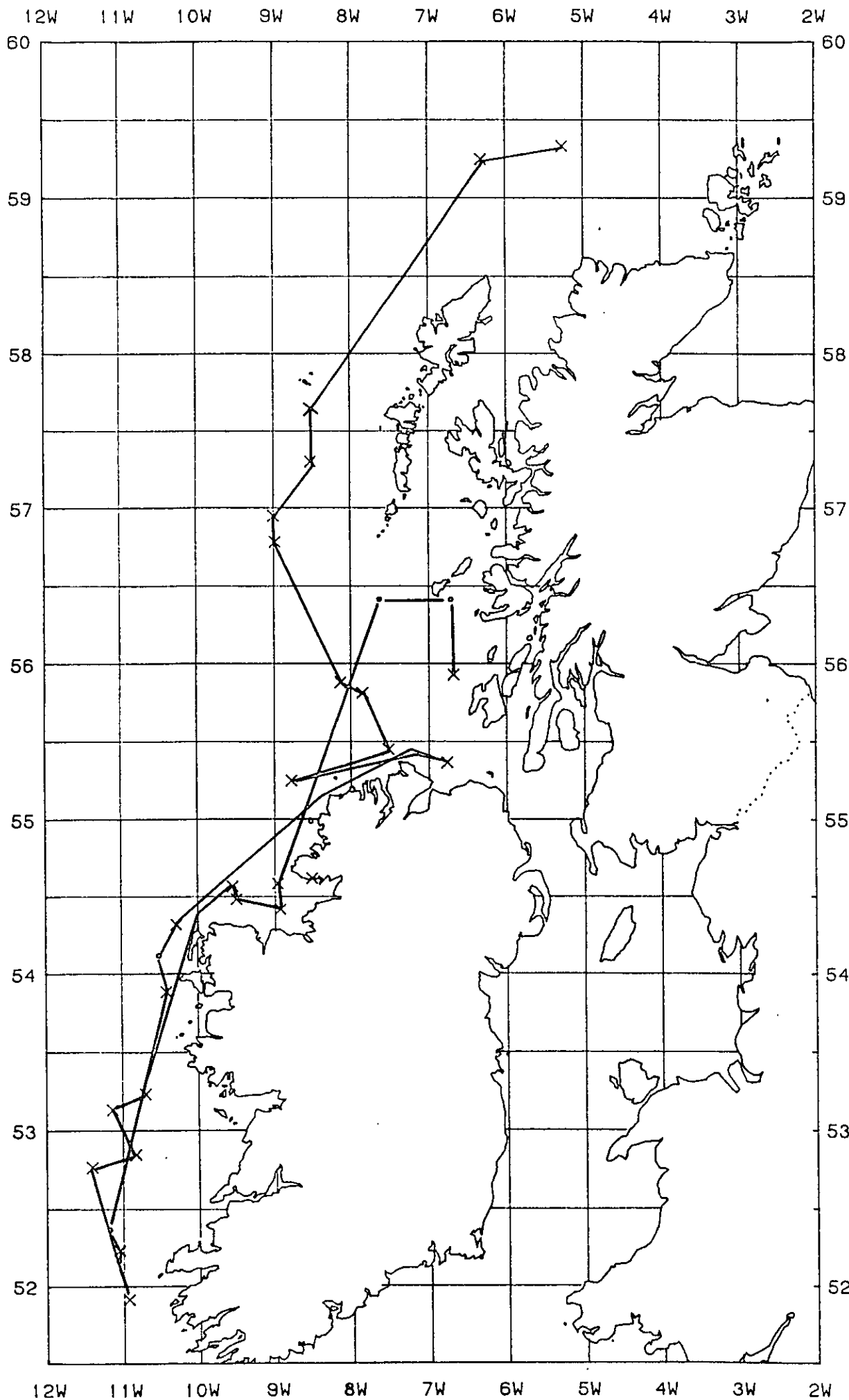
□ Pelagic trawl



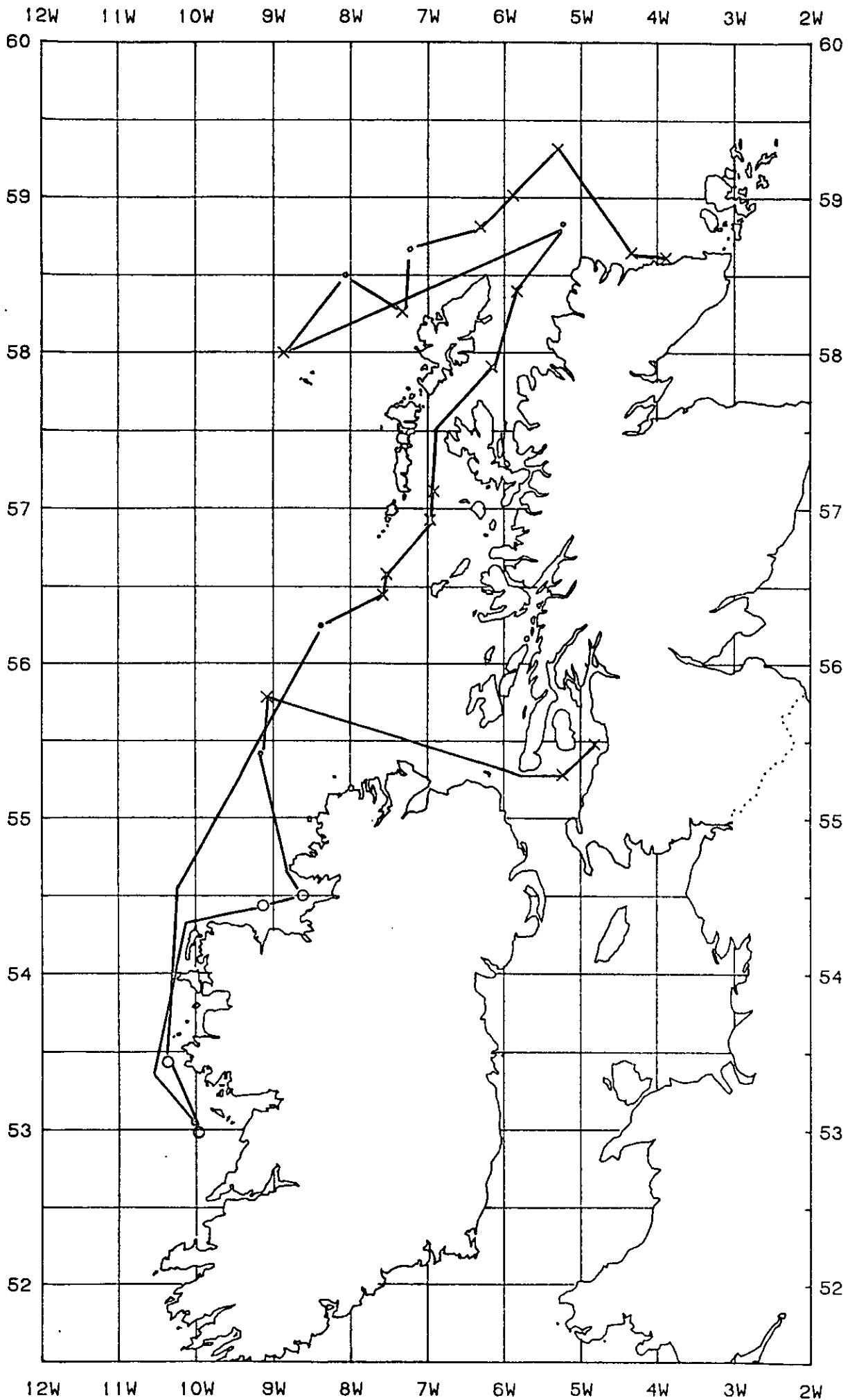
X Bottom trawl o Foul haul



X Bottom trawl o Pelagic trawl • Foul haul

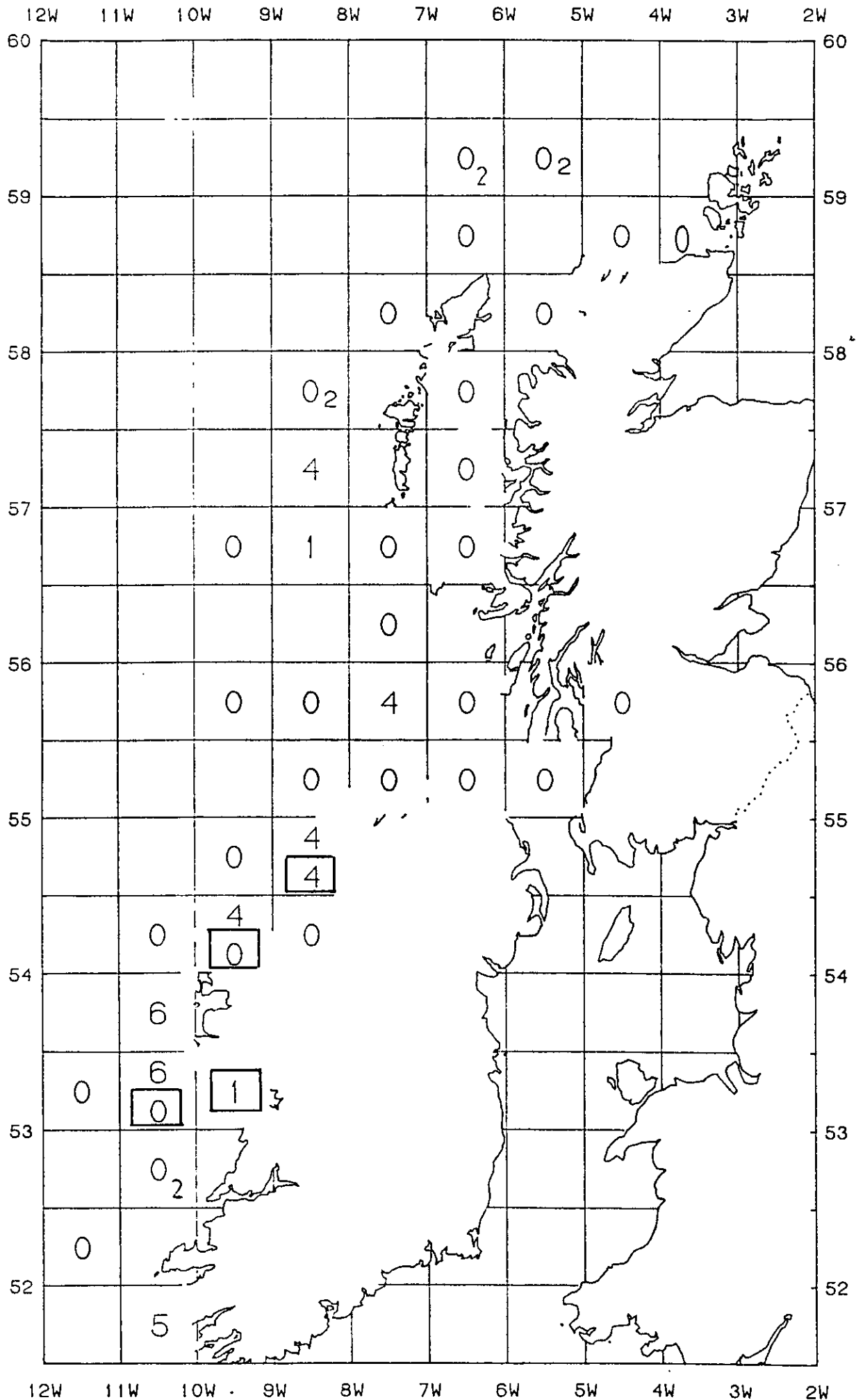


X Bottom trawl ° Foul haul



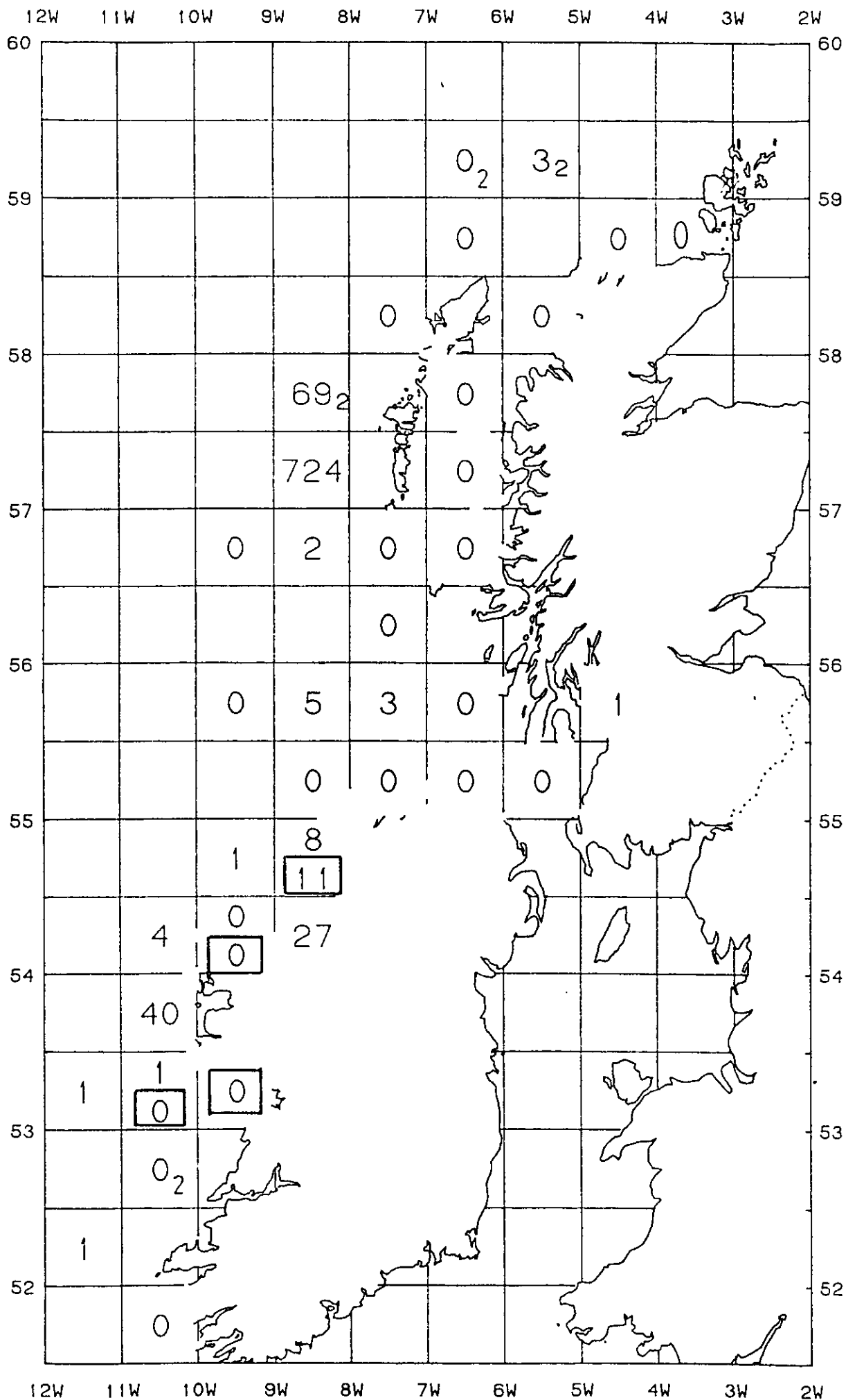
X Bottom trawl O Pelagic trawl • Foul haul

Estimated numbers of 0 group mackerel per hour trawling

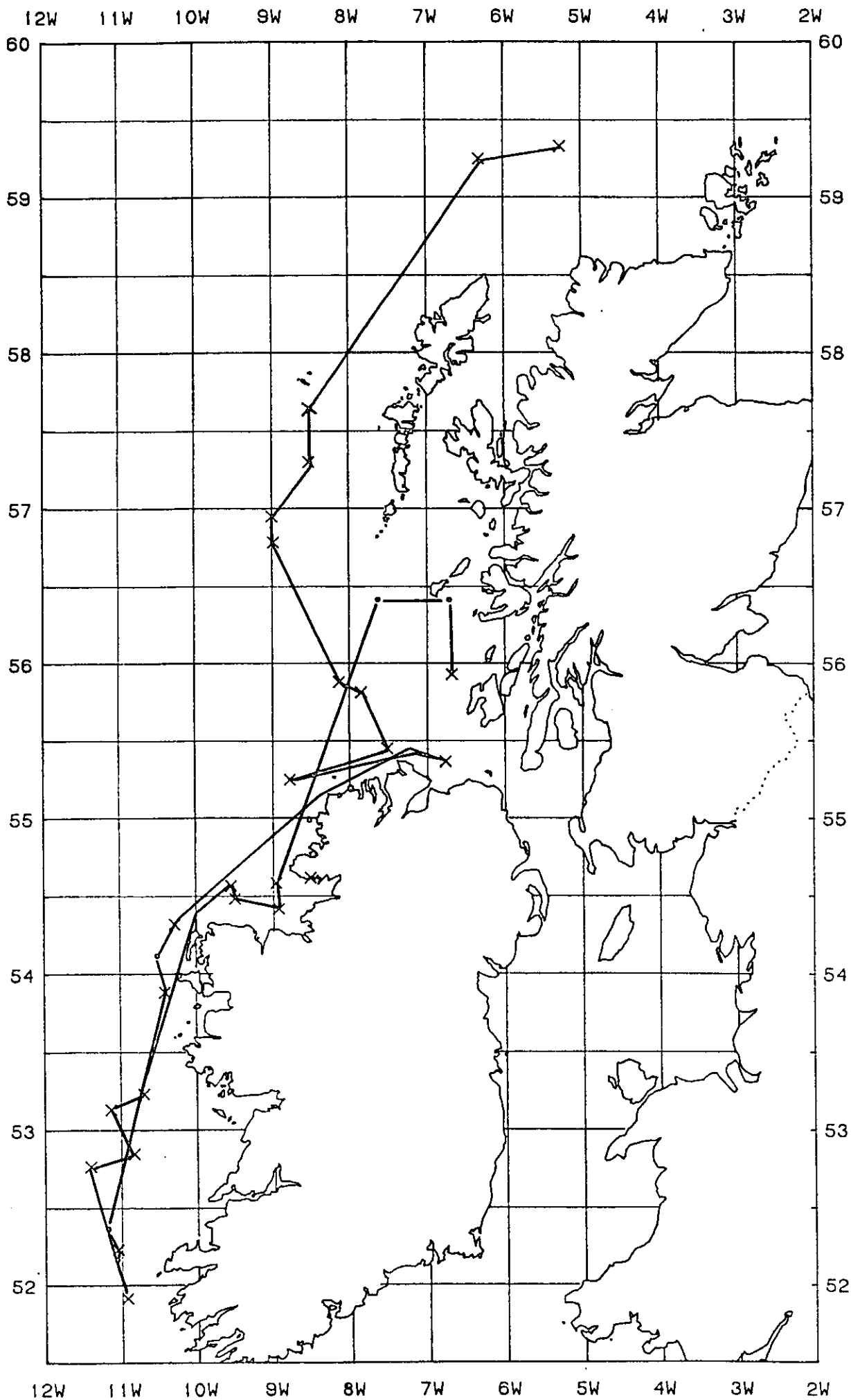


 Pelagic trawl

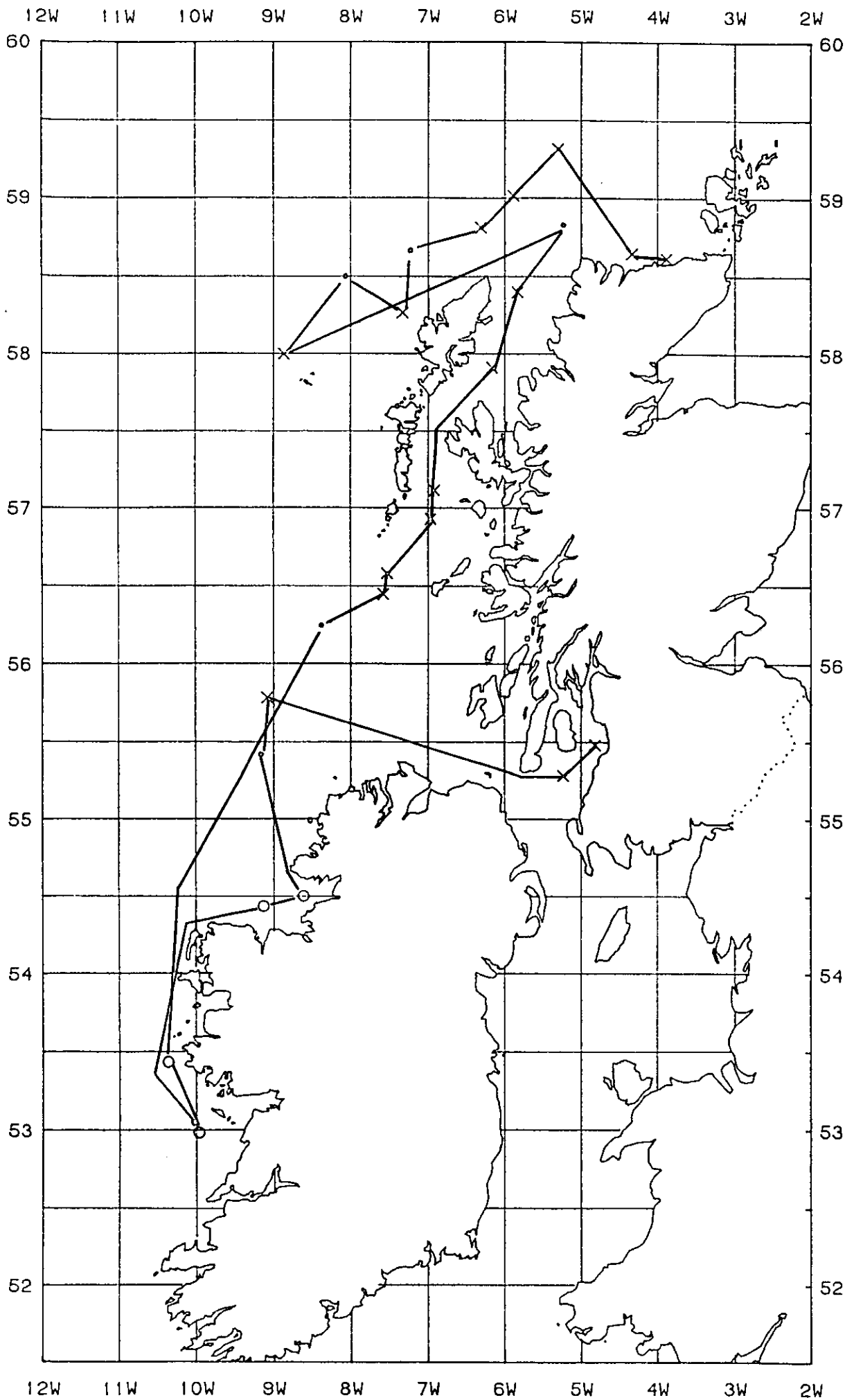
Estimated numbers of 1 group mackerel per hour trawling



Pelagic trawl

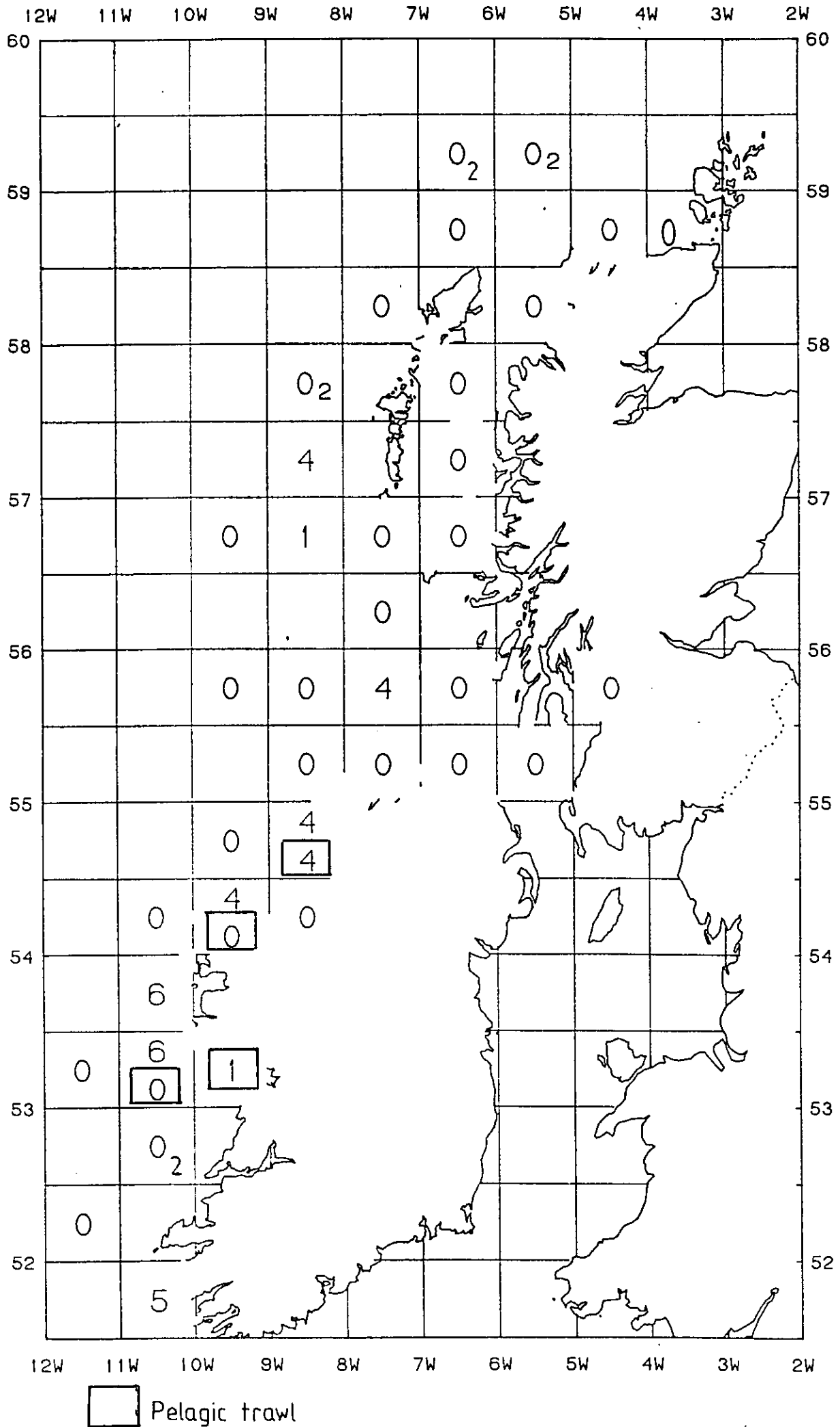


X Bottom trawl • Foul haul

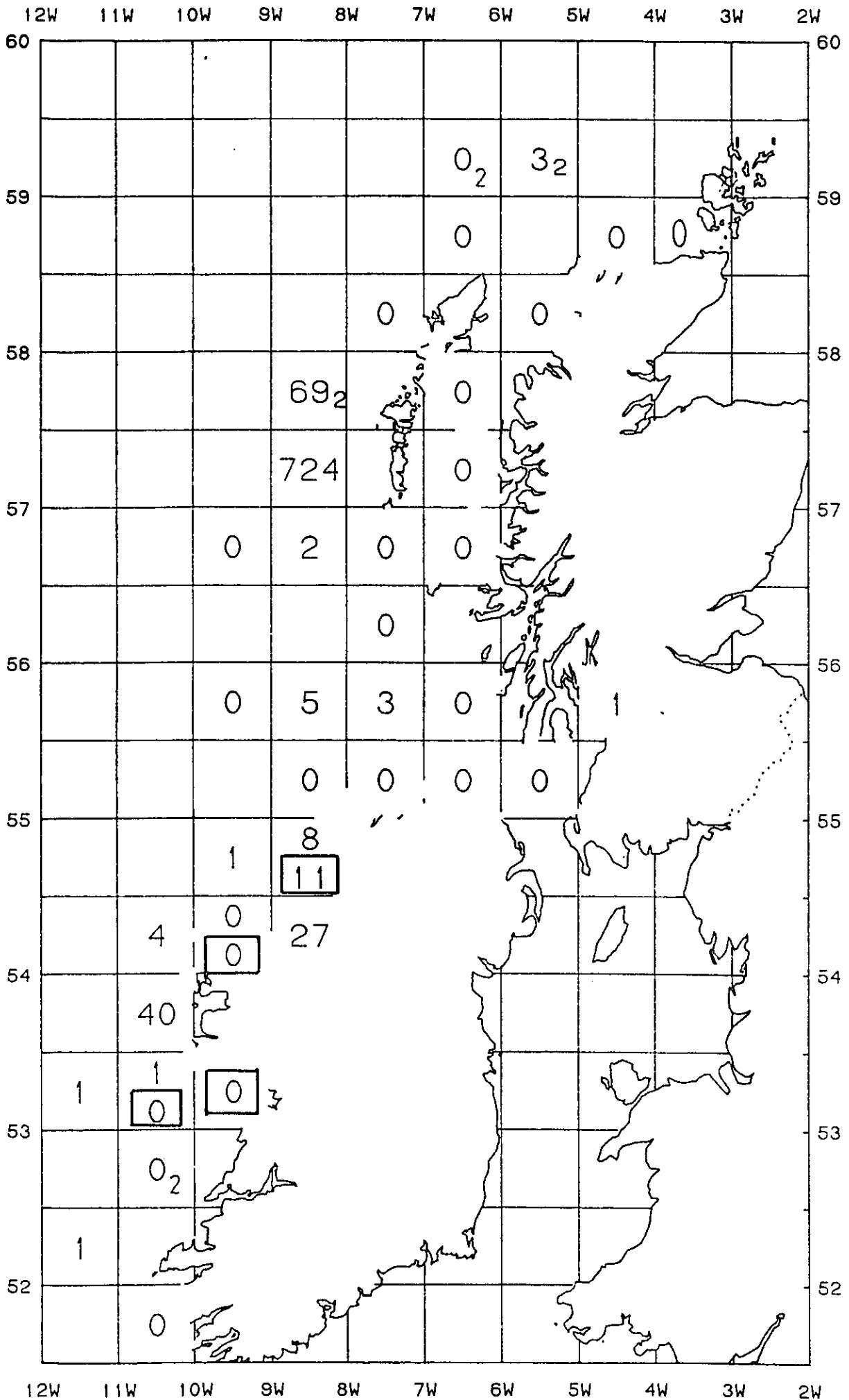


X Bottom trawl o Pelagic trawl • Foul haul

Estimated numbers of 0 group mackerel per hour trawling



Estimated numbers of 1 group mackerel per hour trawling



Pelagic trawl