

**INTERNATIONAL COMMISSION**  
**FOR THE**  
**NORTHWEST ATLANTIC FISHERIES**



**SPECIAL PUBLICATION NO. 7**

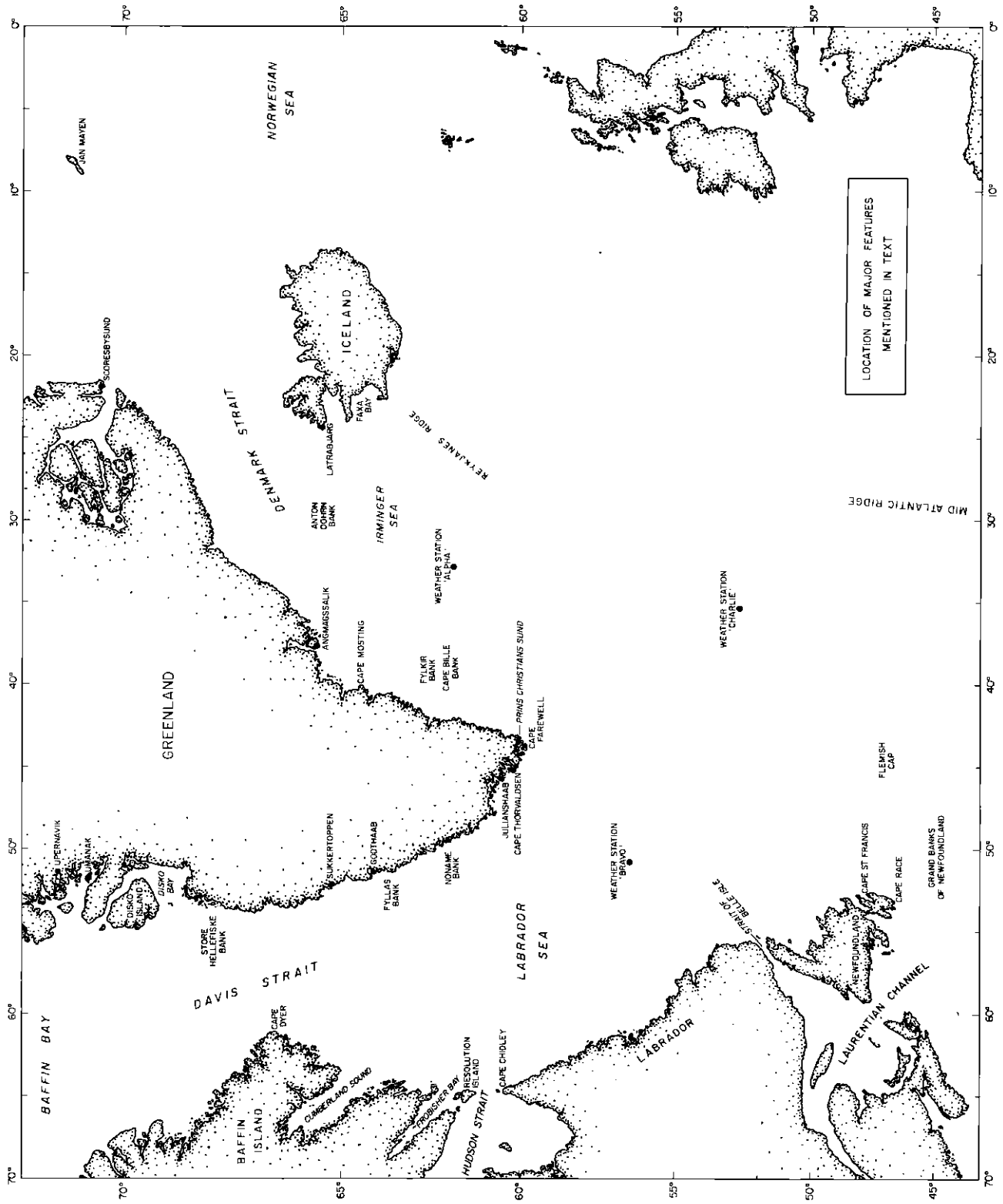
**Environmental Surveys – NORWESTLANT 1–3, 1963**

**PART II. ATLAS**

**Issued from the Headquarters of the Commission**

**Dartmouth, N. S., Canada**

**1968**



LOCATION OF MAJOR FEATURES MENTIONED IN TEXT

## PREFACE

The NORWESTLANT Surveys took place during April-July 1963. The dates of the three surveys which were carried out were as follows:

NORWESTLANT 1: 31 March-9 May;  
 NORWESTLANT 2: 30 April-30 June;  
 NORWESTLANT 3: 30 June-3 August.

The following research vessels took part in the surveys:

NORWESTLANT 1:	<i>Thalassa</i>	France
	<i>G. O. Sars</i>	Norway
	<i>Ernest Holt</i>	UK
	<i>Topseda</i>	USSR
	<i>Academician Knipovich</i>	USSR
NORWESTLANT 2:	<i>Sackville</i>	Canada
	<i>Baffin</i>	Canada
	<i>Dana</i>	Denmark
	<i>Anton Dohrn</i>	Federal Republic of Germany
	<i>Aegir</i>	Iceland
NORWESTLANT 3:	<i>Dana</i>	Denmark
	<i>Ernest Holt</i>	UK
	<i>Explorer</i>	UK
	<i>Academician Knipovich</i>	USSR

In addition, other vessels provided relevant data, especially the Norwegian, French, British, and American weather ships that occupied Ocean Weather Stations *Alfa* and *Bravo*, the U.S. Coast Guard cutter *Evergreen*, U.S.S. *Atka*, and the ships which carry out the Continuous Plankton Recorder Survey for the Oceanographic Laboratory, Edinburgh, Scotland. On behalf of the group of scientists that planned and executed the NORWESTLANT Surveys, I would like to thank the officers, scientists and crews of all these ships for their contributions to the surveys.

The report on the surveys consists of four parts as follows:

Part I — Text;  
 Part II — Atlas;  
 Part III — Physical and chemical oceanographic data;  
 Part IV — Biological data.

Thus, this Atlas forms Part II of the Report. It has been bound in such a way that the reader can rearrange it into a loose-leaf system, should he so wish. In the captions and legends all dates which have the year omitted should be regarded as referring to 1963. An attempt has been made to keep all charts showing horizontal distributions the same scale; with a few exceptions this aim has been achieved. In the case of sections showing vertical distributions, it was obviously impossible to maintain the same scale throughout but, wherever it could be done, a section that was worked during each of the three surveys has been given uniformity of scale, so that conditions along it can be compared from survey to survey.

The preparation of the Atlas has been carried out under my supervision and I wish to express my thanks to the Reporters and members of Co-ordinating Groups who have contributed material, to my colleagues at this laboratory who drew a considerable number of the charts and to the members of the ICNAF Secretariat who helped with the editorial work.

Arthur Lee,  
 Fisheries Laboratory, Lowestoft.

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ПОЛНОМОЩИЮ

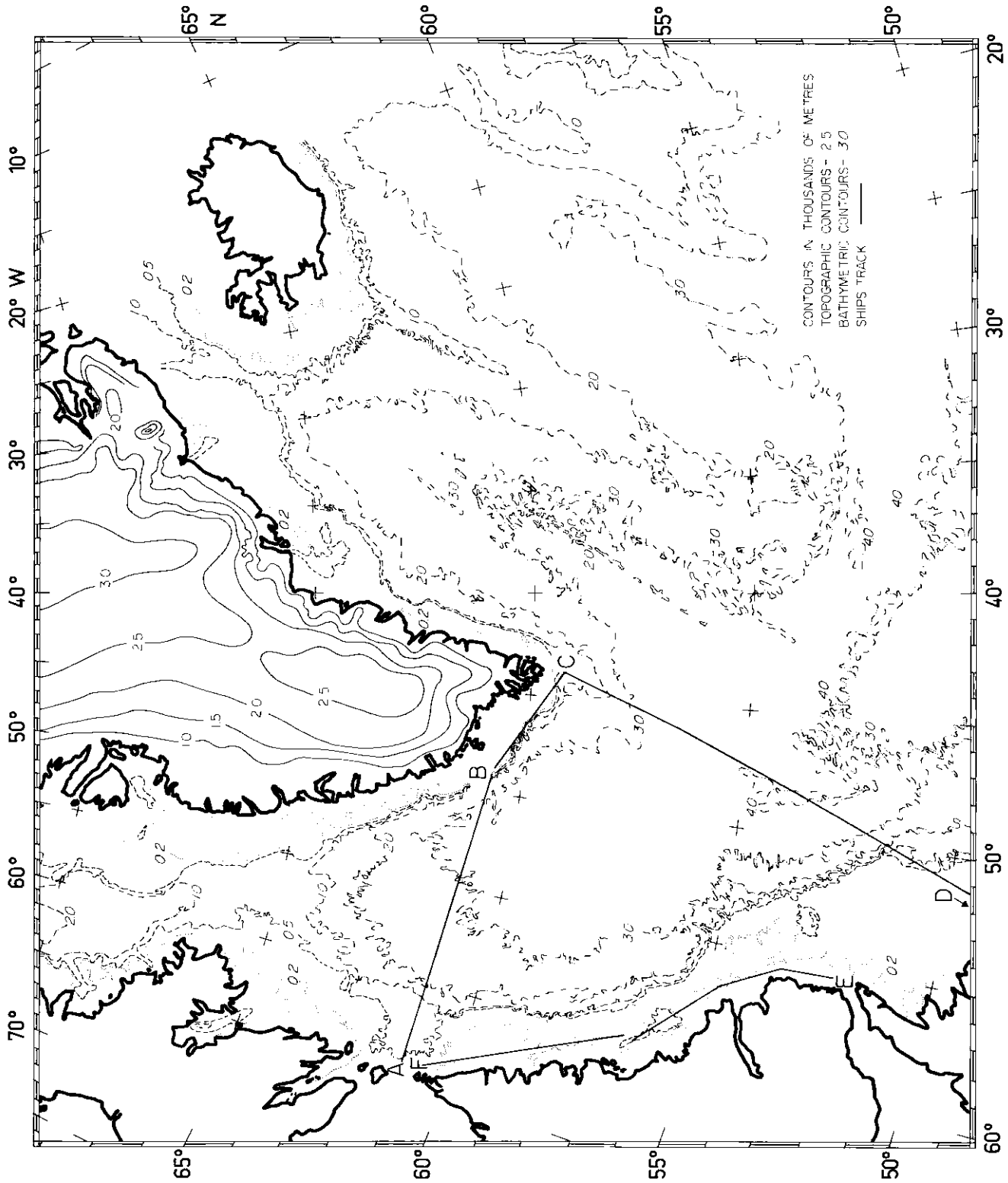
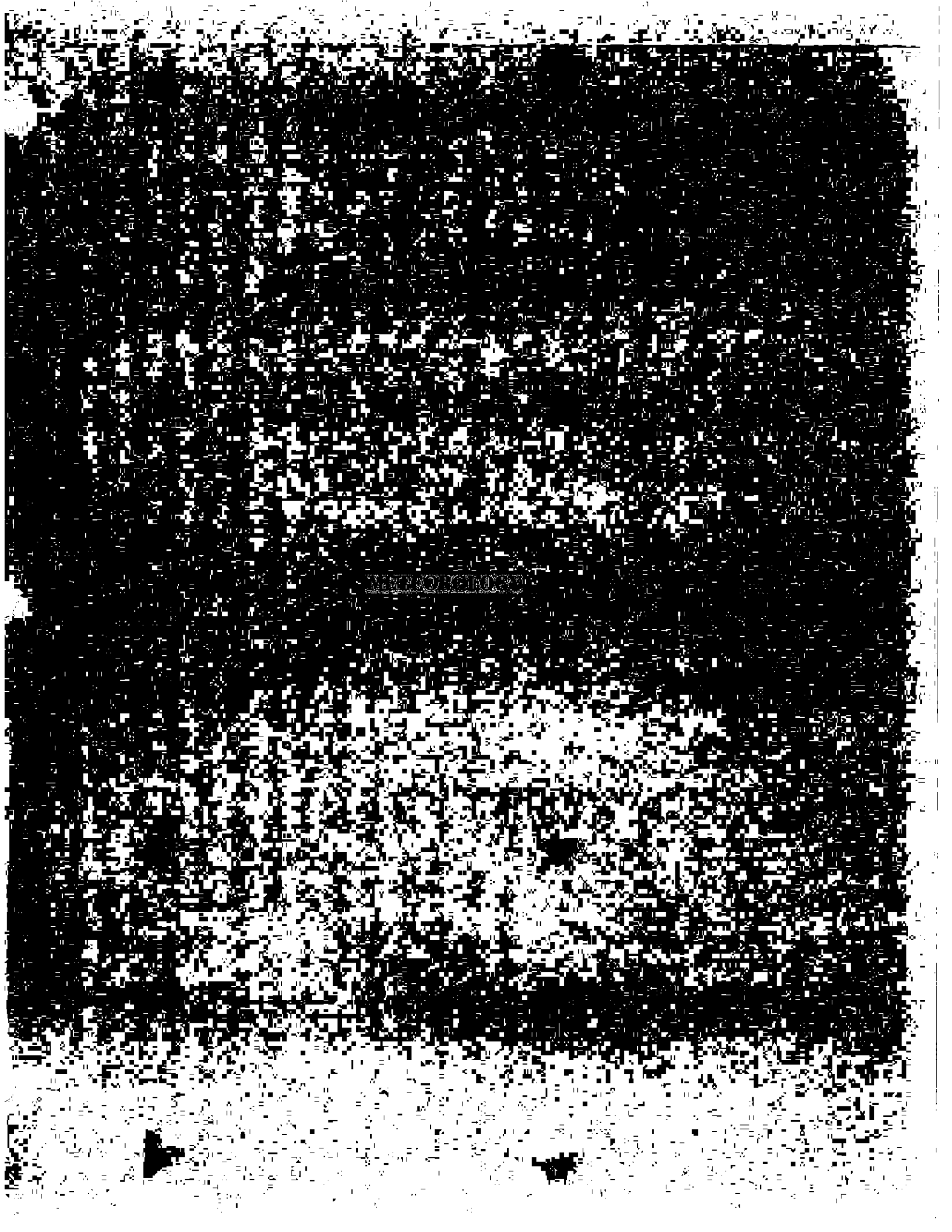


Chart 1. Bathymetric chart of the Northwest Atlantic based on the General Bathymetric Chart of the Oceans (GEBCO) sheet B-1, fourth edition, published in 1966. (The topographic contours are based on data from Svejgaard, 1959.)



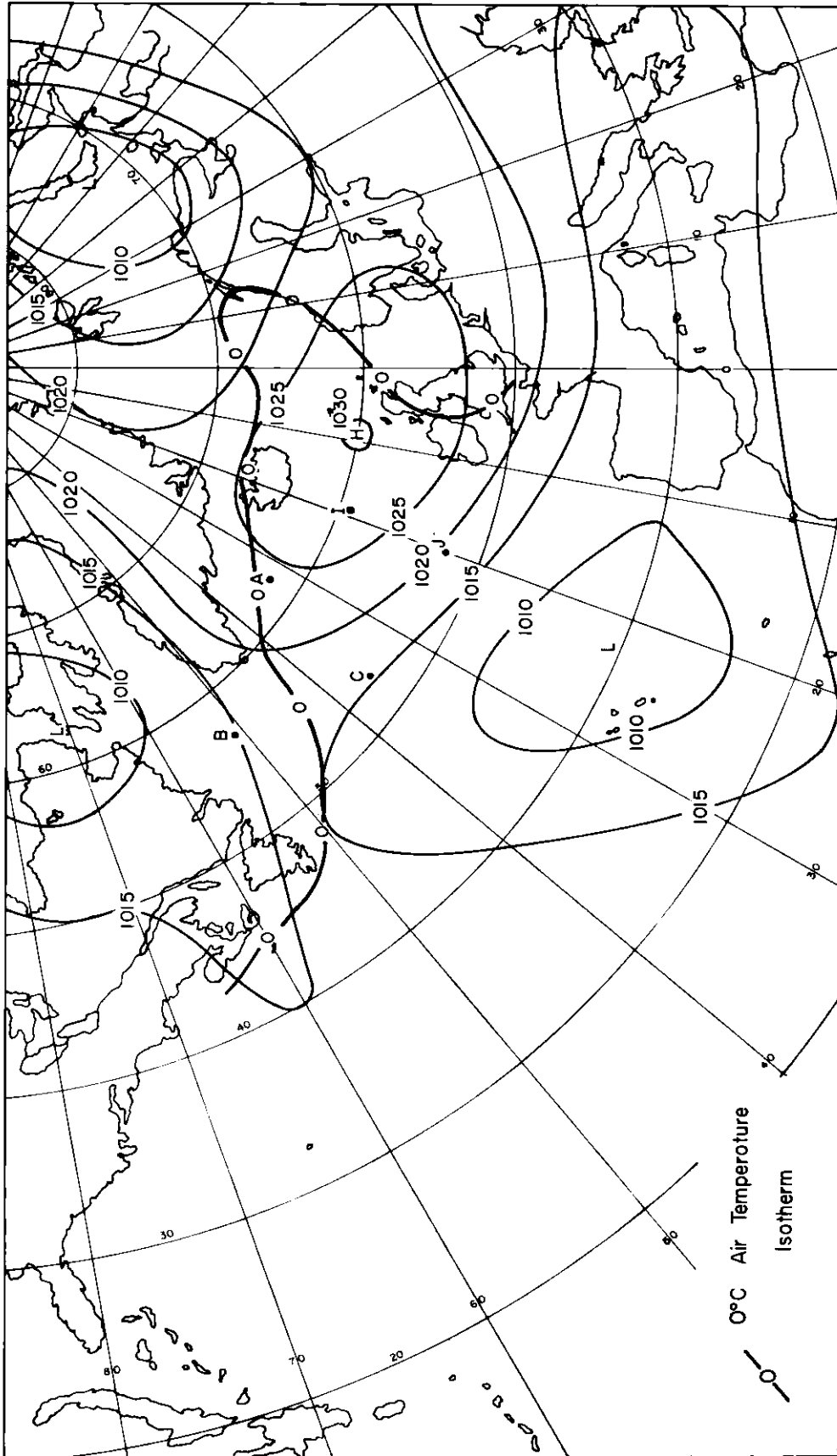


Chart 2. Monthly mean of air pressure at sea level — January 1963. Positions of Ocean Weather Stations A, B, C, I, and J are shown.



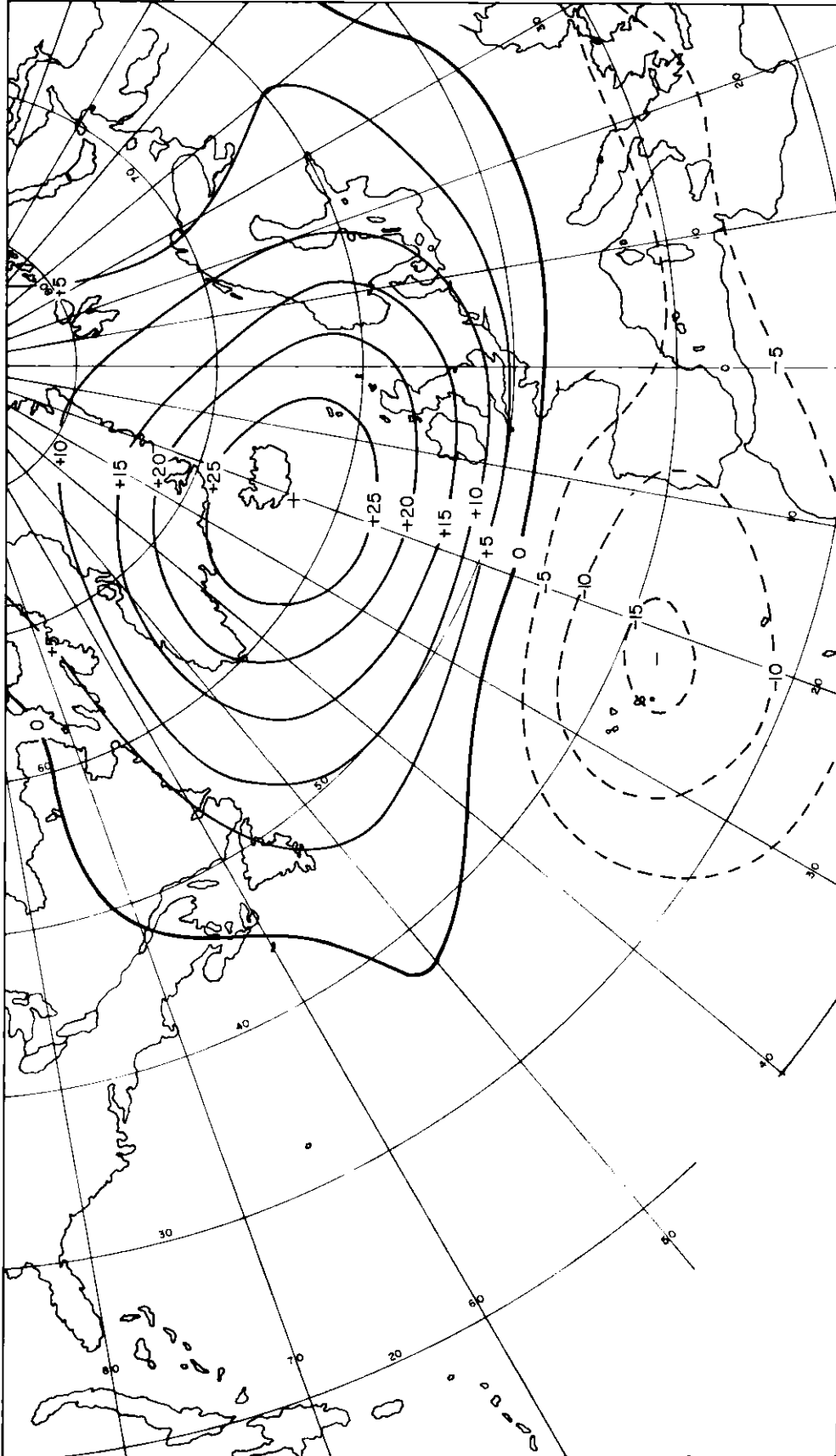


Chart 3. Deviation of the monthly mean of air pressure at sea level from the normal 1899-1939 — January 1963.

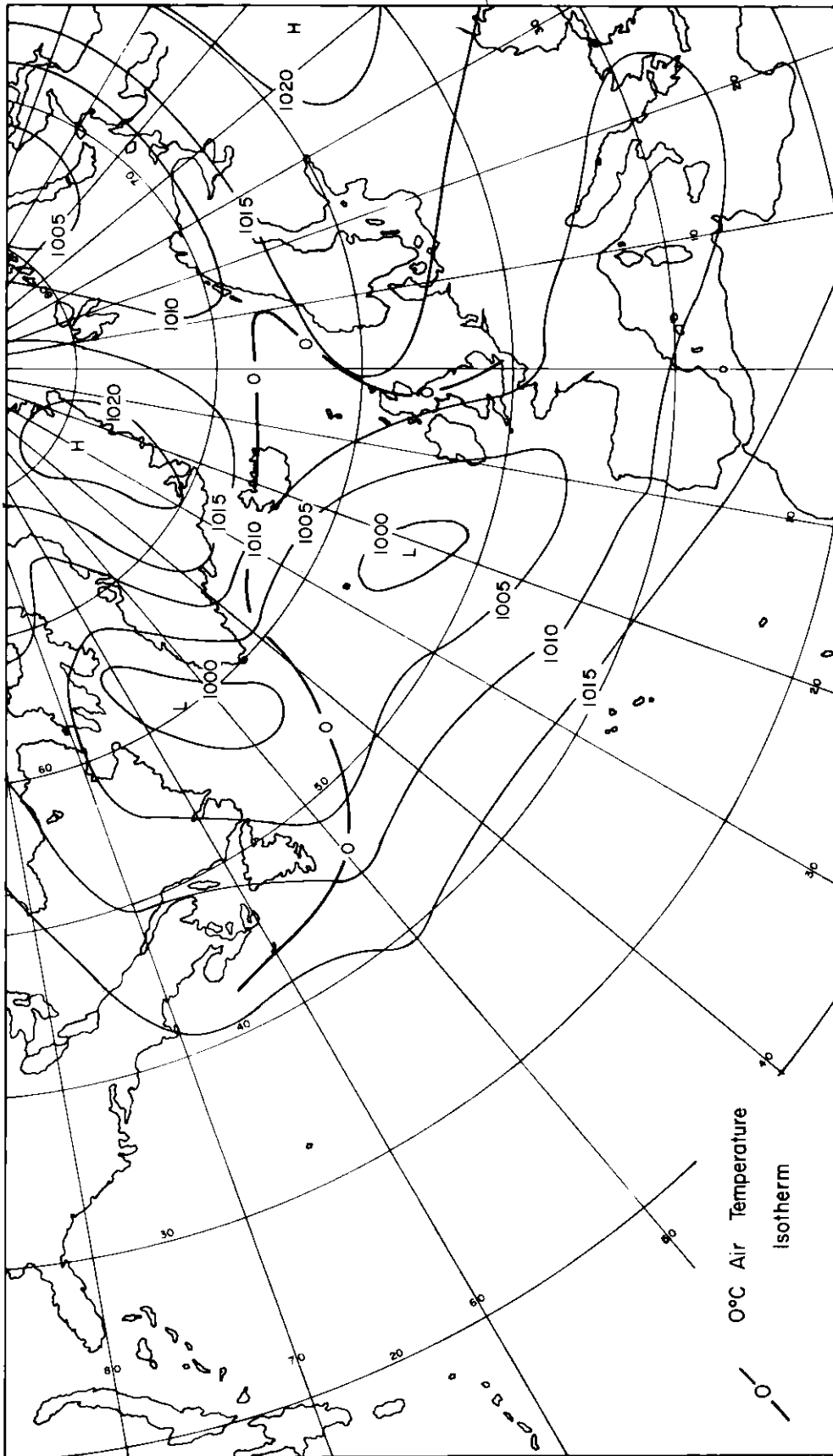


Chart 4. Monthly mean of air pressure at sea level — February 1963.

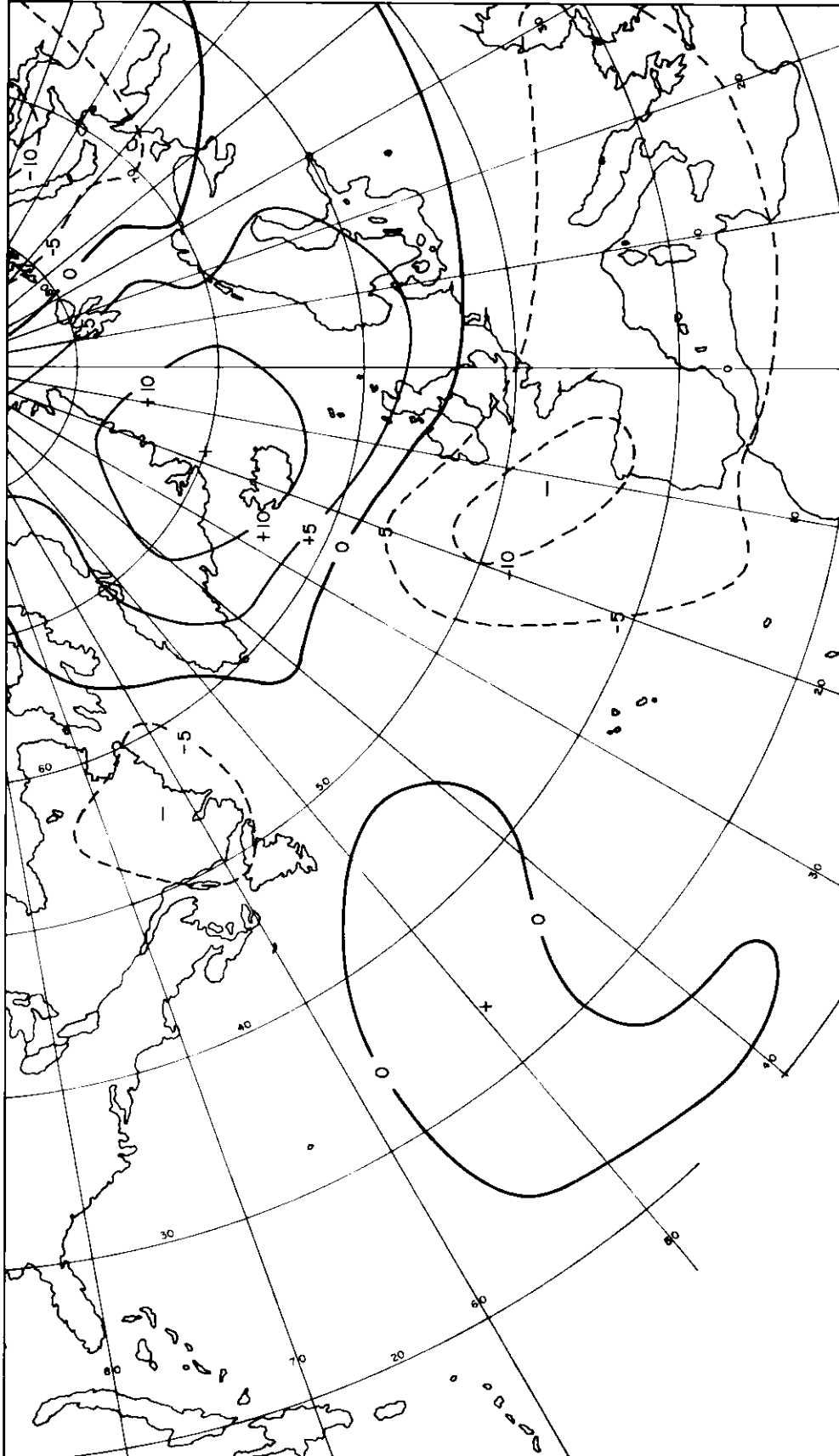


Chart 5. Deviation of the monthly mean of air pressure at sea level from the normal 1899-1939 — February 1963.

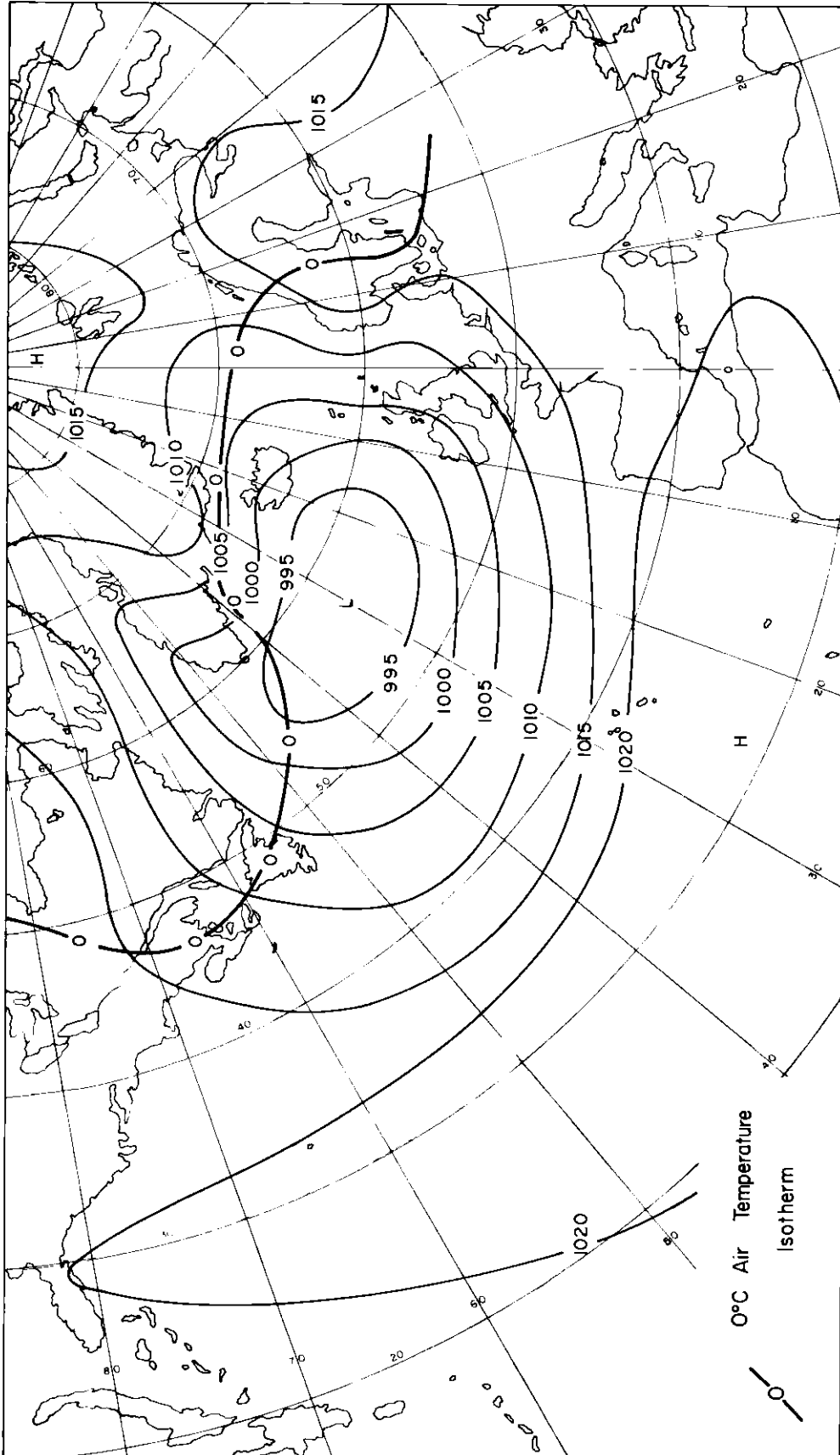


Chart 6. Monthly mean of air pressure at sea level — March 1963.

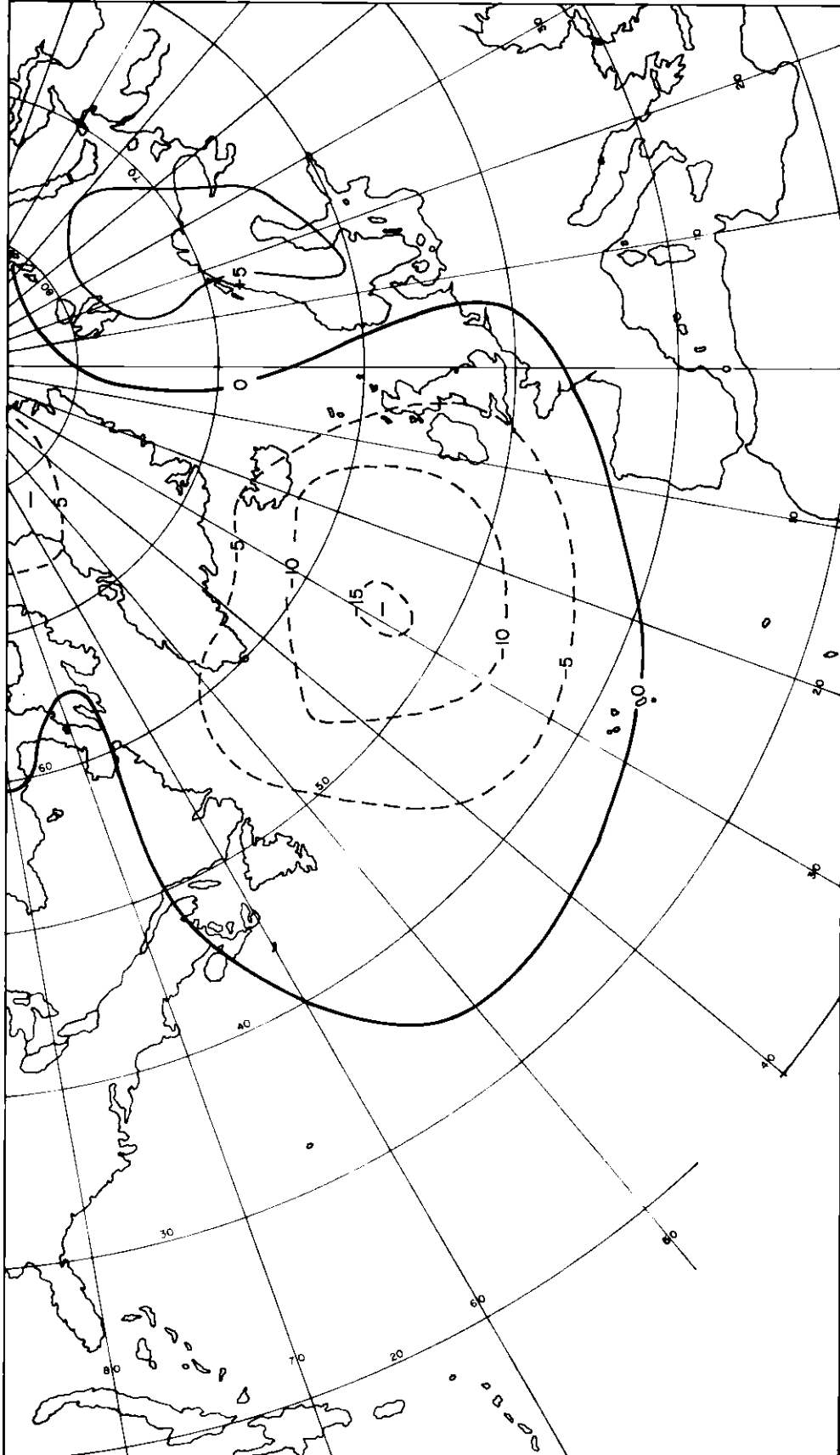


Chart 7. Deviation of the monthly mean of air pressure at sea level from the normal 1899-1939 — March 1963.

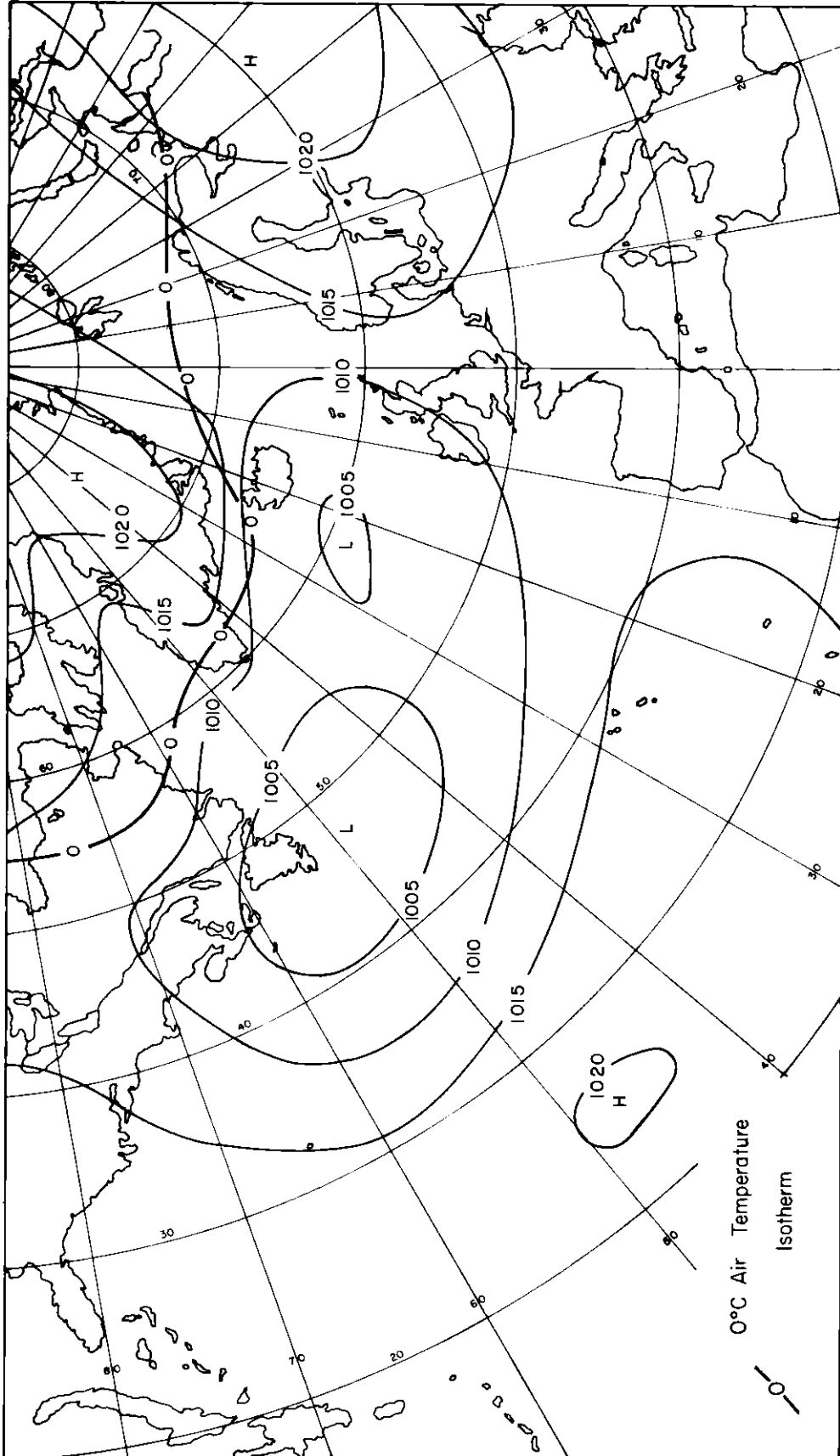


Chart 8. Monthly mean of air pressure at sea level — April 1963.

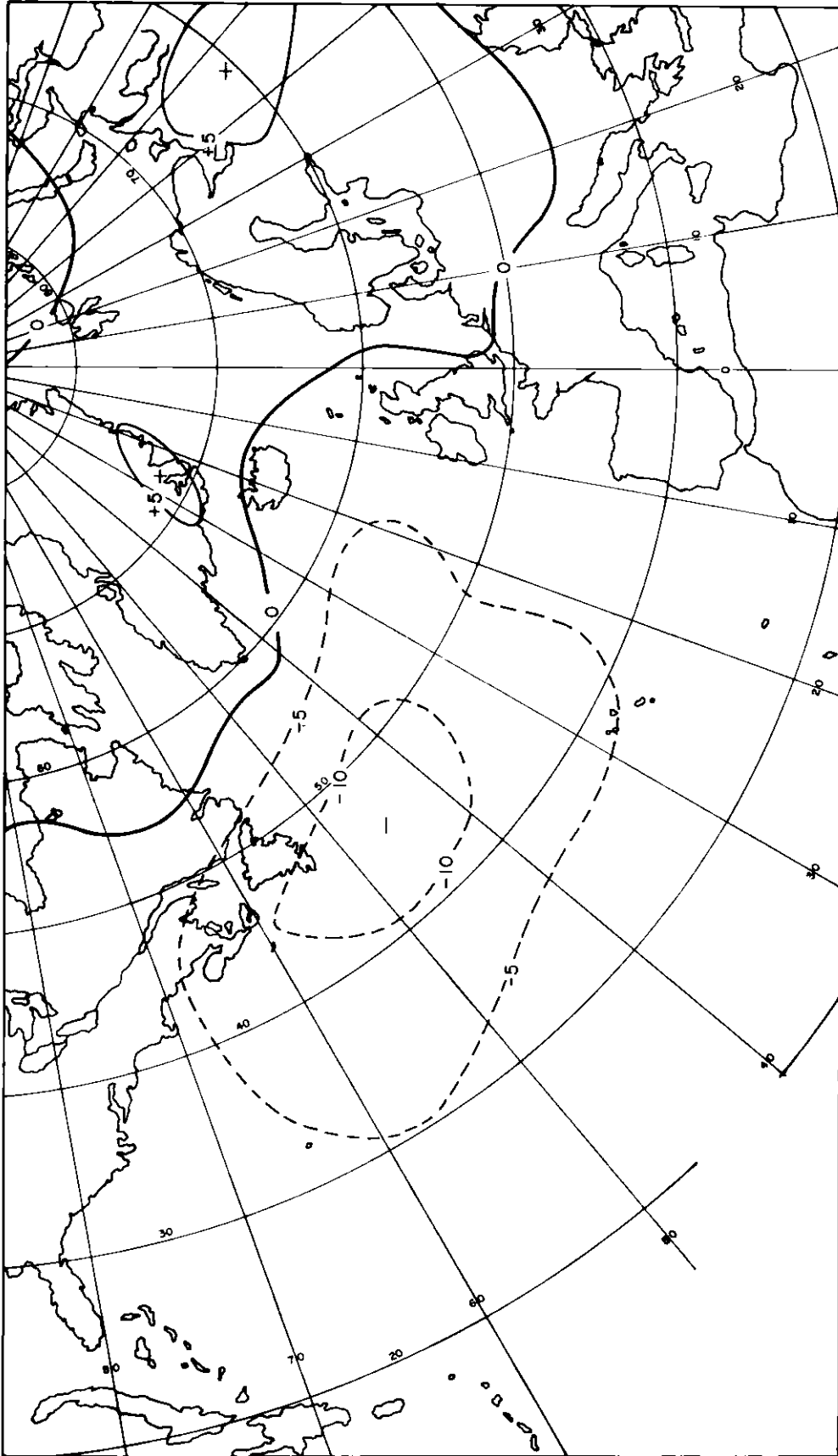


Chart 9. Deviation of the monthly mean of air pressure at sea level from the normal 1899-1939 — April 1963.

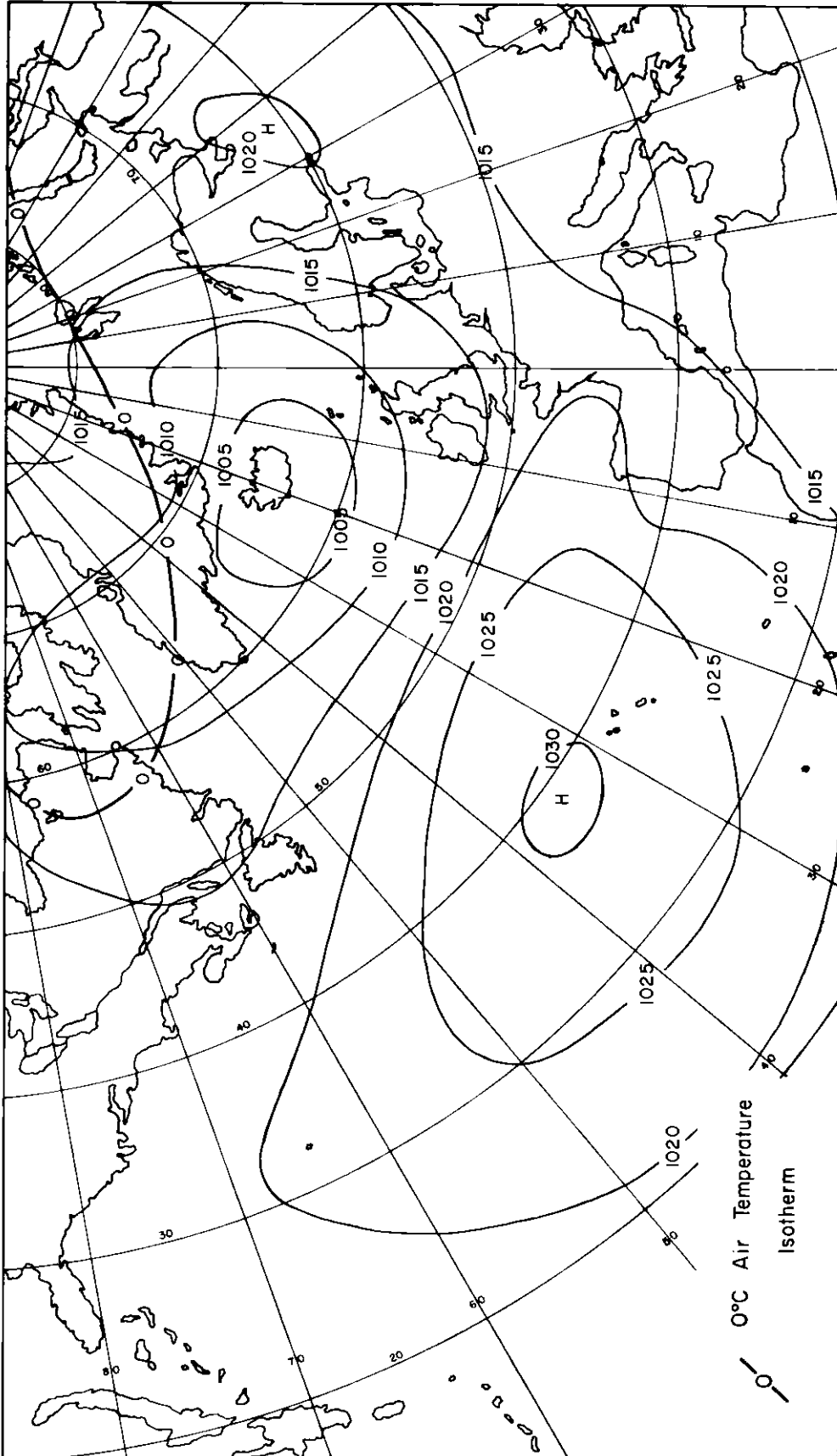


Chart 10. Monthly mean of air pressure at sea level — May 1963.



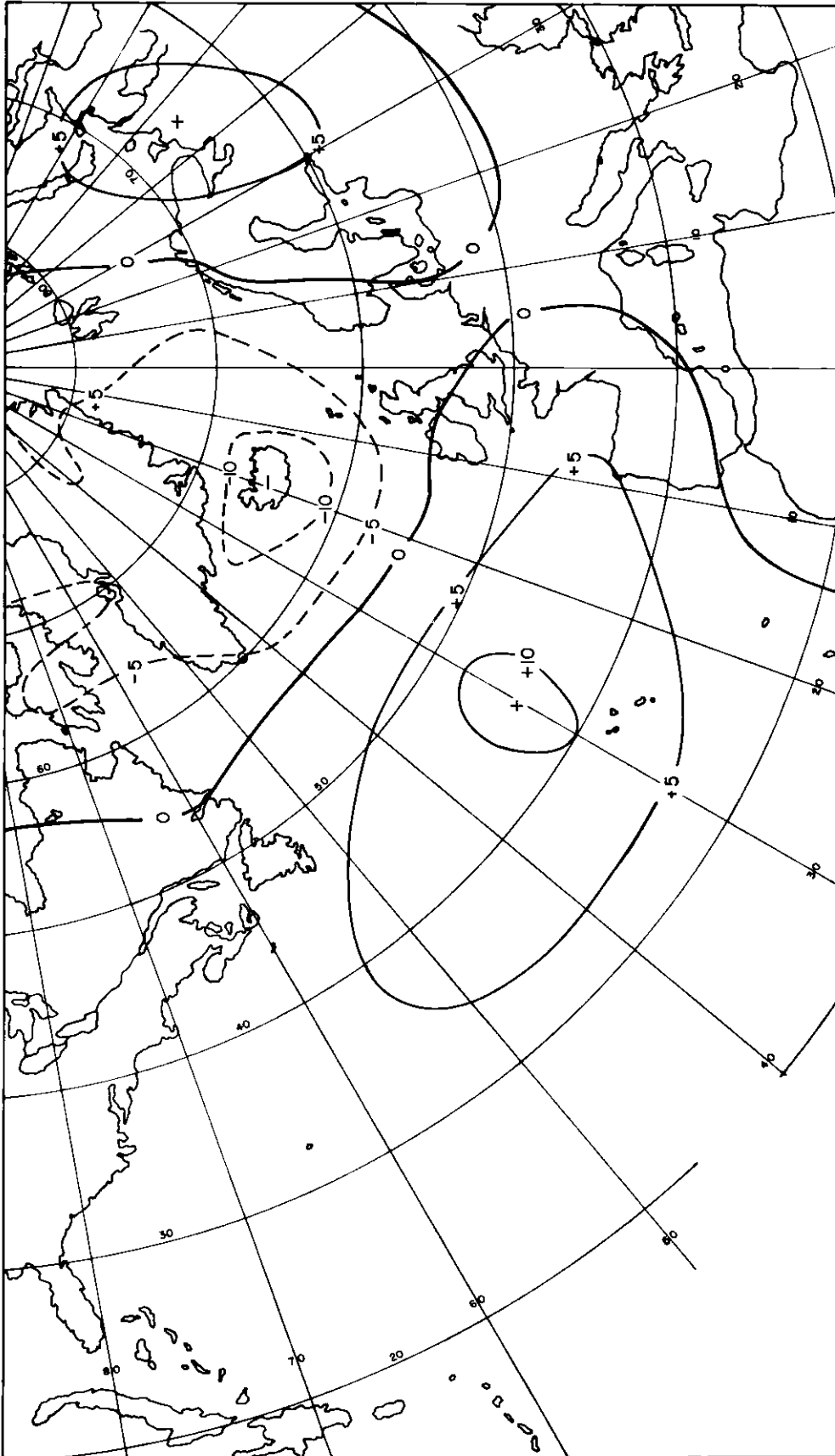


Chart 11. Deviation of the monthly mean of air pressure at sea level from the normal 1899-1939 — May 1963.

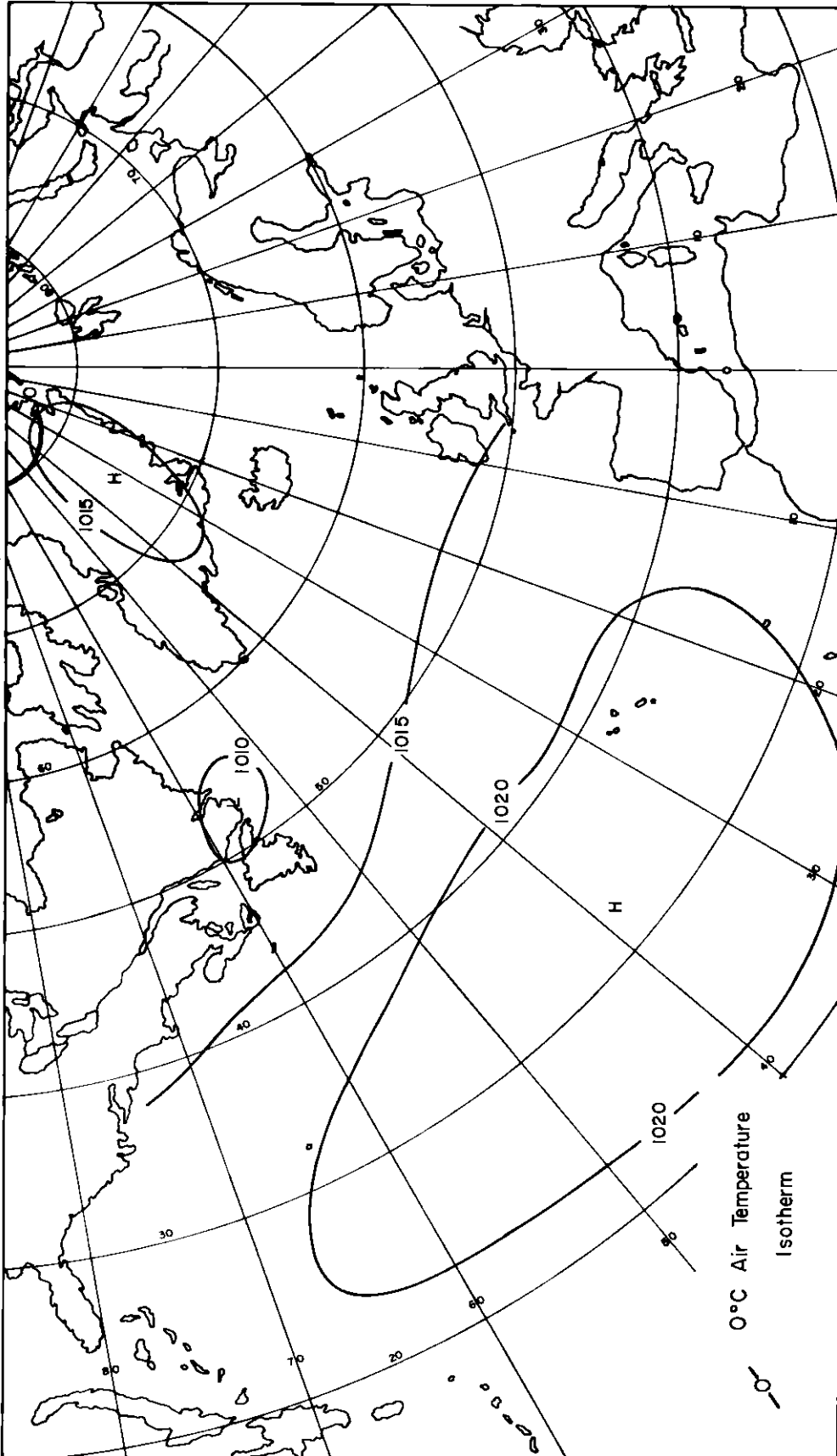


Chart 12. Mean of air pressure at sea level — June-July 1963.

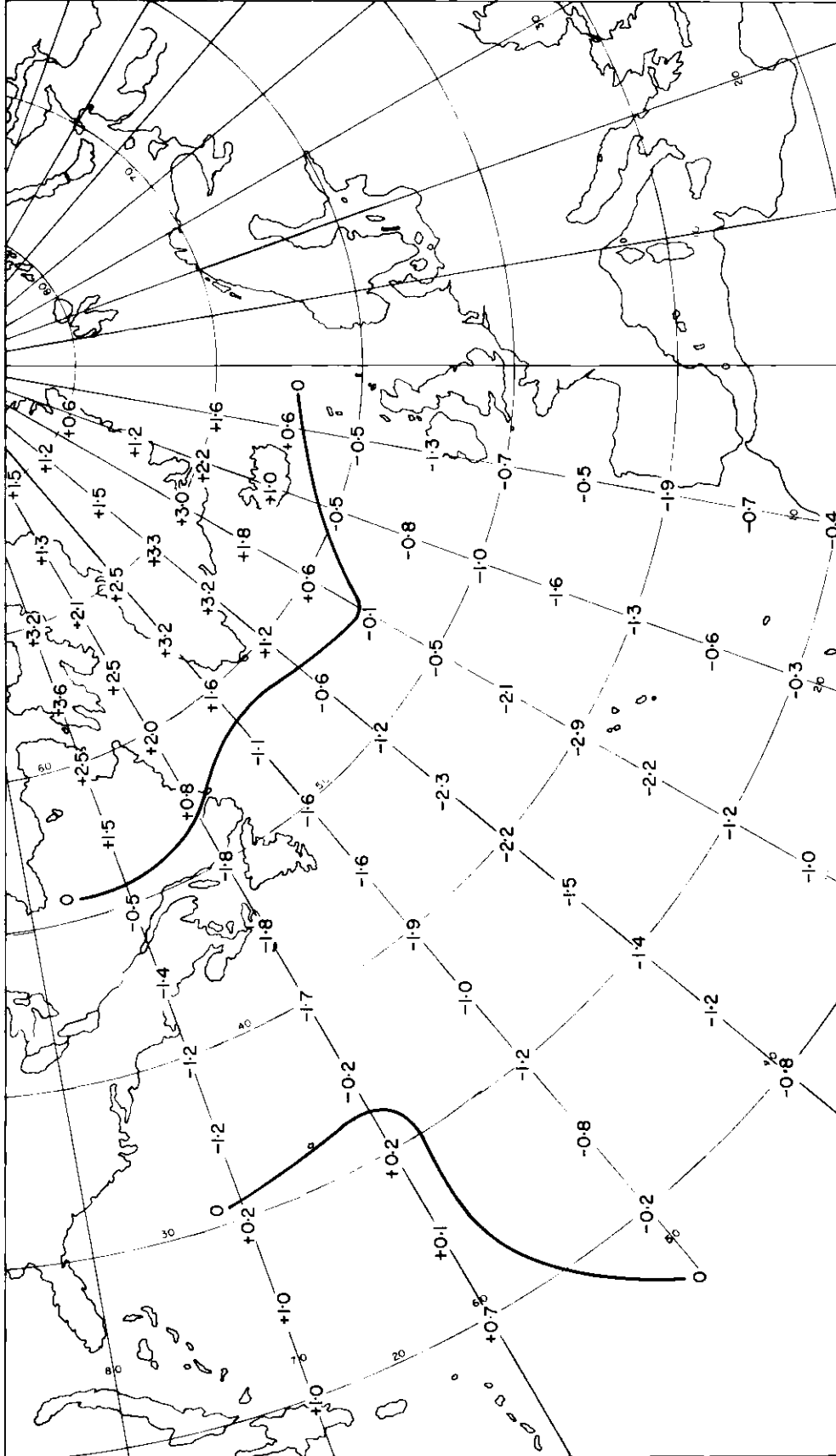
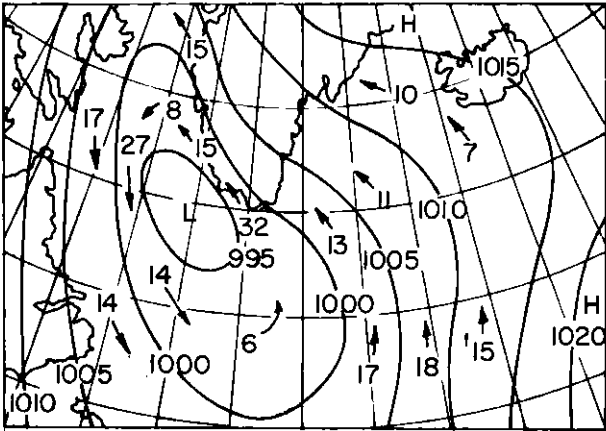
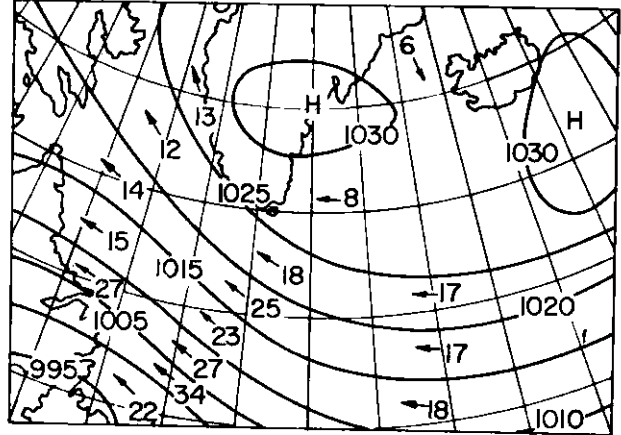


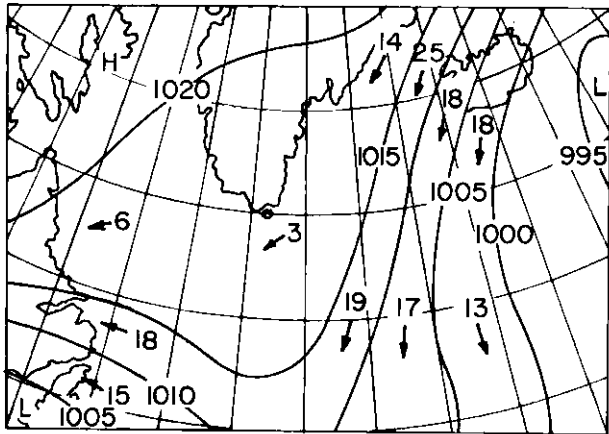
Chart 13. Deviation of the mean of air pressure at sea level — June-July 1963.



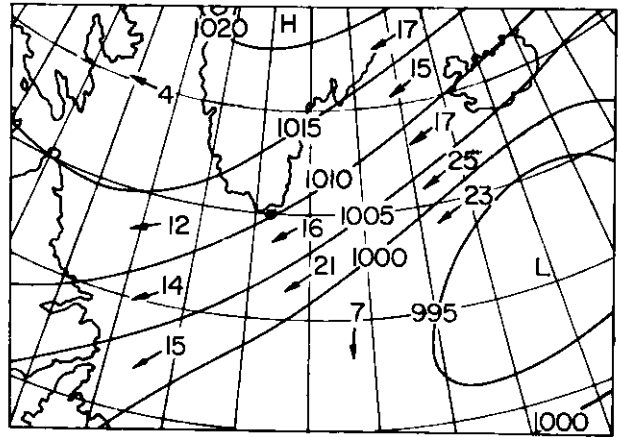
1-5 APRIL



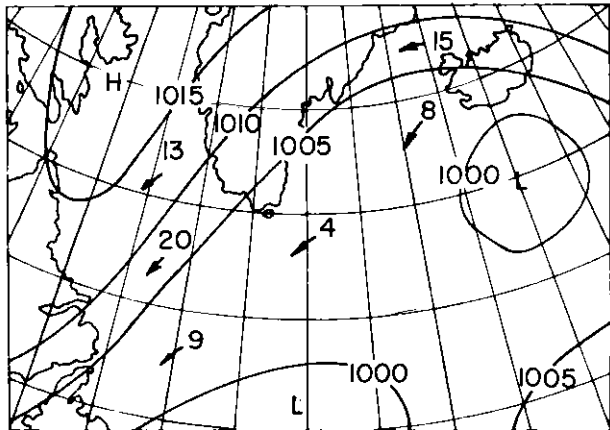
6-8 APRIL



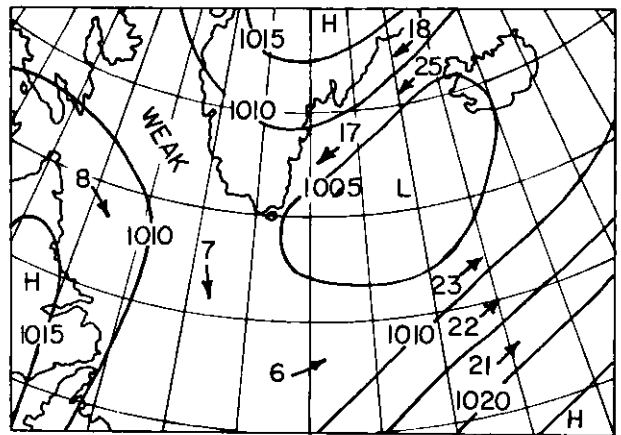
9-12 APRIL



13-21 APRIL

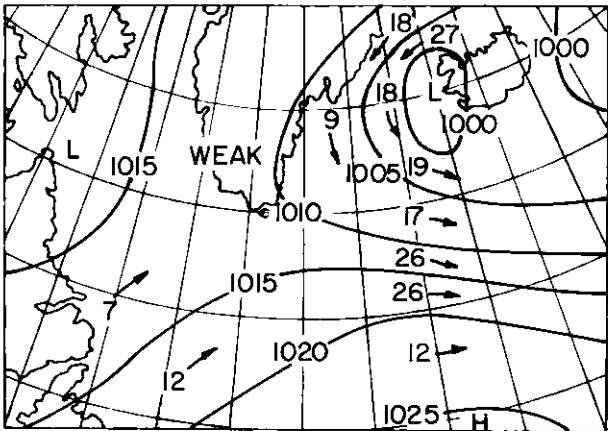


22-25 APRIL

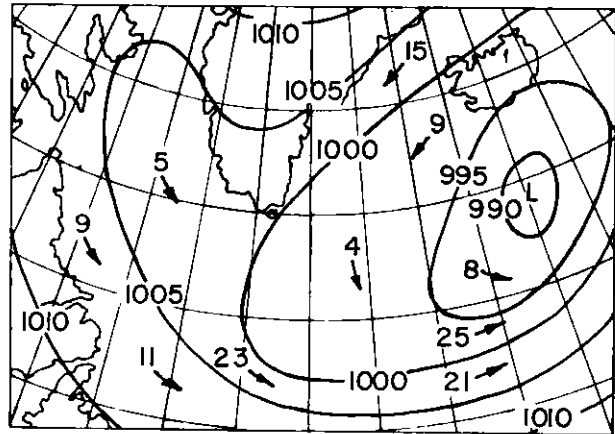


26-30 APRIL

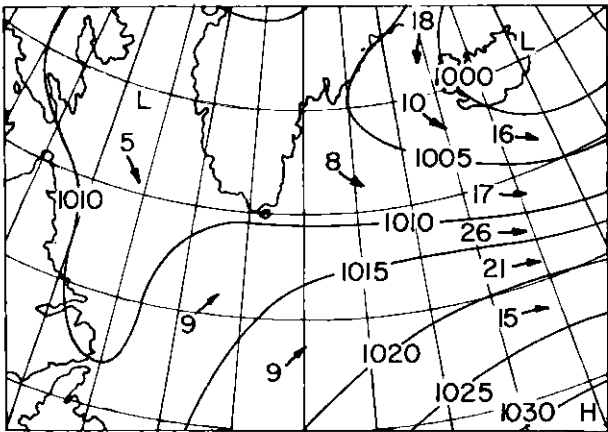
Chart 14A. Weather Sections: 1-30 April 1963 — Average pressure and winds.



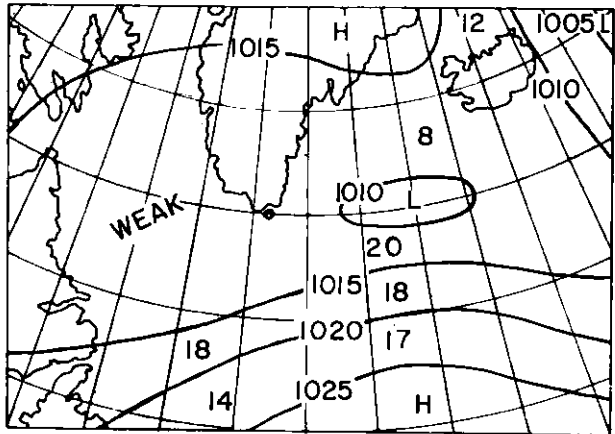
1-5 MAY



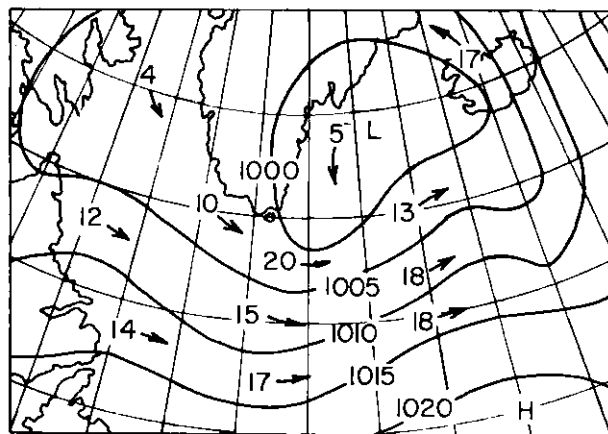
6-13 MAY



14-18 MAY

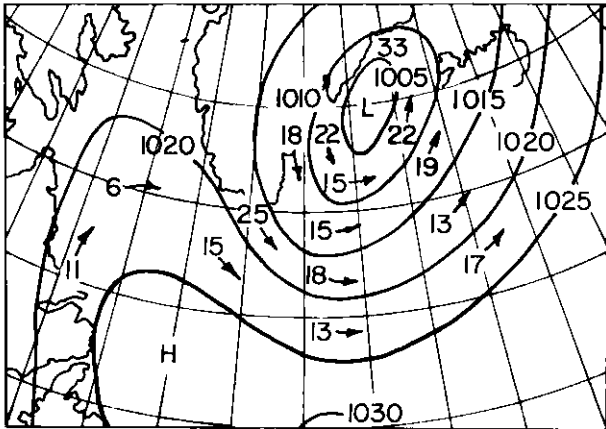


19-22 MAY

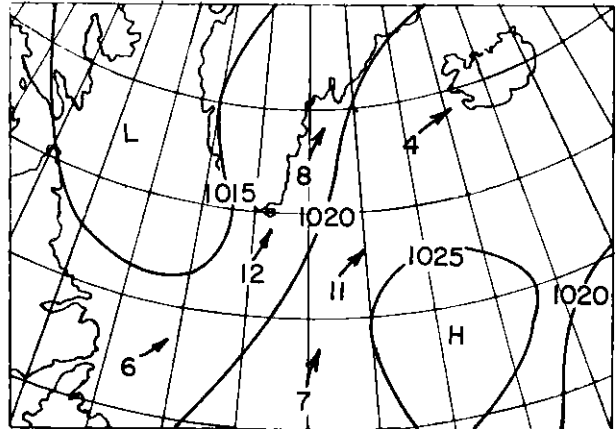


23-27 MAY

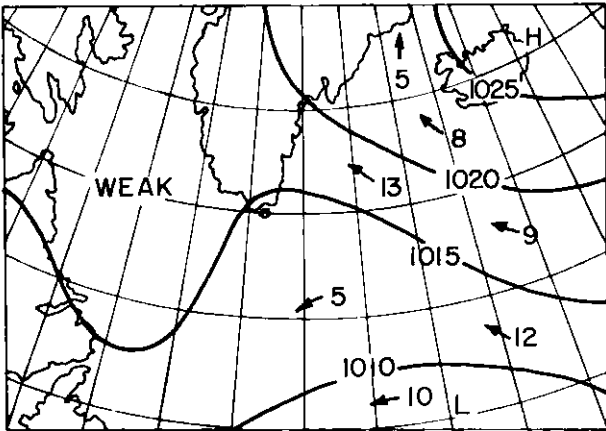
Chart 14B. Weather Sections: 1-27 May 1963 — Average pressure and winds.



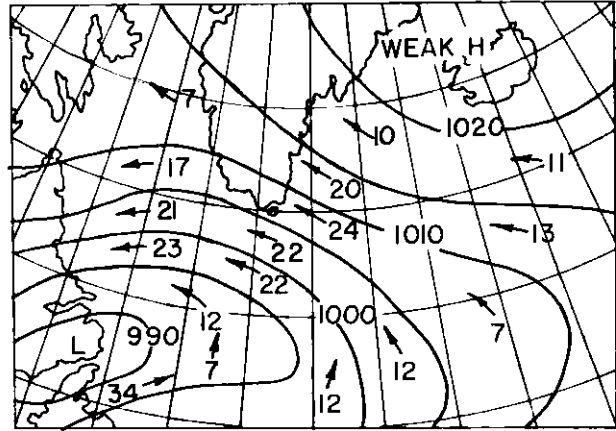
28-31 MAY



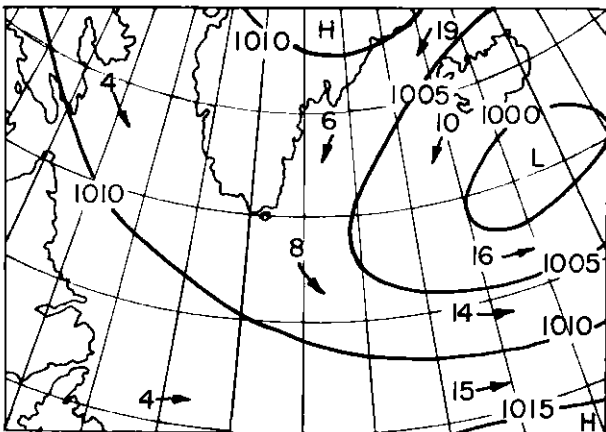
1-4 JUNE



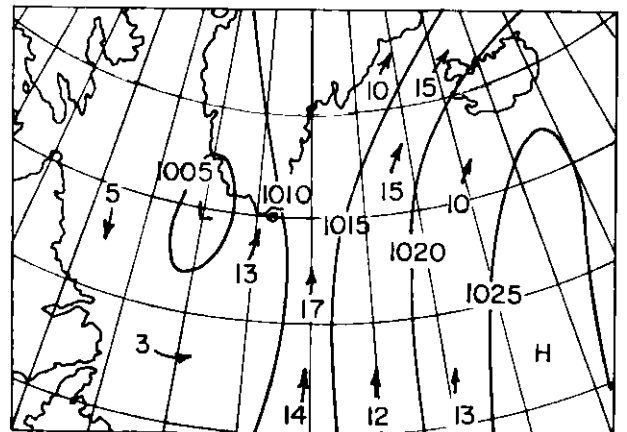
5-8 JUNE



9-13 JUNE

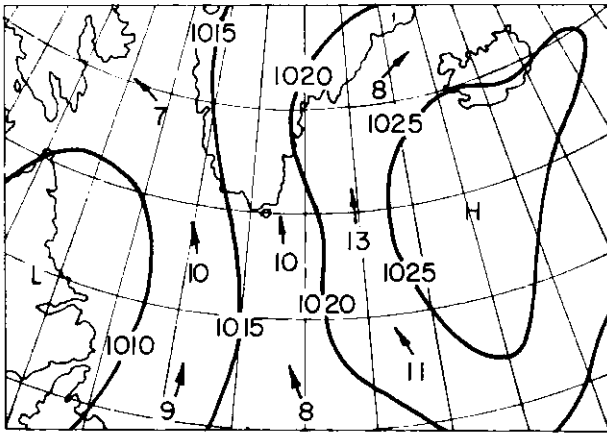


14-25 JUNE

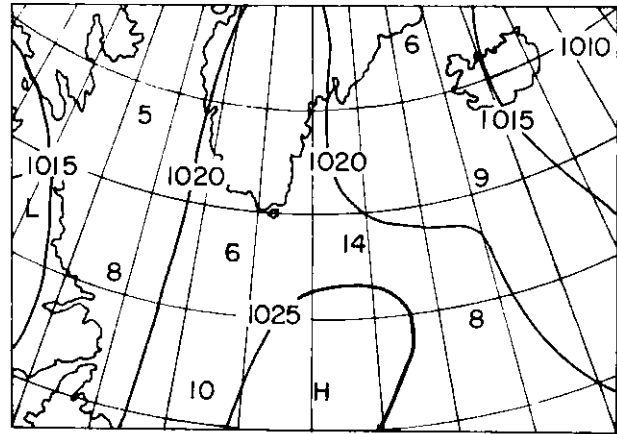


26-30 JUNE

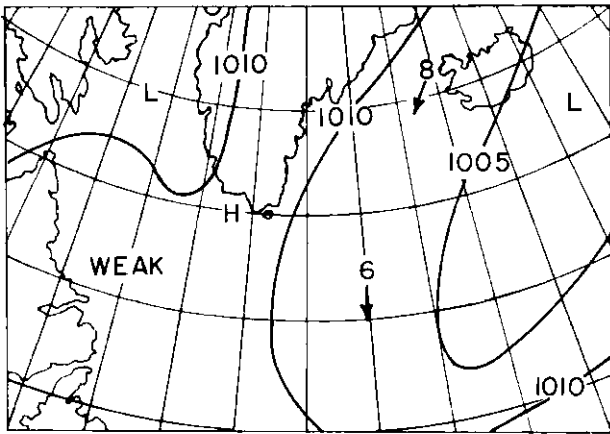
Chart 14C. Weather Sections: 28 May-30 June 1963 — Average pressure and winds.



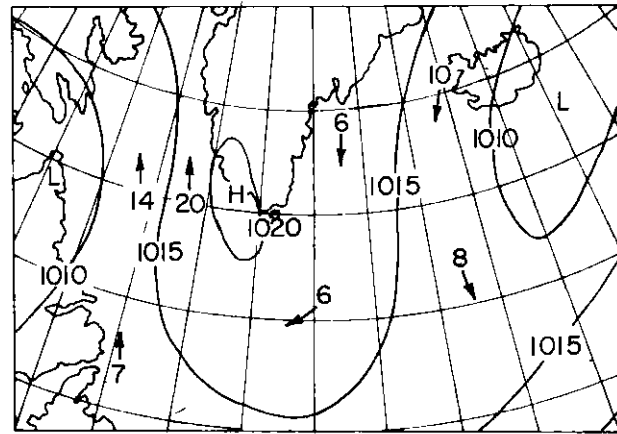
1-6 JULY



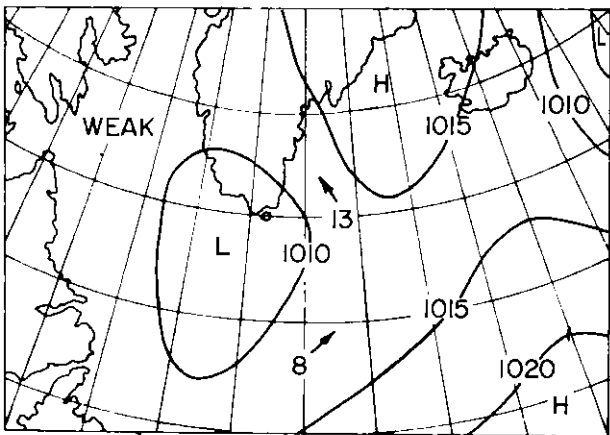
7-12 JULY



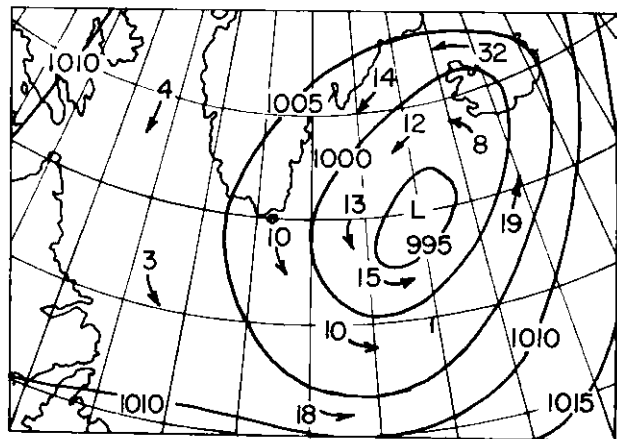
13-19 JULY



20-23 JULY

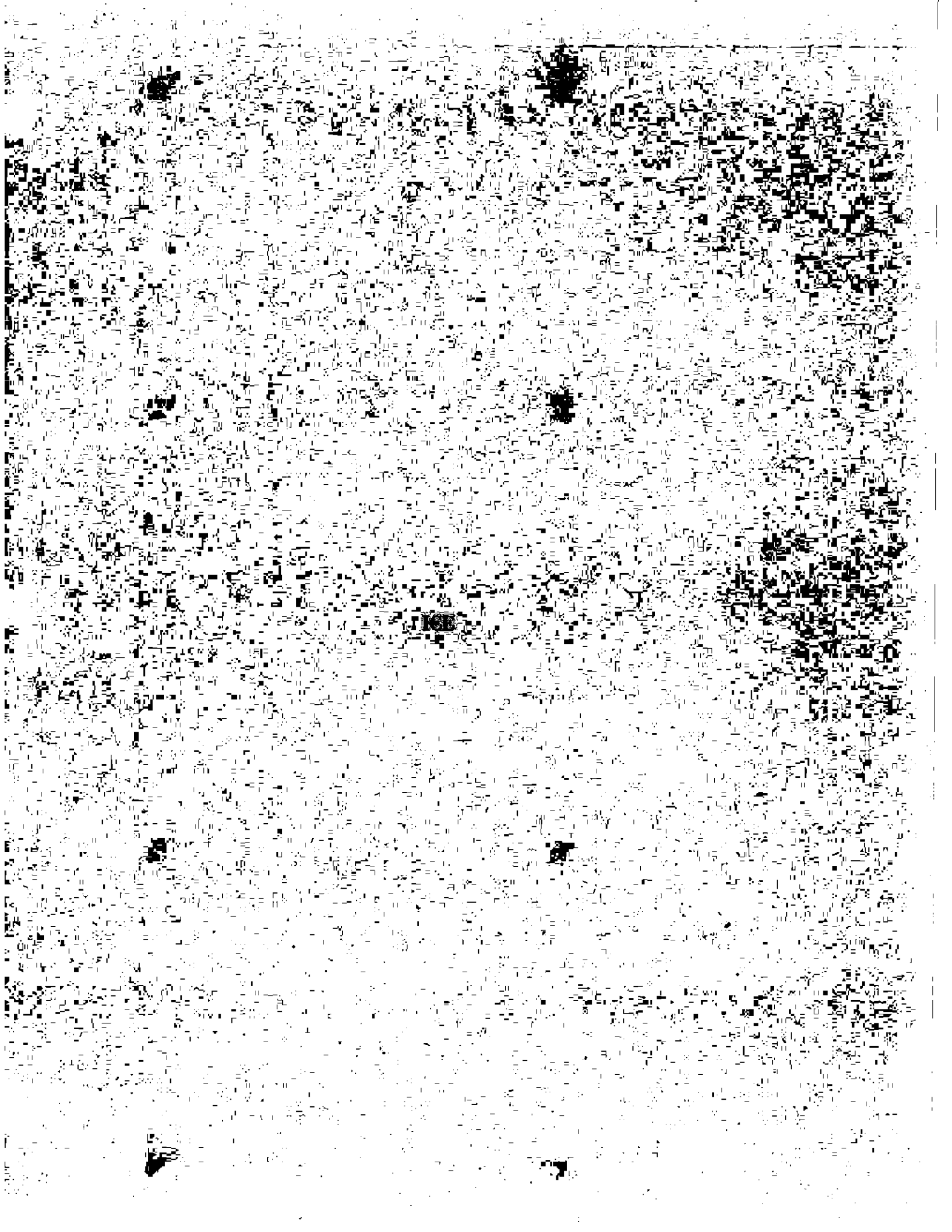


24-26 JULY



27-31 JULY

Chart 14D. Weather Sections: 1-31 July 1963 — Average pressure and winds.





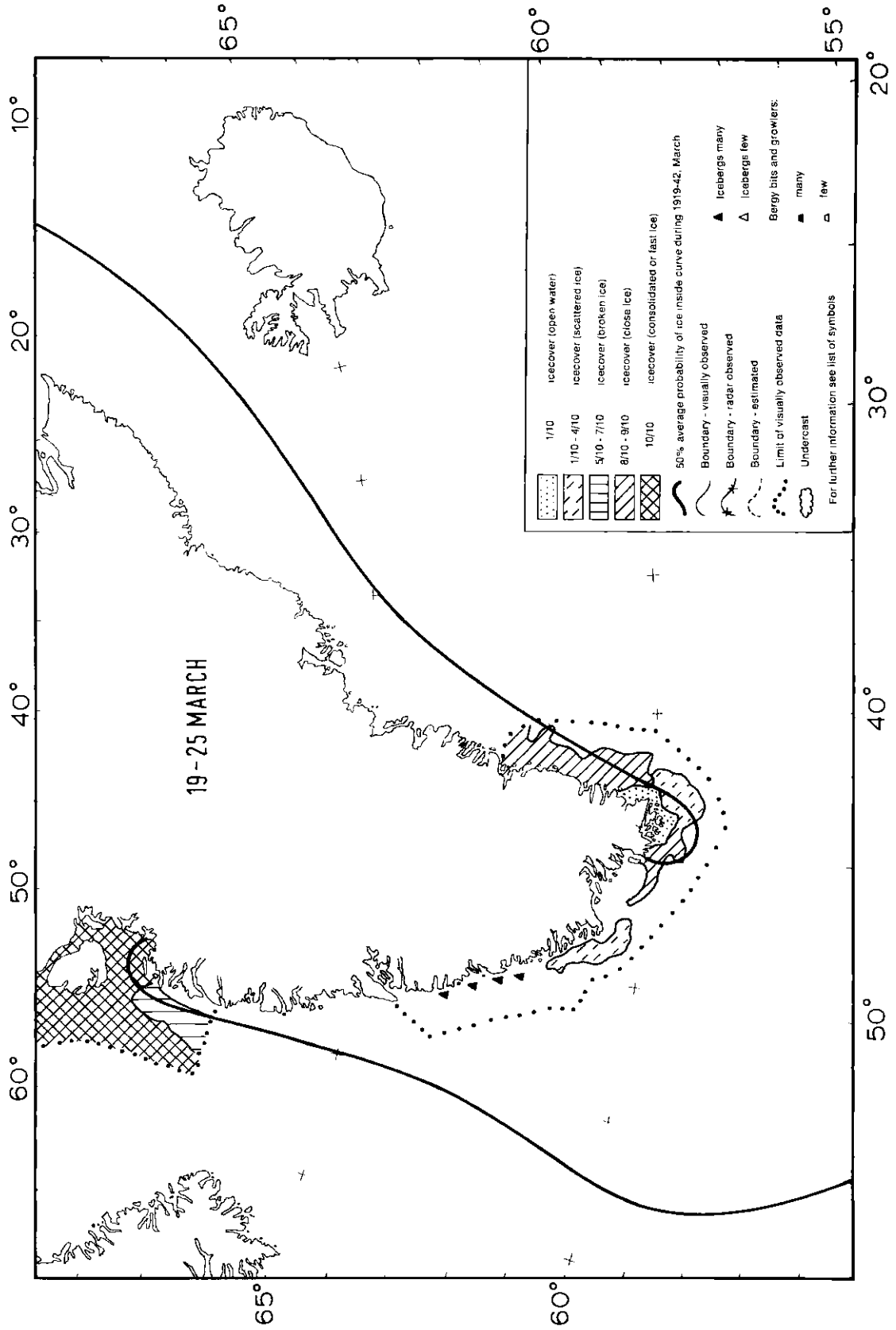


Chart 15. Ice conditions around Greenland from 19 to 25 March.

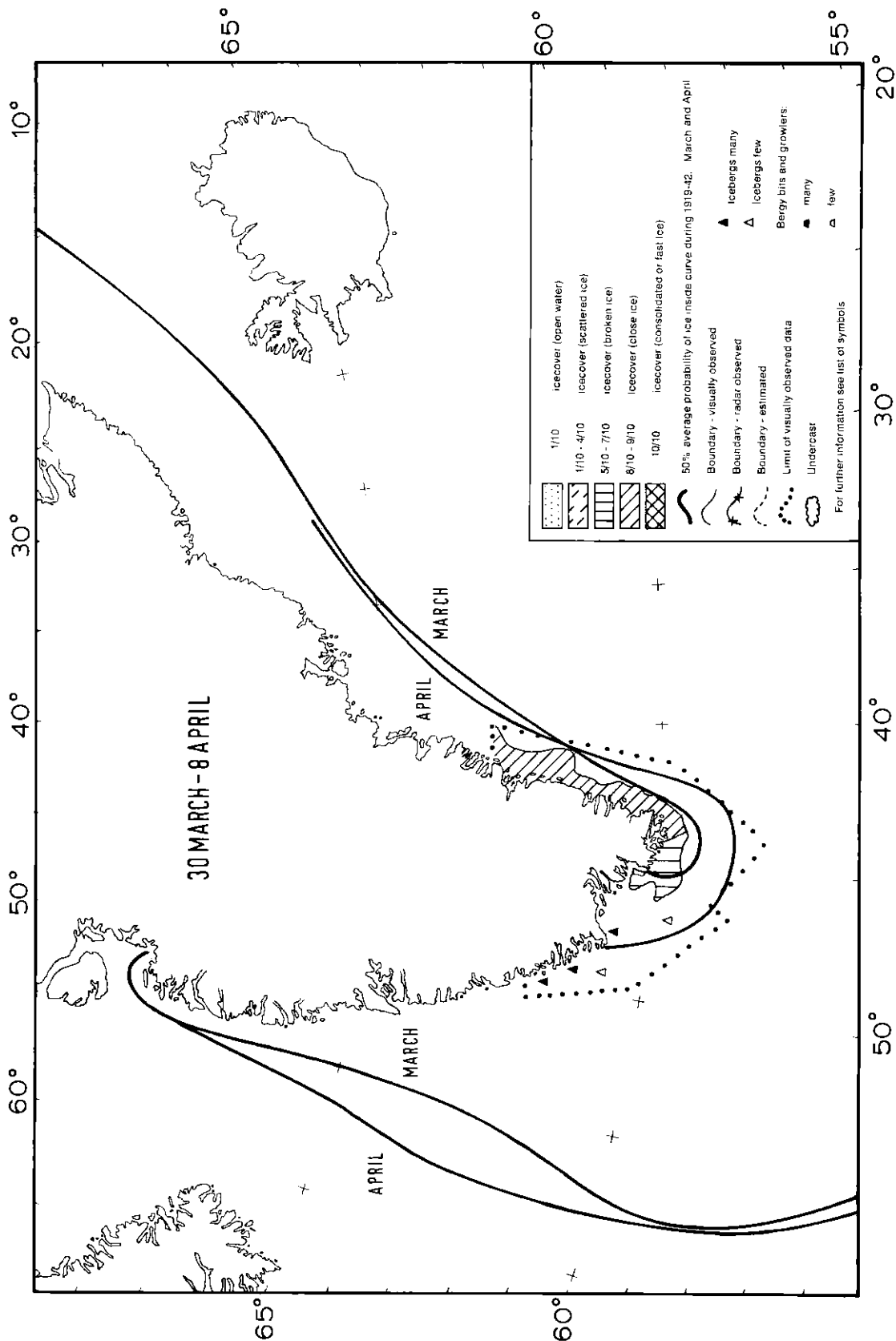


Chart 16. Ice conditions around Greenland from 30 March to 8 April.

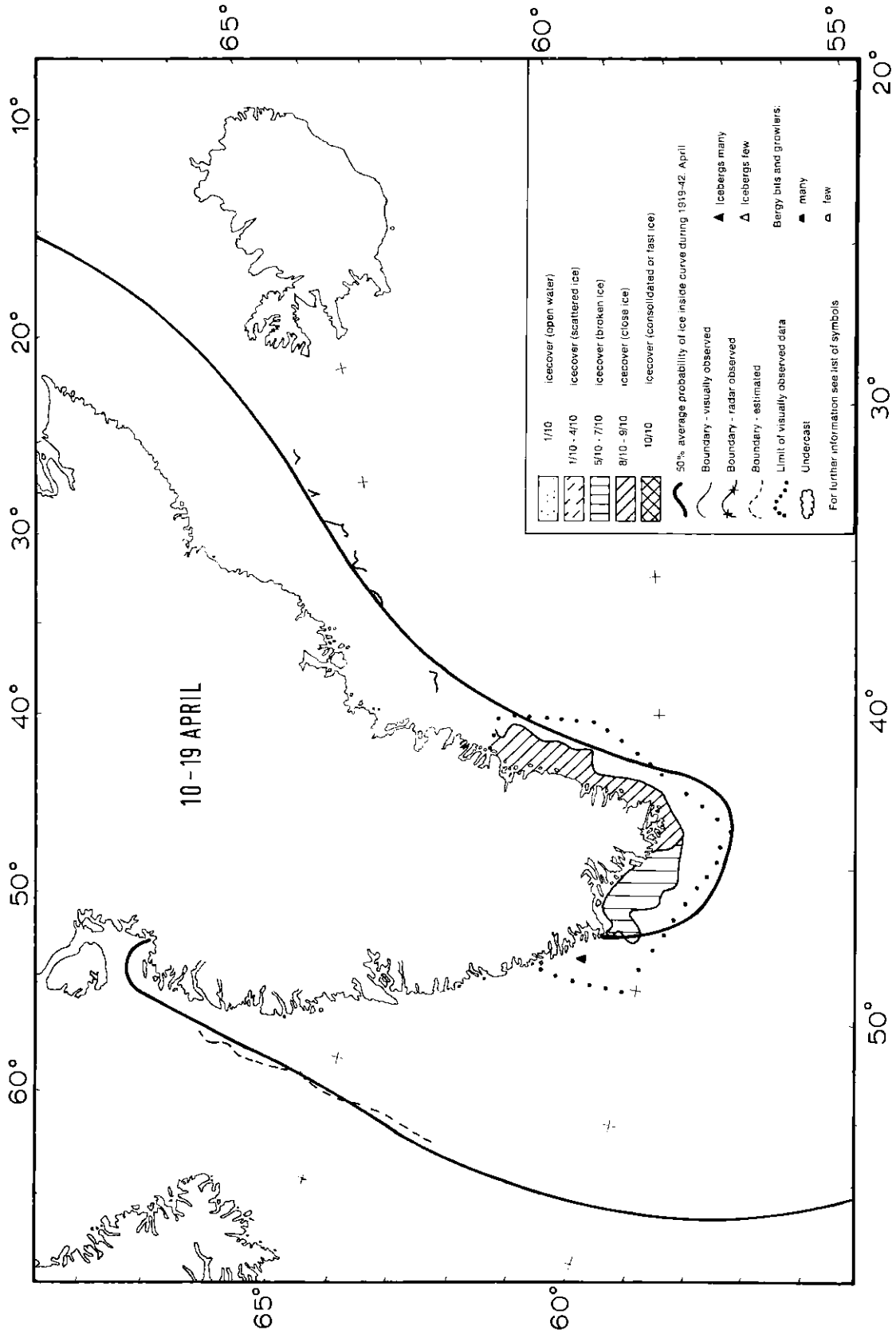


Chart 17. Ice conditions around Greenland from 10 to 19 April.

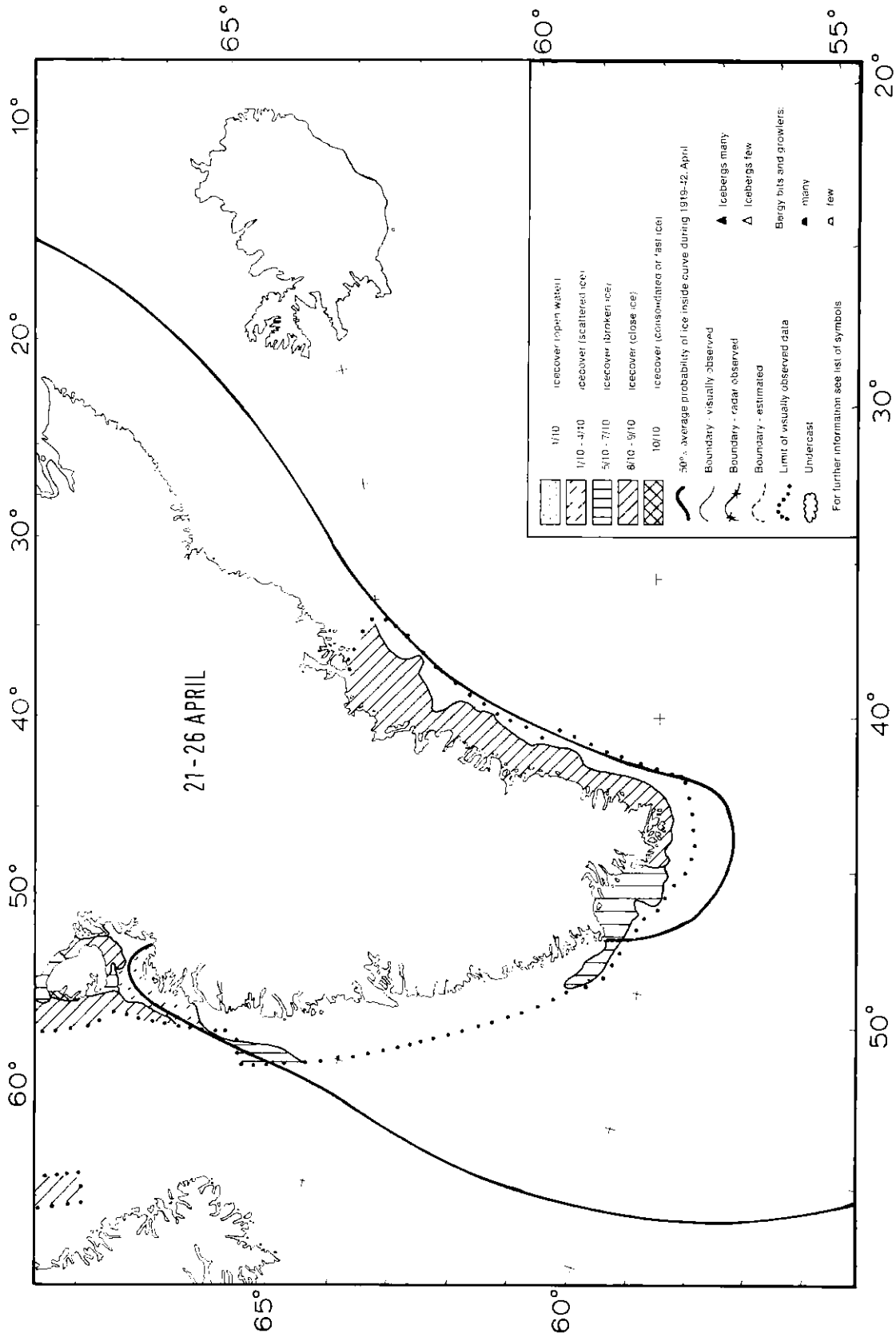


Chart 15. Ice conditions around Greenland from 21 to 26 April.

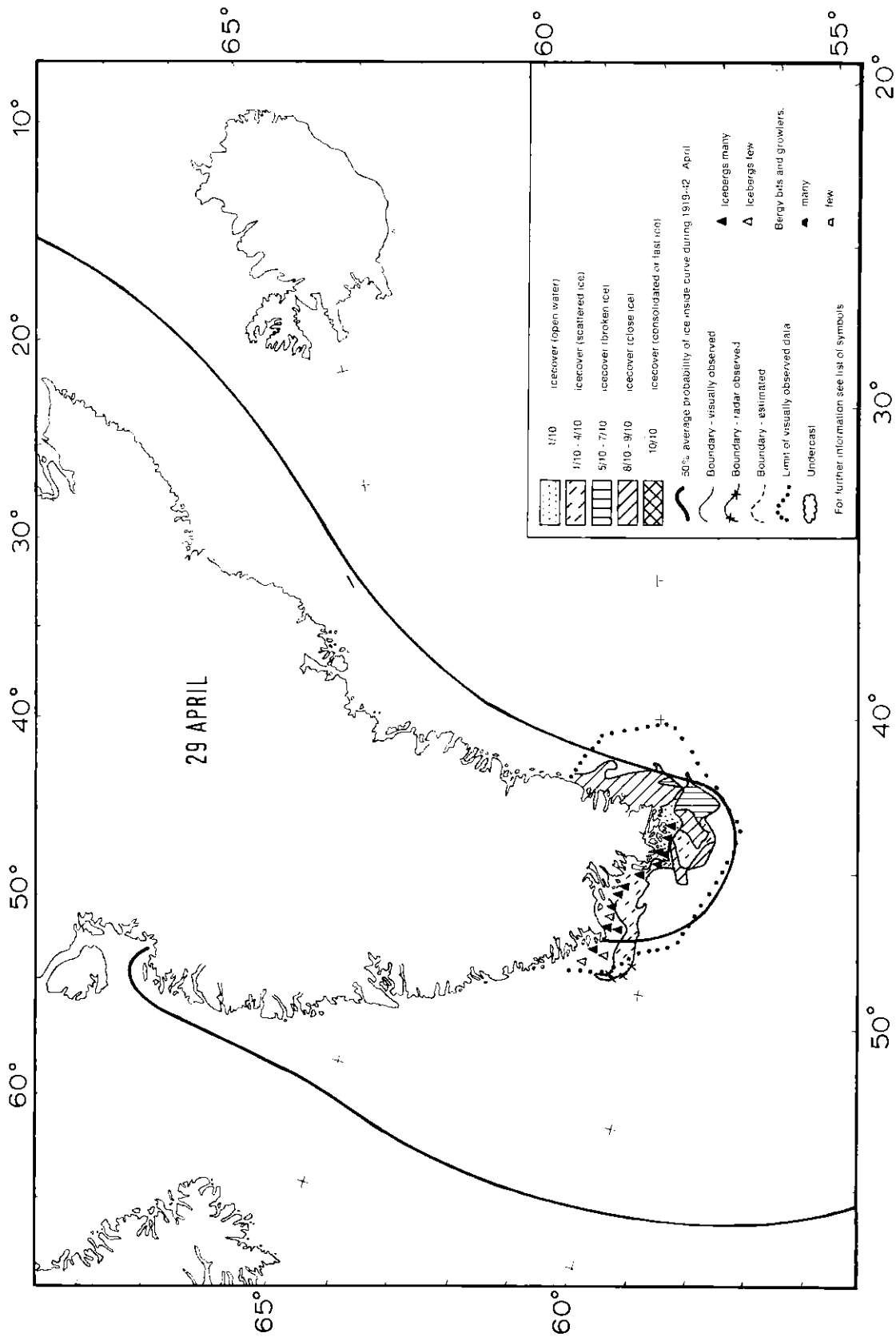


Chart 19. Ice conditions around Greenland, 29 April.

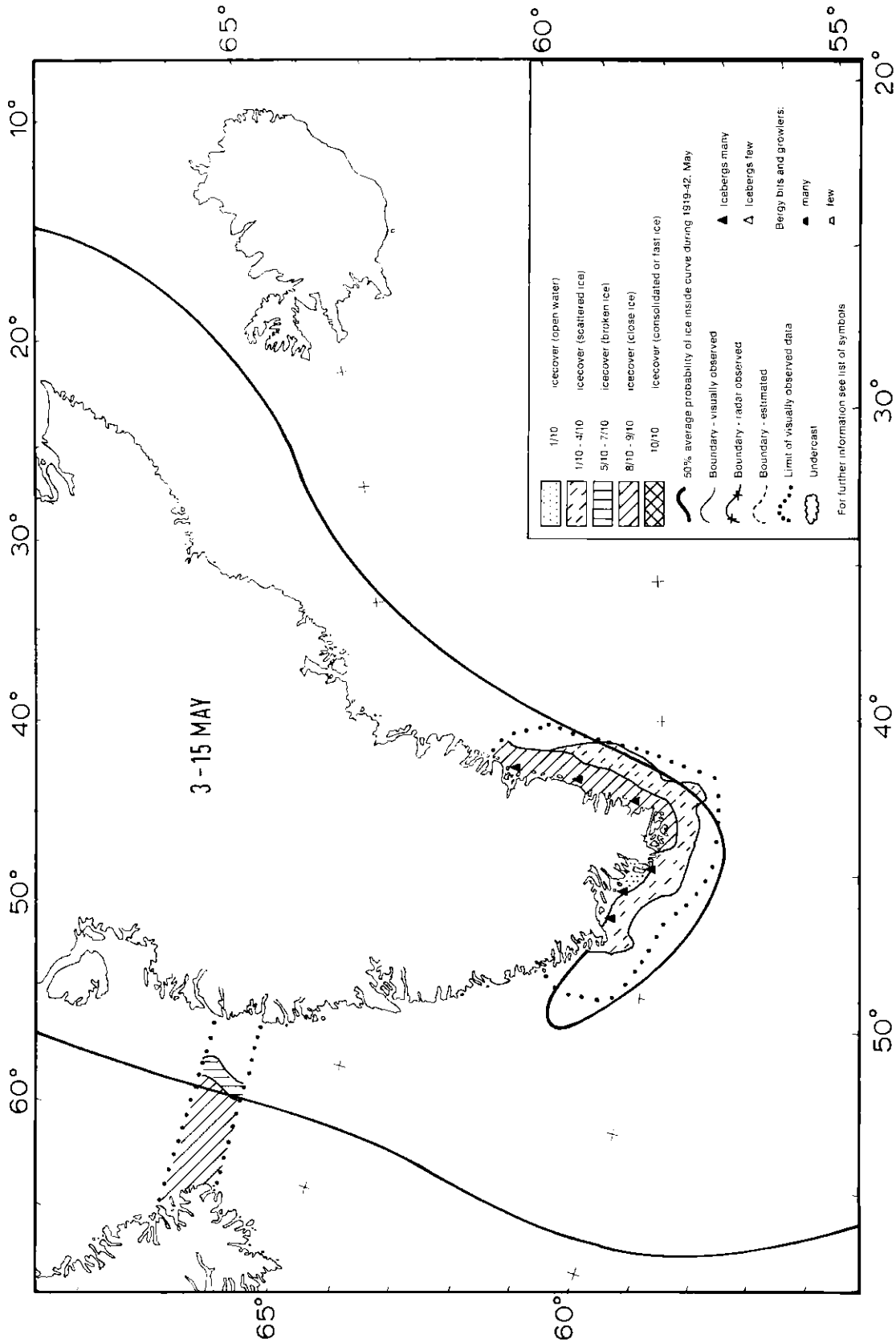


Chart 20. Ice conditions around Greenland from 3 to 15 May.

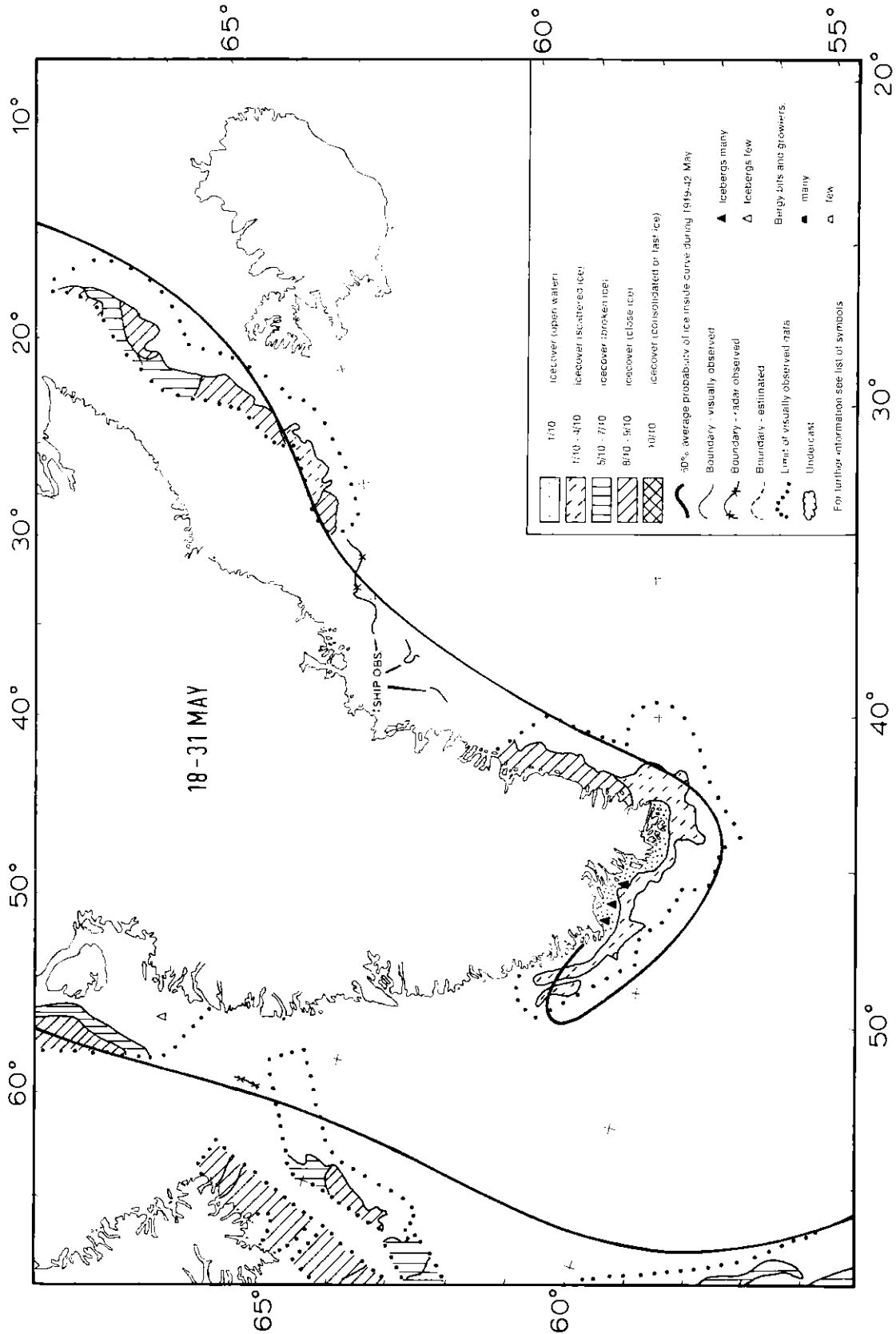


Chart 21. Ice conditions around Greenland from 18 to 31 May.

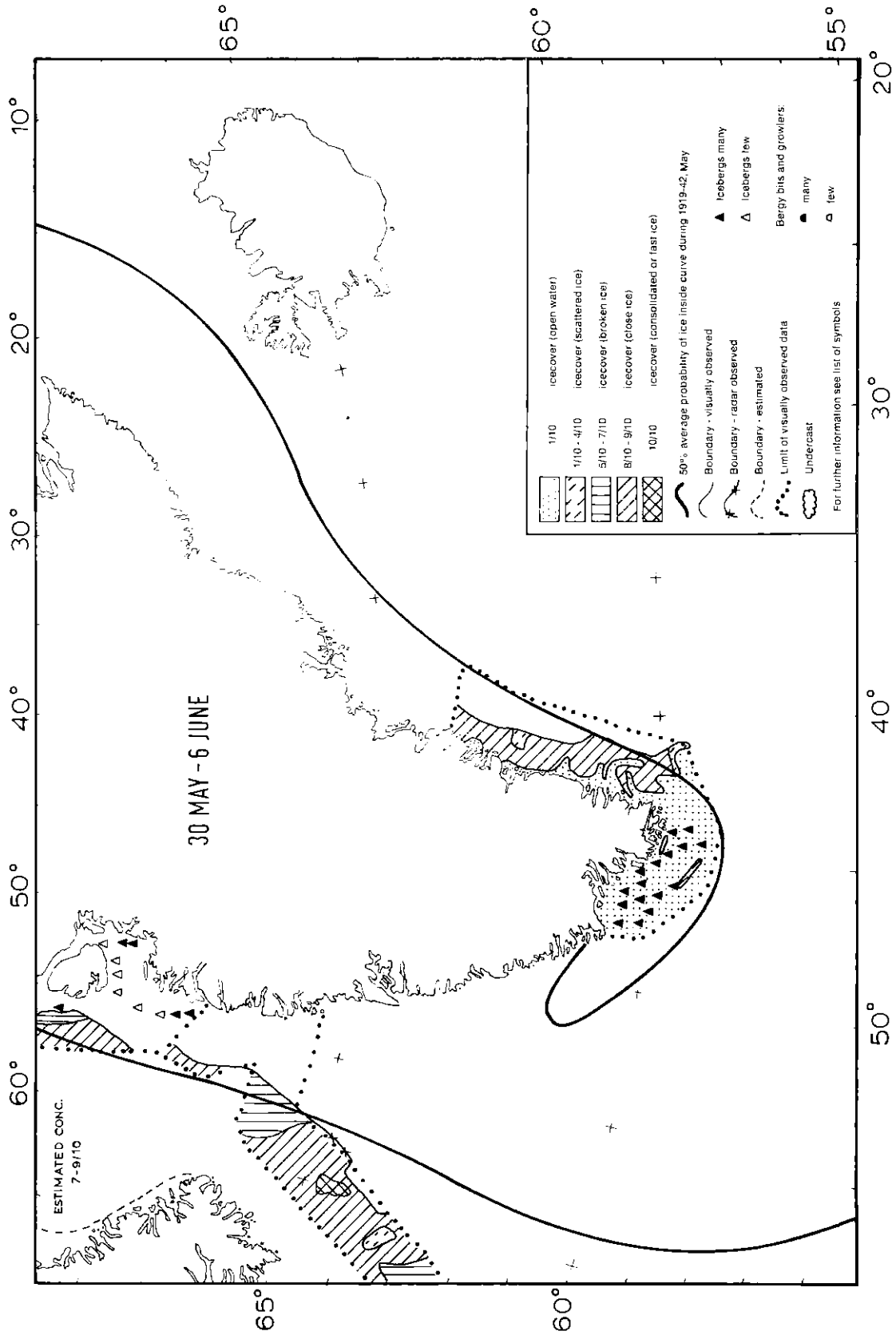


Chart 22. Ice conditions around Greenland from 30 May to 6 June.



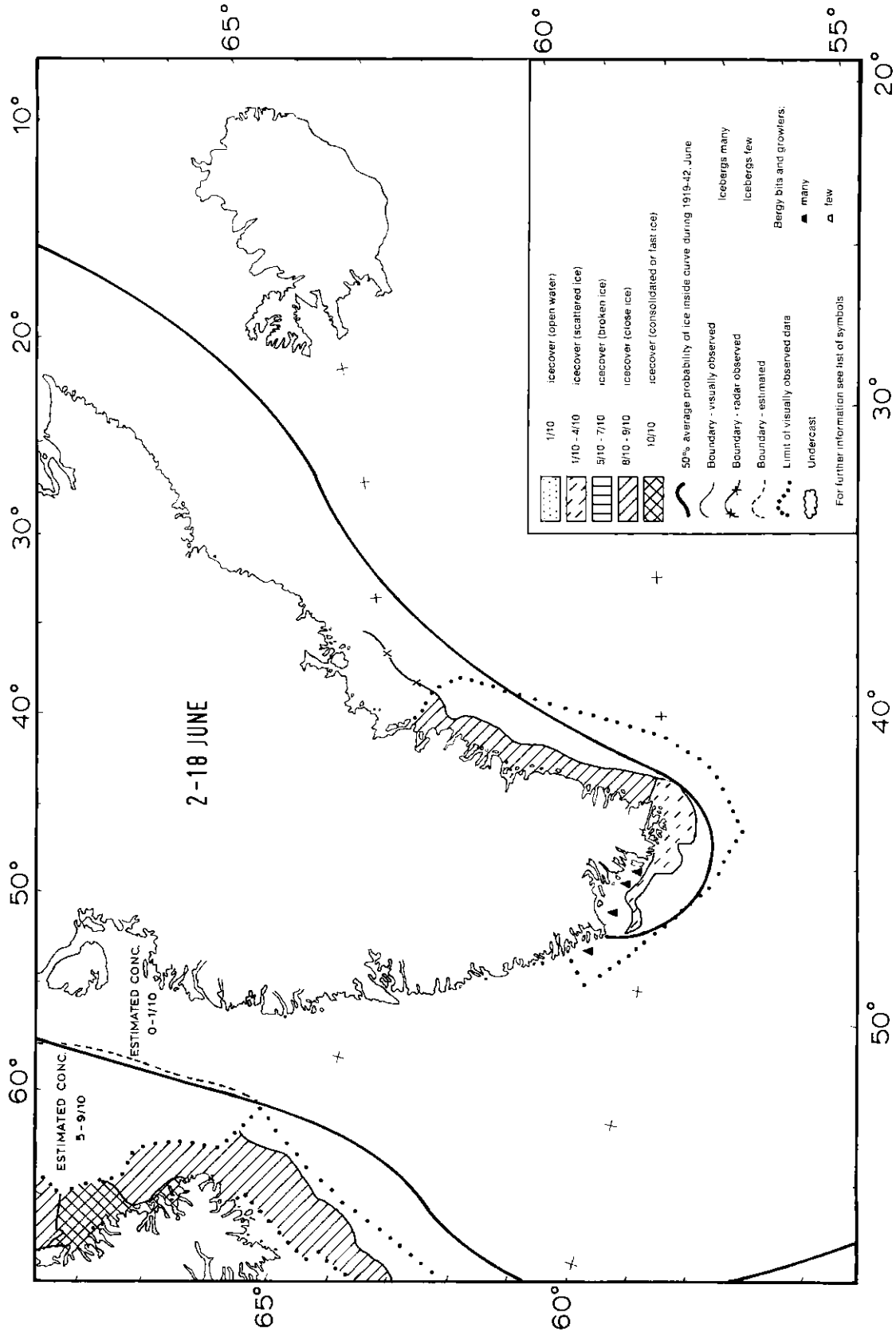


Chart 23. Ice conditions around Greenland from 2 to 18 June.

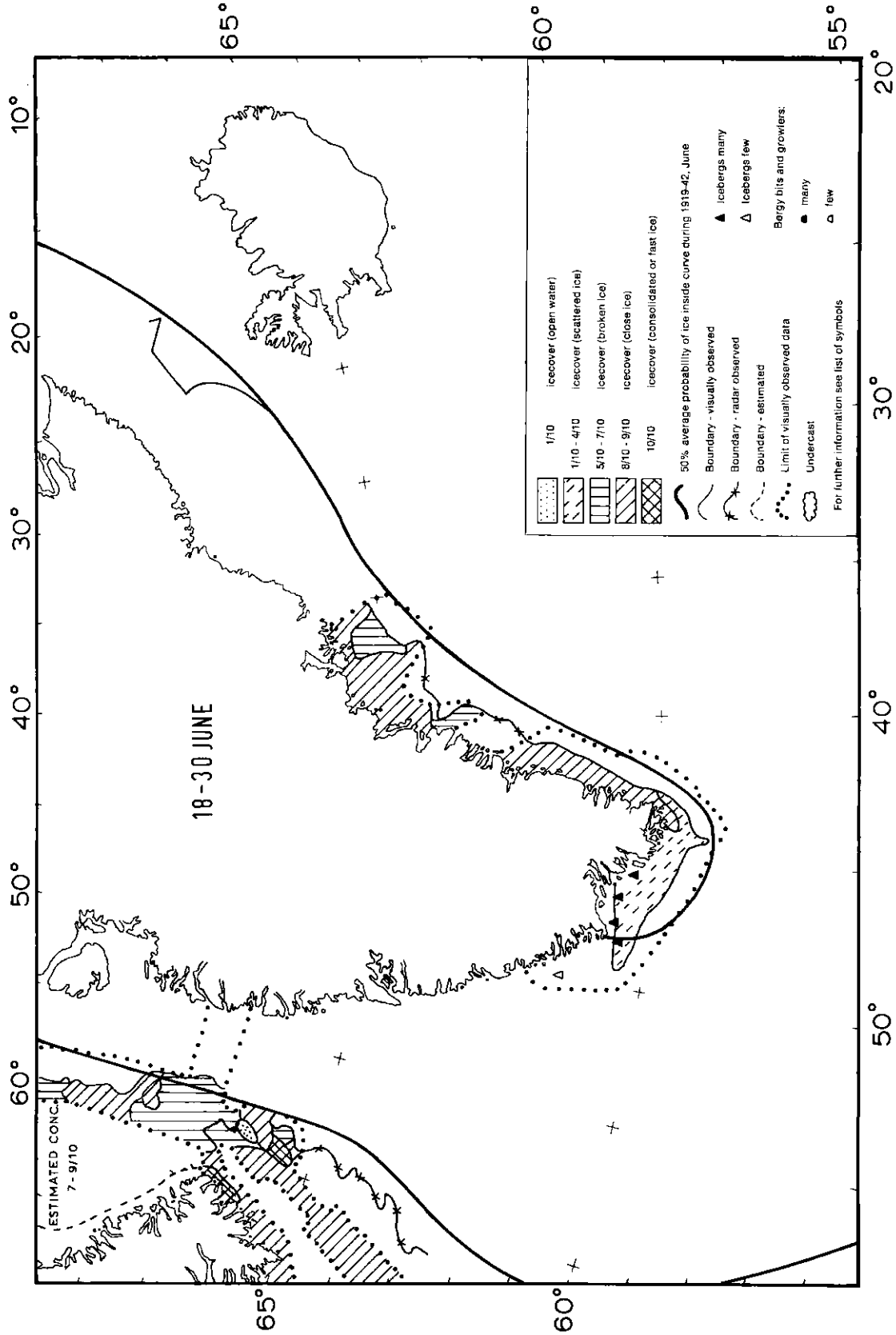


Chart 24. Ice conditions around Greenland from 18 to 30 June.

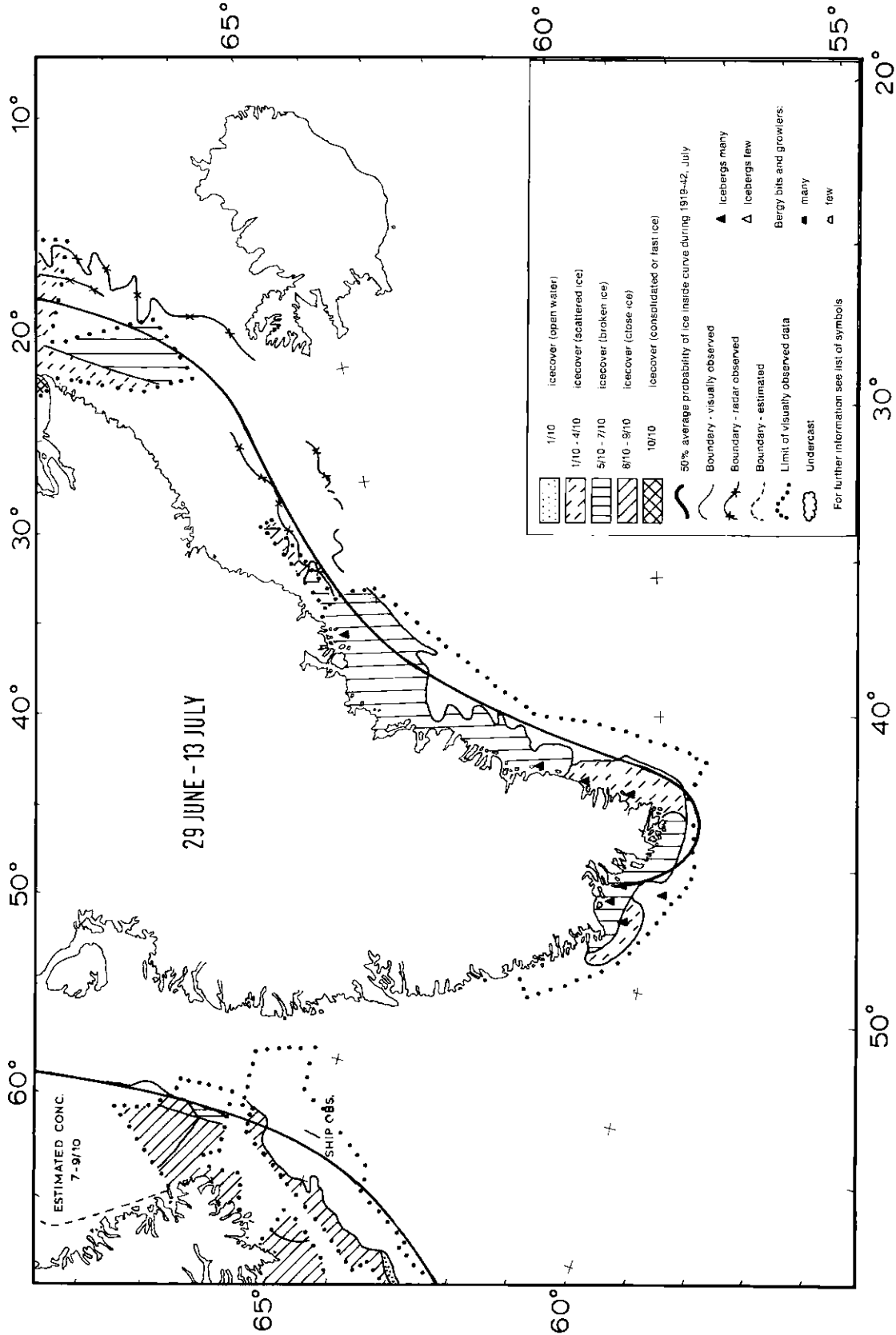


Chart 25. Ice conditions around Greenland from 29 June to 13 July.

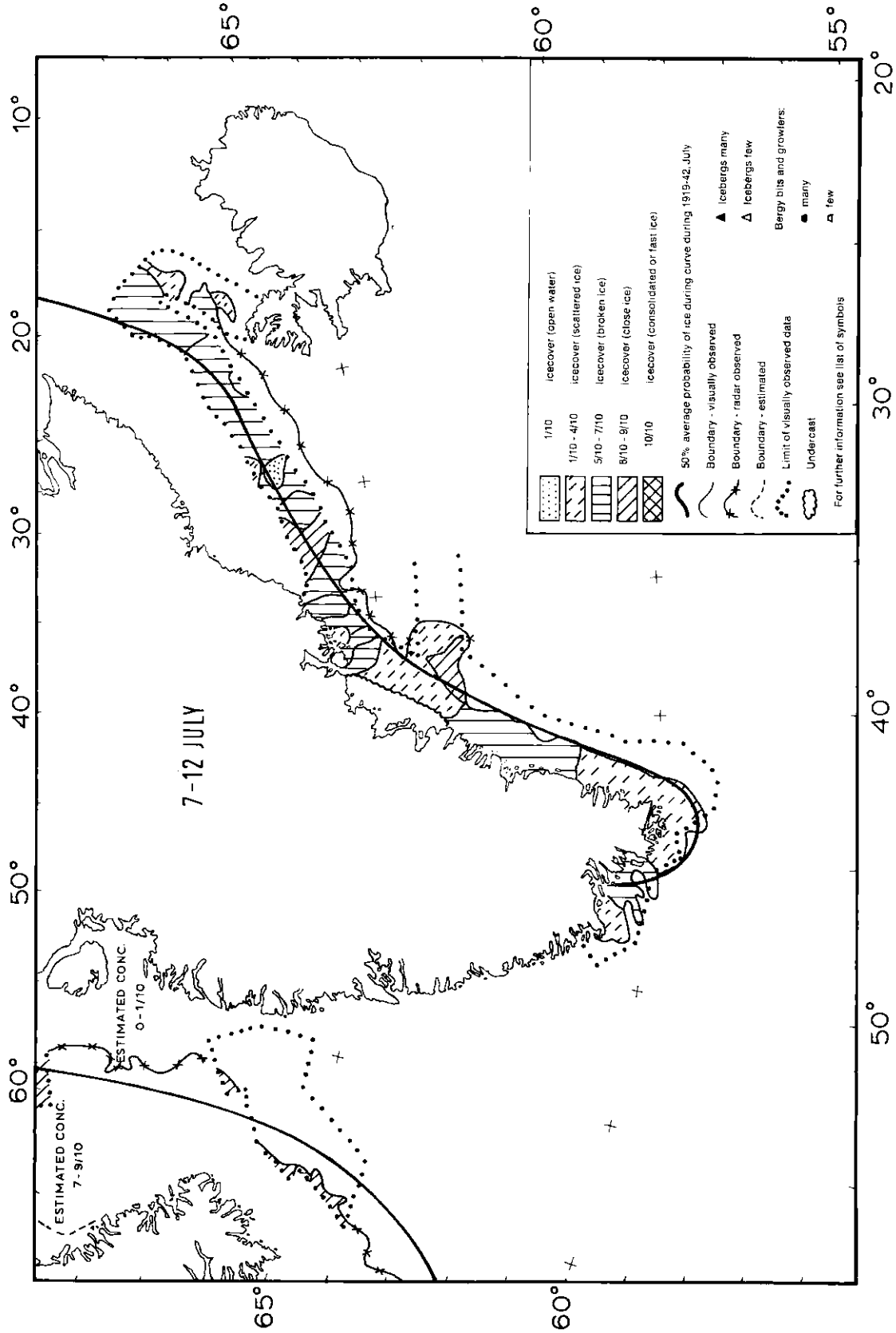


Chart 26. Ice conditions around Greenland from 7 to 12 July.

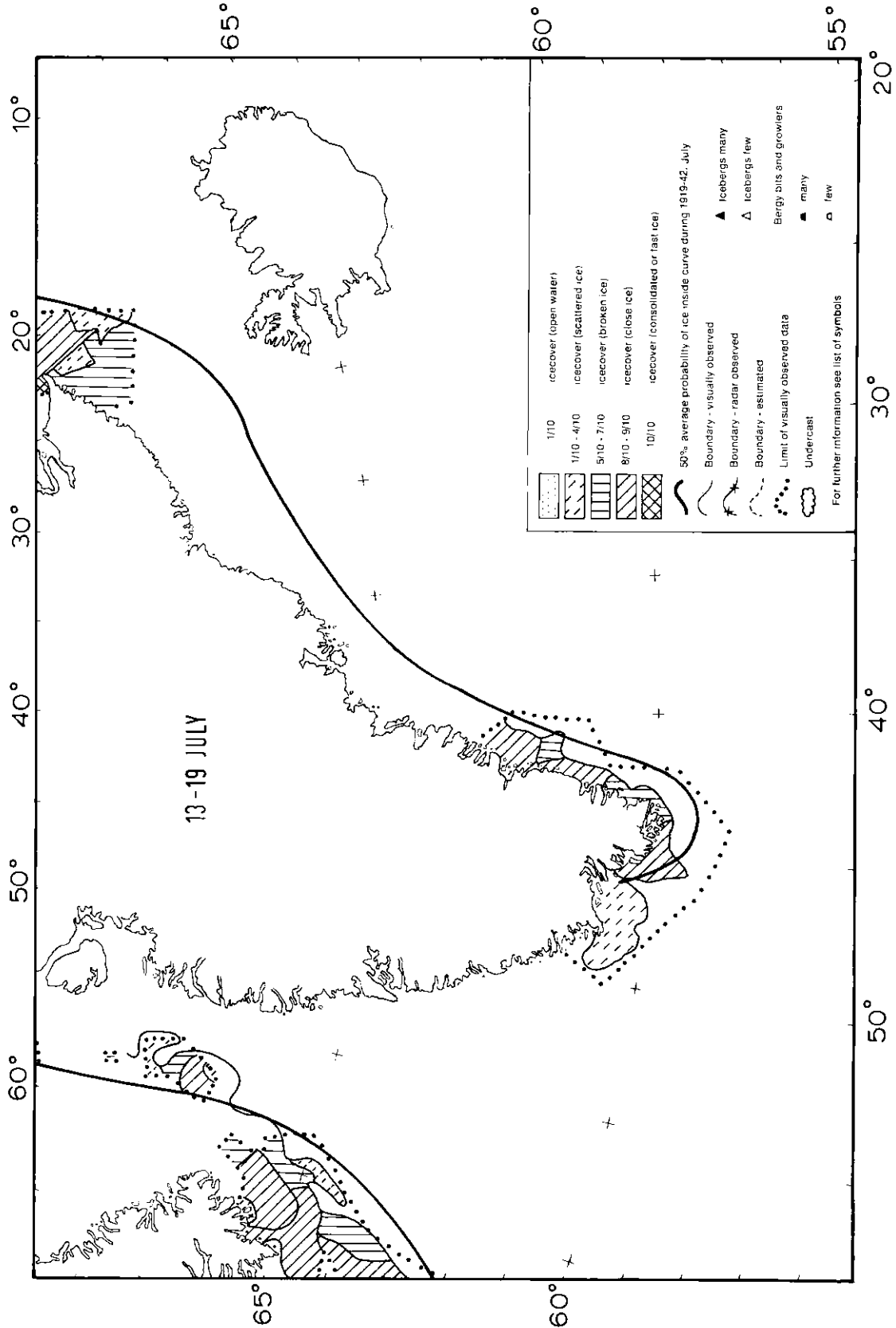


Chart 27. Ice conditions around Greenland from 13 to 19 July.

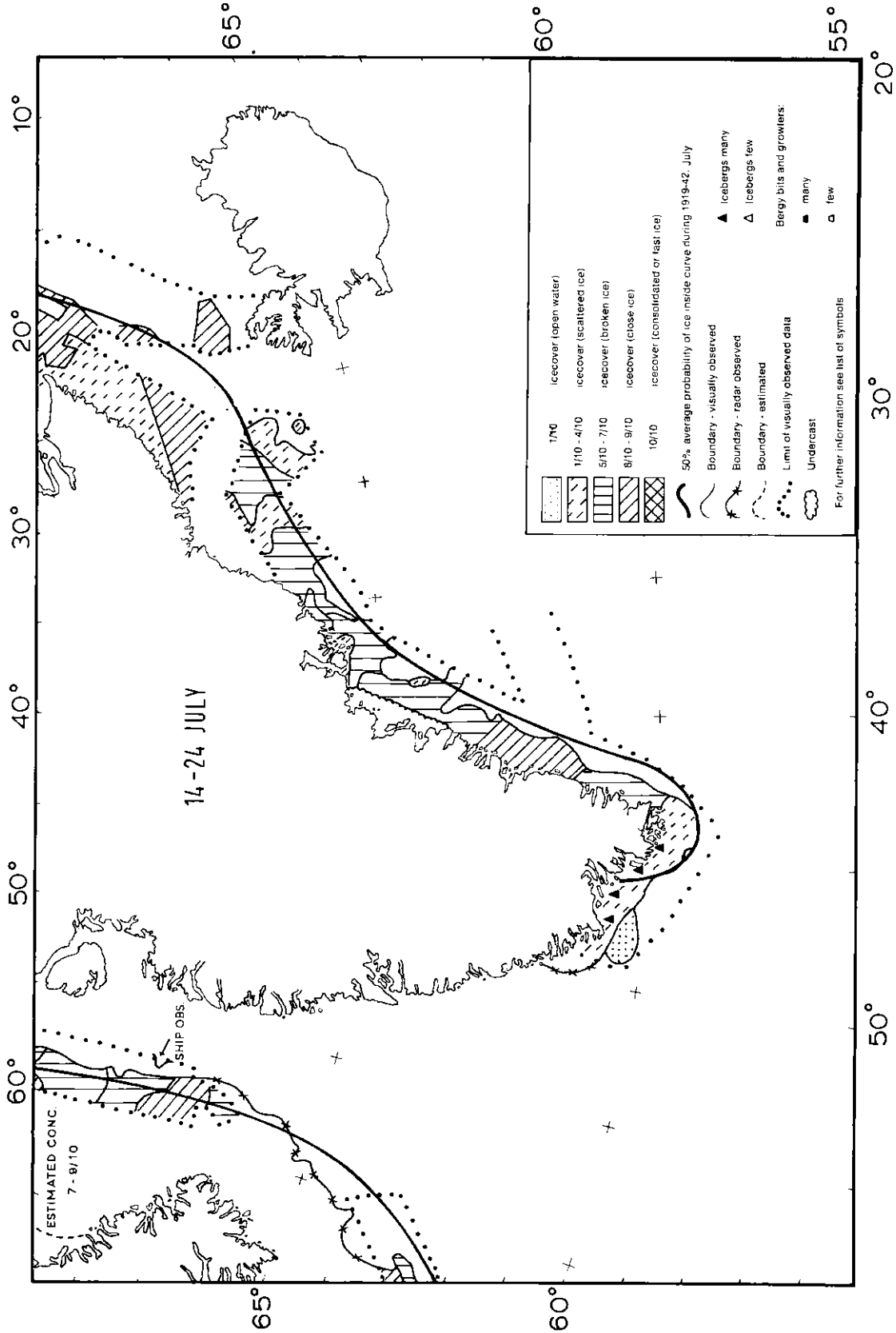


Chart 28. Ice conditions around Greenland from 14 to 24 July.

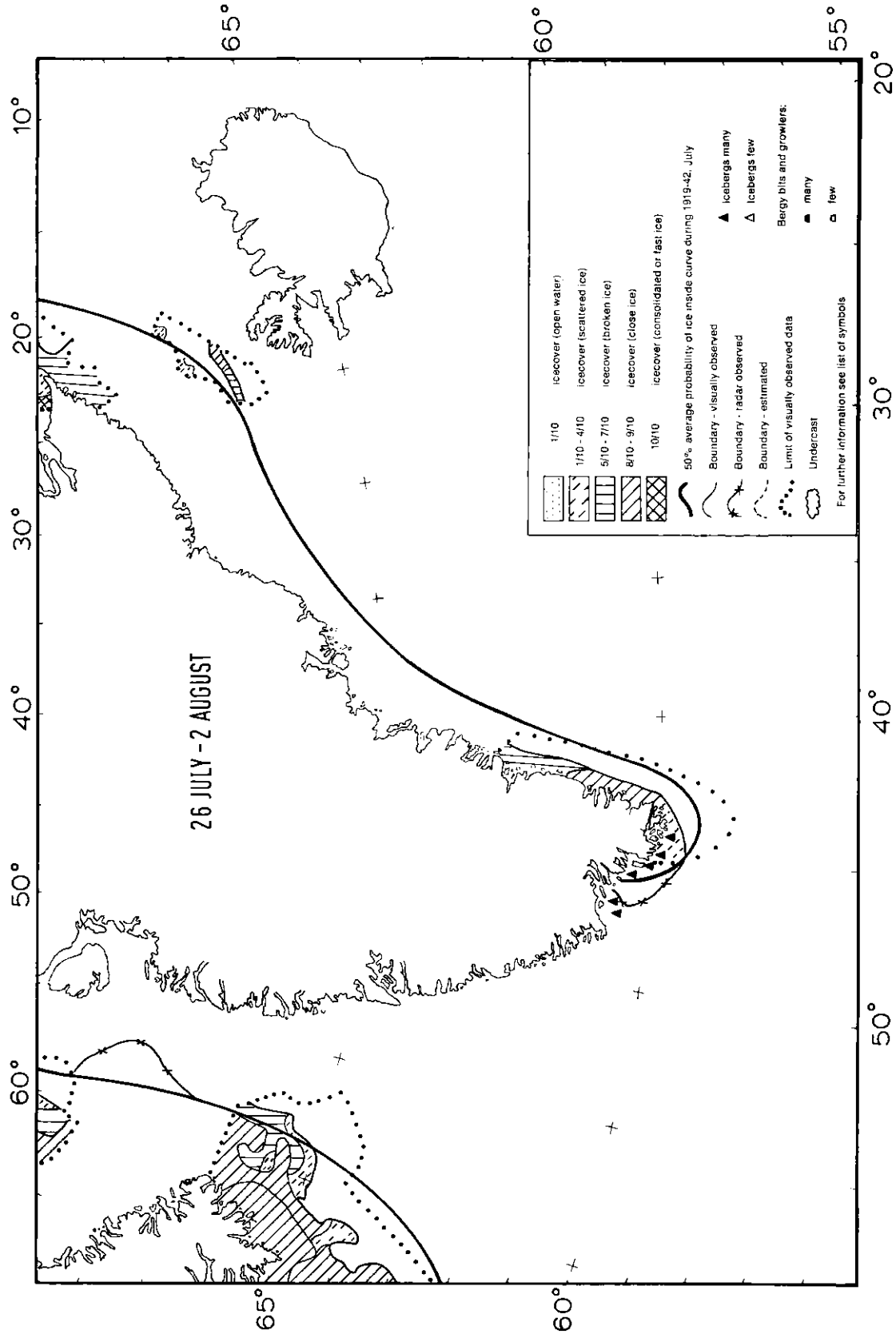


Chart 29. Ice conditions around Greenland from 26 July to 2 August.

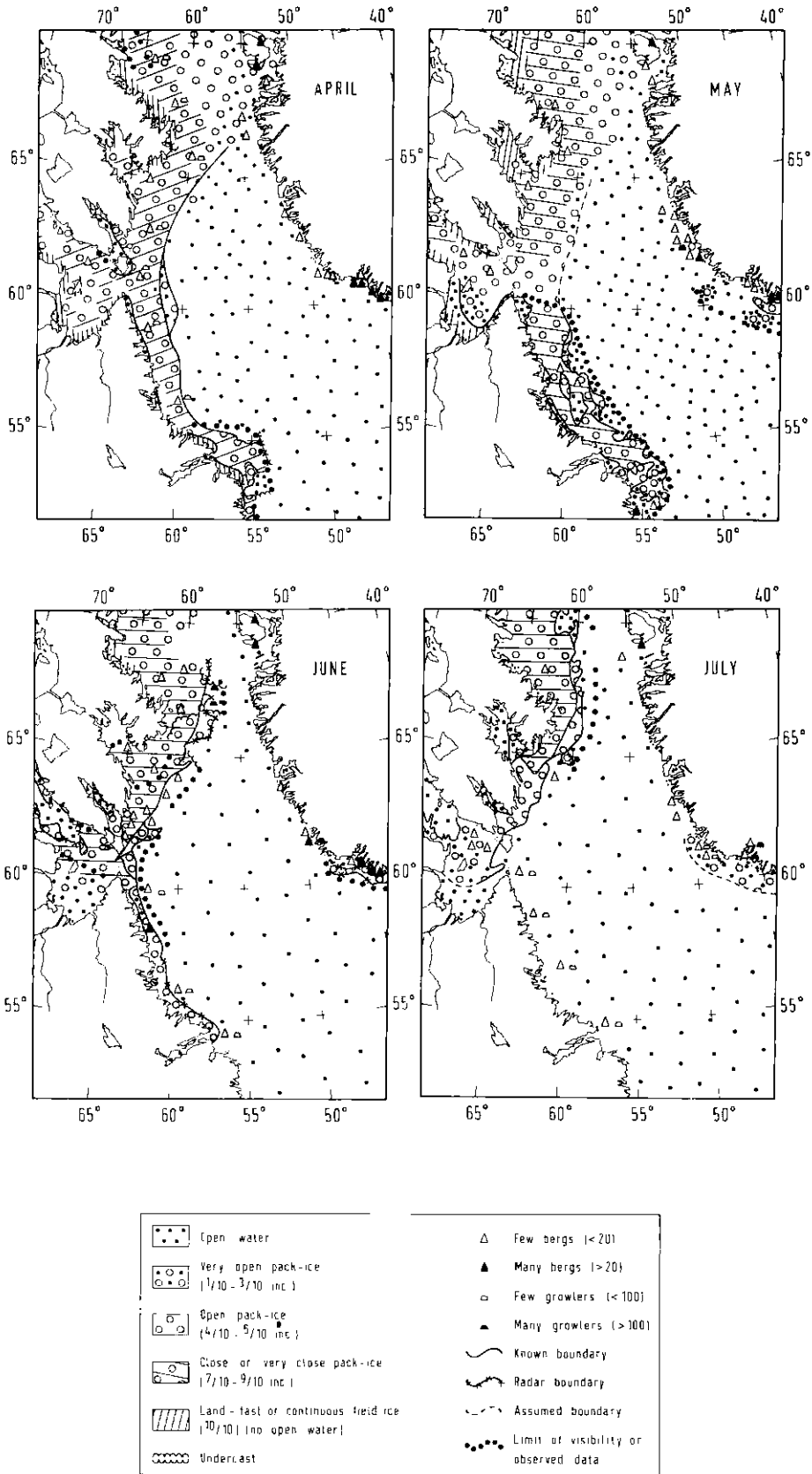


Chart 30. Ice conditions in the Labrador Sea and Davis Strait at the ends of each of the months April-July 1963.



**PHYSICAL OCEANOGRAPHY**

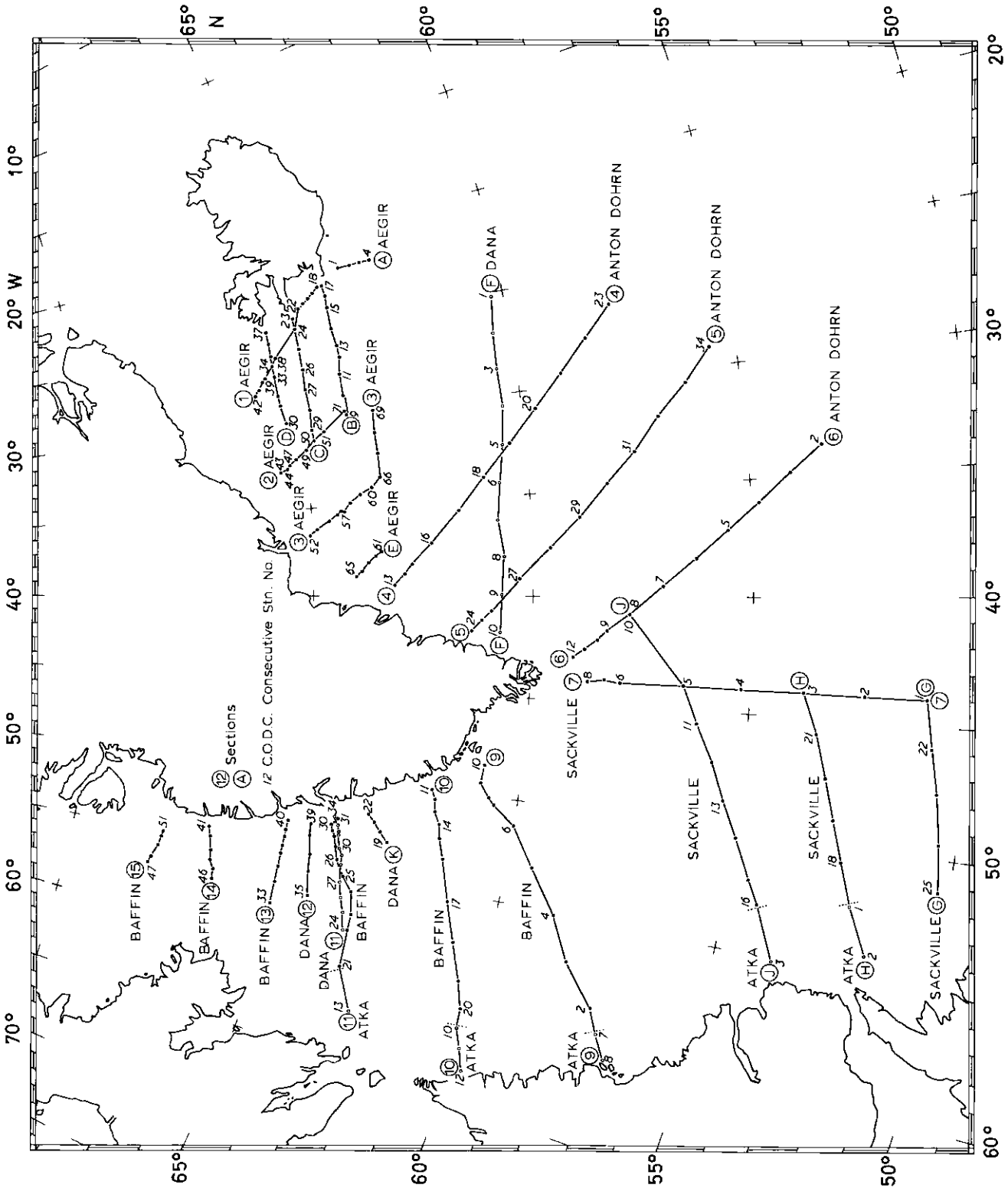


Chart 32. NORWESTLANT 2: Positions of stations and sections.

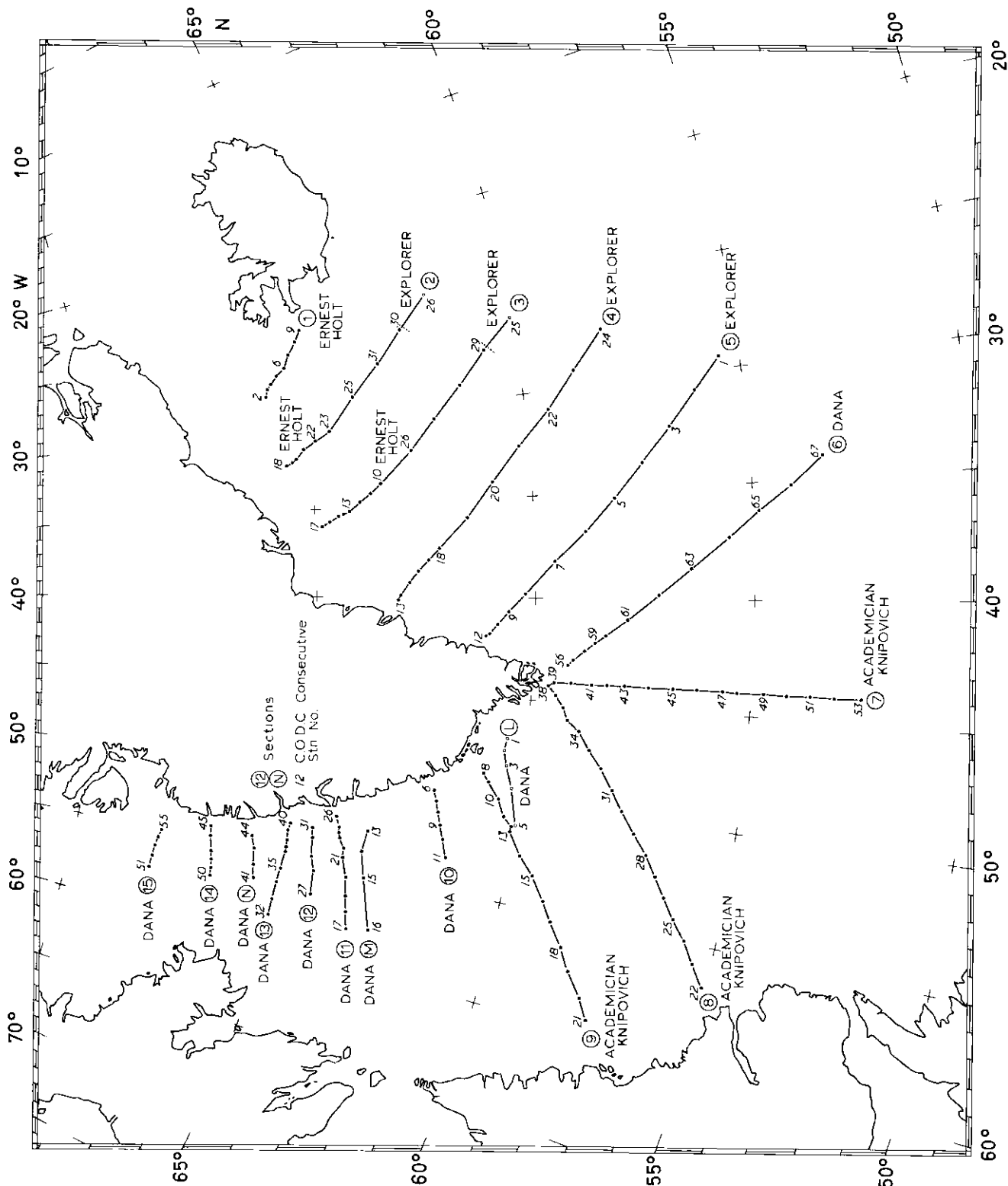


Chart 33. NORWESTLANT 3: Positions of stations and sections.

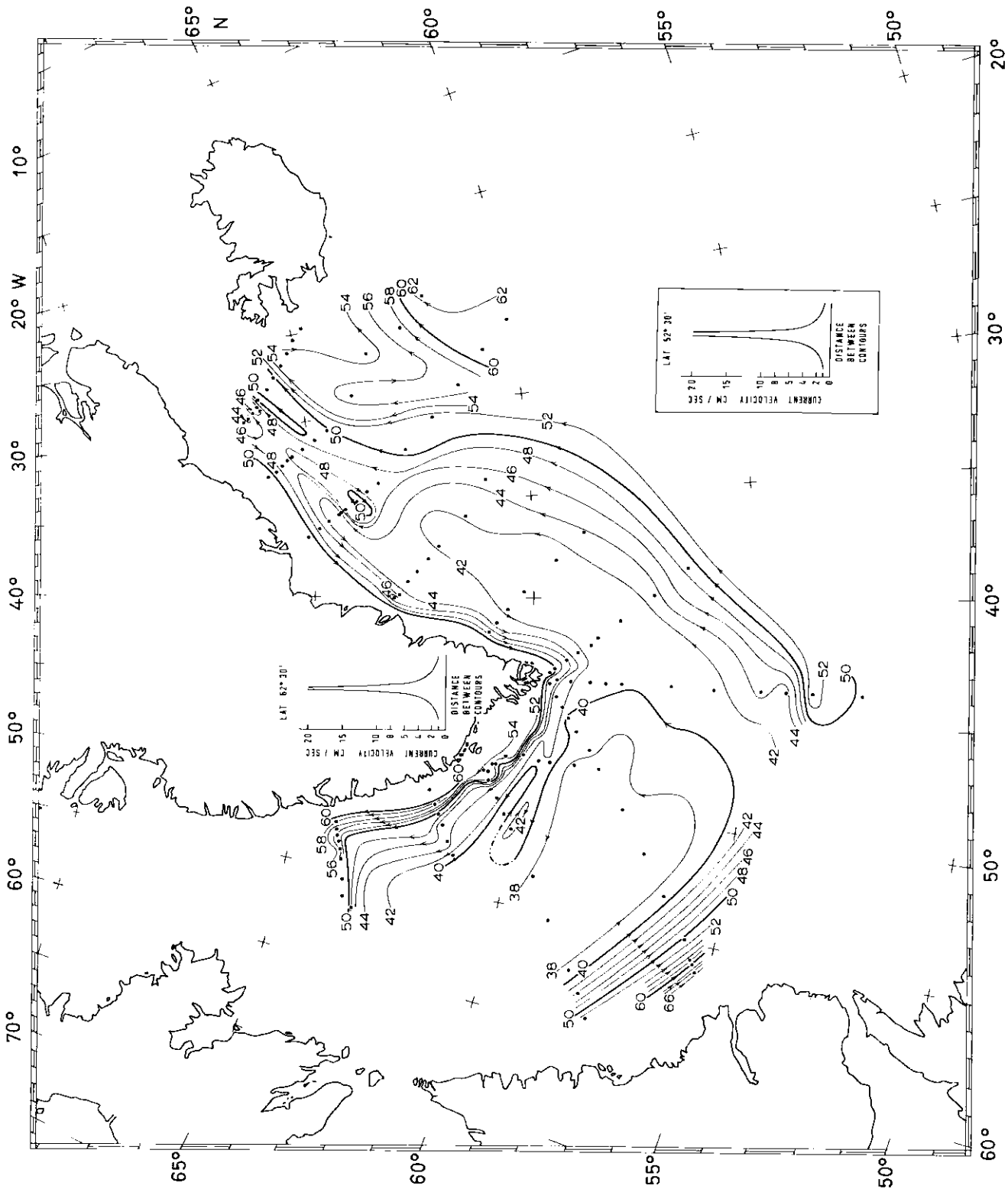


Chart 34. NORWESTLANT 1: 31 March-9 May: Dynamic topography of the sea surface relative to the pressure surface at 1,000 m. (Units: Dyn cms).

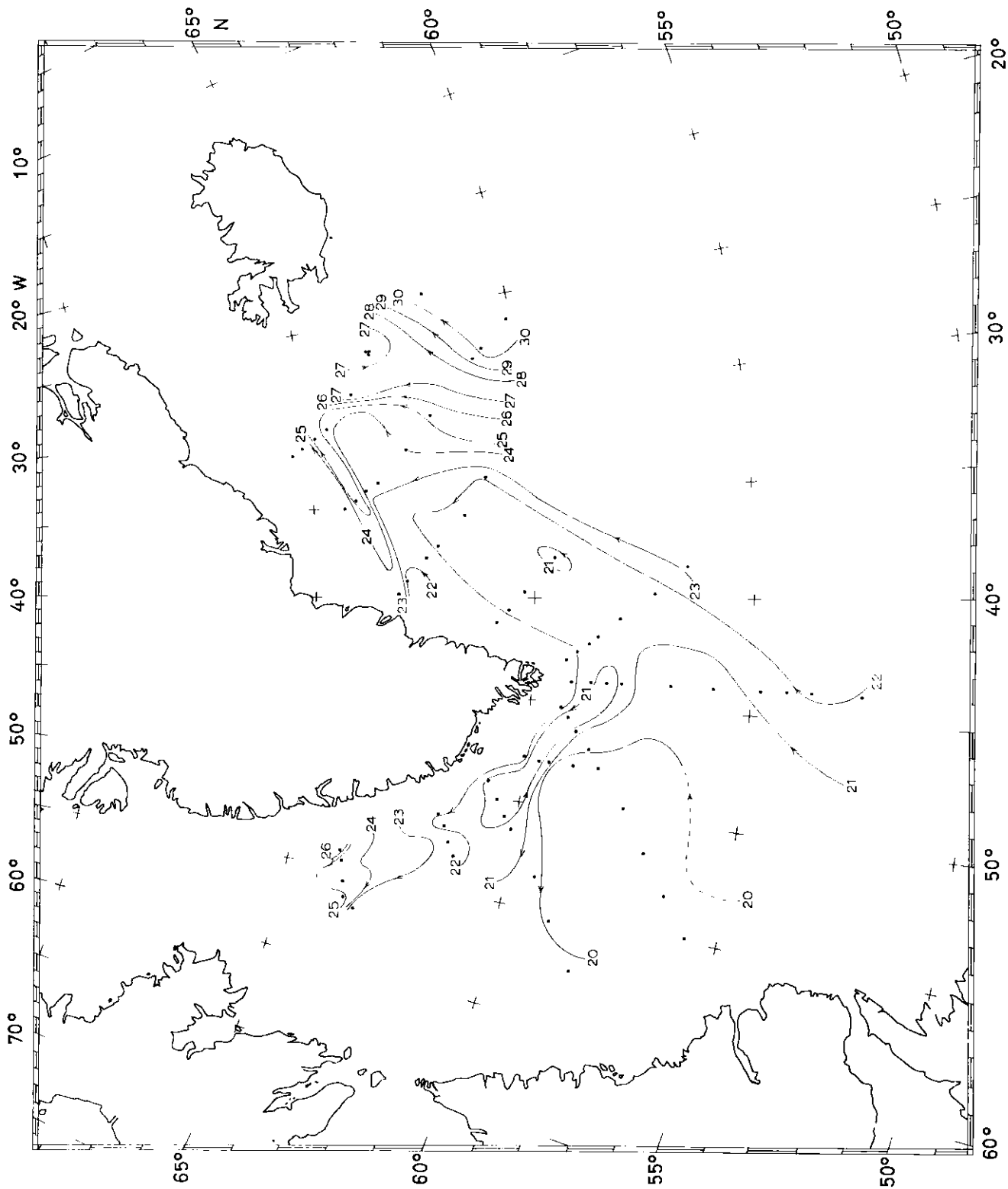


Chart 35. NORWESTLANT 1: 31 March-9 May: Potential energy anomaly in units of  $10^8$  ergs/cm<sup>2</sup> relative to the pressure surface at 1,000 m. Transport between contours is about 1 million metric tons per second.

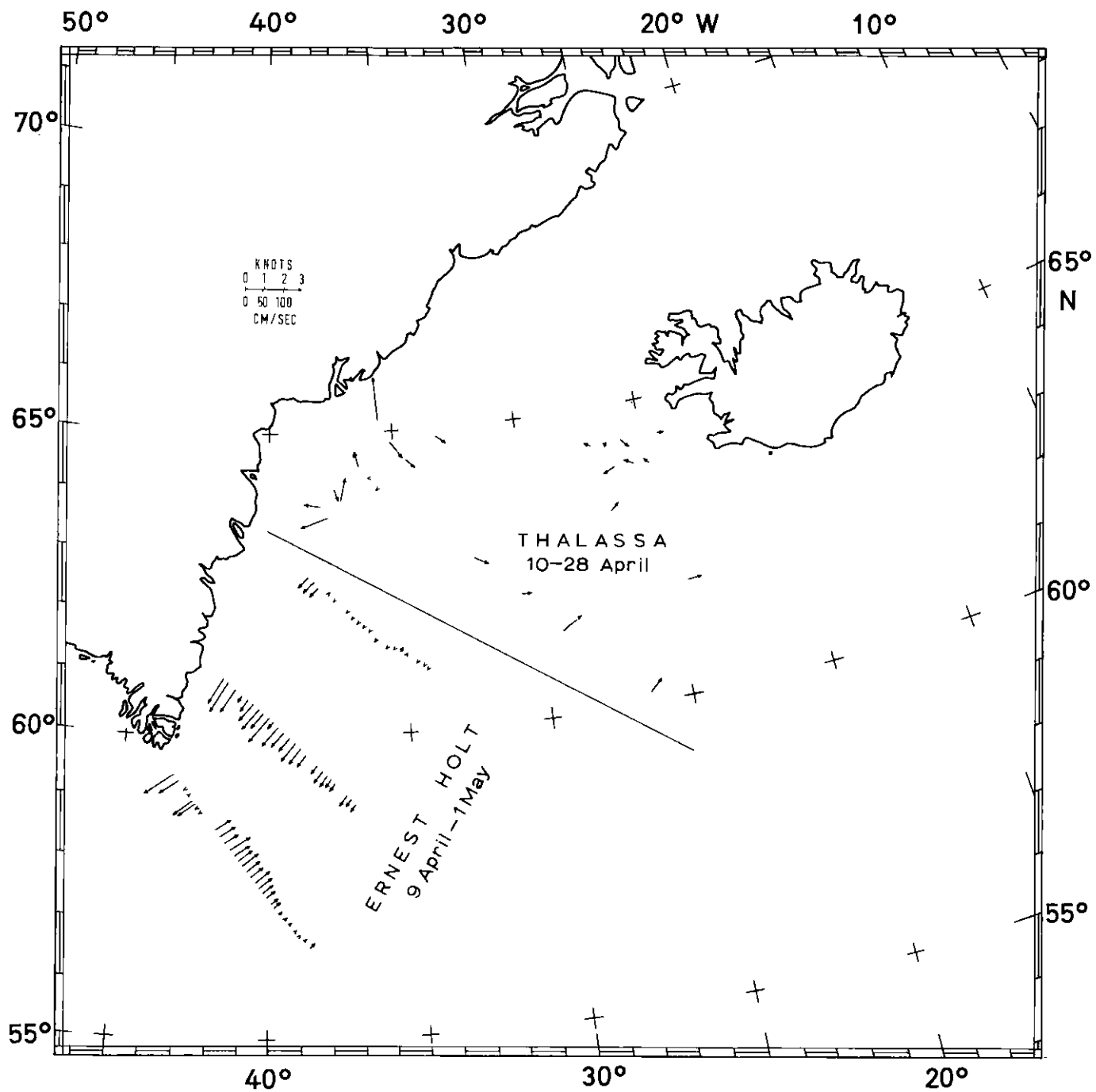


Chart 36. NORWESTLANT 1: 9 April-1 May: GEK observations. The observations made by *Ernest Holt* consist of the component at right angles to northwest-southeast tracks only.

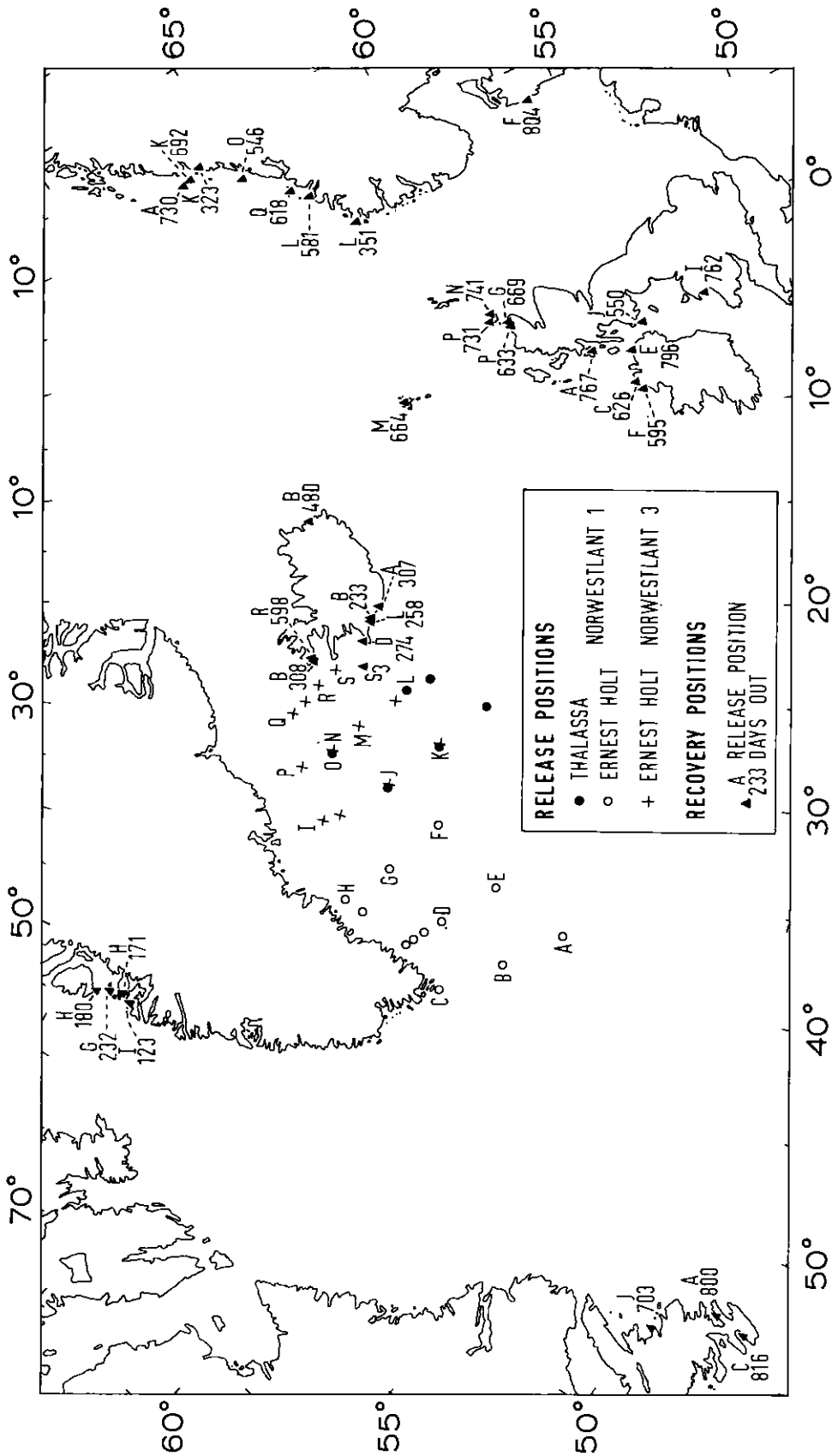


Chart 37. NORWESTLANT 1 and 3: Positions of drift-bottle releases and recoveries.

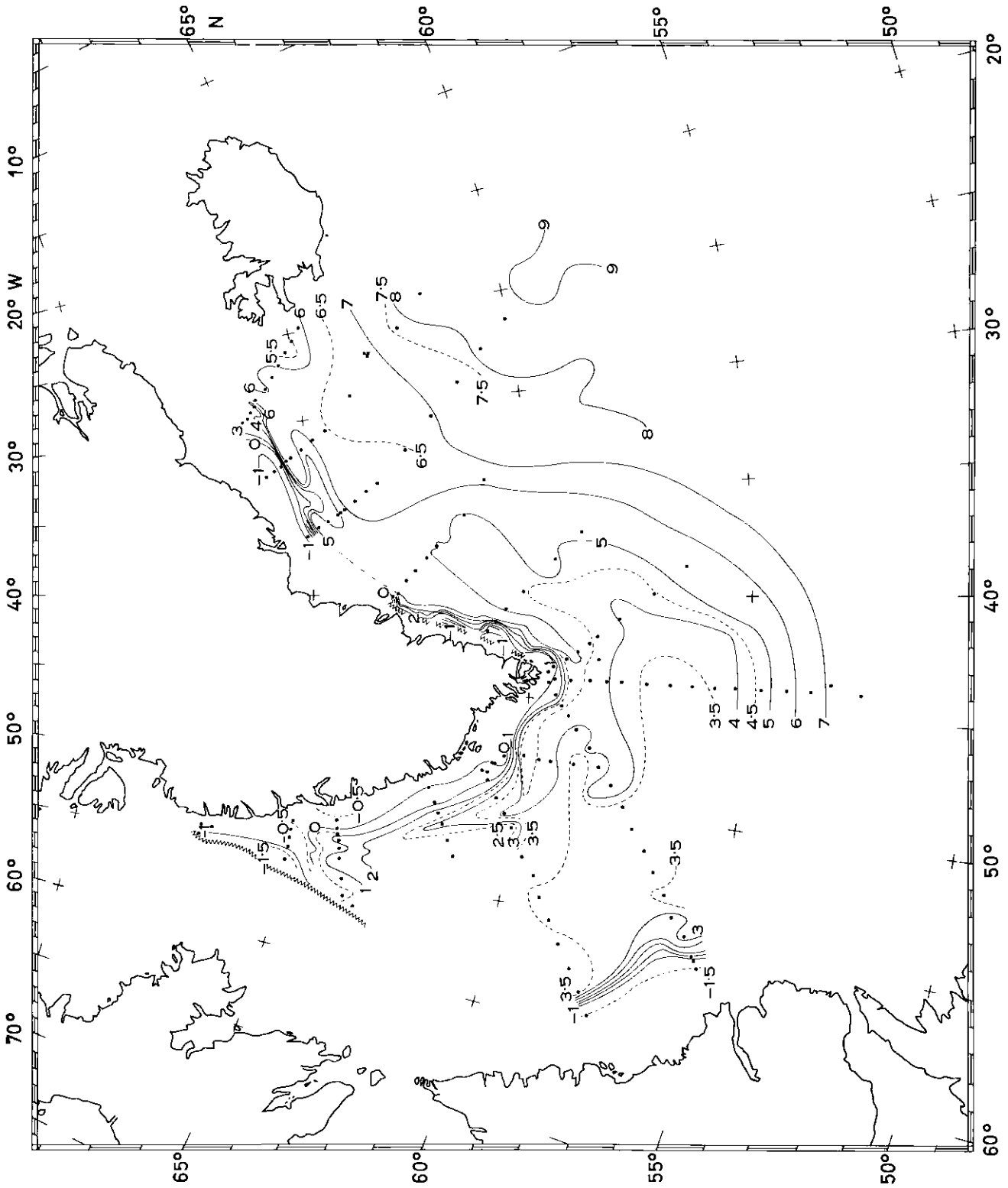


Chart 38. NORWESTLANT 1: 31 March-9 May: Temperature (°C) at 0 m.



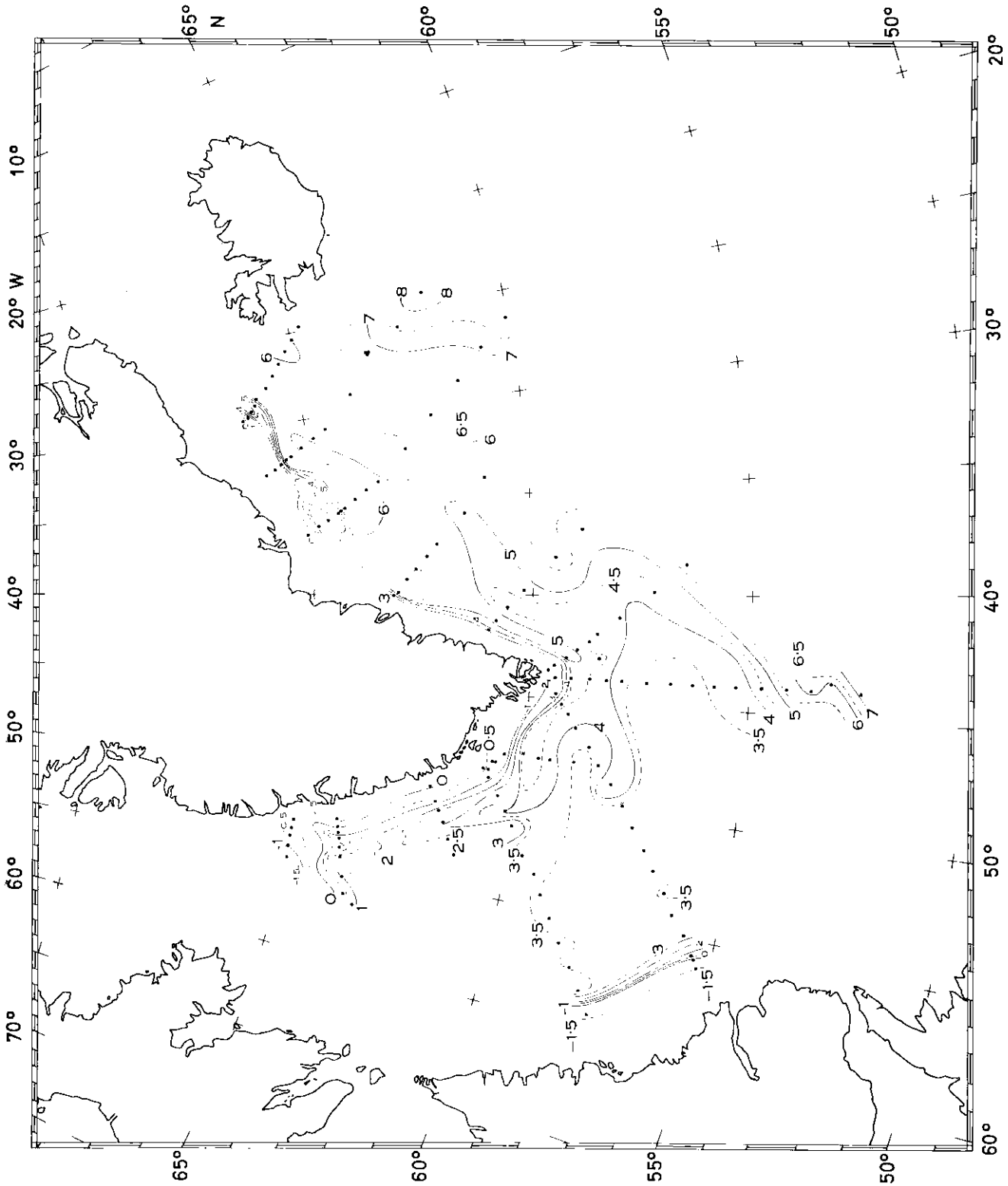


Chart 39. NORWESTLANT 1: 31 March-9 May: Temperature (°C) at 20 m.

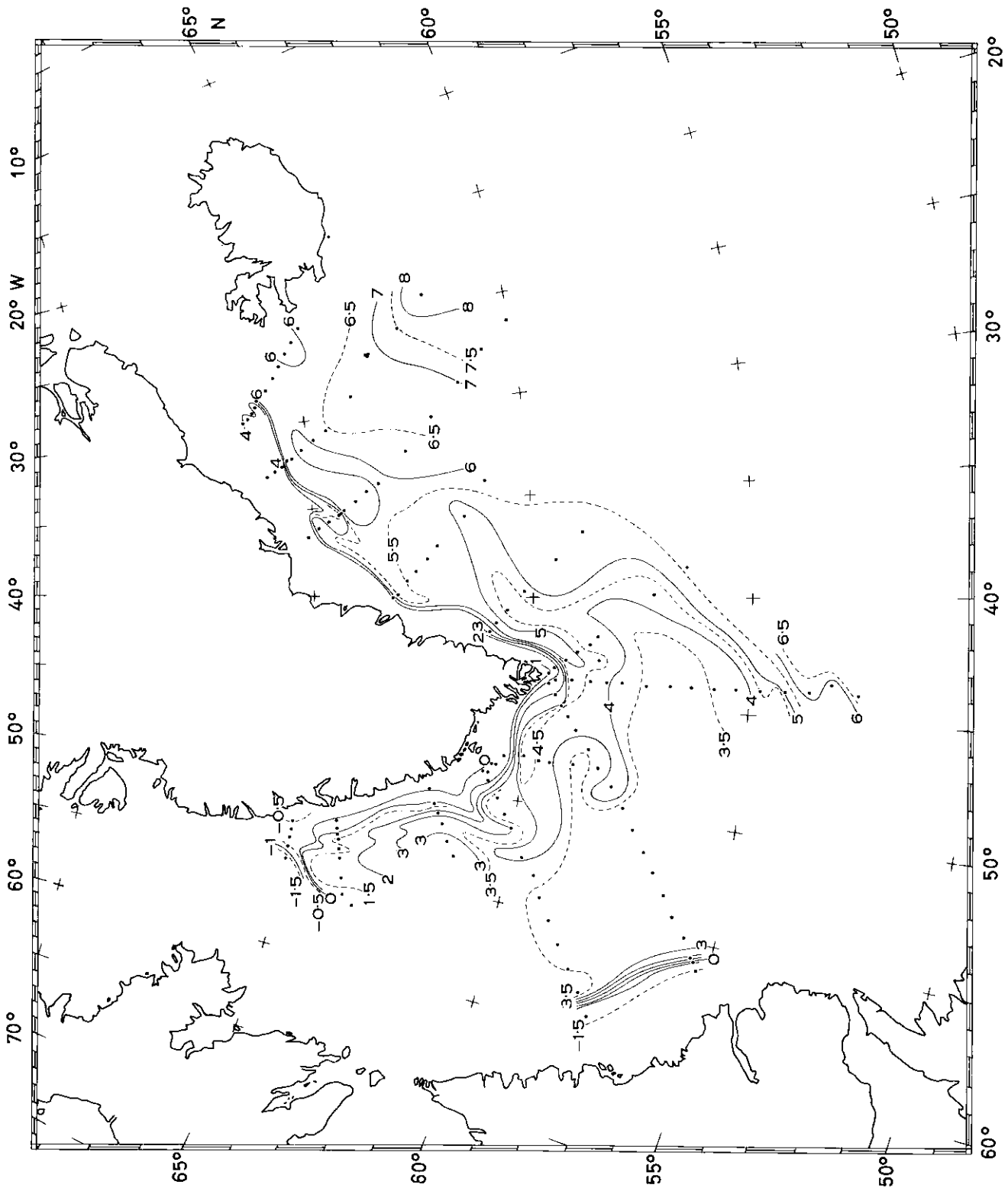


Chart 40. NORWESTLANT 1: 31 March-9 May: Temperature (°C) at 50 m.

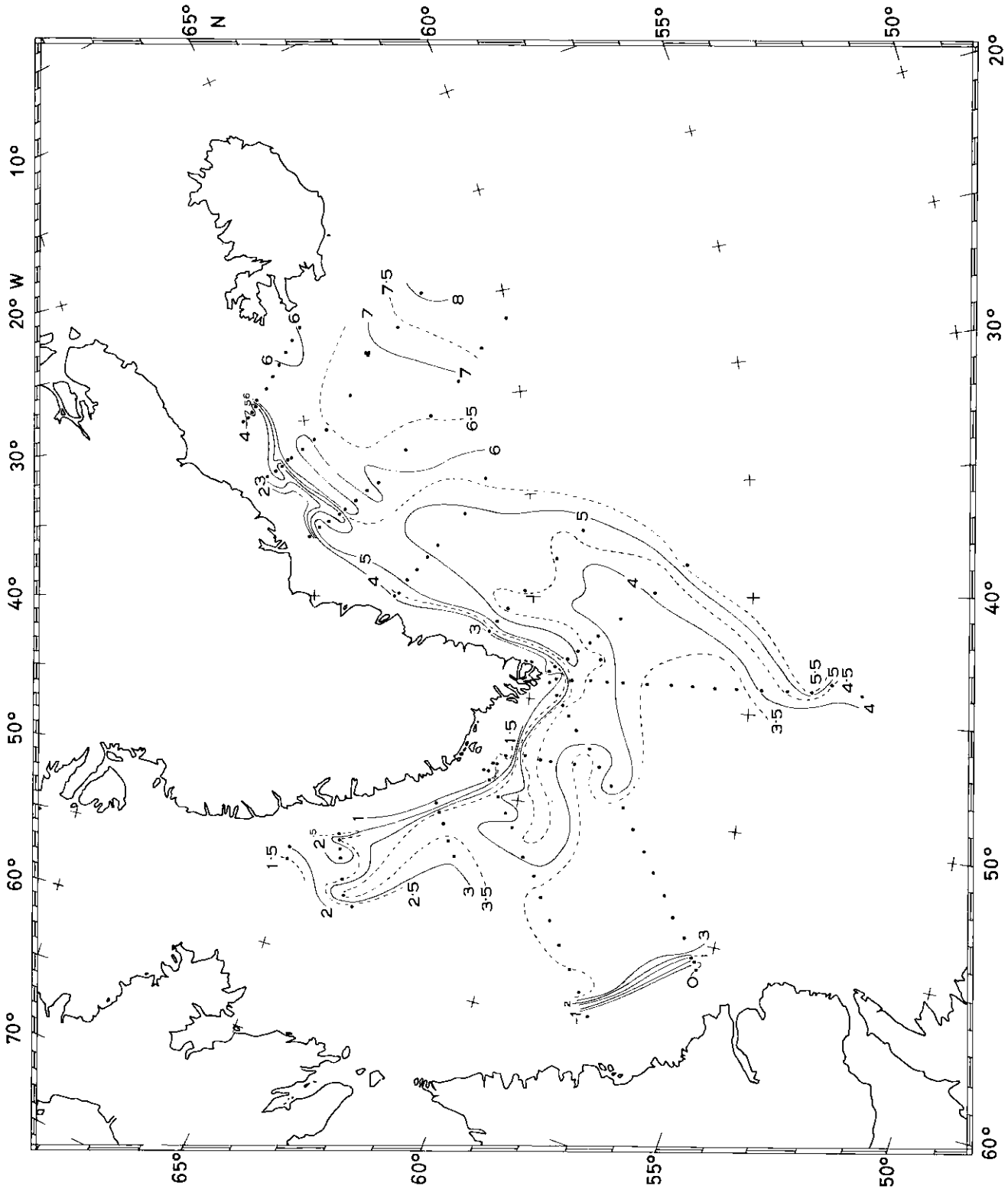


Chart 41. NORWESTLANT 1: 31 March-9 May: Temperature (°C) at 100 m.

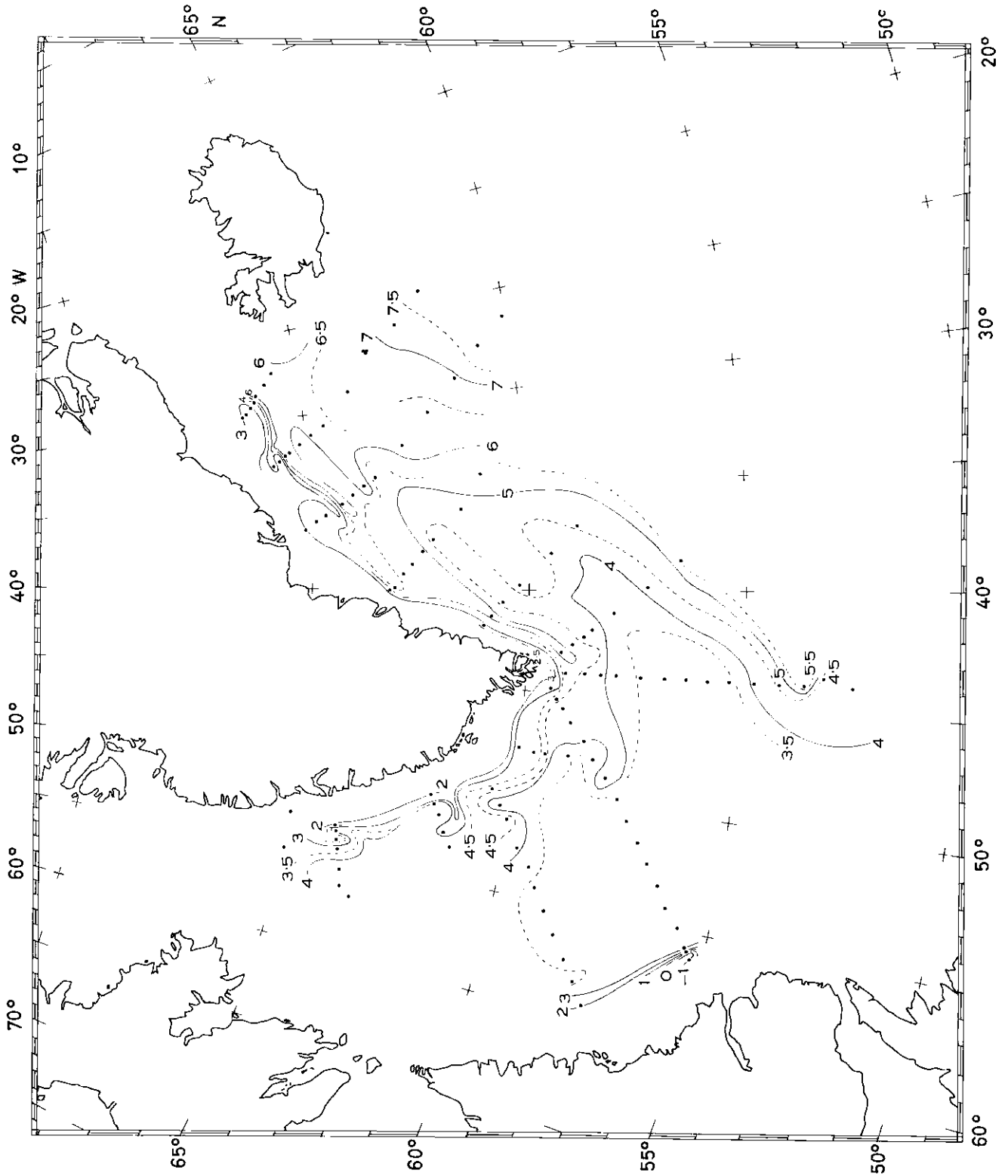


Chart 42. NORWESTLANT 1: 31 March-9 May: Temperature (°C) at 200 m.

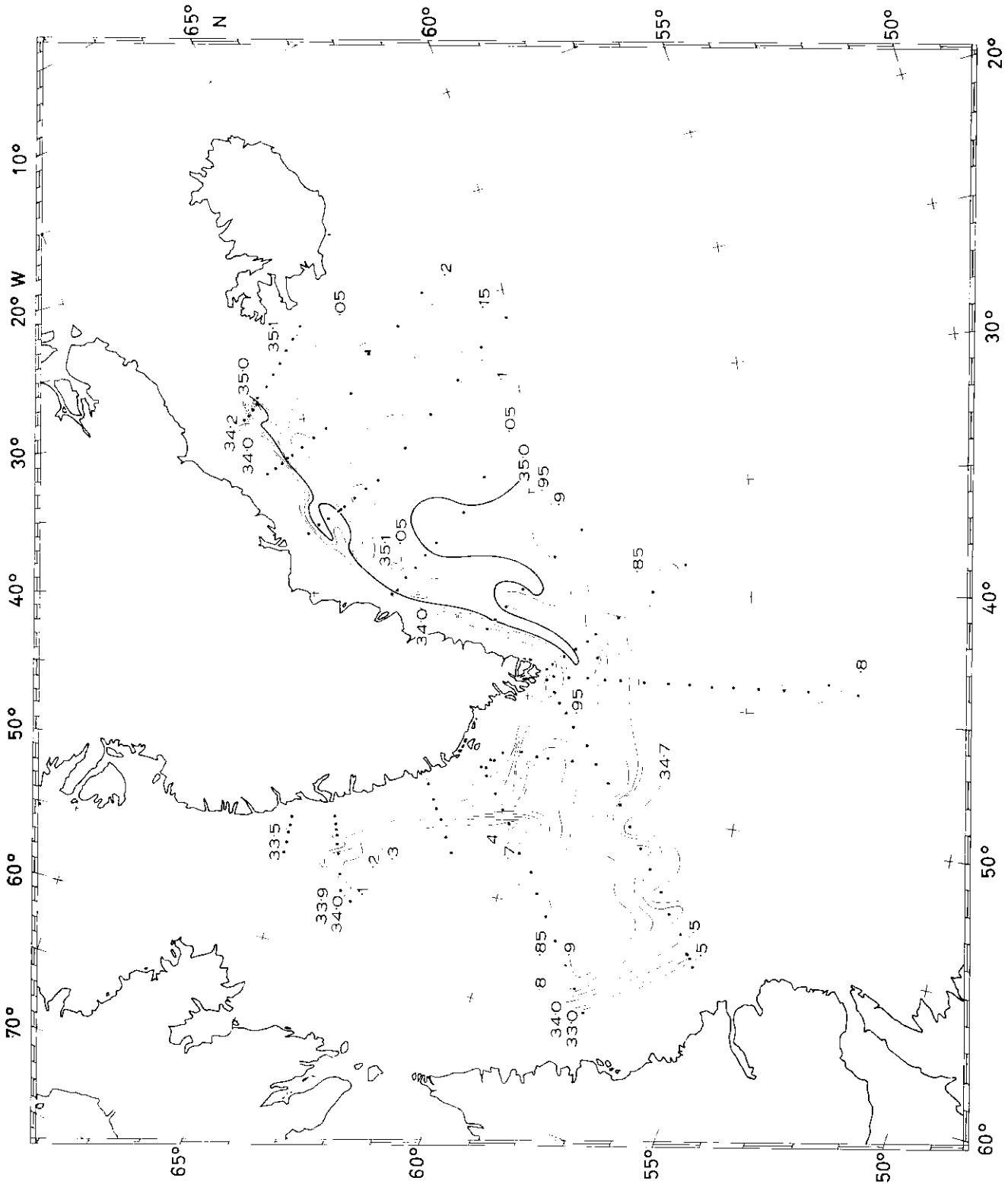


Chart 43. NORWESTLANT 1: 31 March-9 May: Salinity (‰) at 0 m.

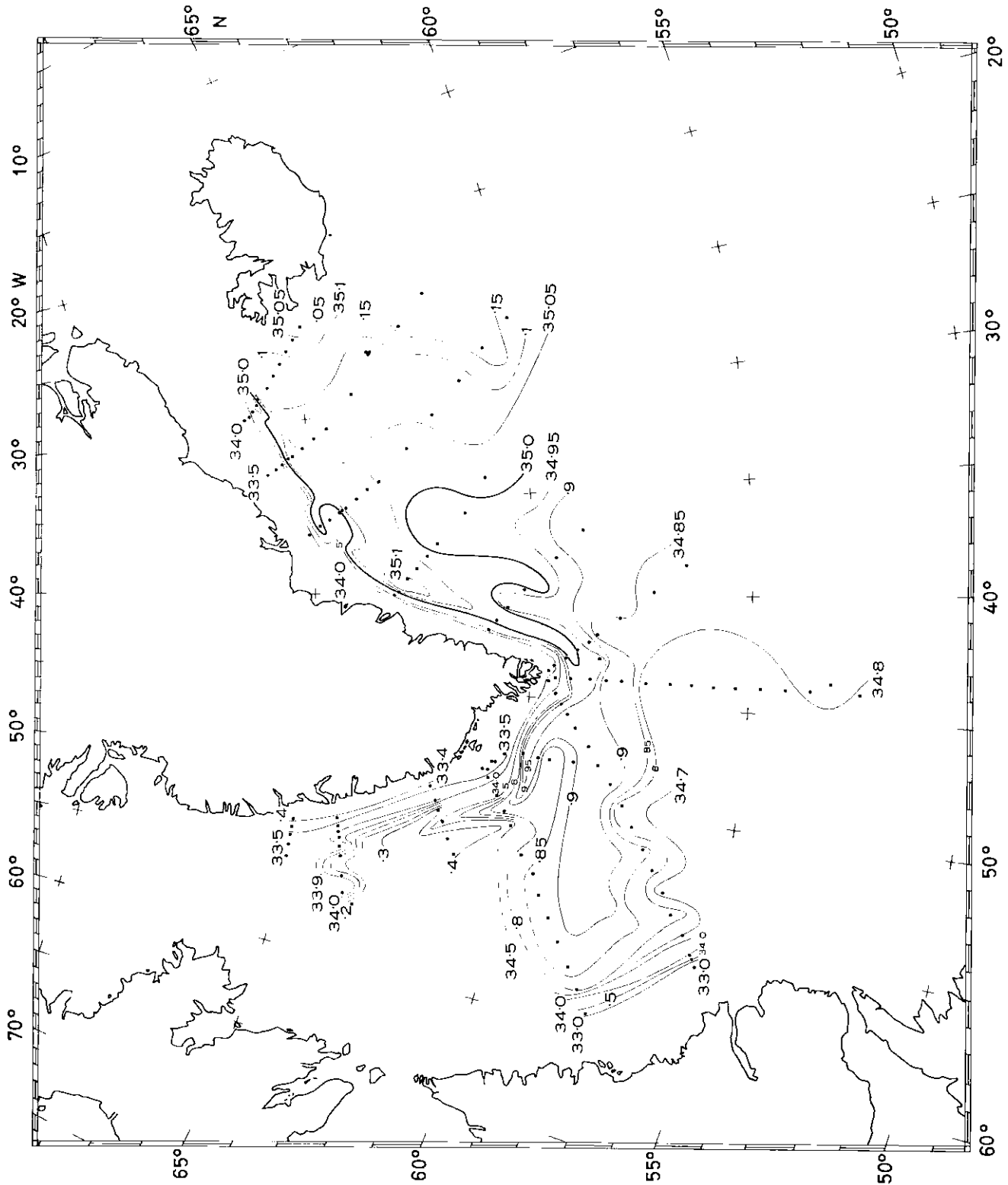


Chart 44, NORWESTLANT 1: 31 March-9 May: Salinity (‰) at 20 m.

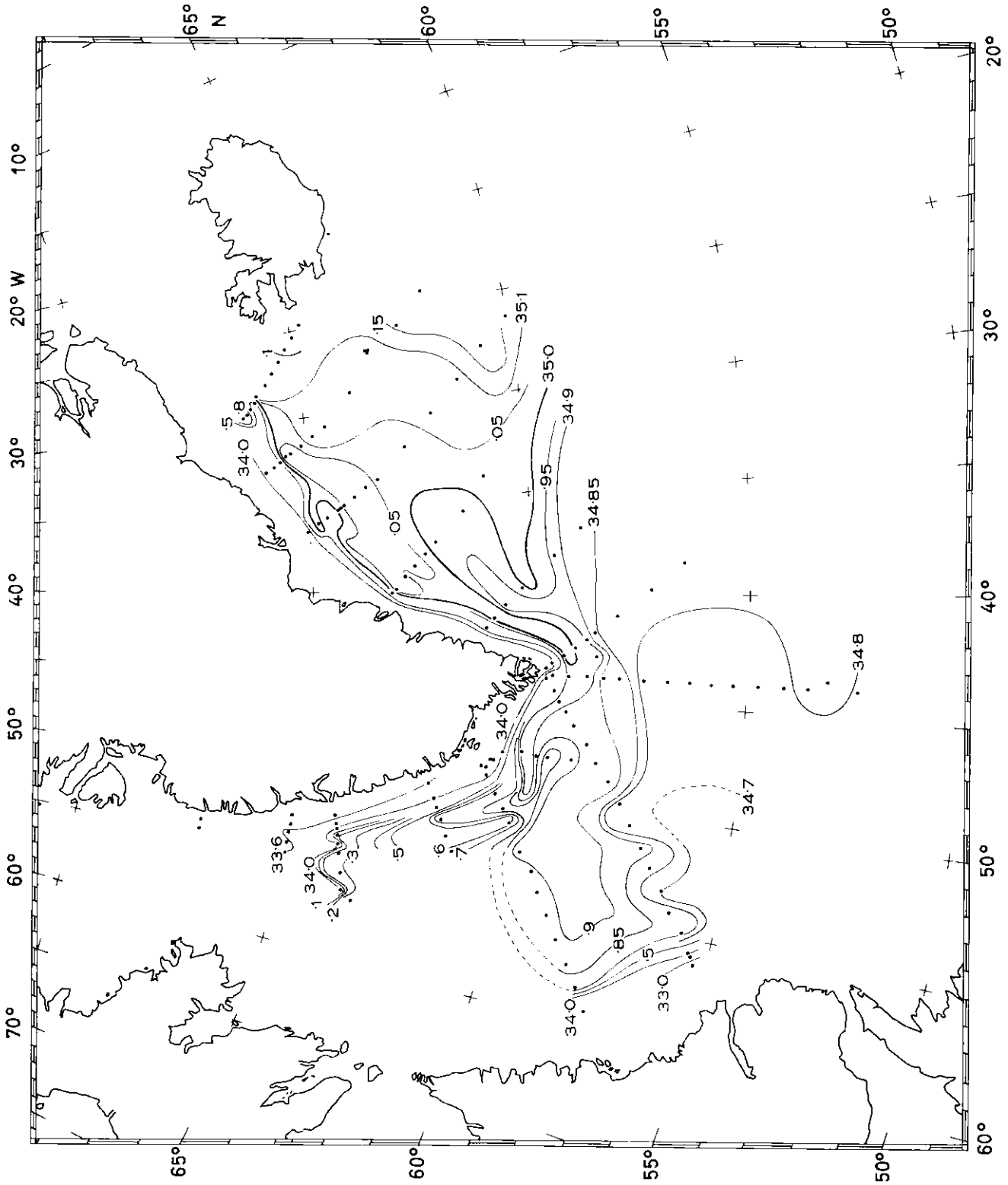


Chart 45. NORWESTLANT 1: 31 March-9 May: Salinity (‰) at 50 m.

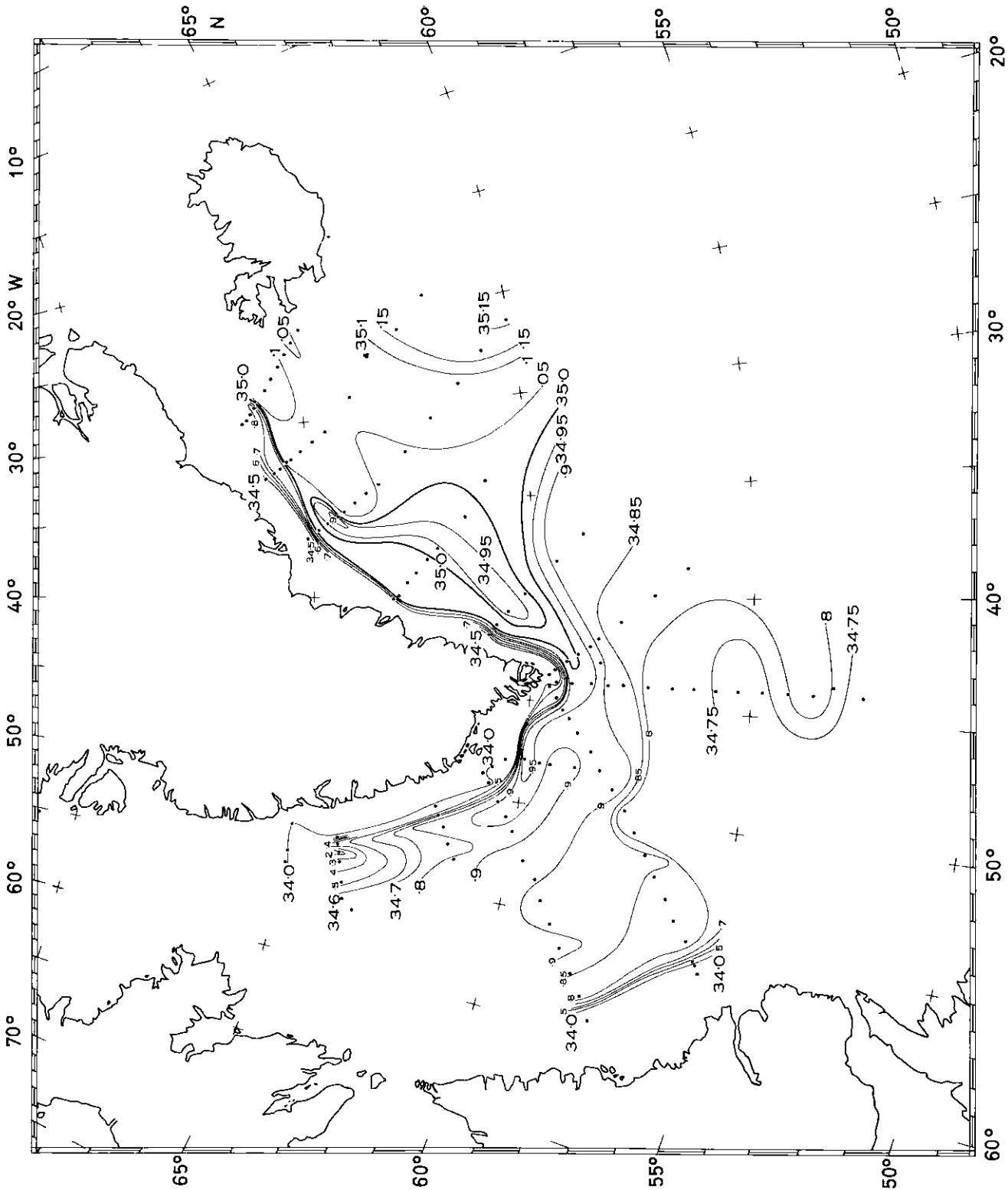


Chart 46. NORWESTLANT 1: 31 March-9 May: Salinity (‰) at 100 m.



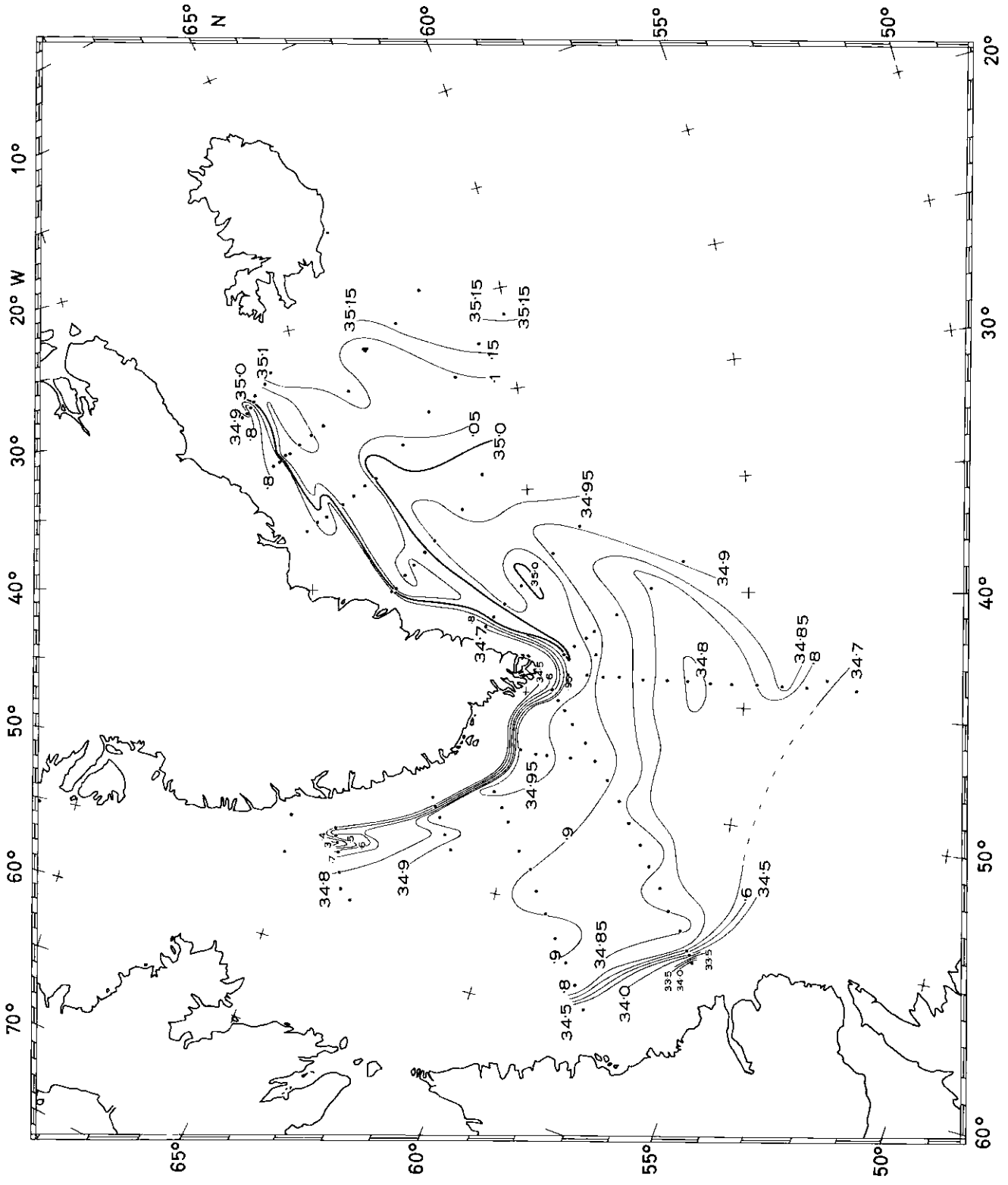


Chart 47. NORWESTLANT 1: 31 March-9 May: Salinity (‰) at 200 m.

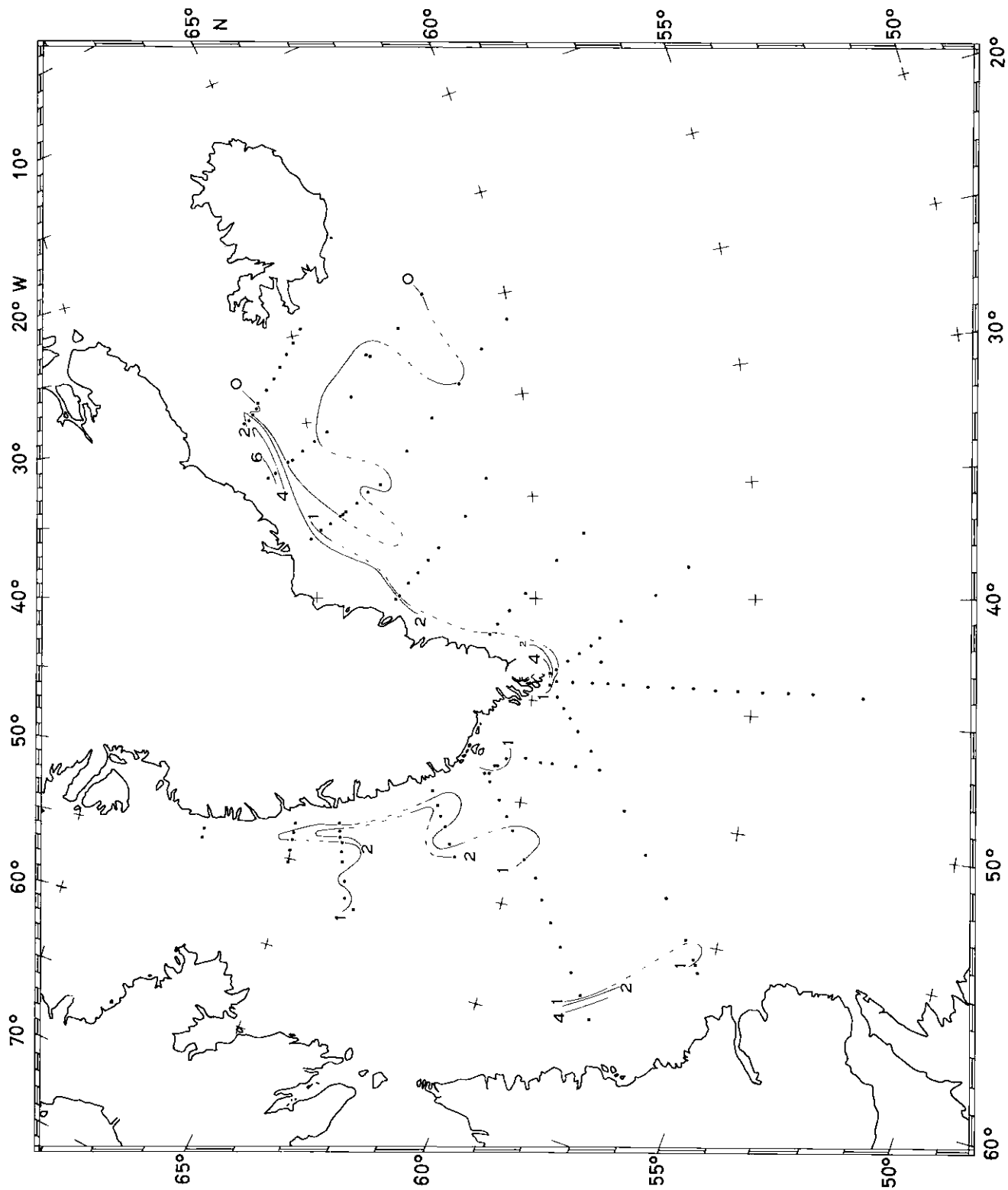


Chart 48. NORWESTLANT 1: 31 March-9 May: Stability 10 x (50 m Sigma-t minus 0 m Sigma-t).

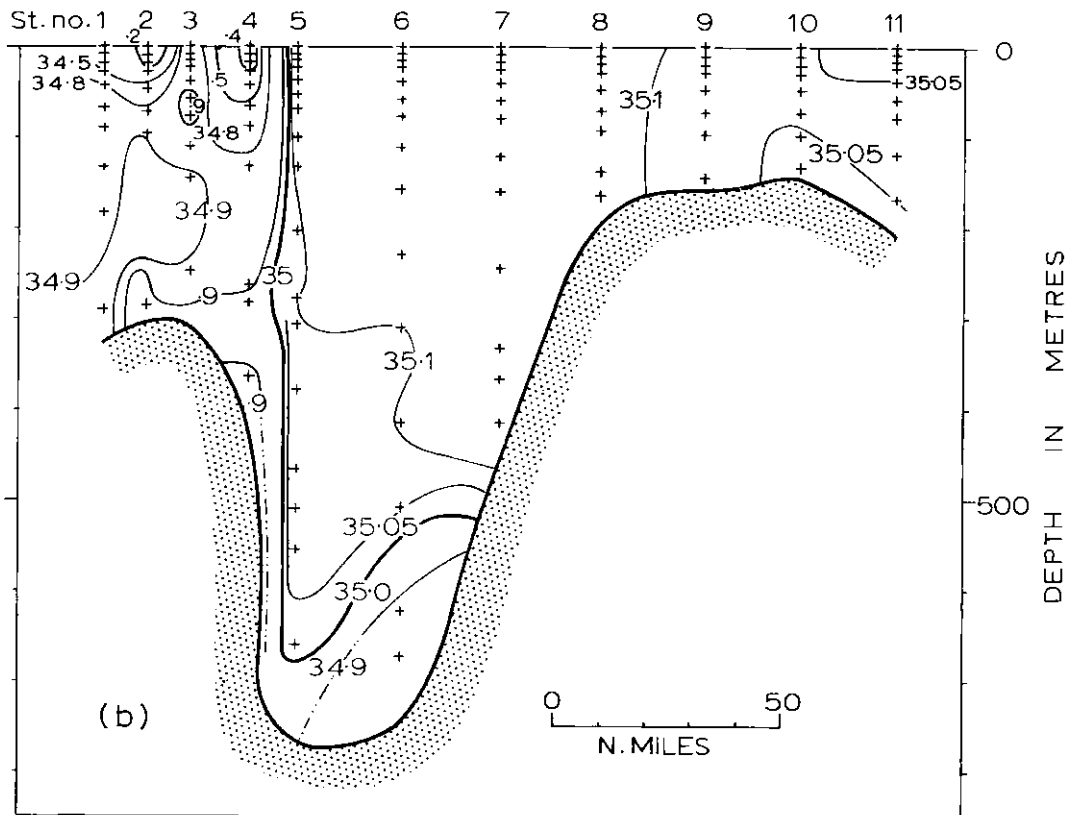
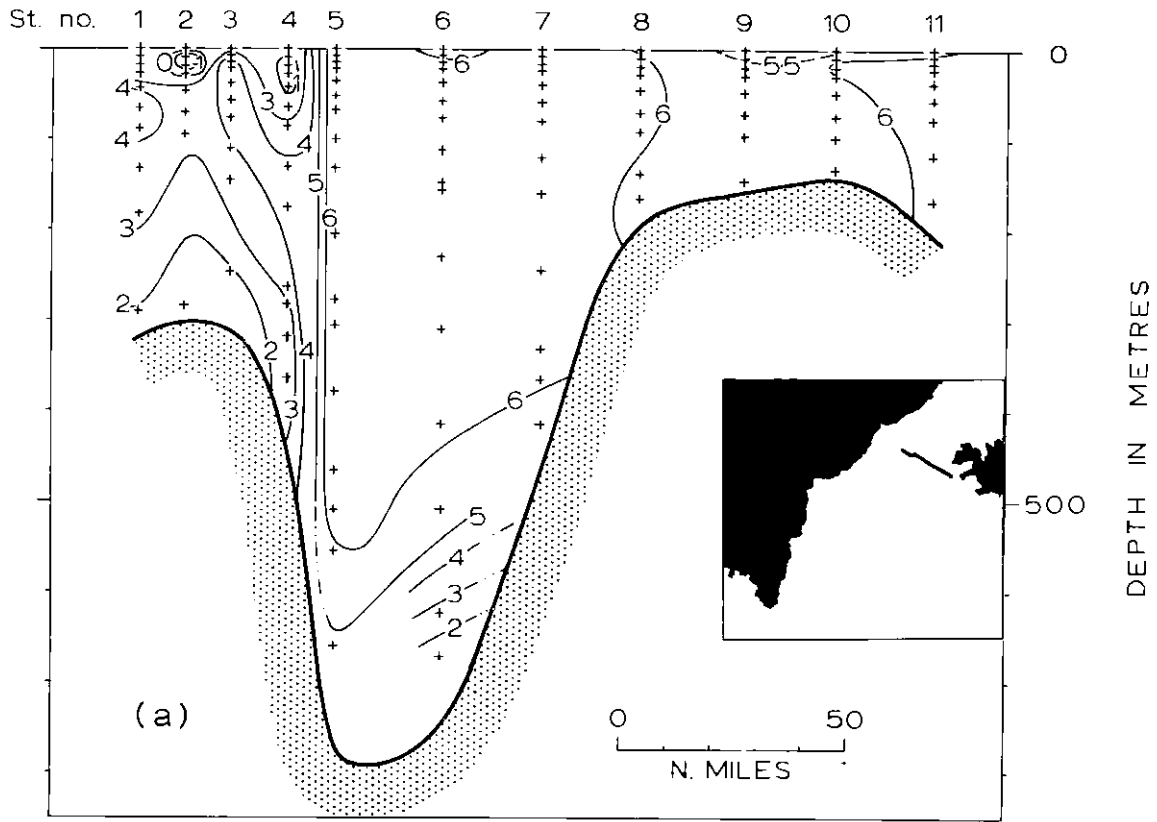


Chart 49. NWPWSTLAN'T 1: Section 1: 31 March-2 April: (a) Temperature (°C); (b) Salinity (‰).

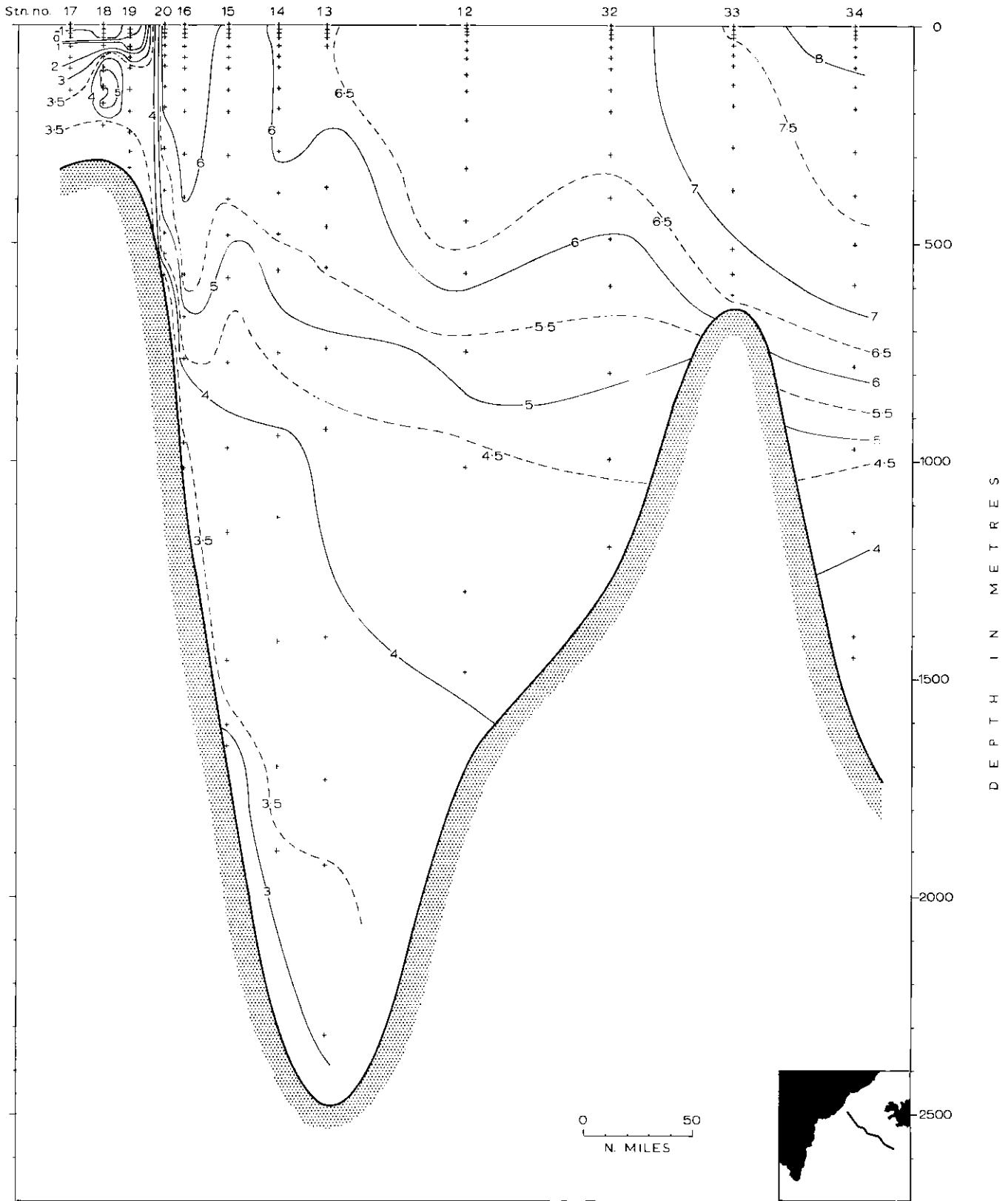


Chart 50. NORWESTLANT 1: Section 2: 3-25 April: Temperature (°C).

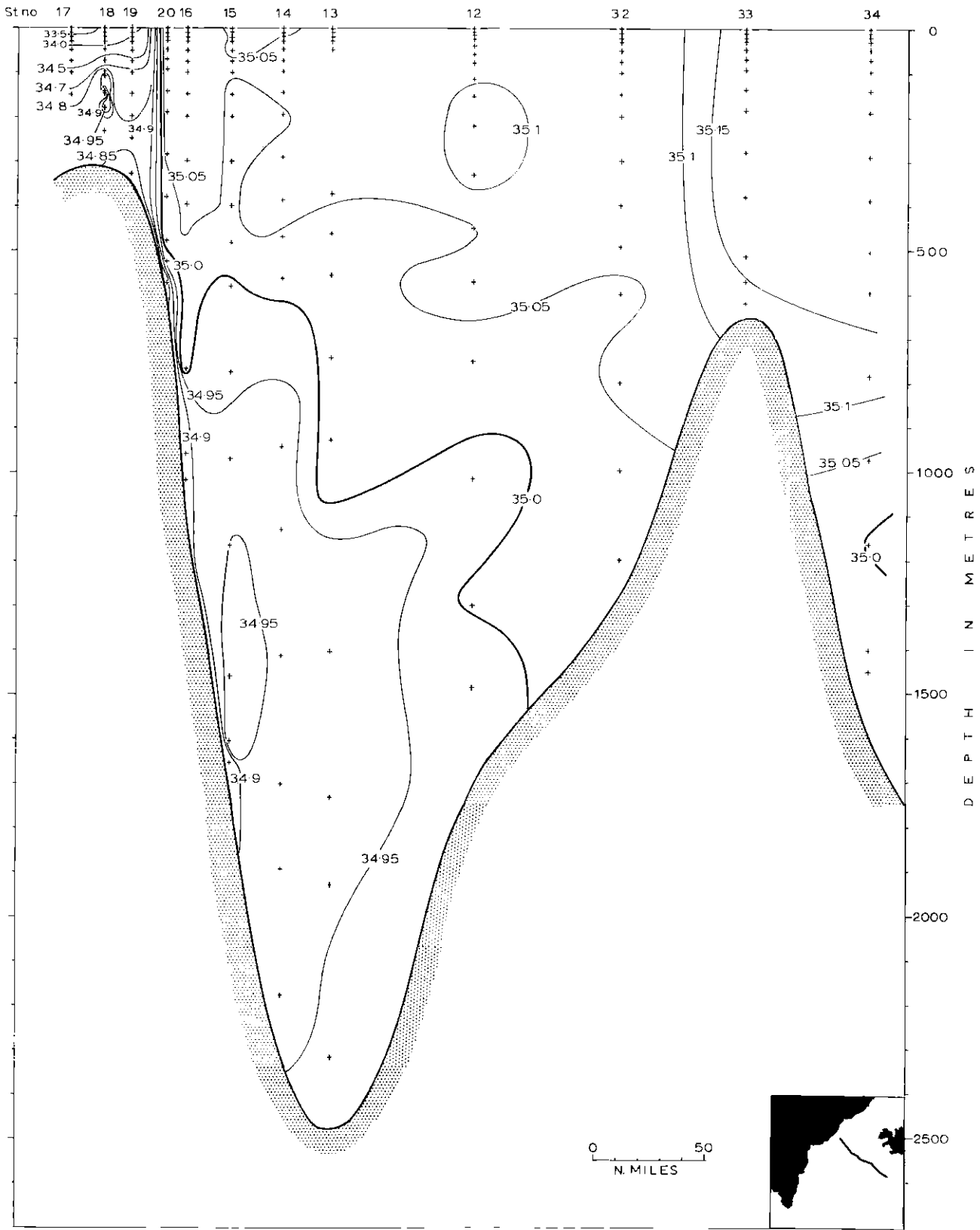


Chart 51. NORWESTLANT 1: Section 2: 3-25 April: Salinity (‰).

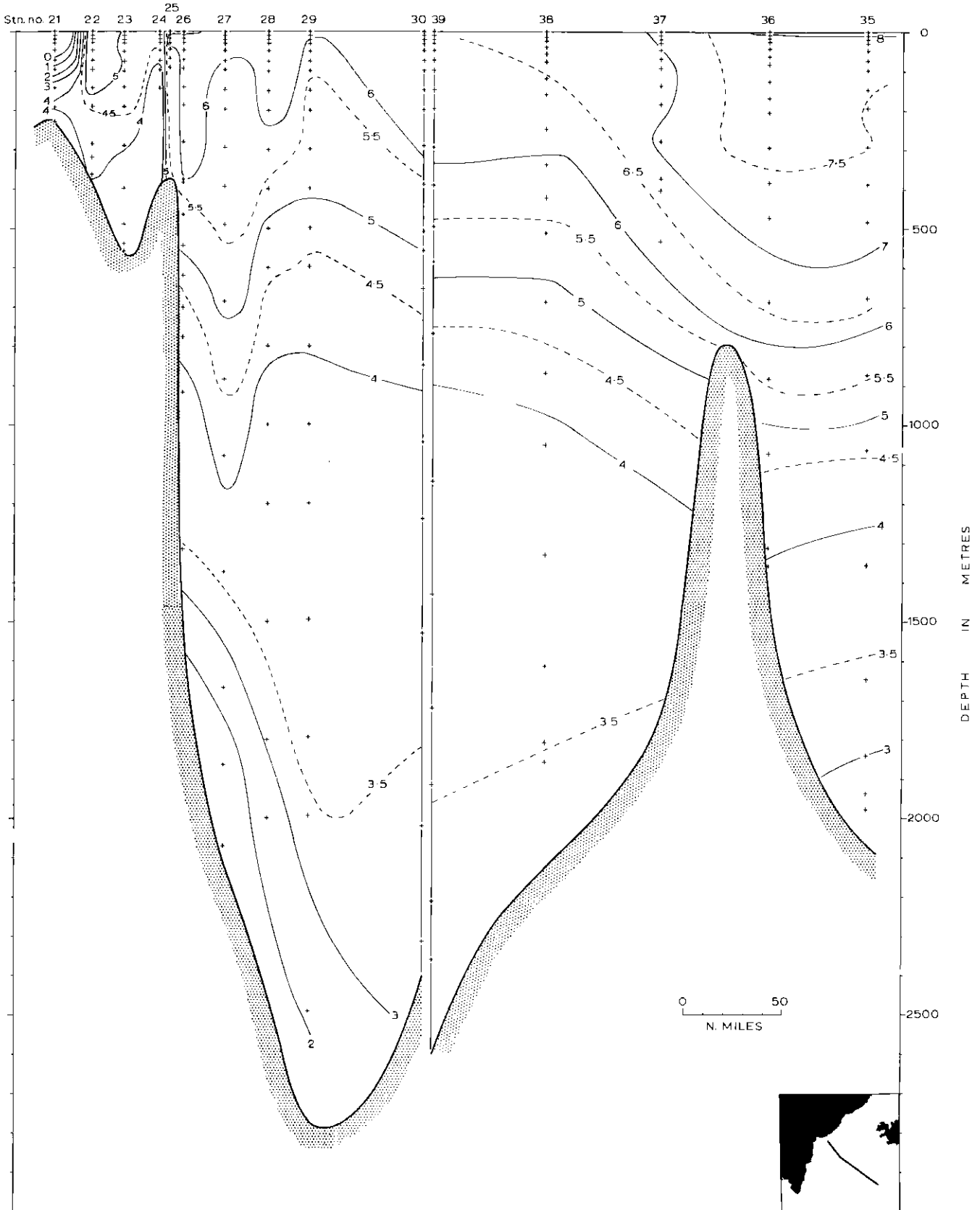


Chart 52. NORWESTLANT 1: Section 3: 5-27 April: Temperature (°C).

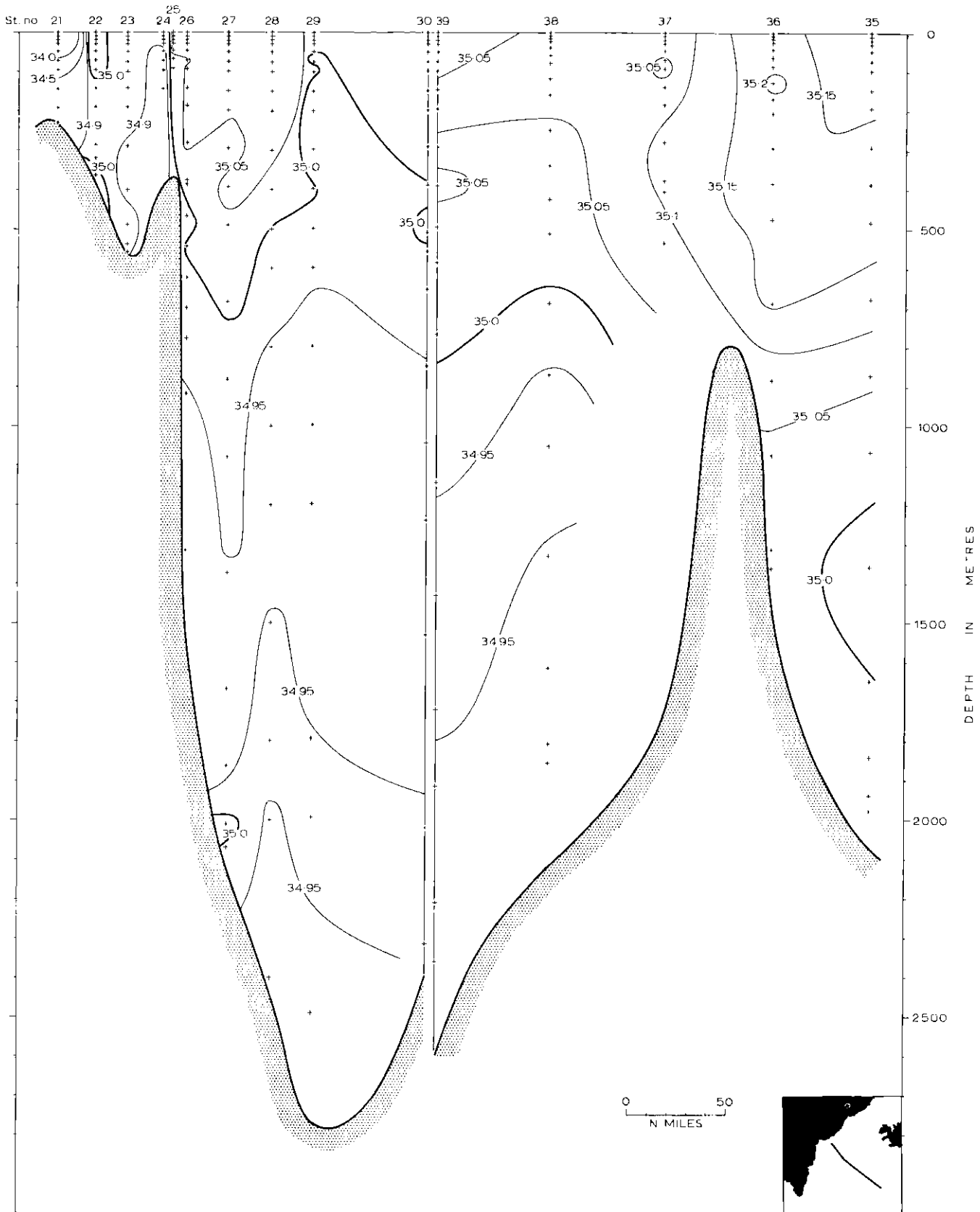


Chart 53. NORWESTLANT 1: Section 3: 5-27 April: Salinity (‰).

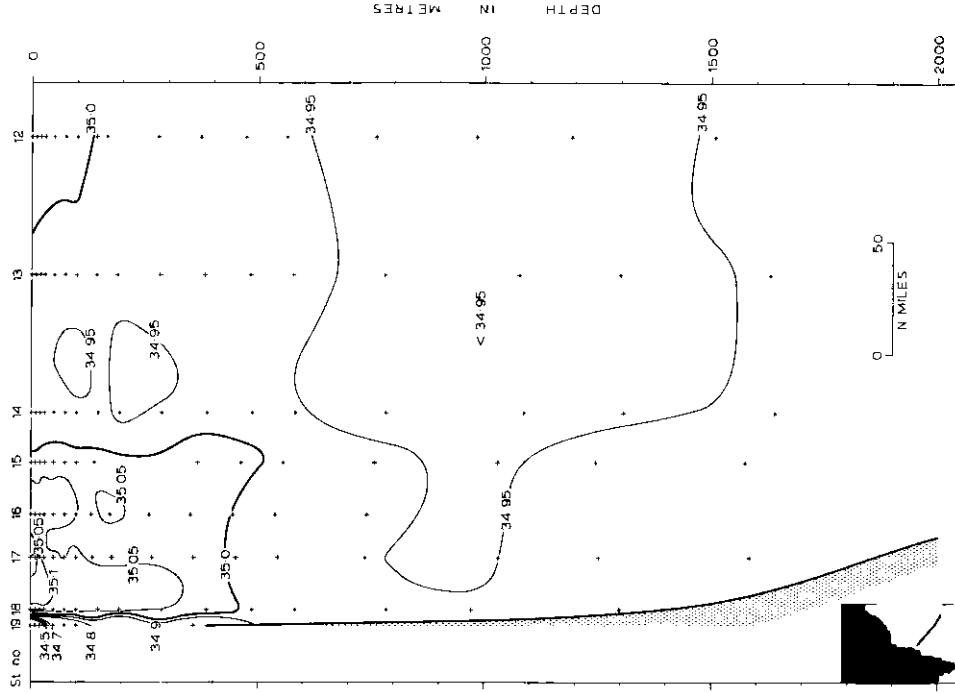


Chart 55. NORWESTLANT 1: Section 4: 25-28 April: Salinity (‰).

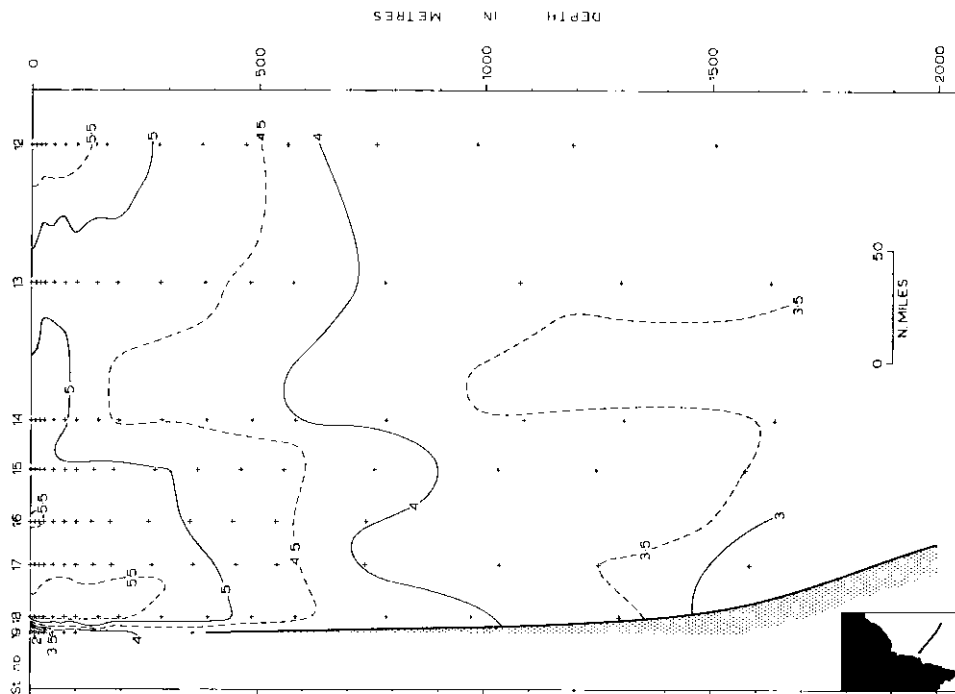


Chart 54. NORWESTLANT 1: Section 4: 25-28 April: Temperature (°C).



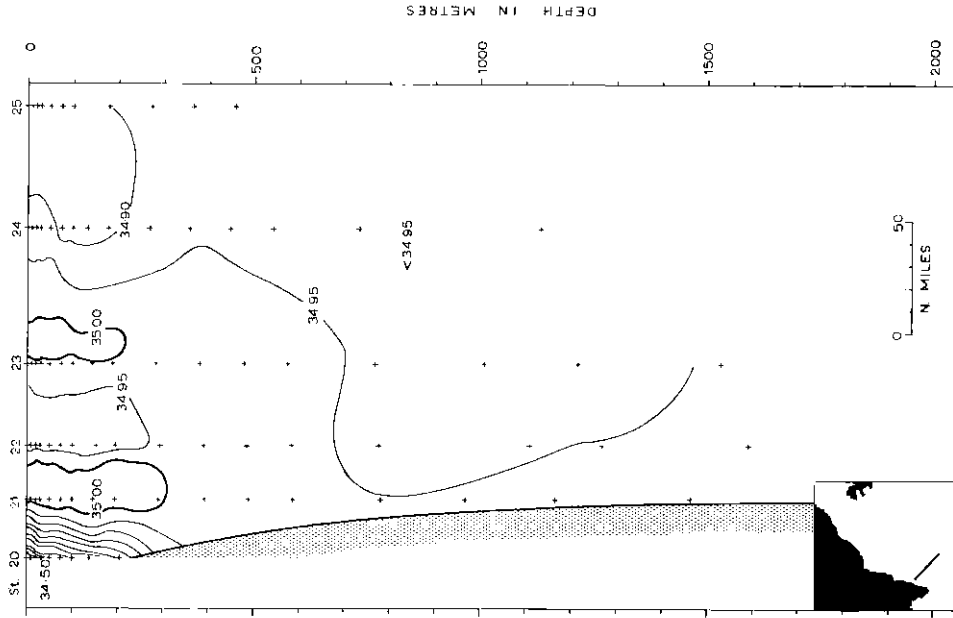


Chart 57. NORWESTLANT 1: Section 5: 30 April-1 May: Salinity (‰).

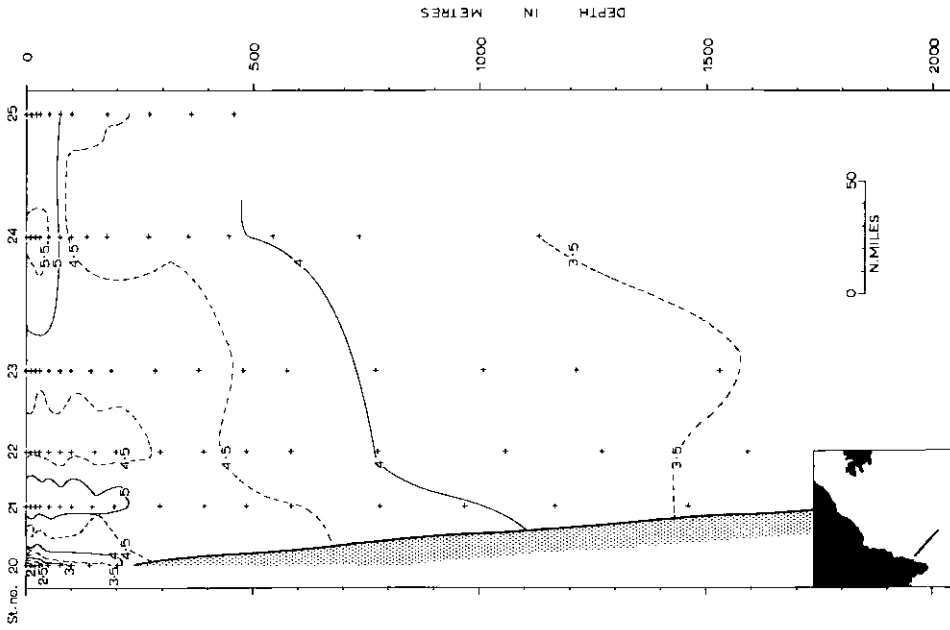


Chart 56. NORWESTLANT 1: Section 5: 30 April-1 May: Temperature (°C).

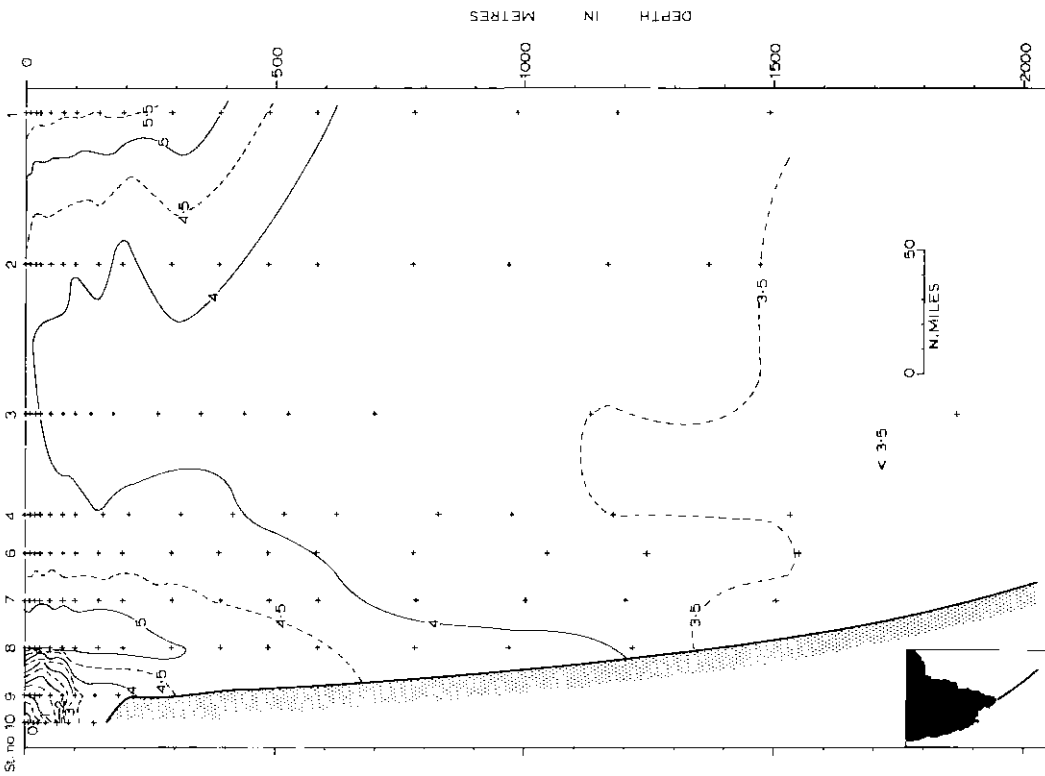


Chart 58. NORWESTLANT 1; Section 6: 9-11 April: Temperature (°C).

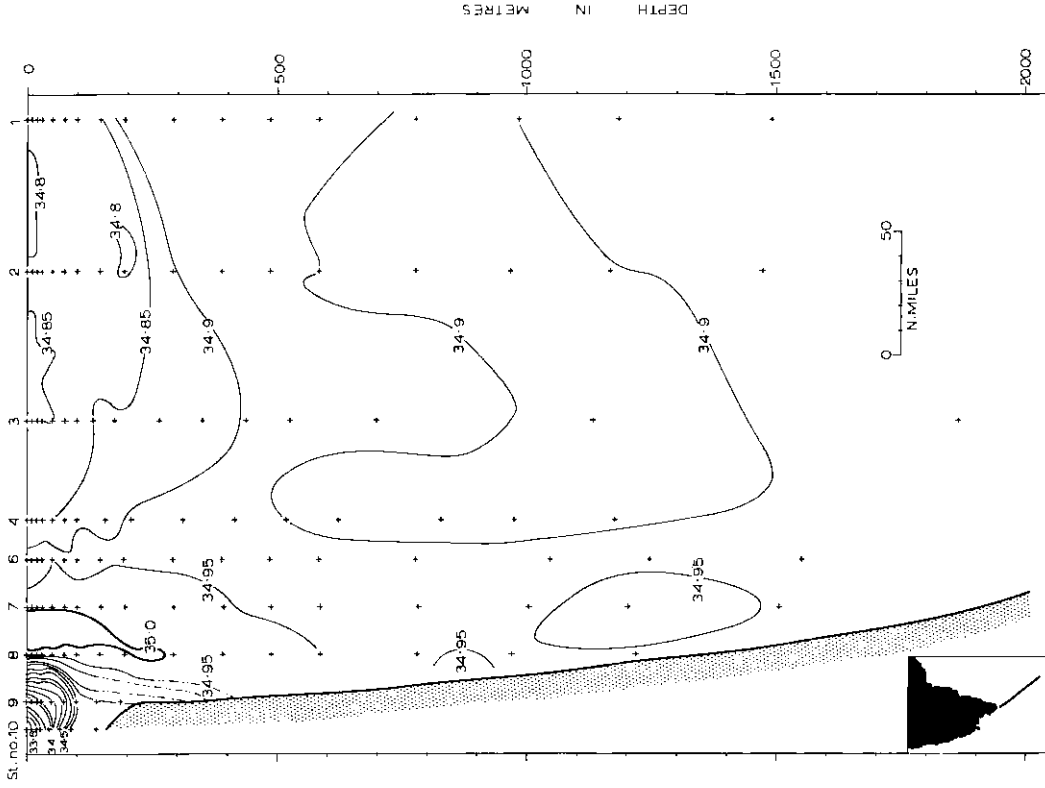


Chart 59. NORWESTLANT 1; Section 6: 9-11 April: Salinity (‰).

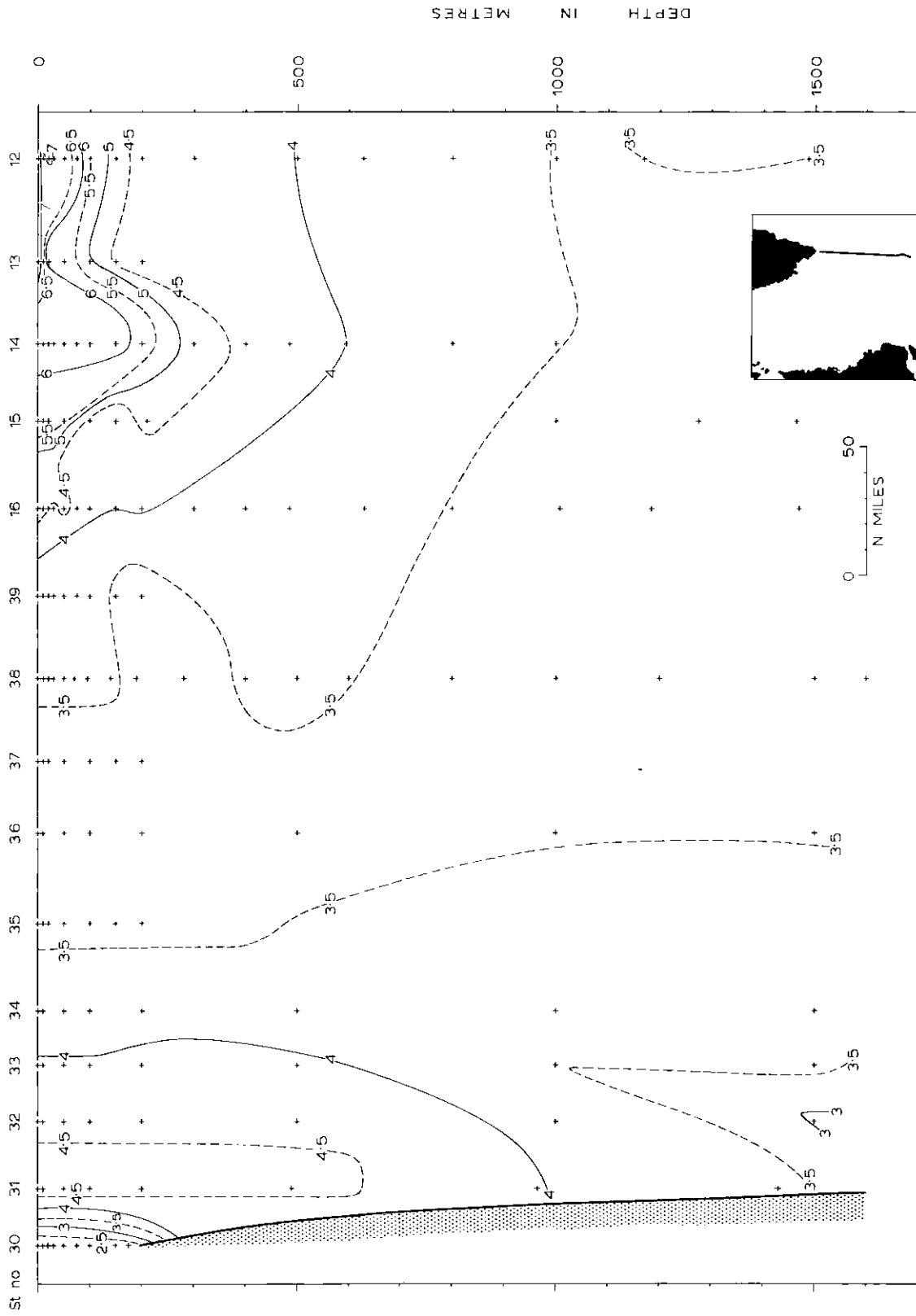
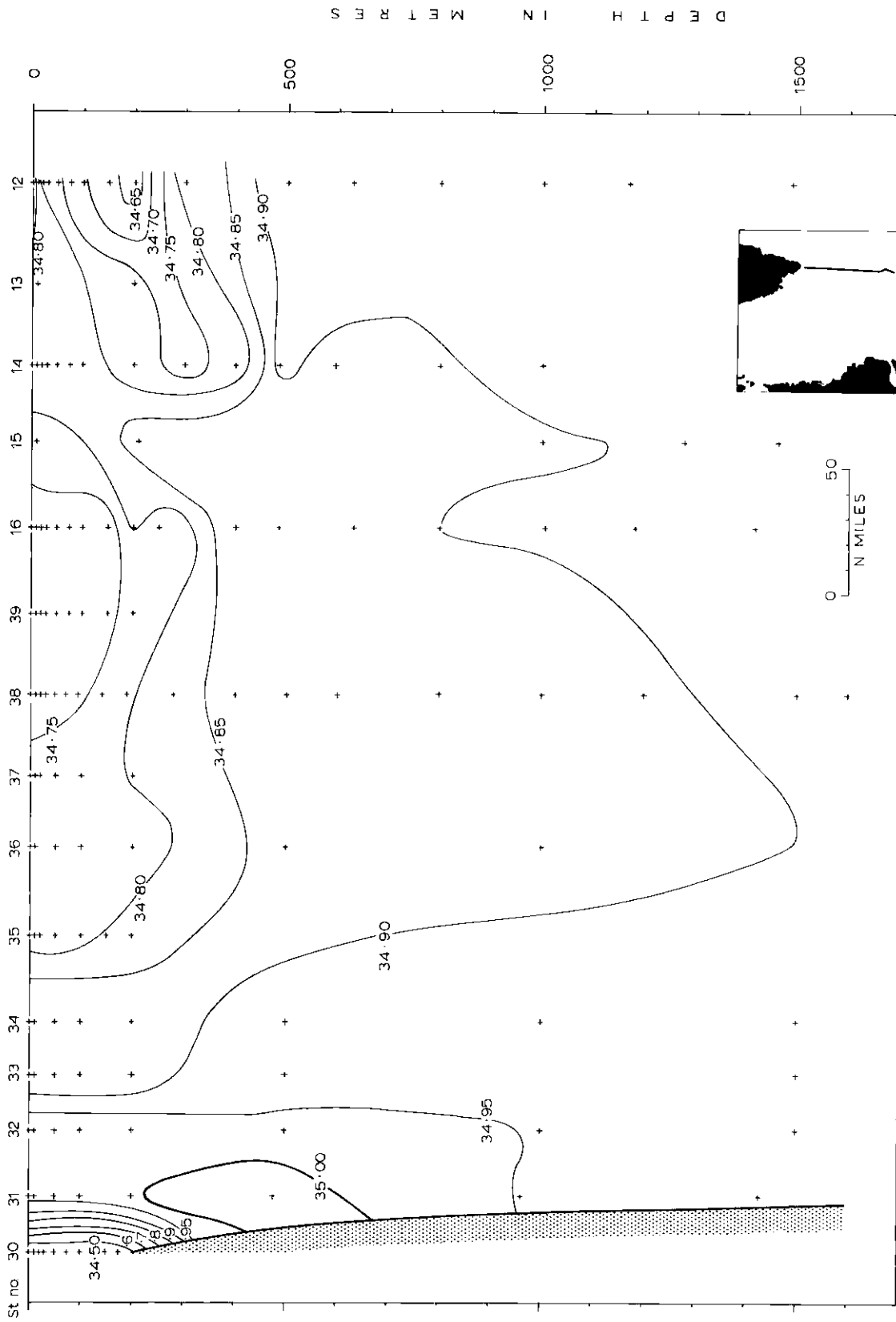


Chart 60. NORWESTLANT 1: Section 7: 19-21 April: Temperature (°C).



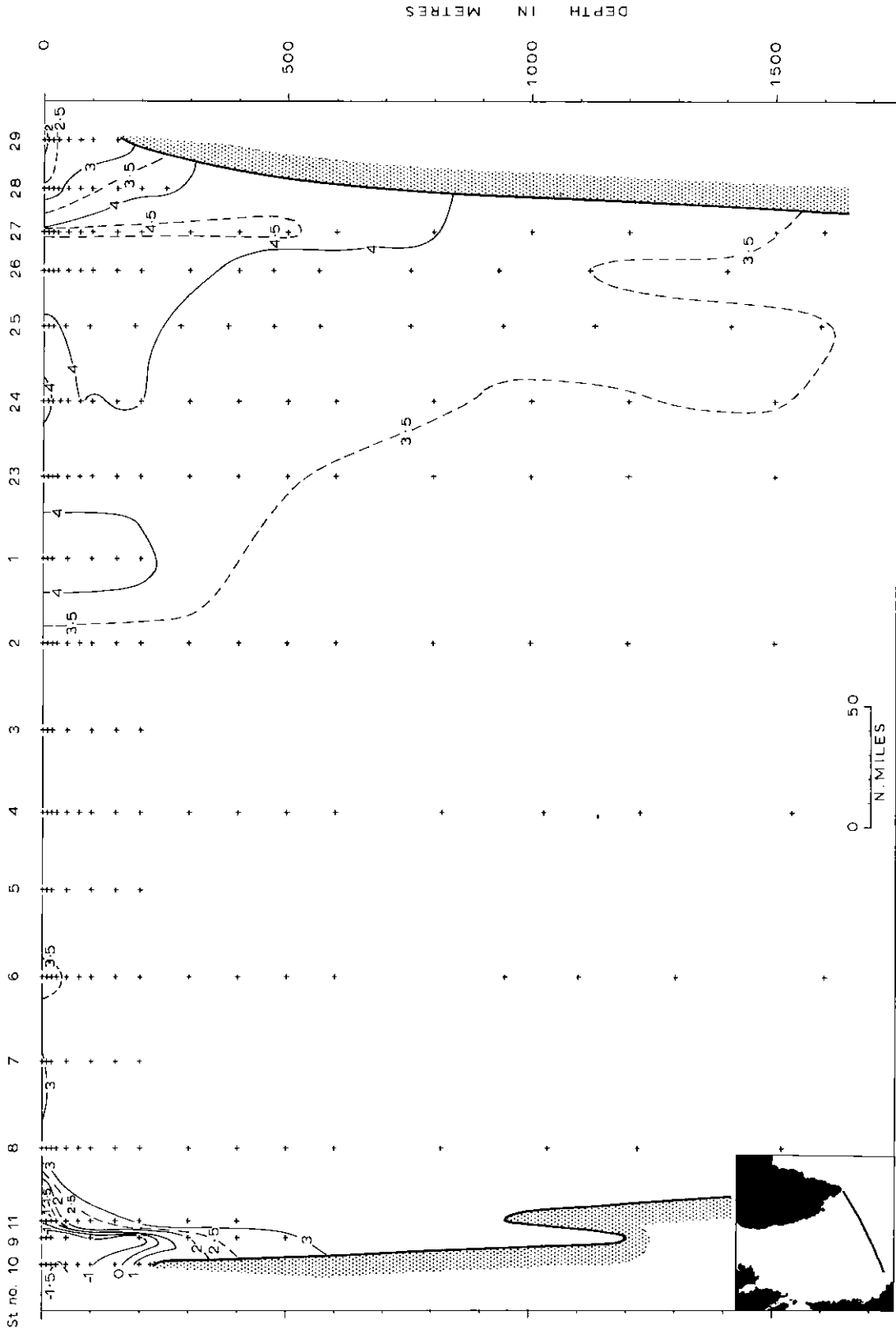


Chart 62. NORWESTLANT 1: Section 8: 15-18 April: Temperature (°C).

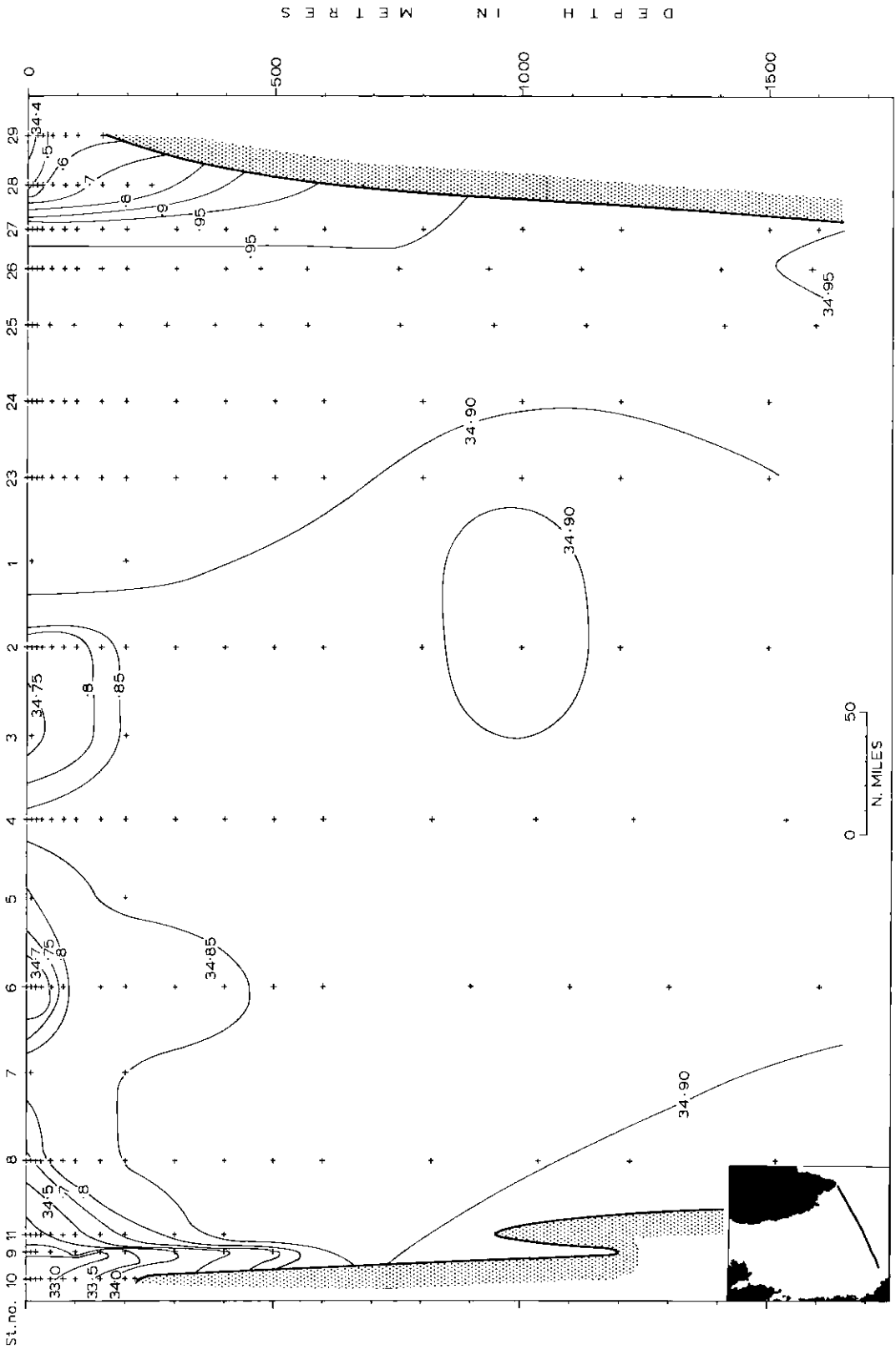


Chart 63. NORWESTLANT 1: Section 8: 15-18 April: Salinity (‰).

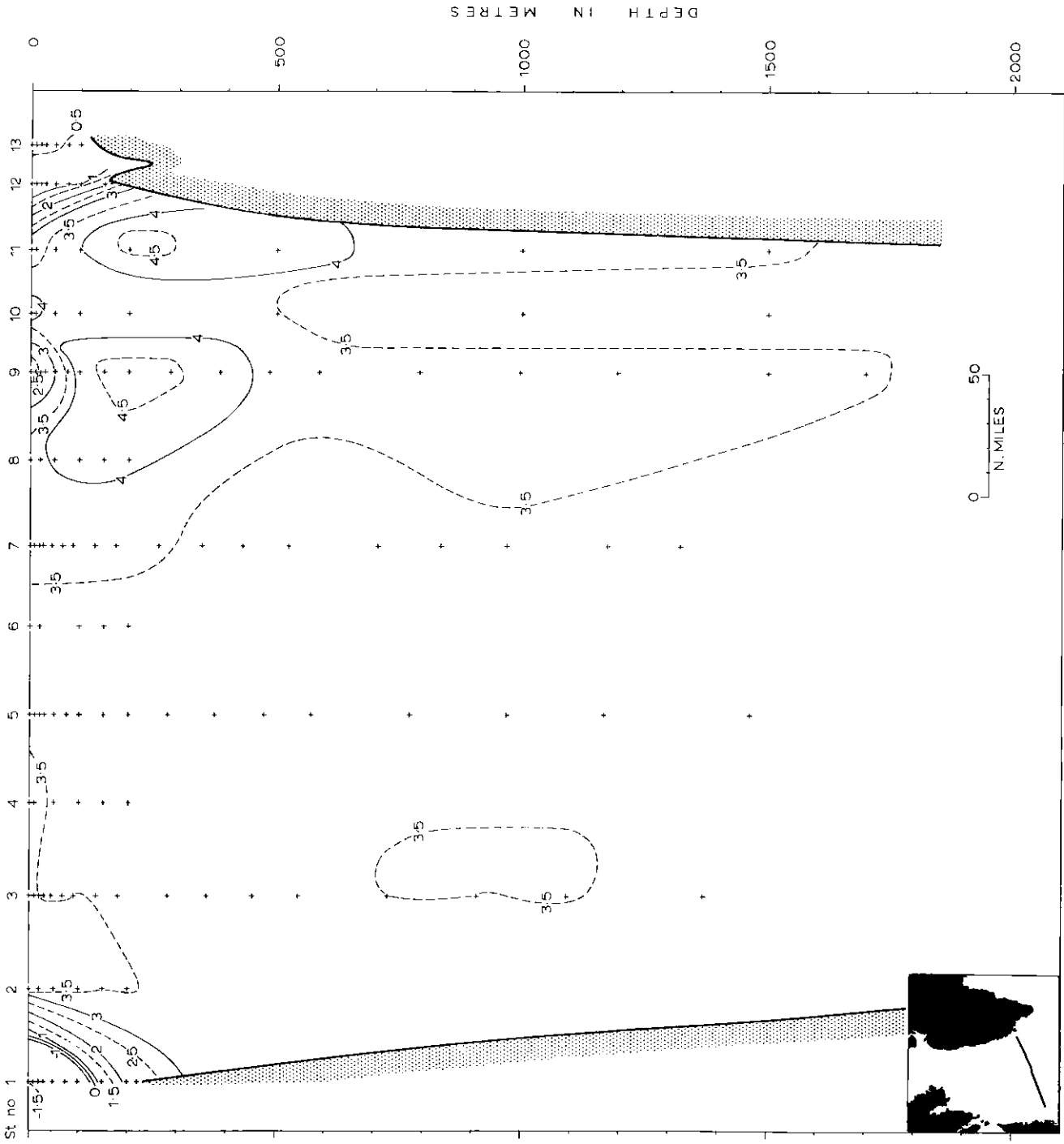


Chart 64. NORWESTLANT 1: Section 9: 10-13 April: Temperature (°C).

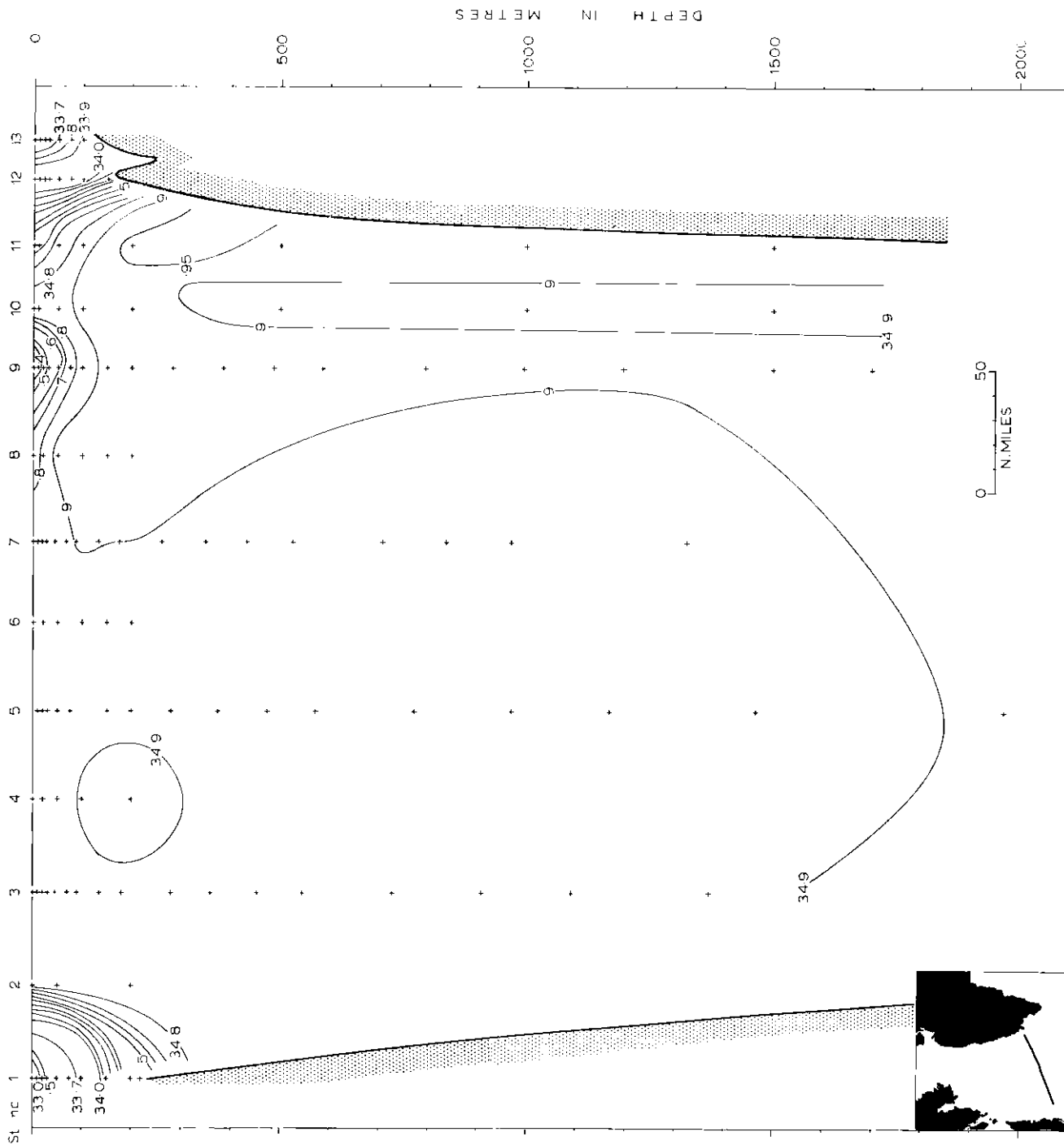


Chart 65. NORWESTLANT 1: Section 9: 10-13 April: Salinity (‰).



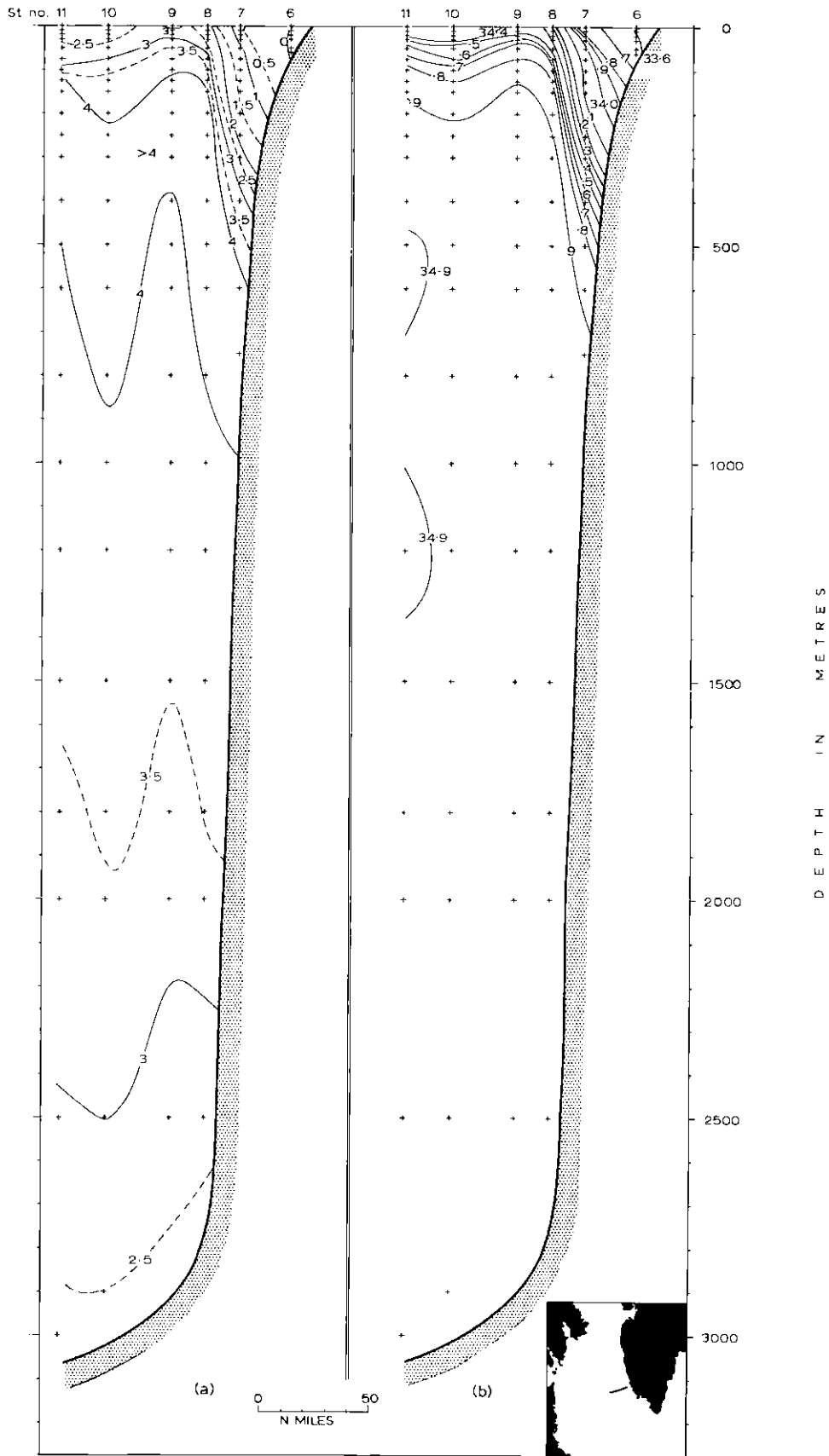


Chart 66. NORWESTLANT 1: Section 10: 11-12 April: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

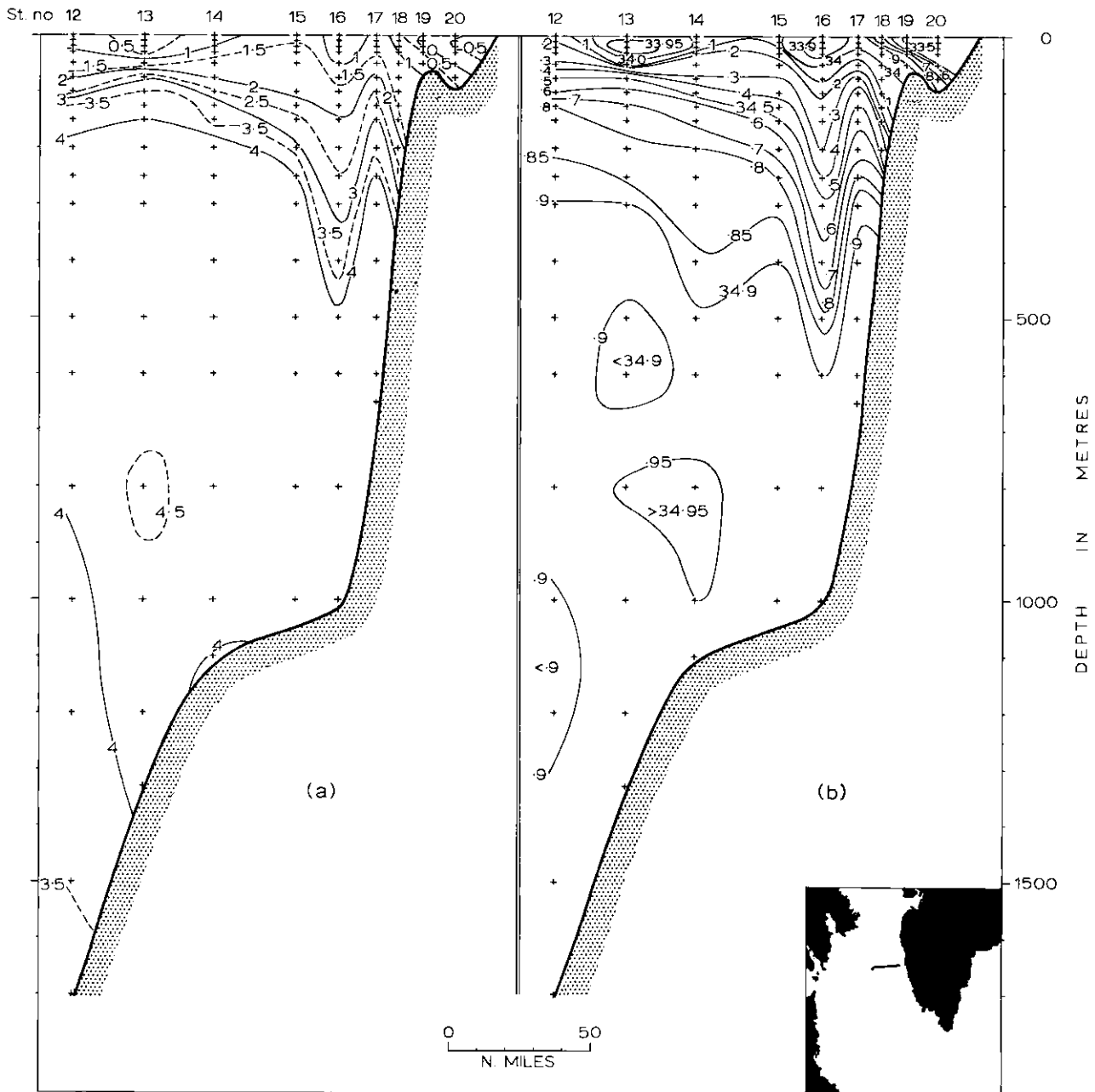


Chart 67A. NORWESTLANT 1: Section 11: 17-18 April: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

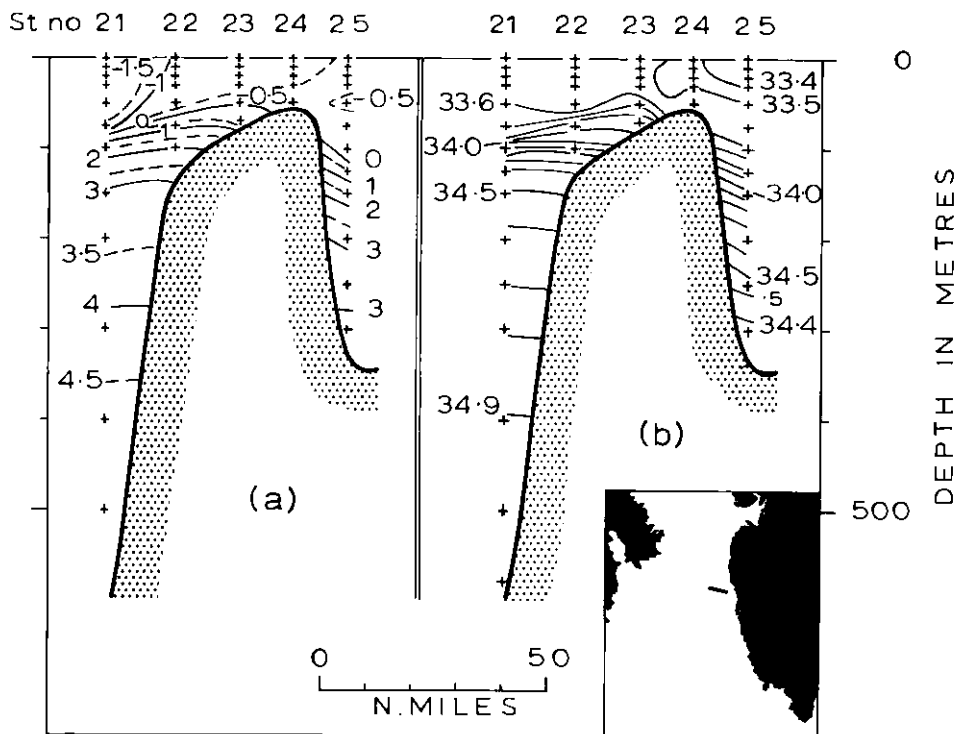


Chart 67B, NORWESTLANT 1: Section 12: 20-21 April: (a) Temperature ( $^{\circ}\text{C}$ );  
 (b) Salinity ( $^{\circ}/_{\infty}$ ).

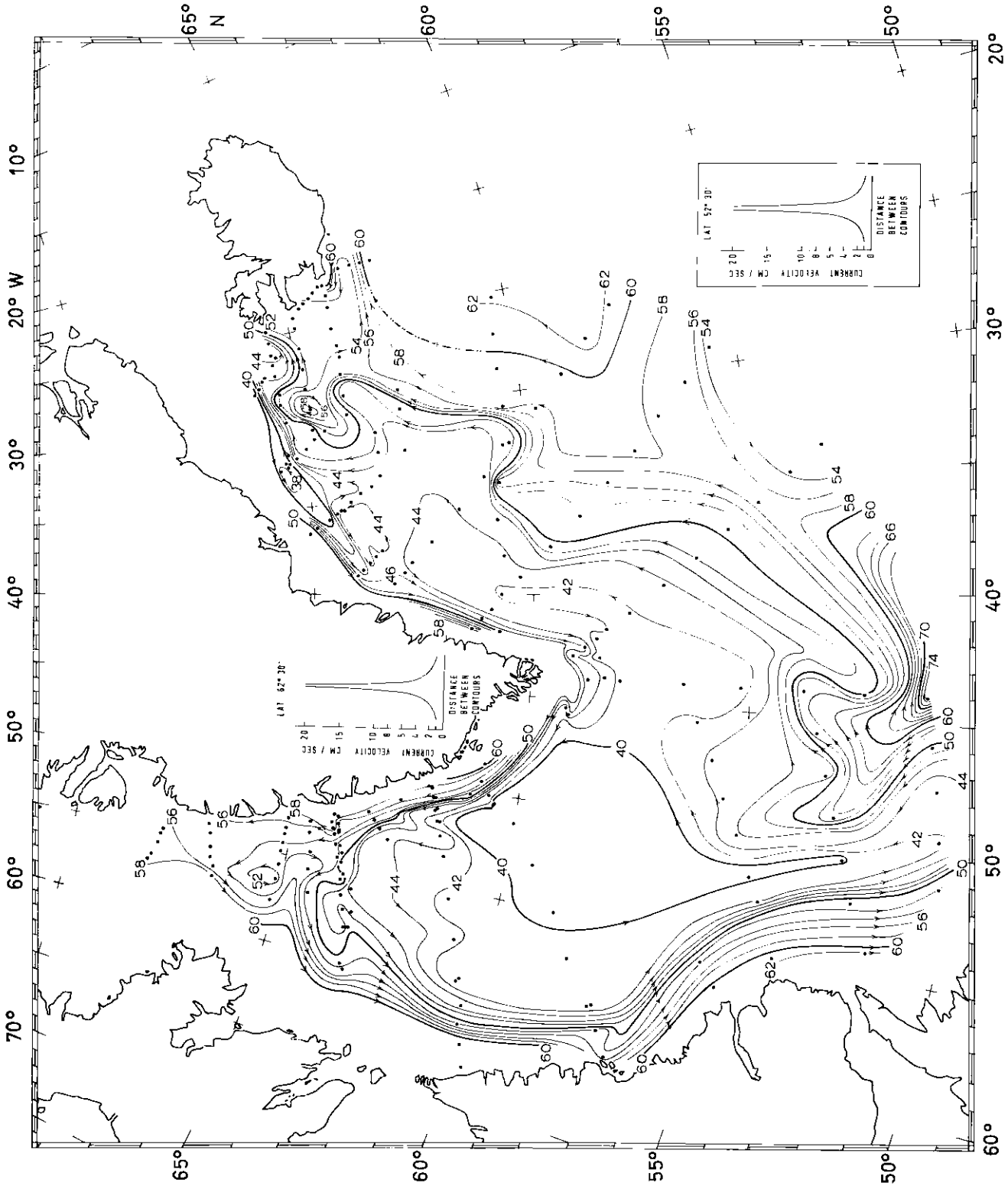


Chart 68. NORWESTLANT 2: 1 May-18 June: Dynamic topography of the sea surface relative to the pressure surface at 1,000 m. (Units: Dyn cms).

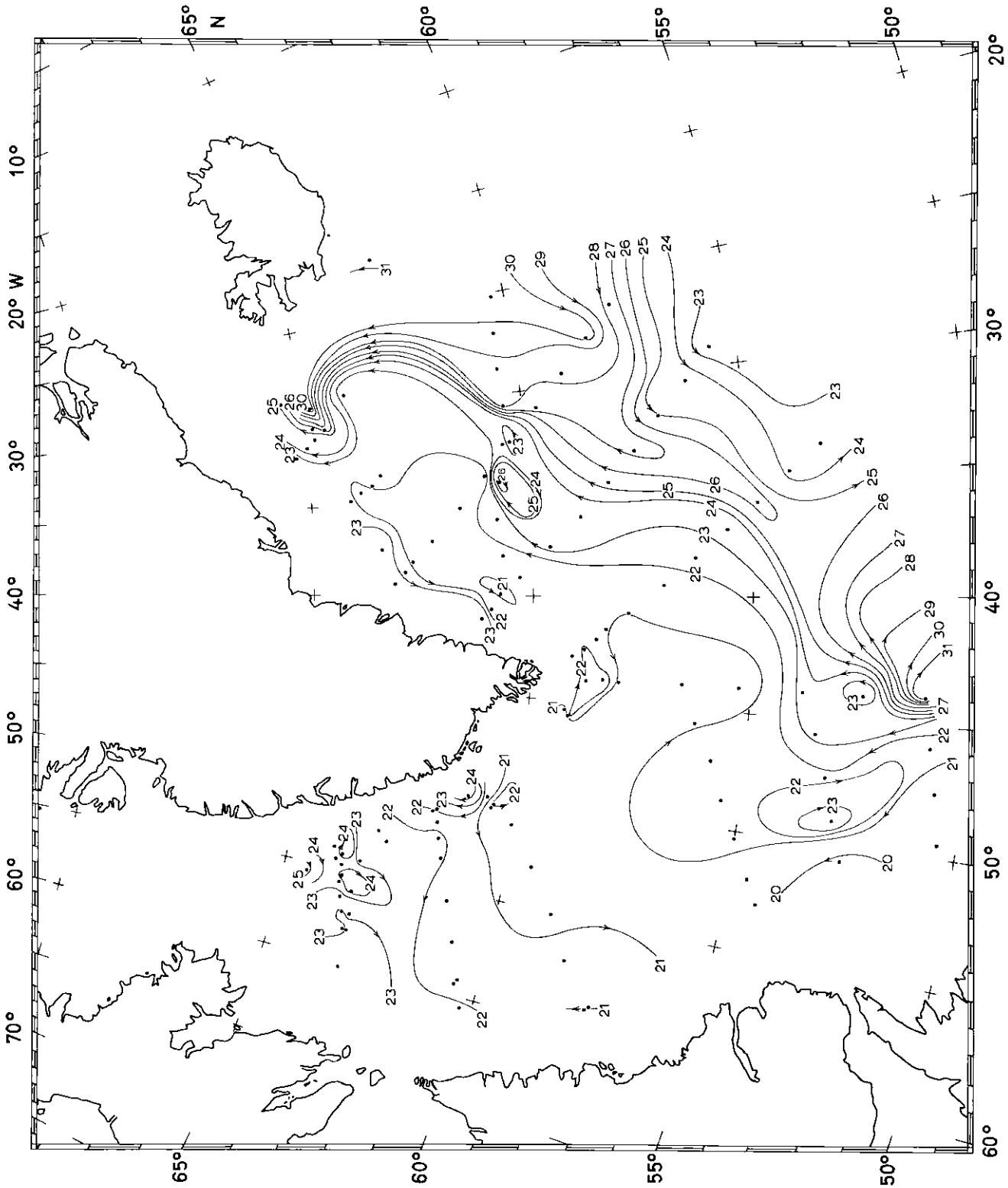


Chart 69. NORWESTLANT 2: 1 May-18 June: Potential energy anomaly in units of  $10^8$  ergs/cm<sup>2</sup> relative to the pressure surface at 1,000 m. Transcont between contours is about 1 million metric tons per second.

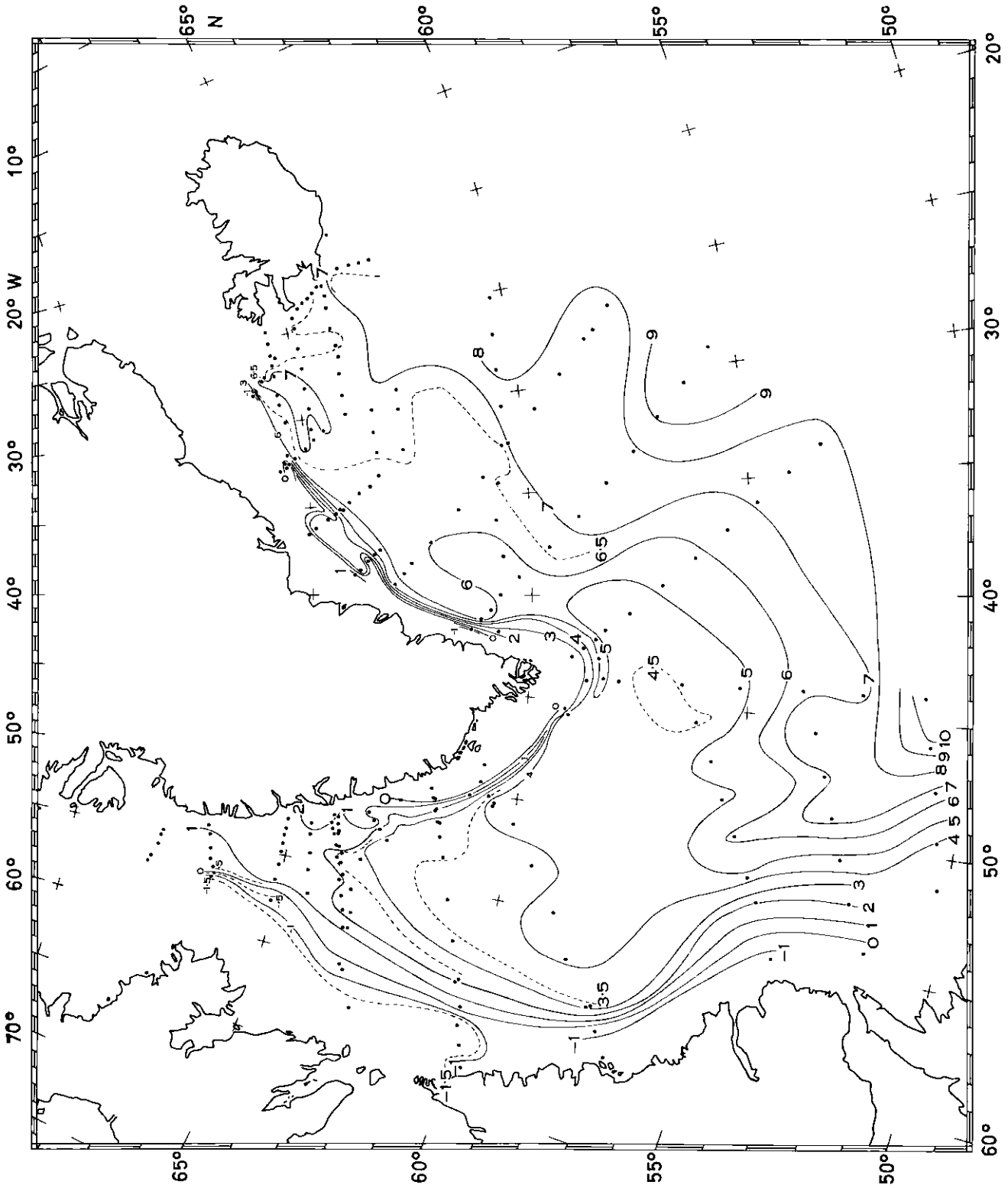


Chart 70. NORWESTLANT 2: 1 May-18 June: Temperature (°C) at 0 m.

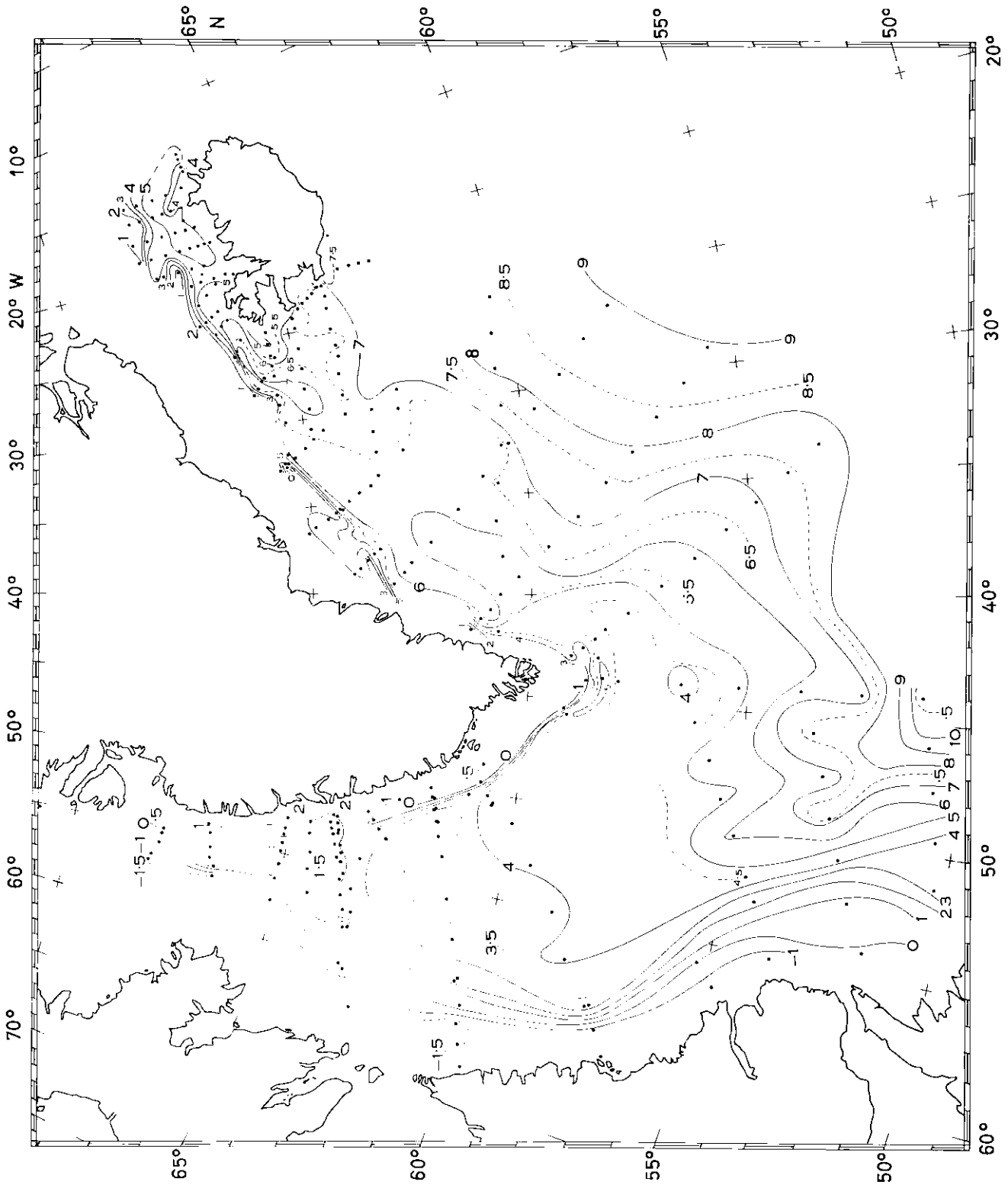


Chart 71. NORWESTLANT 2: 1 May-19 June: Temperature (°C) at 20 m.

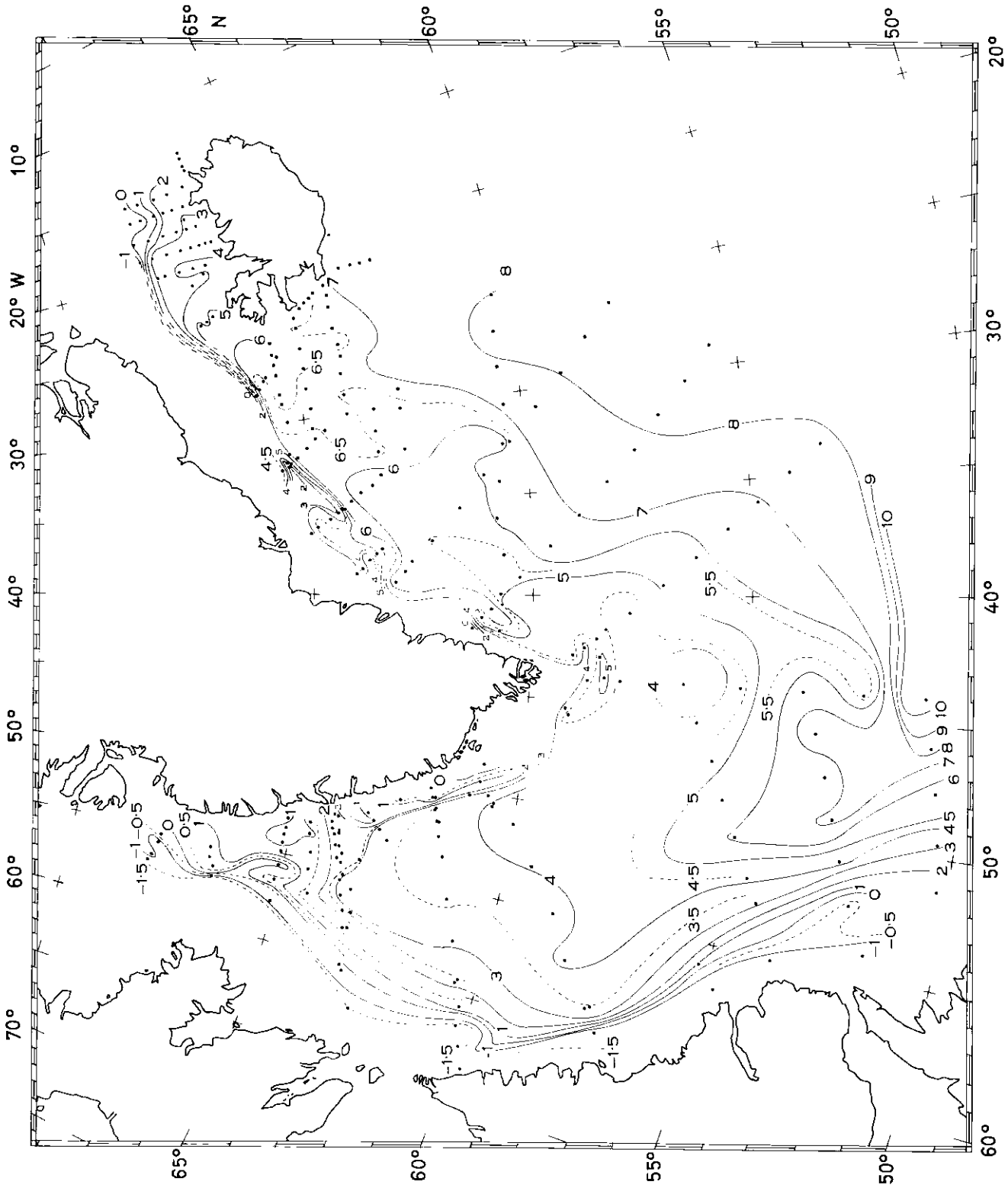


Chart 72. NORWESTLANT 2: 1 May-19 June: Temperature (°C) at 50 m.



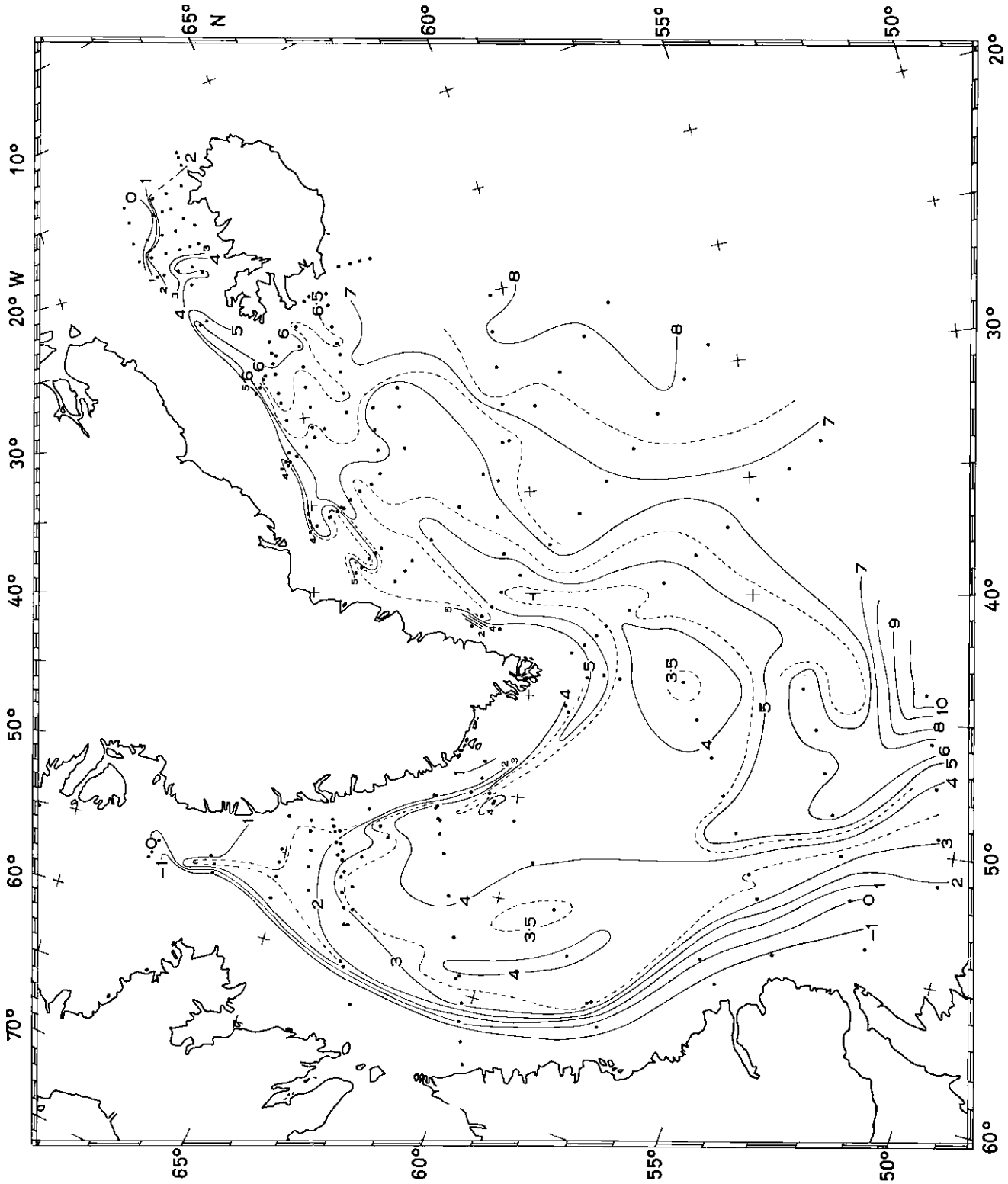


Chart 73. NORWESTLANT 2: 1 May-19 June: Temperature (°C) at 100 m.

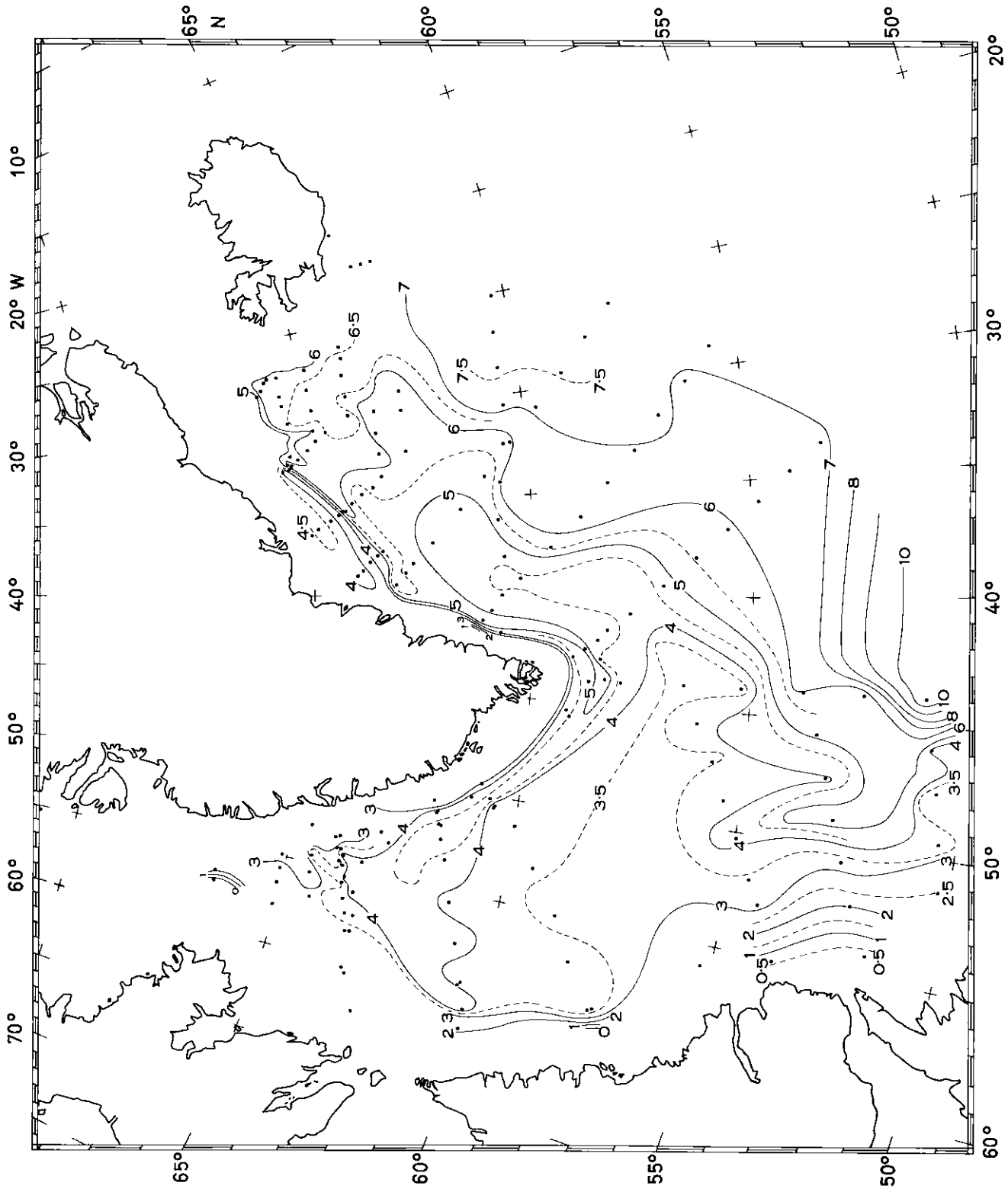


Chart 74. NORWESTLANT 2: 1 May-18 June: Temperature (°C) at 200 m.

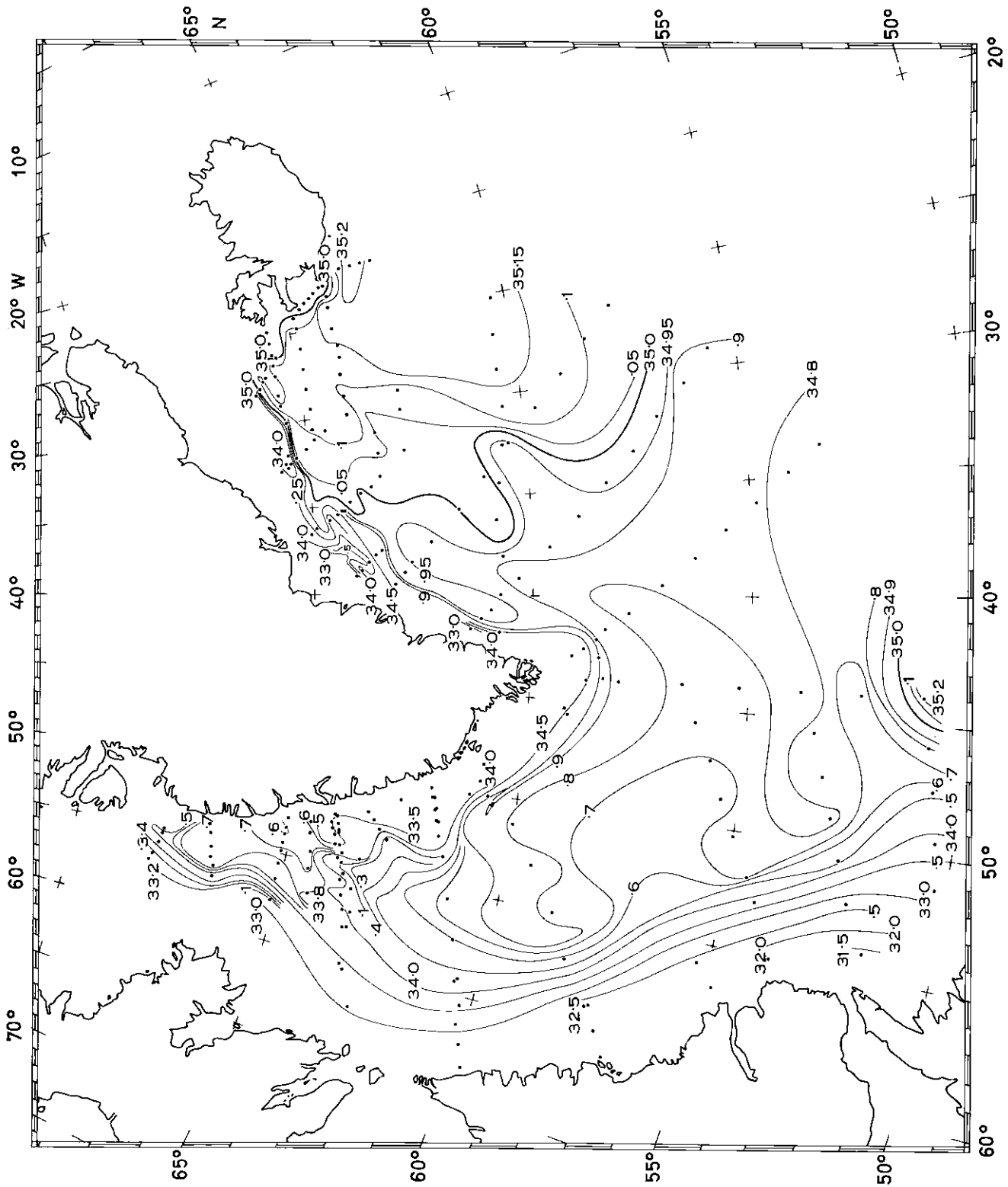


Chart 75. NORWESTLANT 2: 1 May-16 June: Salinity (‰) at 0 m.

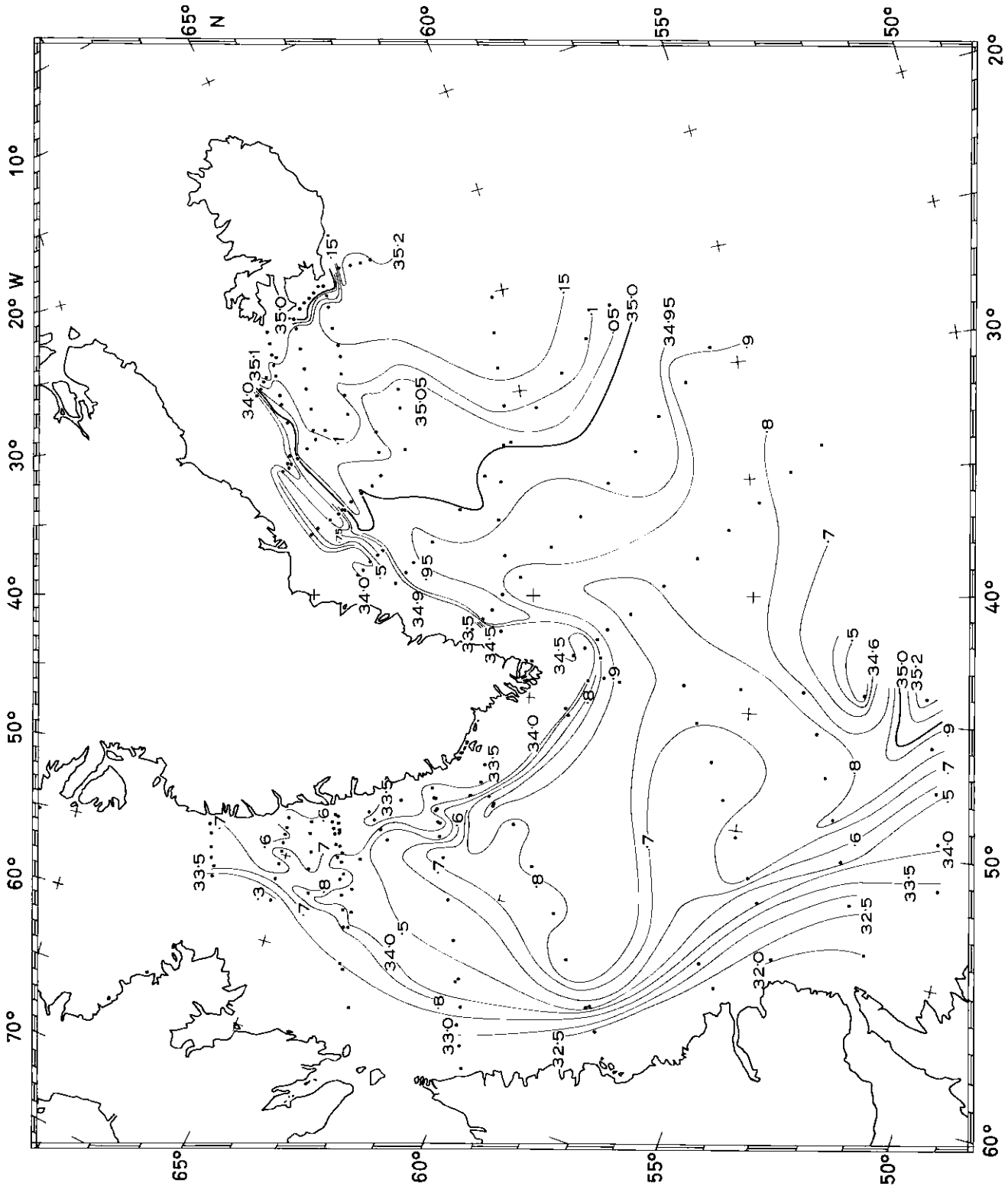


Chart 76. NORWESTLANT 2: 1 May-18 June: Salinity (‰) at 20 m.

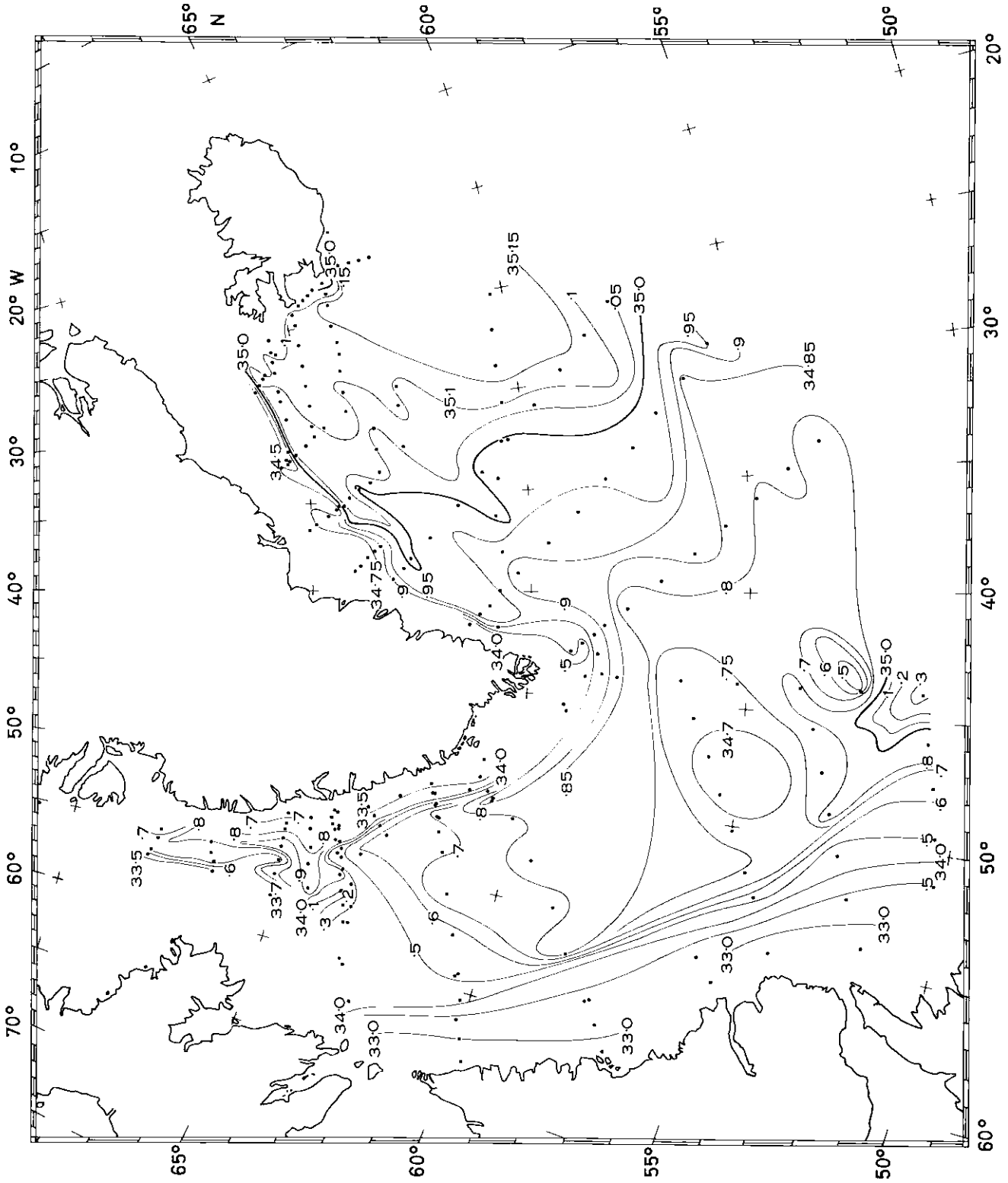


Chart 77. NORWESTLANT 2: 1 May-18 June: Salinity (‰) at 50 m.

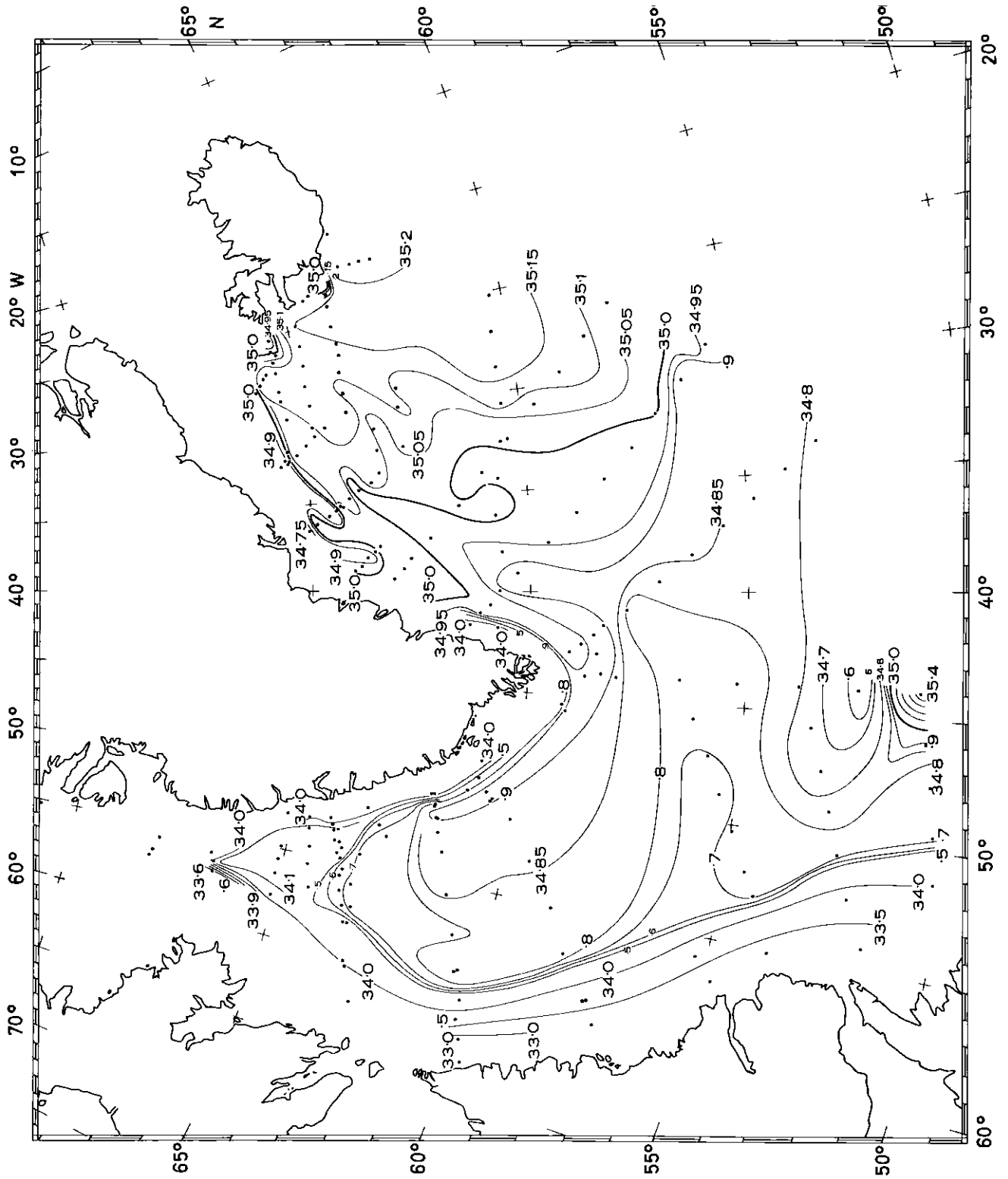


Chart 78. NORWESTLANT 2: 1 May-18 June: Salinity (‰) at 100 m.

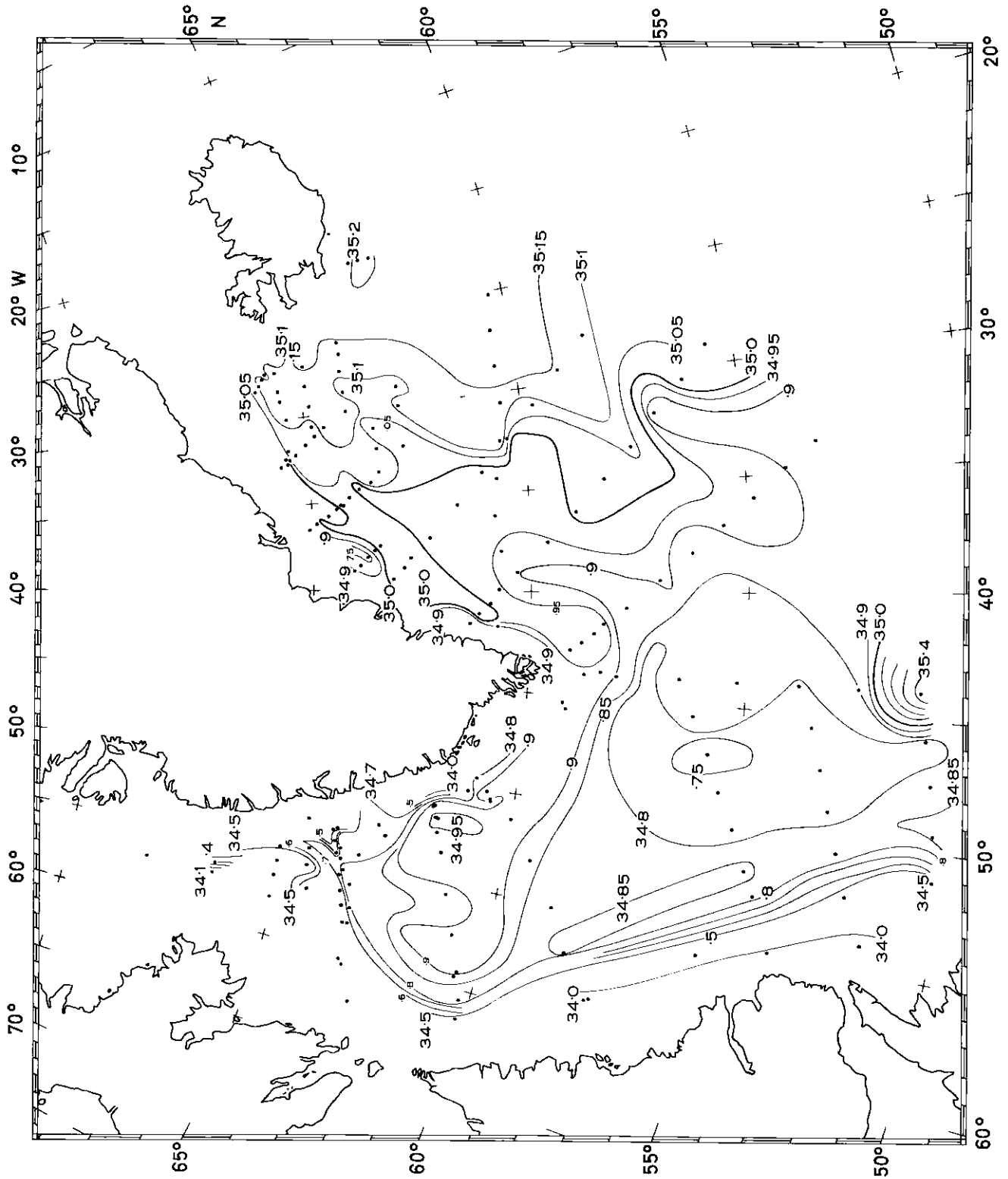


Chart 79. NORWESTLANT 2: 1 May-18 June: Salinity (‰) at 200 m.

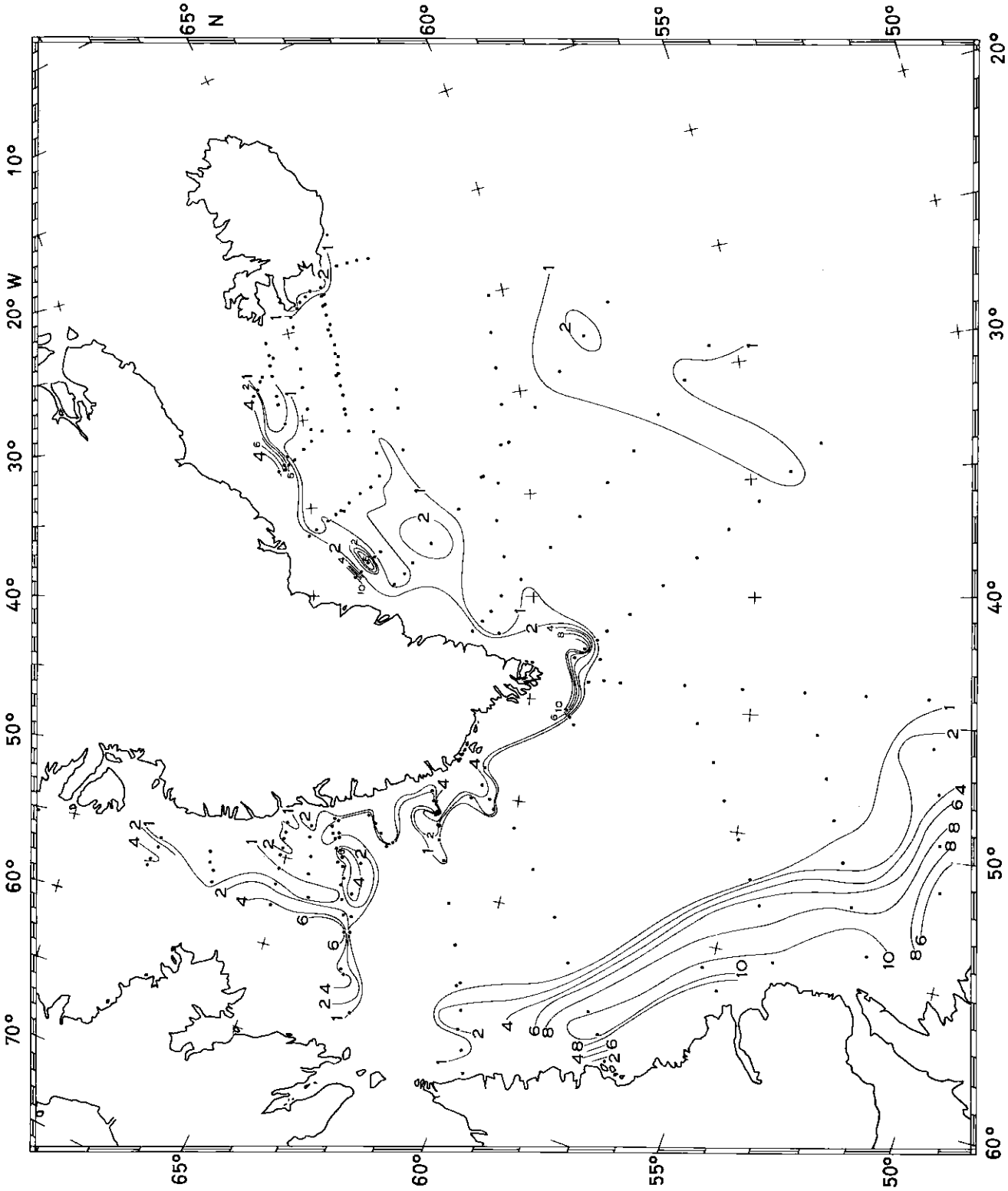


Chart 80. NORWESTLANT 2: 1 May-18 June: Stability:  $10 \times (50 \text{ m } \sigma_t - t \text{ minus } 0 \text{ m } \sigma_t - t)$ .



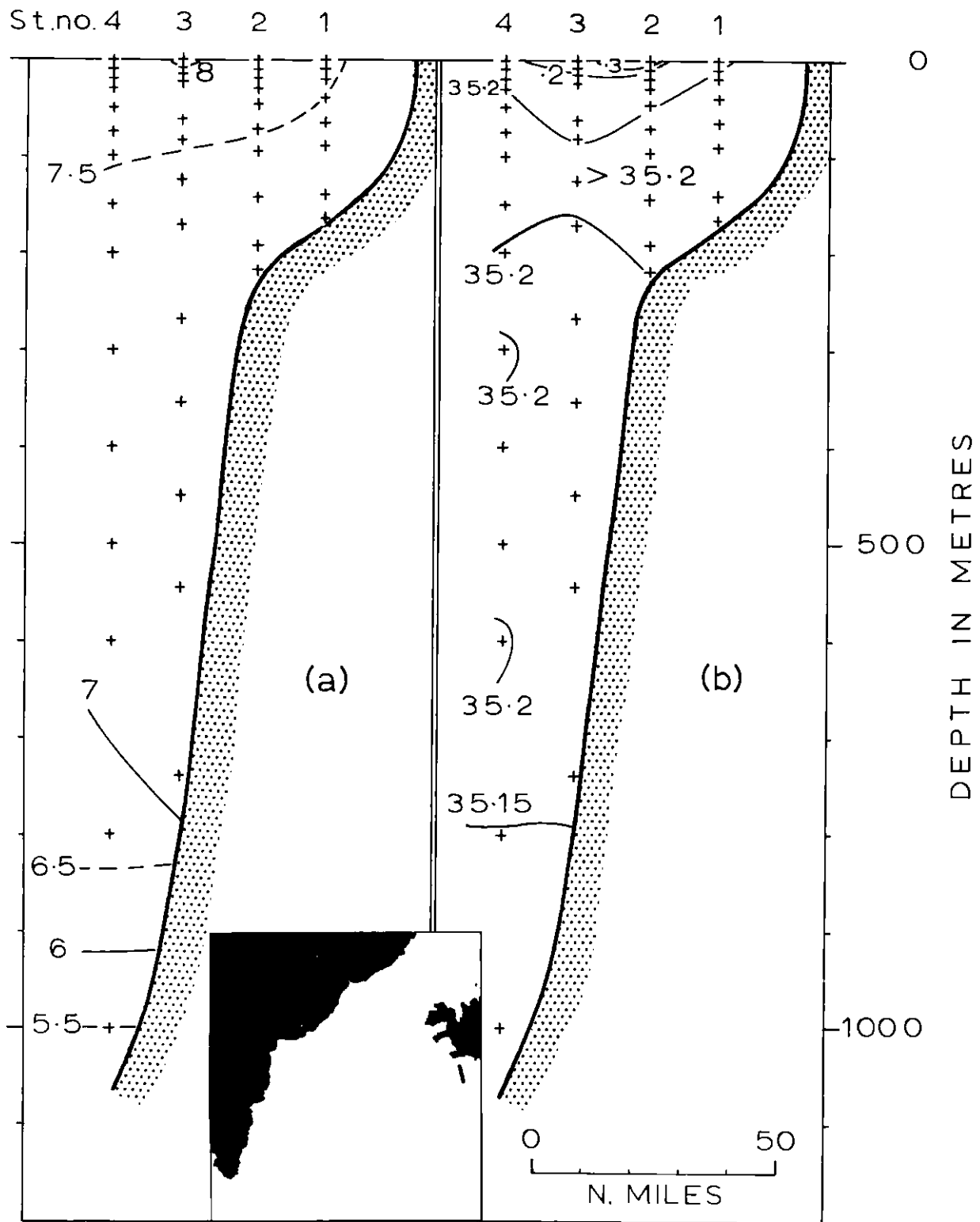


Chart 81. NORWESTLANT 2: Section A: 1-2 May: (a) Temperature (°C); (b) Salinity (‰).

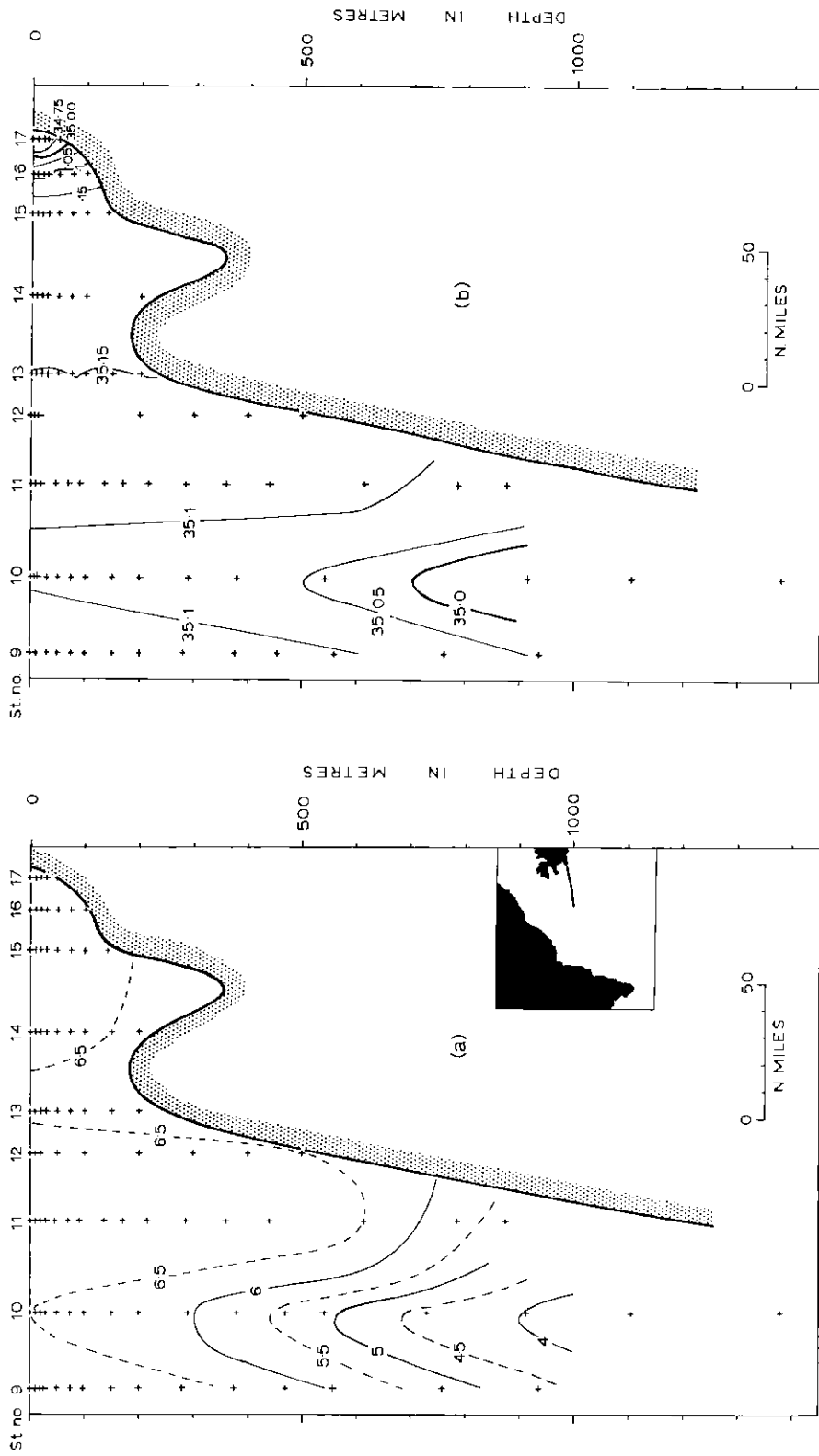


Chart 82. NORWESTLANT 2: Section B: 15-16 May: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $^{\circ}/\text{‰}$ ).



Chart 83. NORWESTLANT 2: Section C: 19-24 May: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

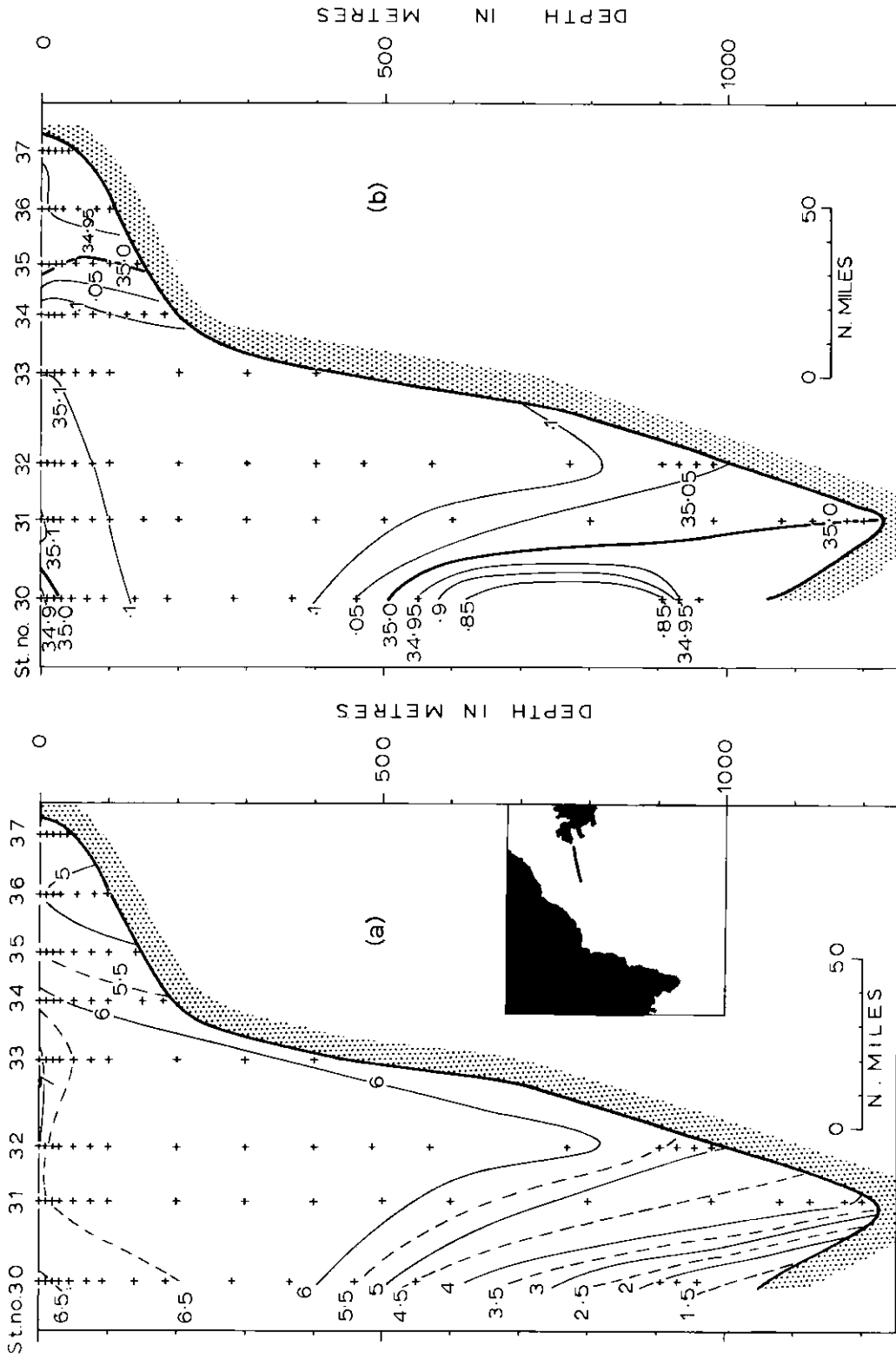


Chart 84. NORWESTLANT 2: Section D: 20-21 May: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

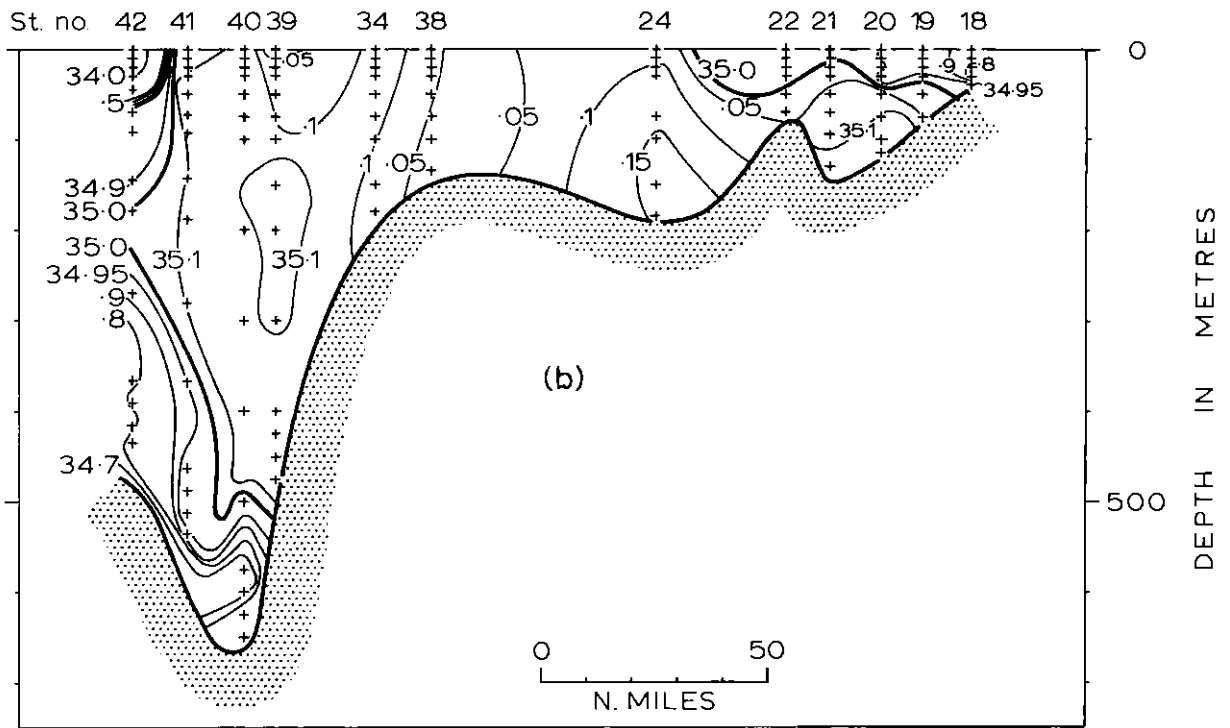
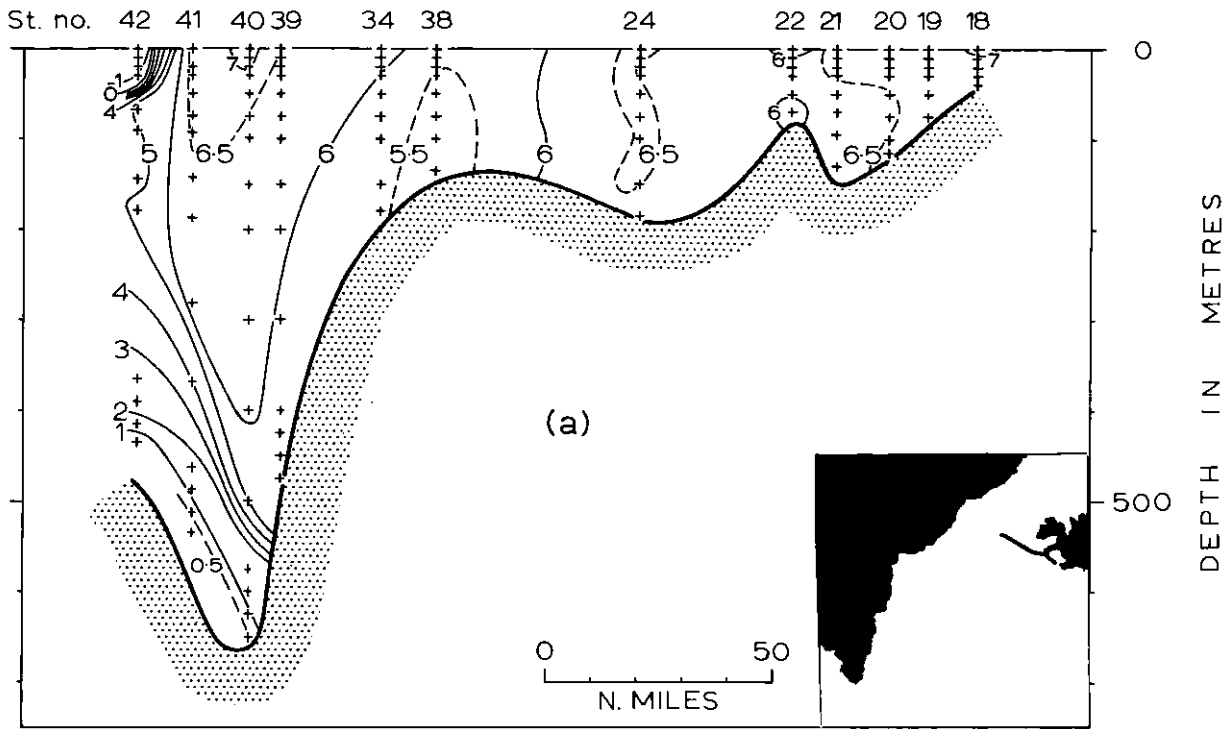


Chart 85. NORWESTLANT 2: Section 1: 18-21 May: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

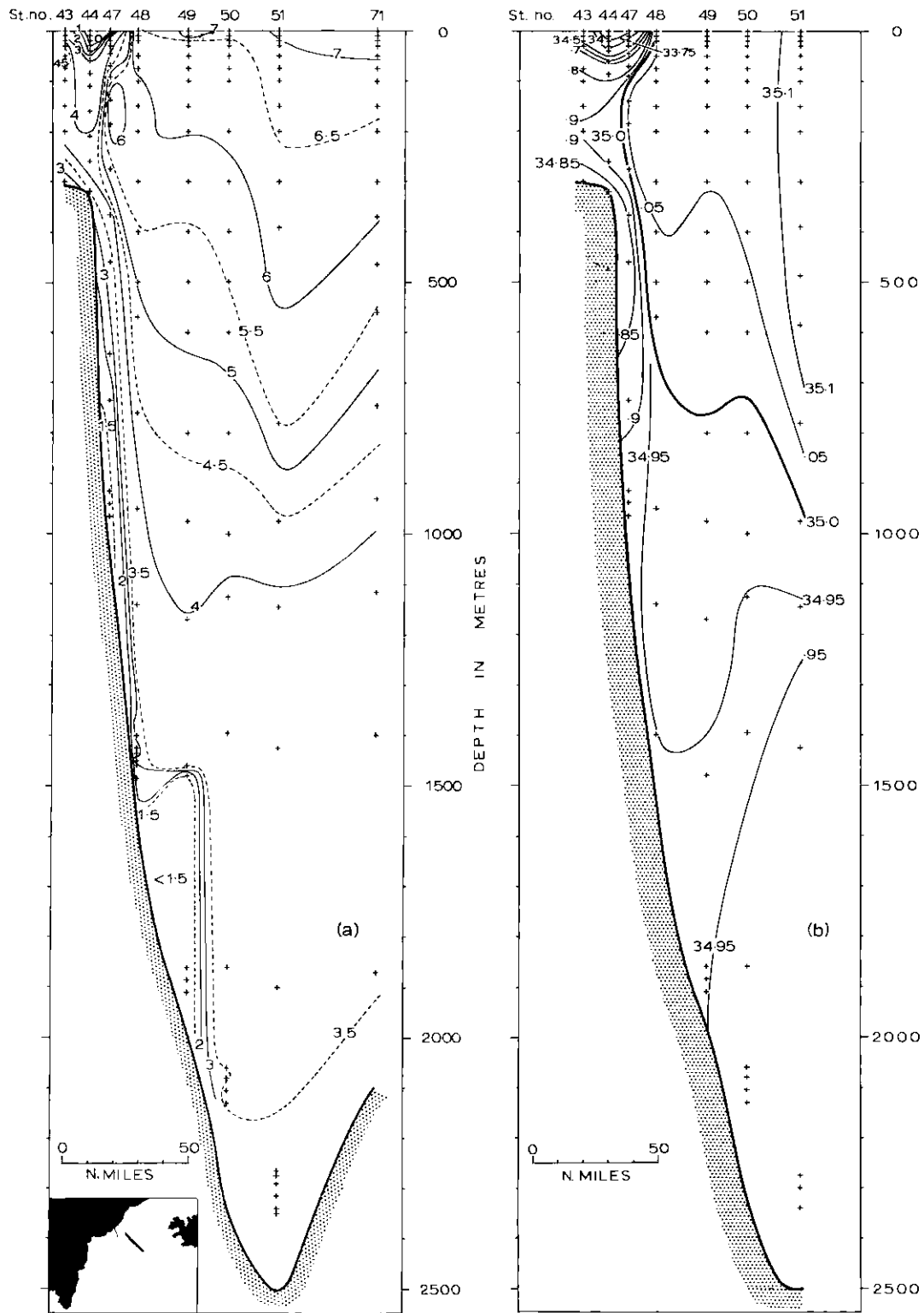


Chart 86. NORWESTLANT 2: Section 2: 23-30 May: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

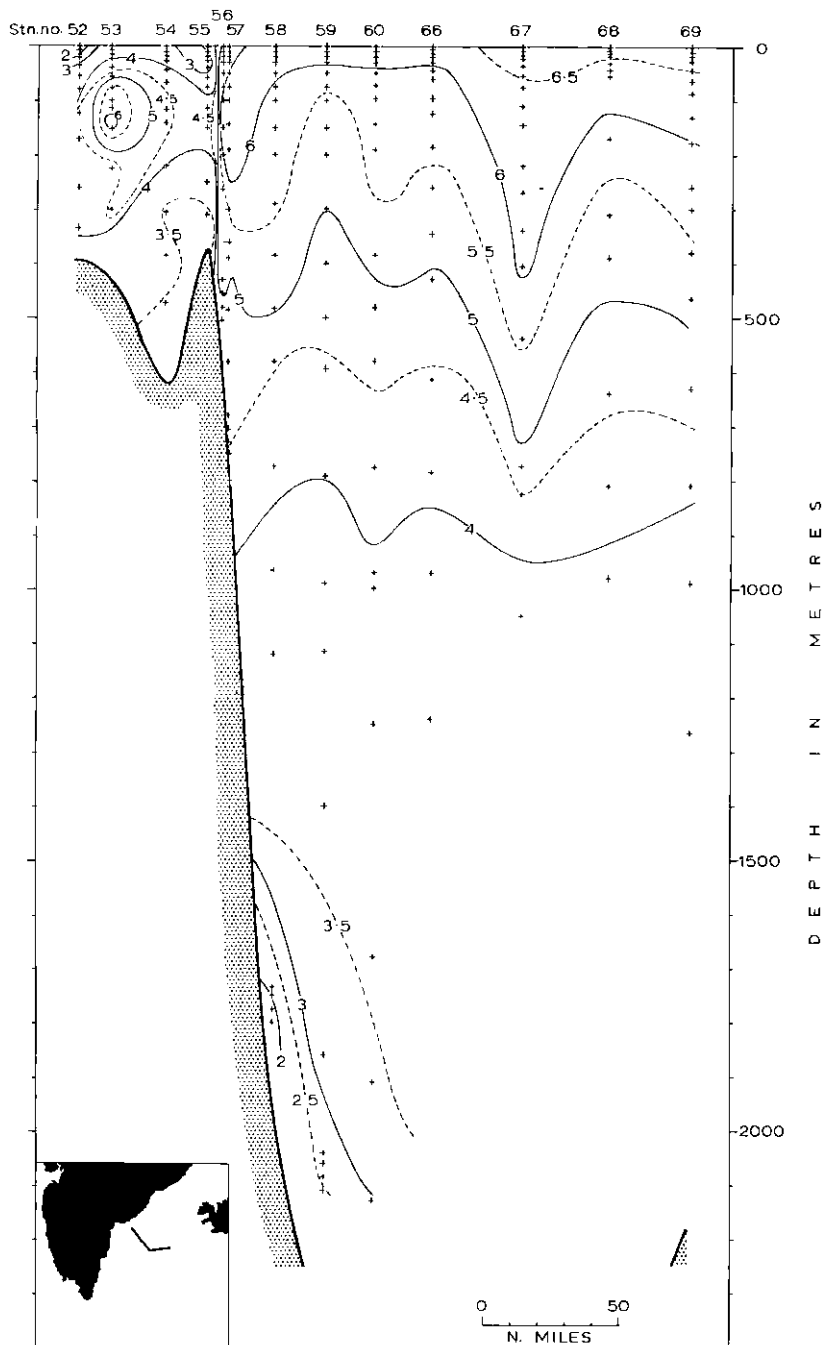


Chart 87. NORWESTLANT 2: Section 3: 25-30 May: Temperature (°C).

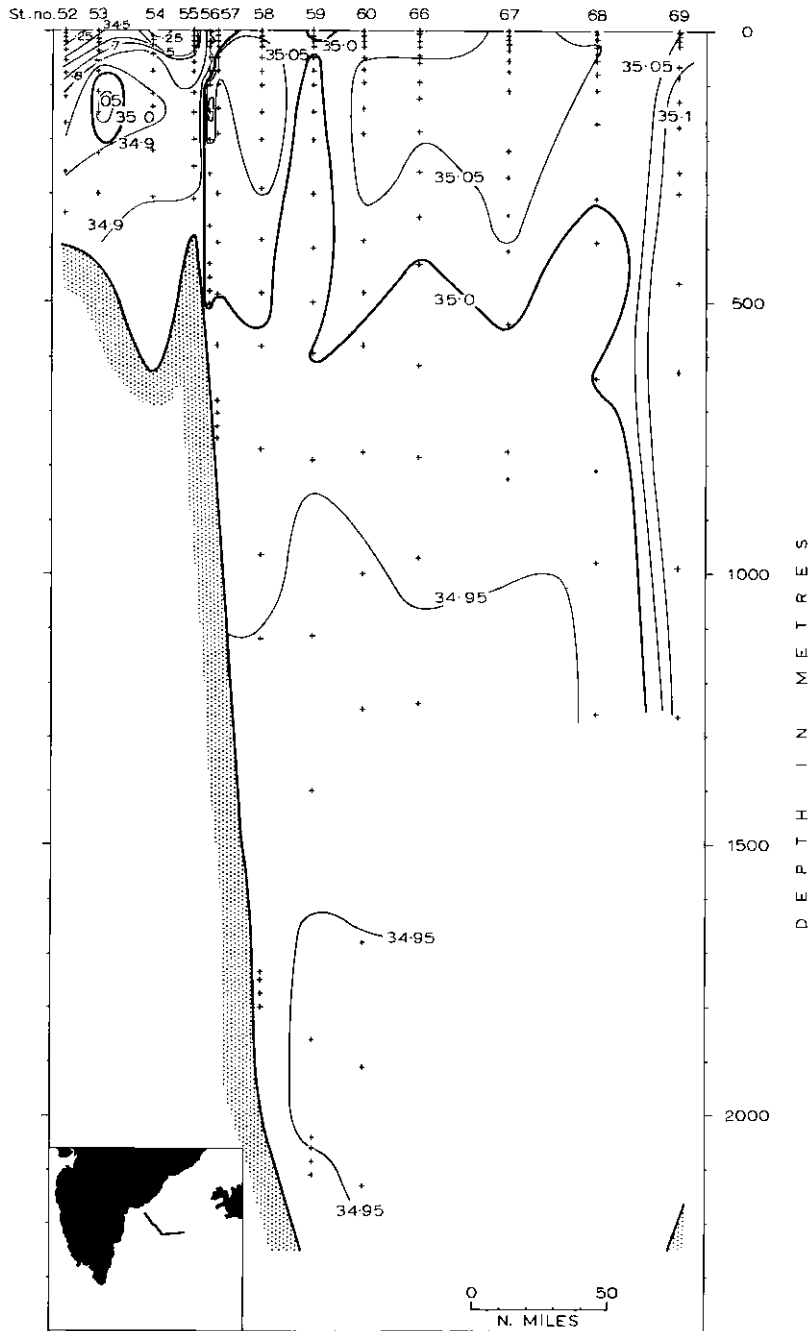


Chart 88. NORWESTLANT 2: Section 3: 25-30 May: Salinity (‰).





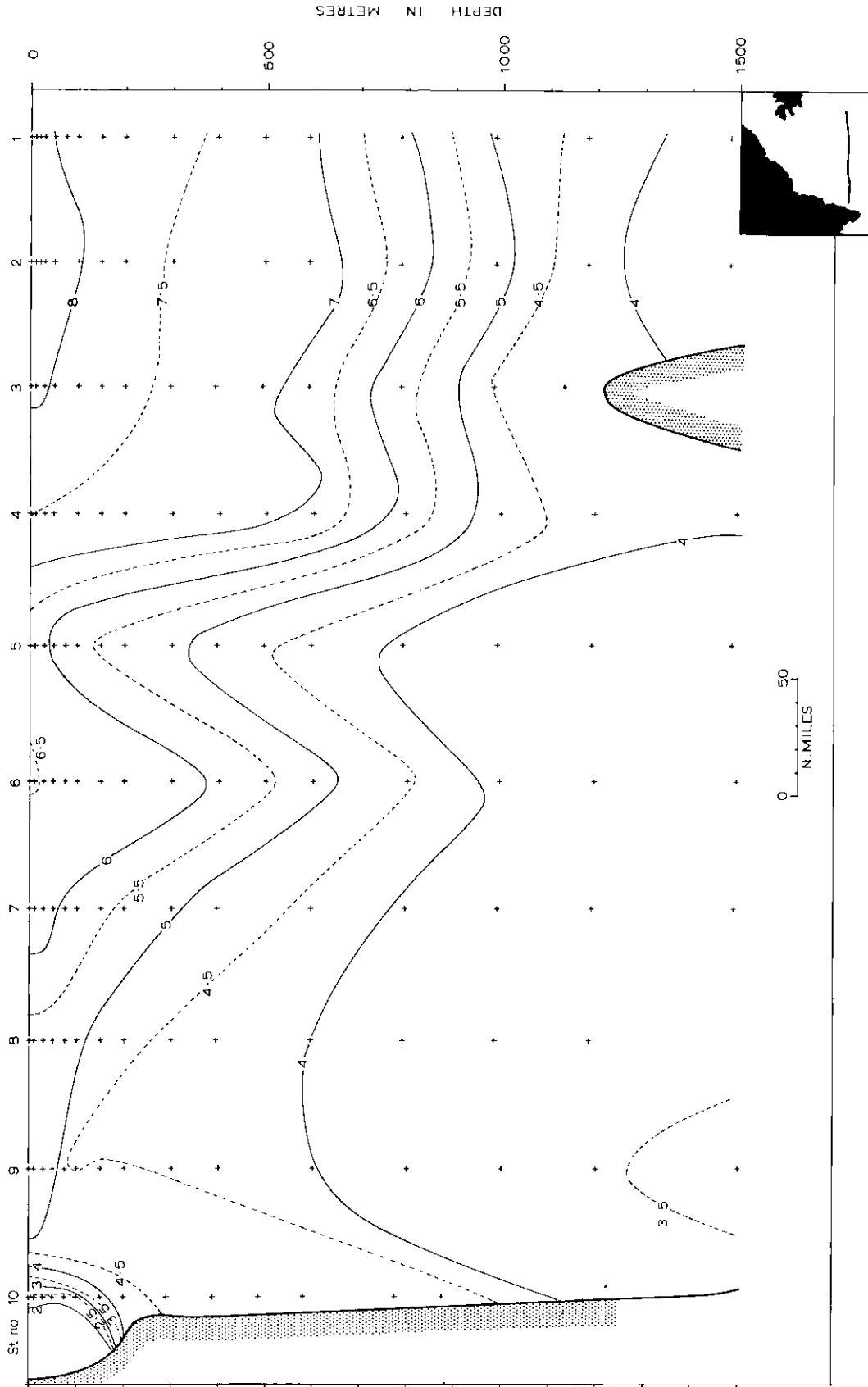


Chart 90. NORWESTLANT 2: Section F: 21-24 May: Temperature ( $^{\circ}$ C).

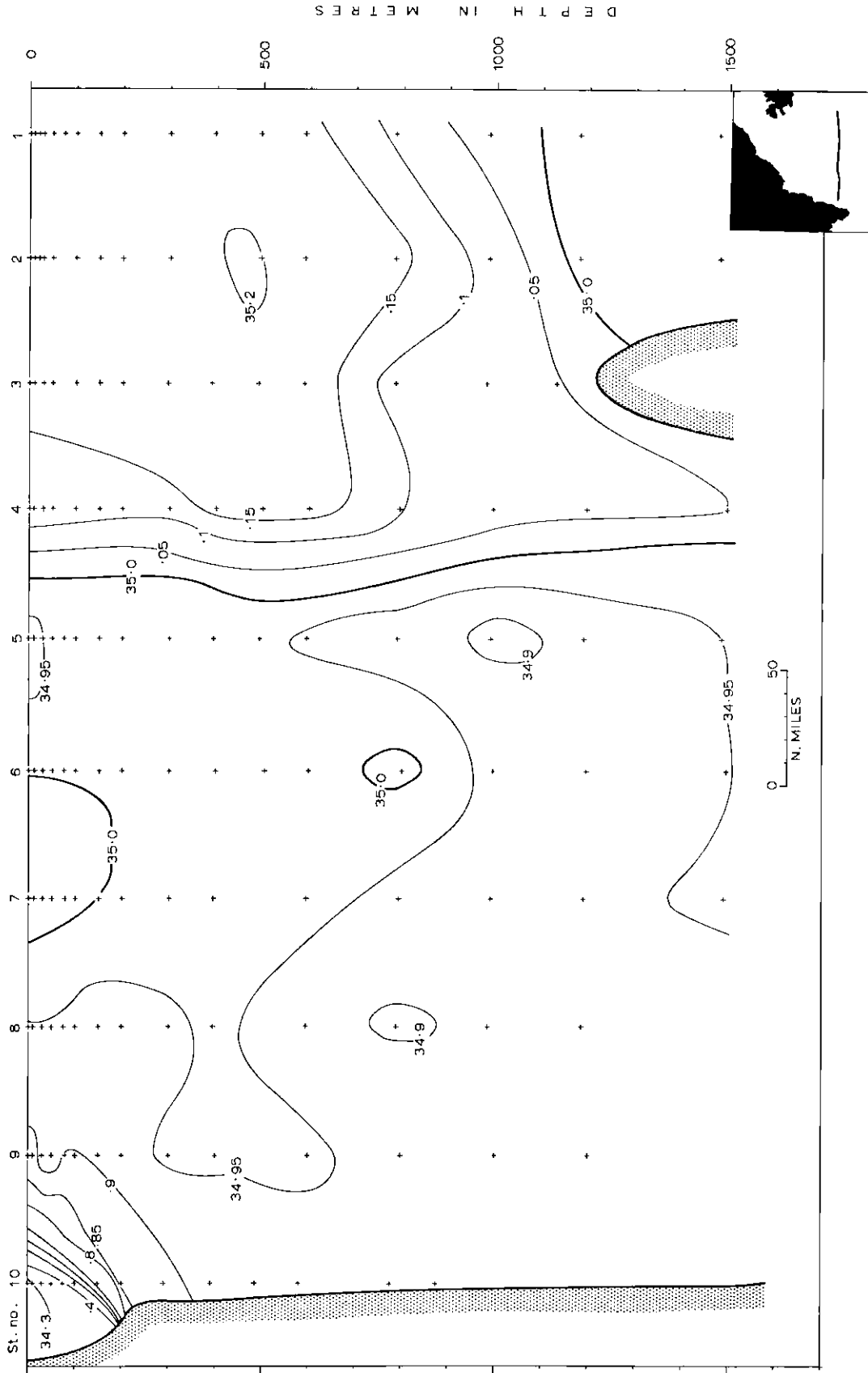


Chart 91. NORWESTLANT 2: Section F: 21-24 May: Salinity (‰).

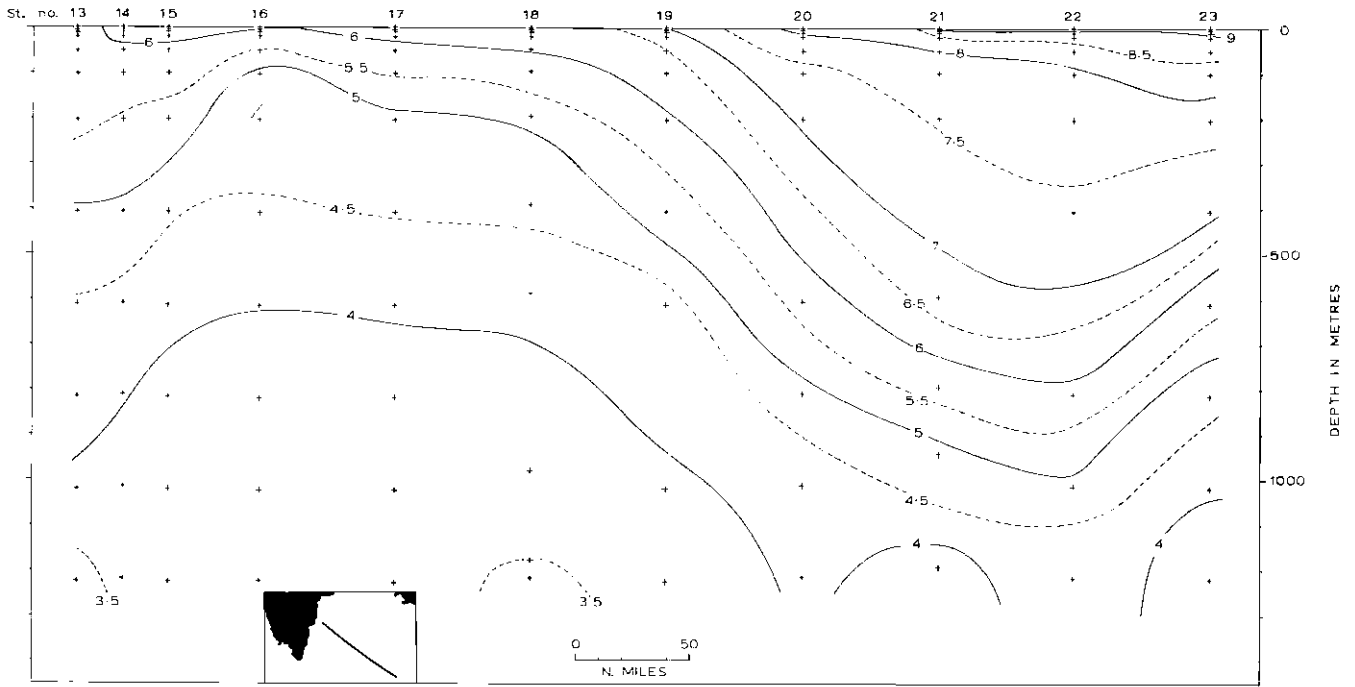


Chart 92. NORWESTLANT 2: Section 4: 4-8 June: Temperature (°C).

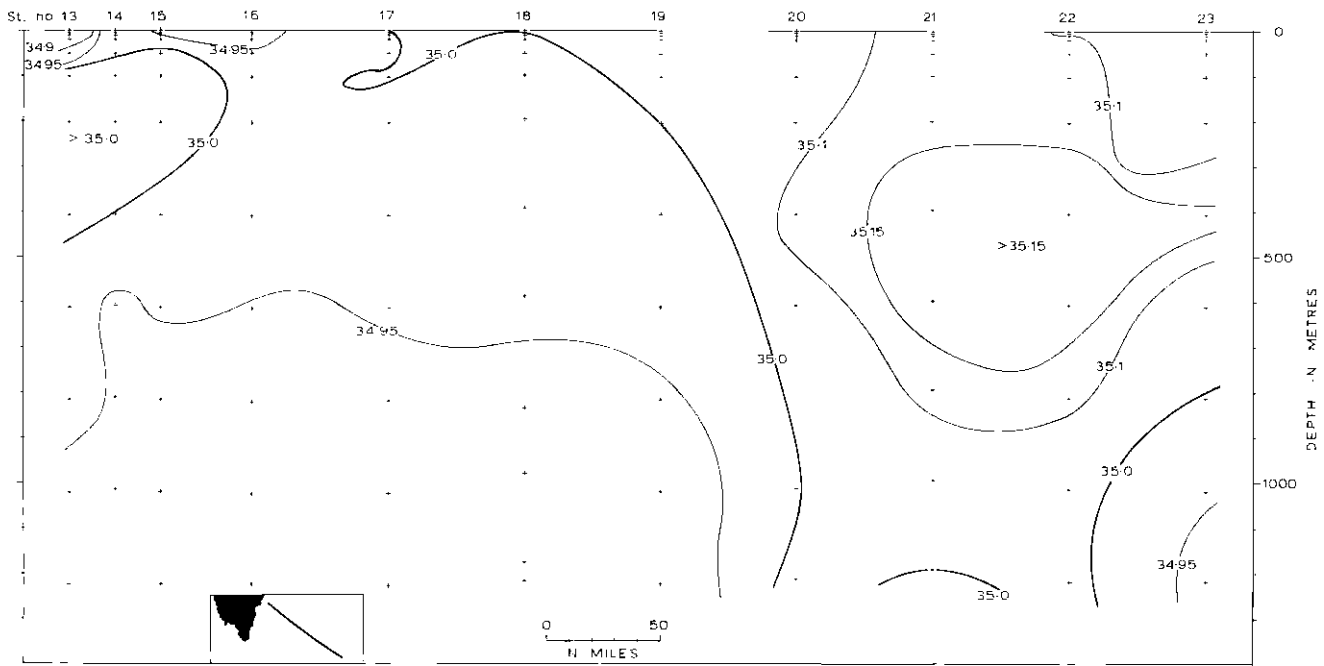


Chart 93. NORWESTLANT 2: Section 4: 4-8 June: Salinity (‰).

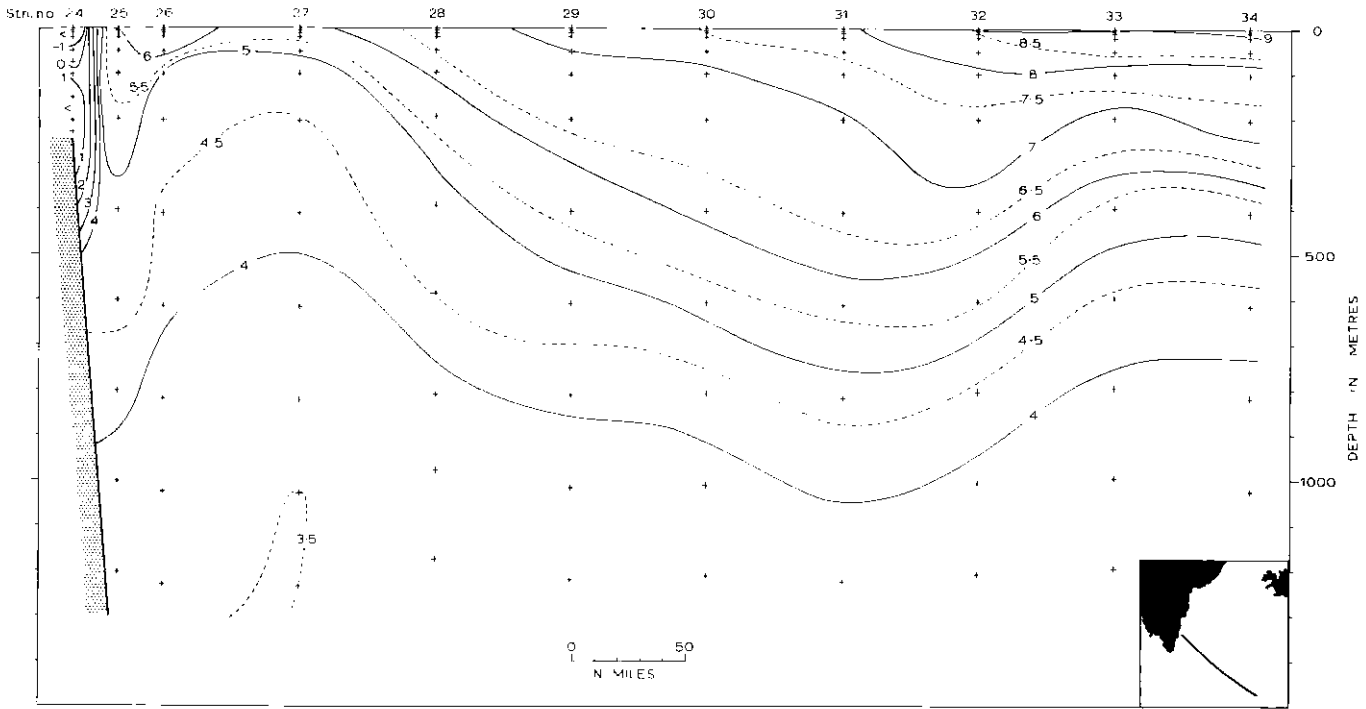


Chart 94. NORWESTLANT 2: Section 5: 15-18 June: Temperature (°C).

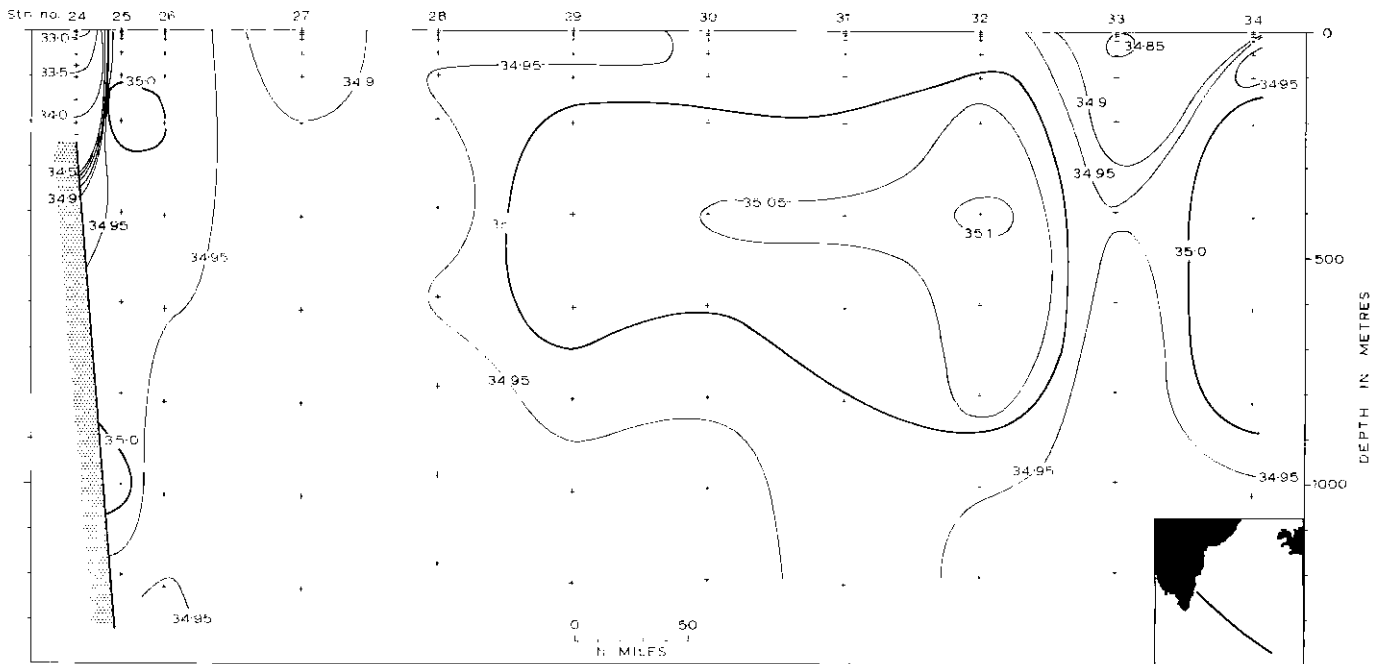


Chart 95. NORWESTLANT 2: Section 5: 15-18 June: Salinity (‰).

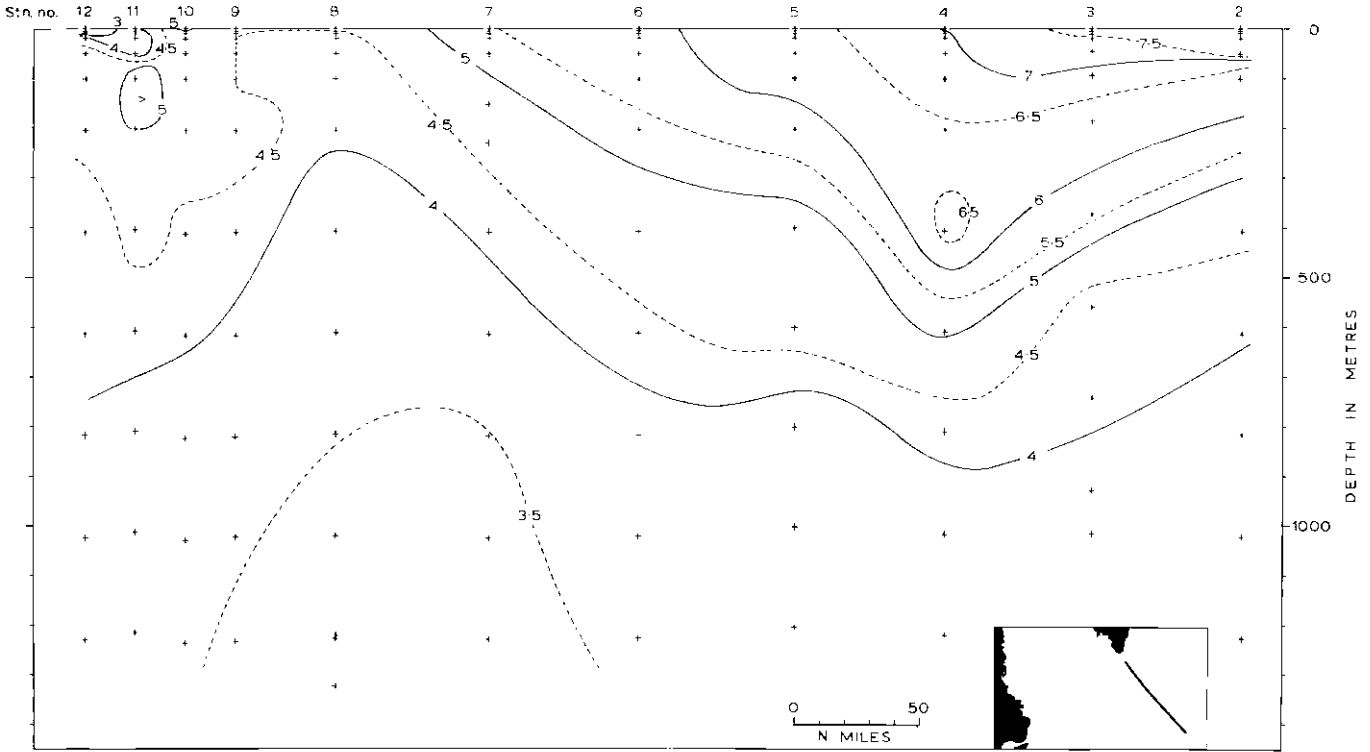


Chart 96. NORWESTLANT 2: Section 6: 28 May-1 June: Temperature ( $^{\circ}\text{C}$ ).

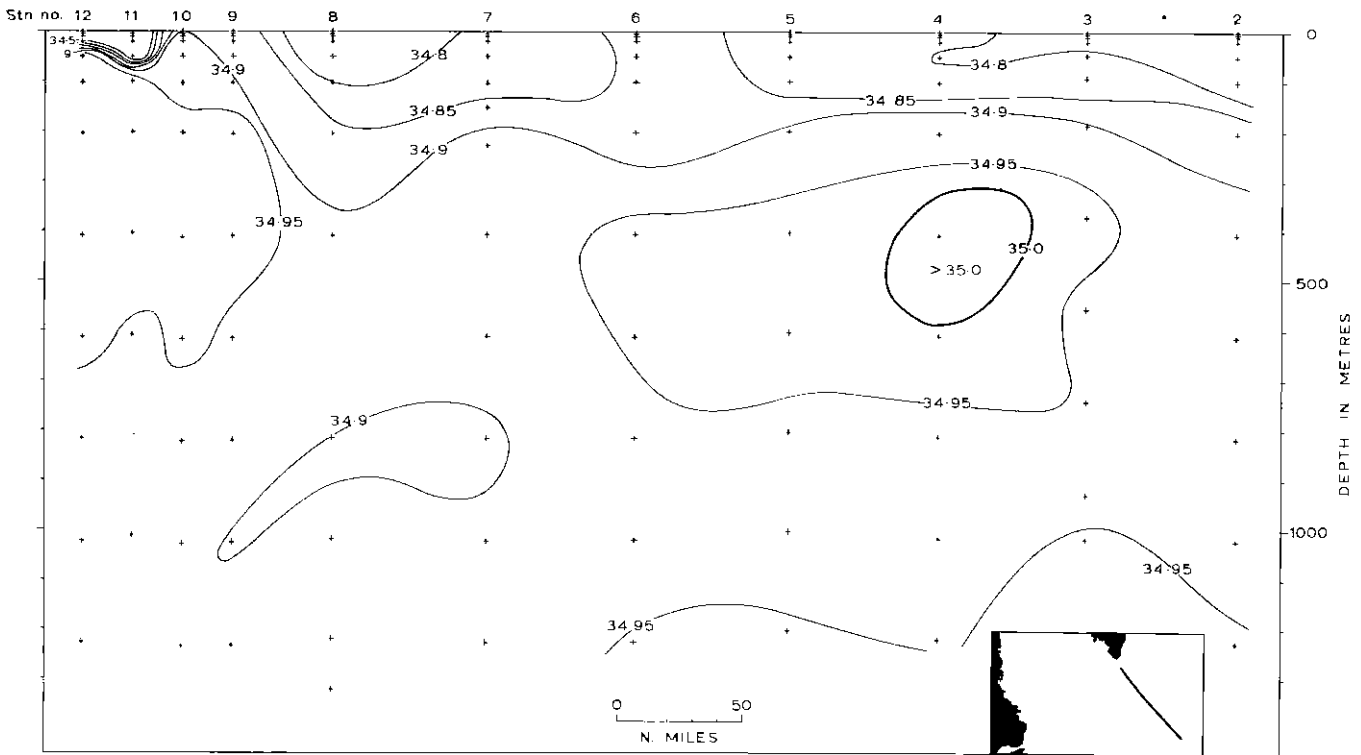


Chart 97. NORWESTLANT 2: Section 6: 28 May-1 June: Salinity ( $\text{‰}$ ).

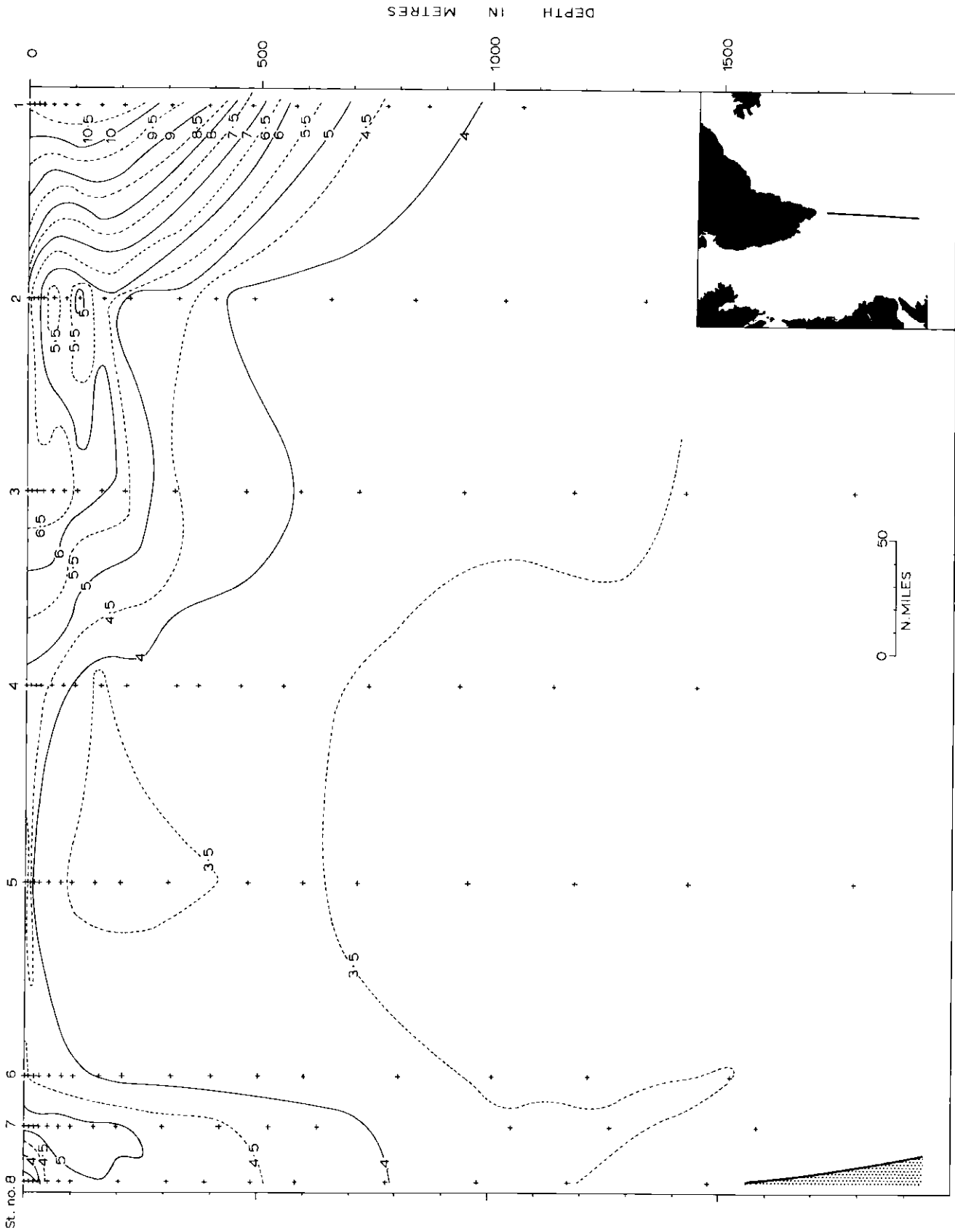


Chart 98. NORWESTLANT 2: Section 7: 26-28 May: Temperature (°C).

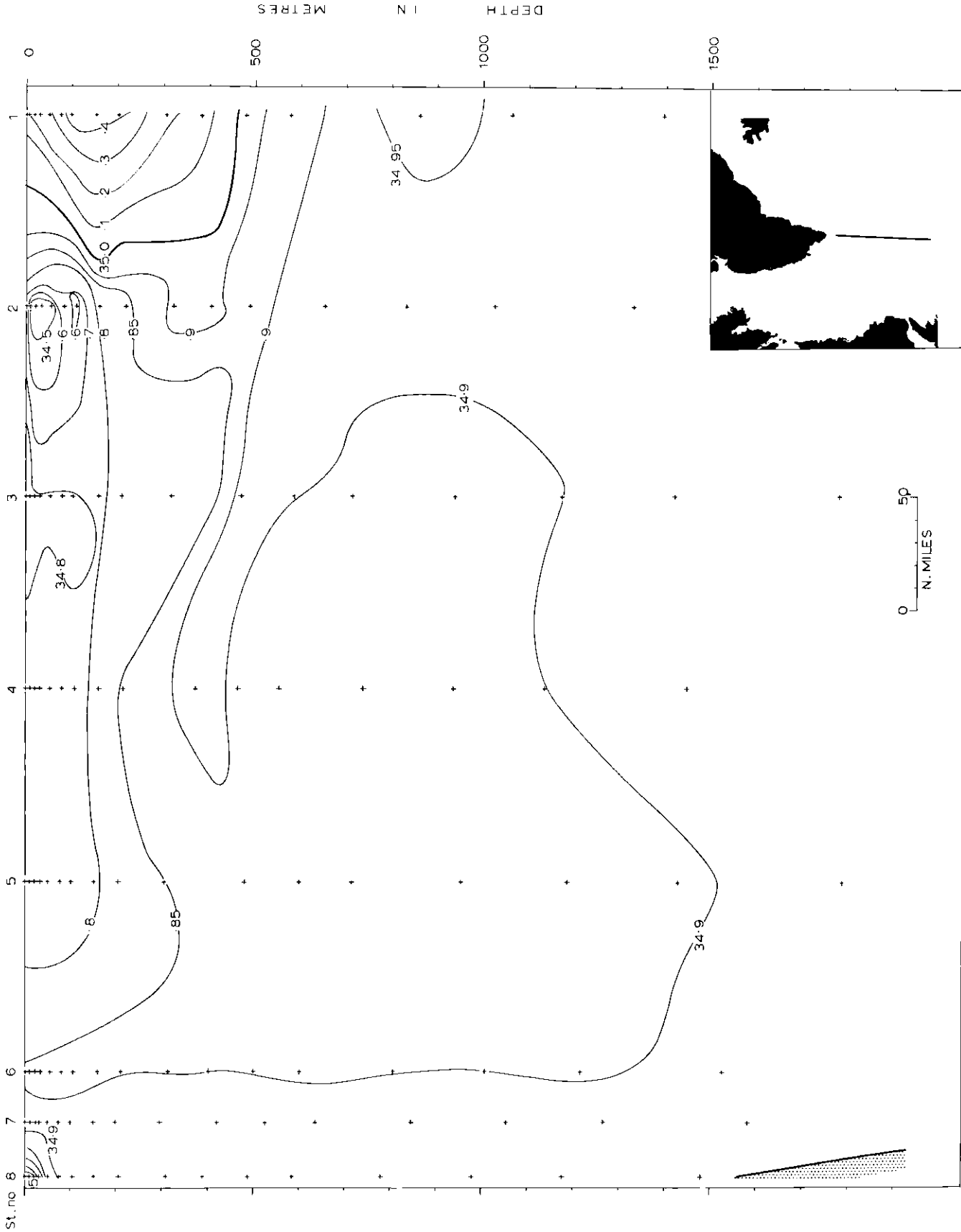


Chart 99. NORWESTLANT 2: Section 7: 26-28 May: Salinity (‰).



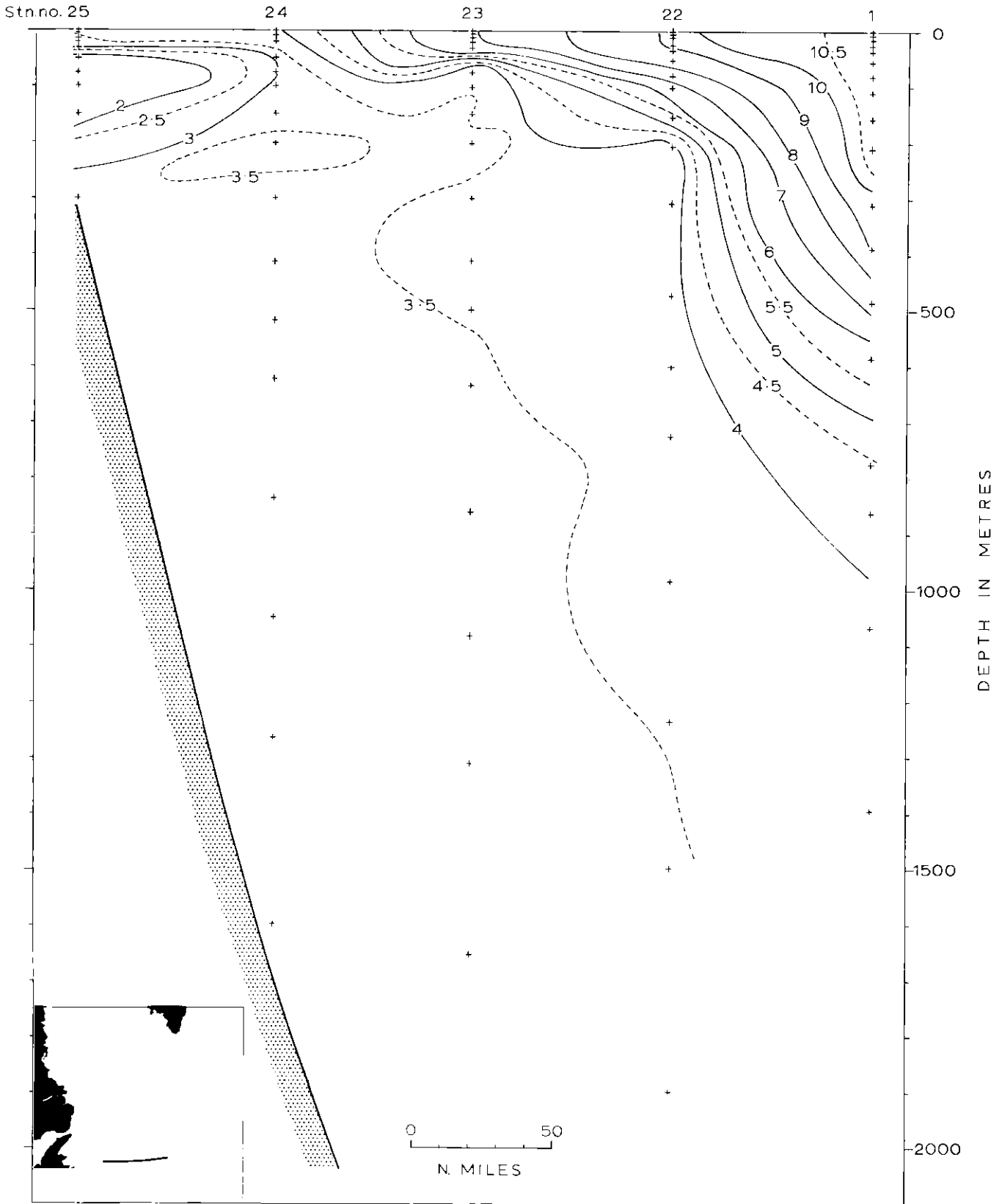


Chart 100. NORWEGICANT 2: Section C: 26 May-14 June: Temperature (°C).

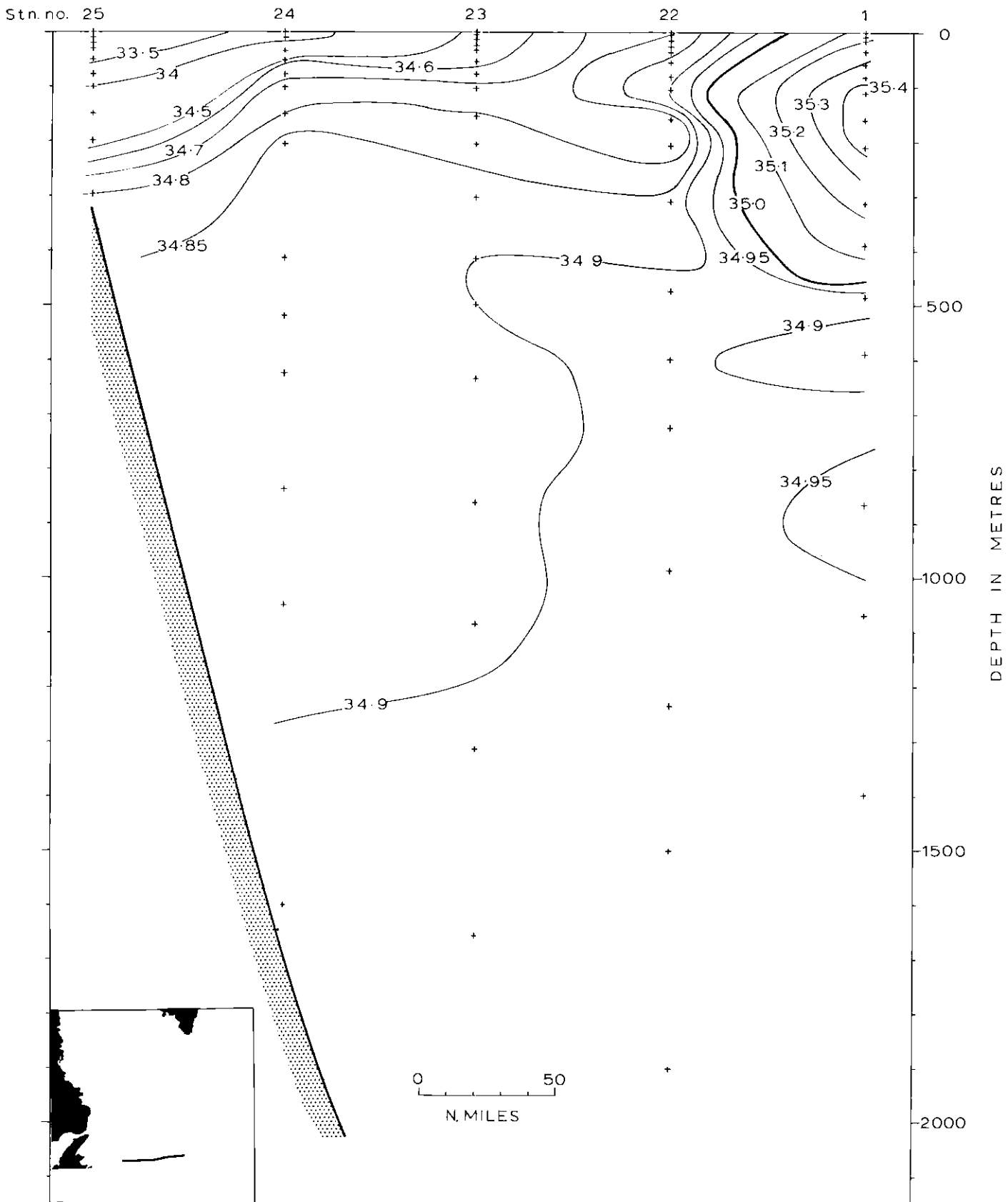


Chart 101. NORTHWESTLANT 2: Section G: 26 May-13 June: Salinity (‰).

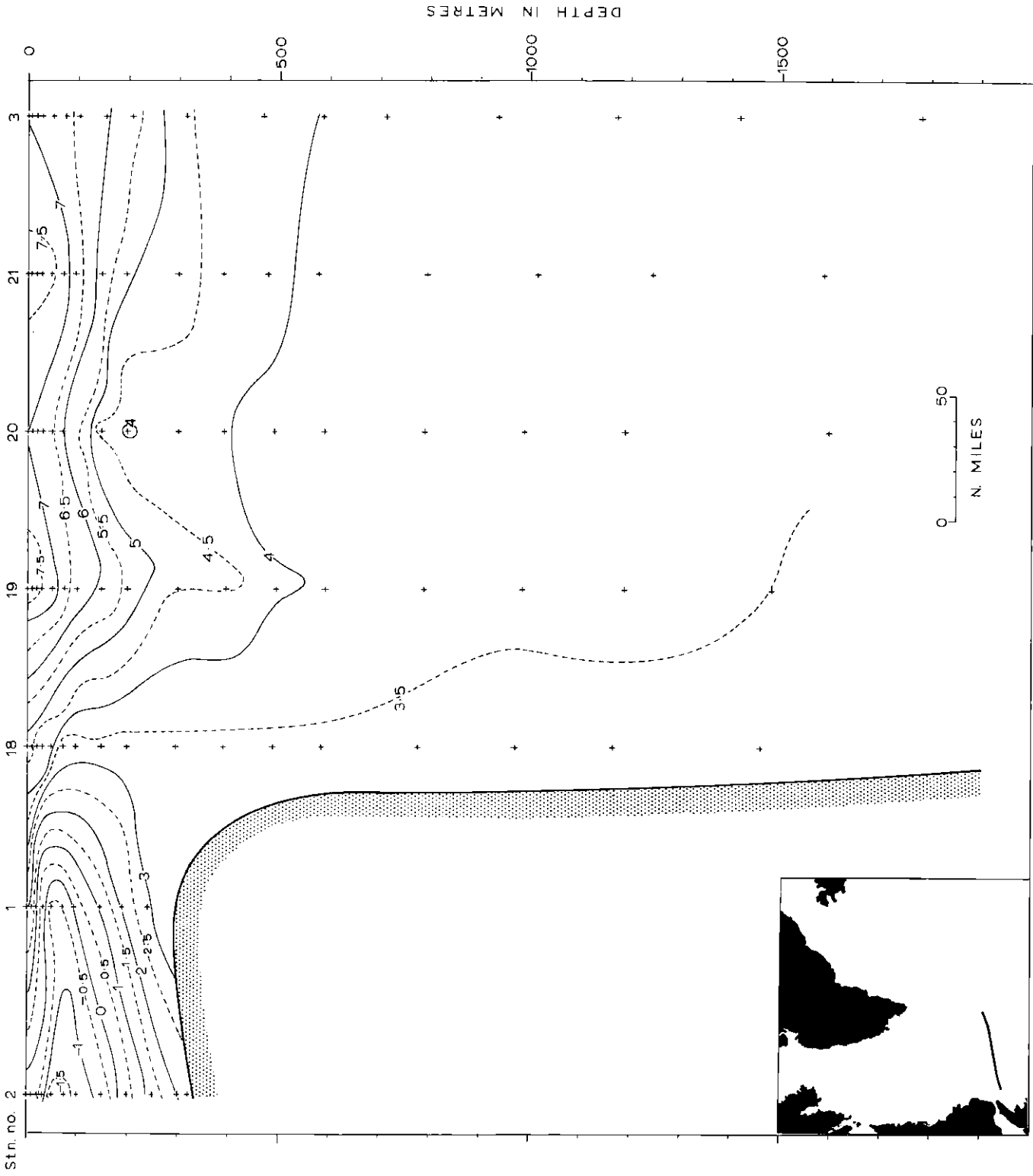


Chart 102, NORWESTLANT 2: Section H: 27 May-12 June: Temperature (°C).

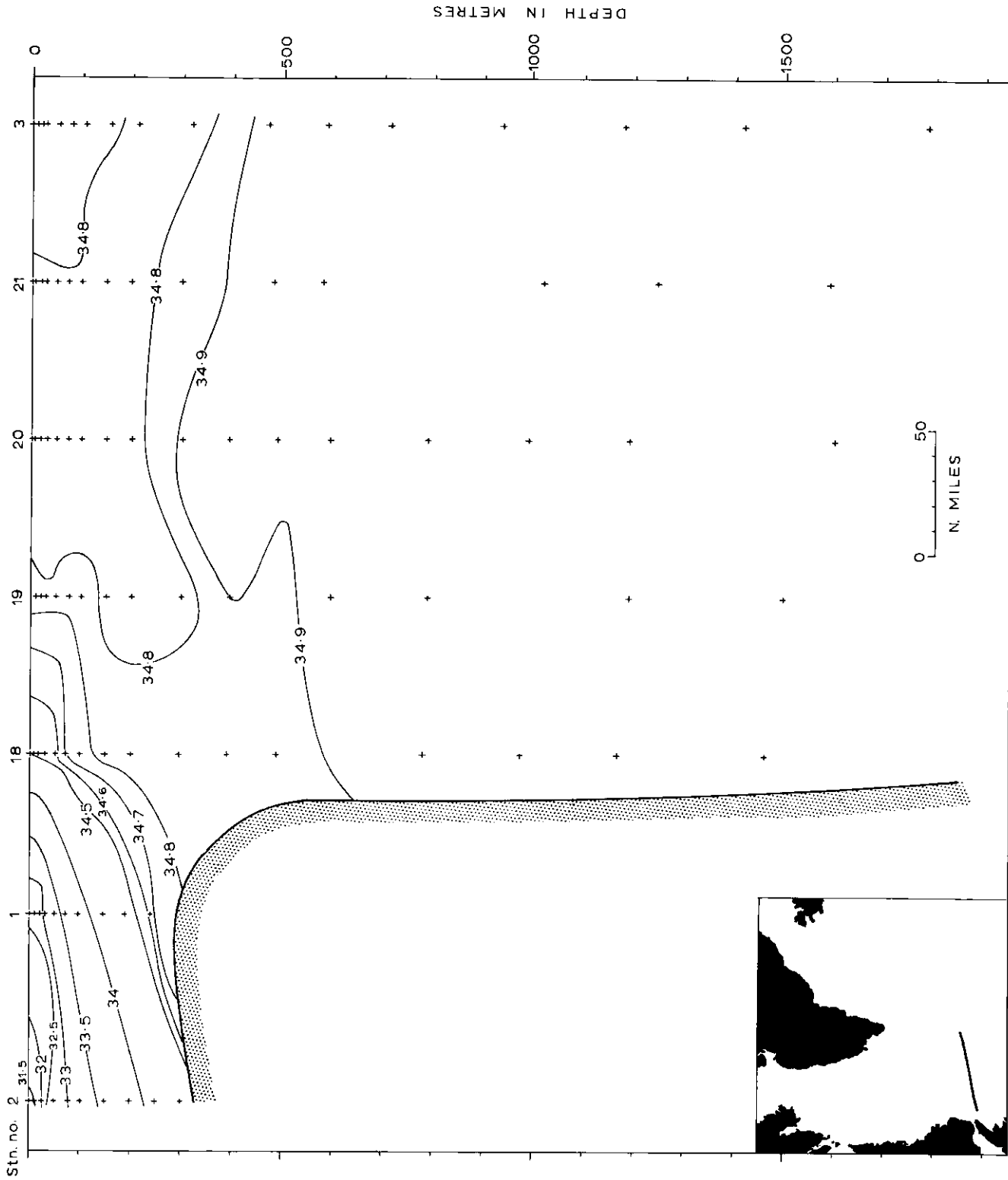


Chart 103. NORWESTLANT 2: Section H1: 27 May-12 June: Salinity (‰).

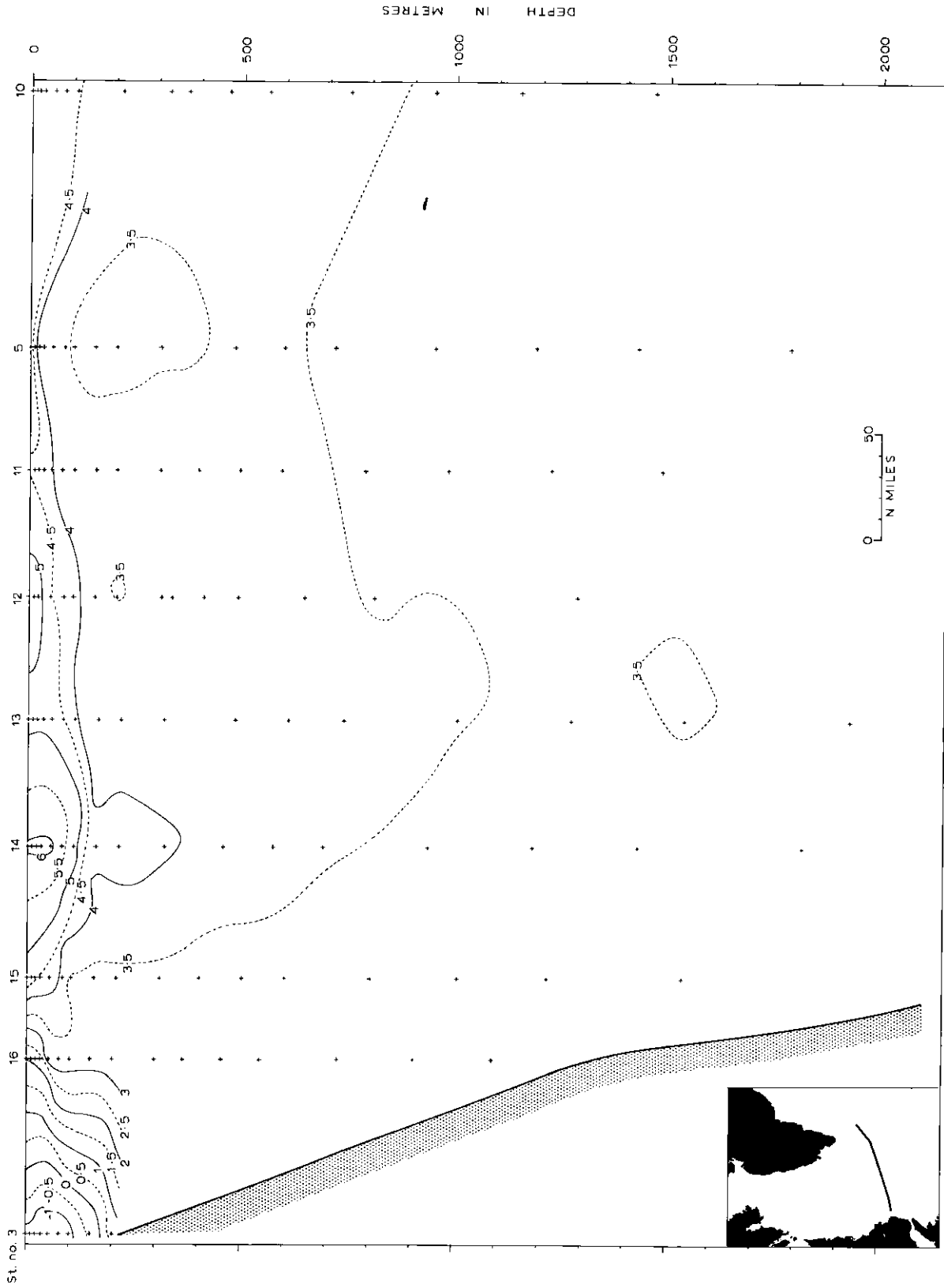


Chart 104. NORWESTLANT 2: Section J: 28 May-2 June: Temperature (°C).

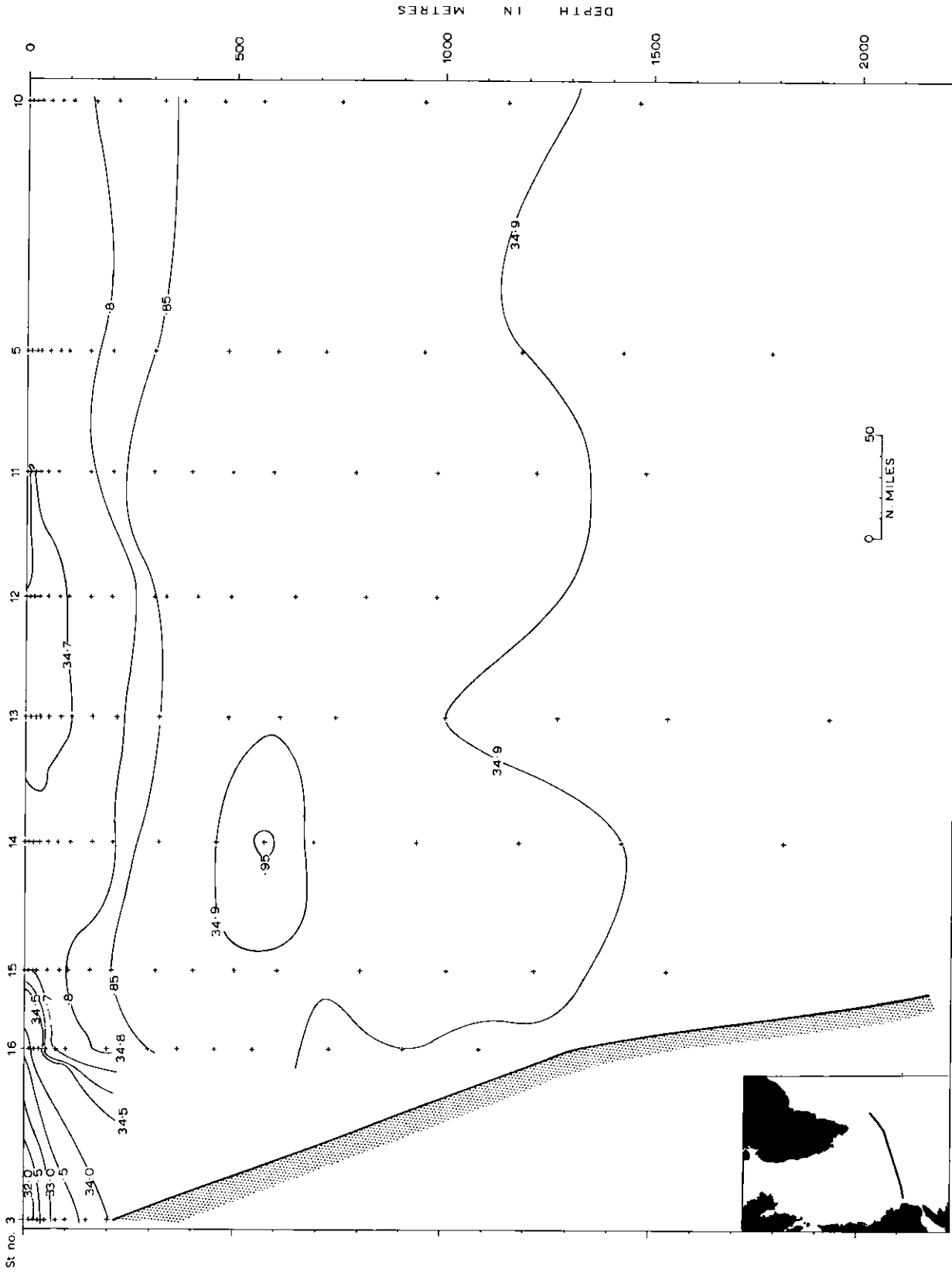


Chart 105, NORWESTLANT 2: Section J: 28 May-2 June: Salinity (‰).



Chart 106. NORWESTLANT 2: Section 9: 26 May-3 June: Temperature (°C).

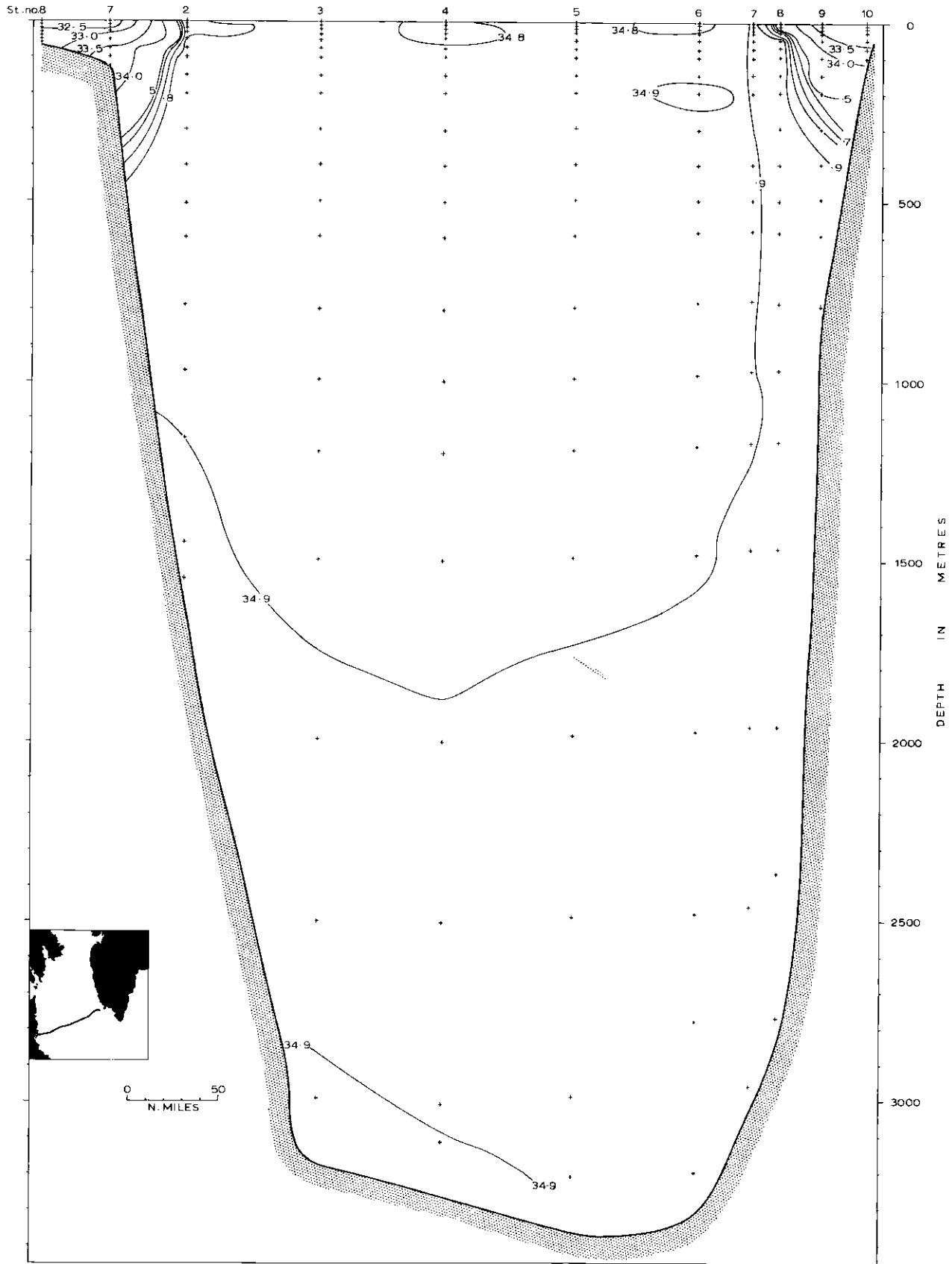


Chart 107. NORWESTLANT 2: Section 9: 26 May-3 June: Salinity (‰).





Chart 108. NORWESTLANT 2: Section 10: 29 May-5 June: Temperature (°C).

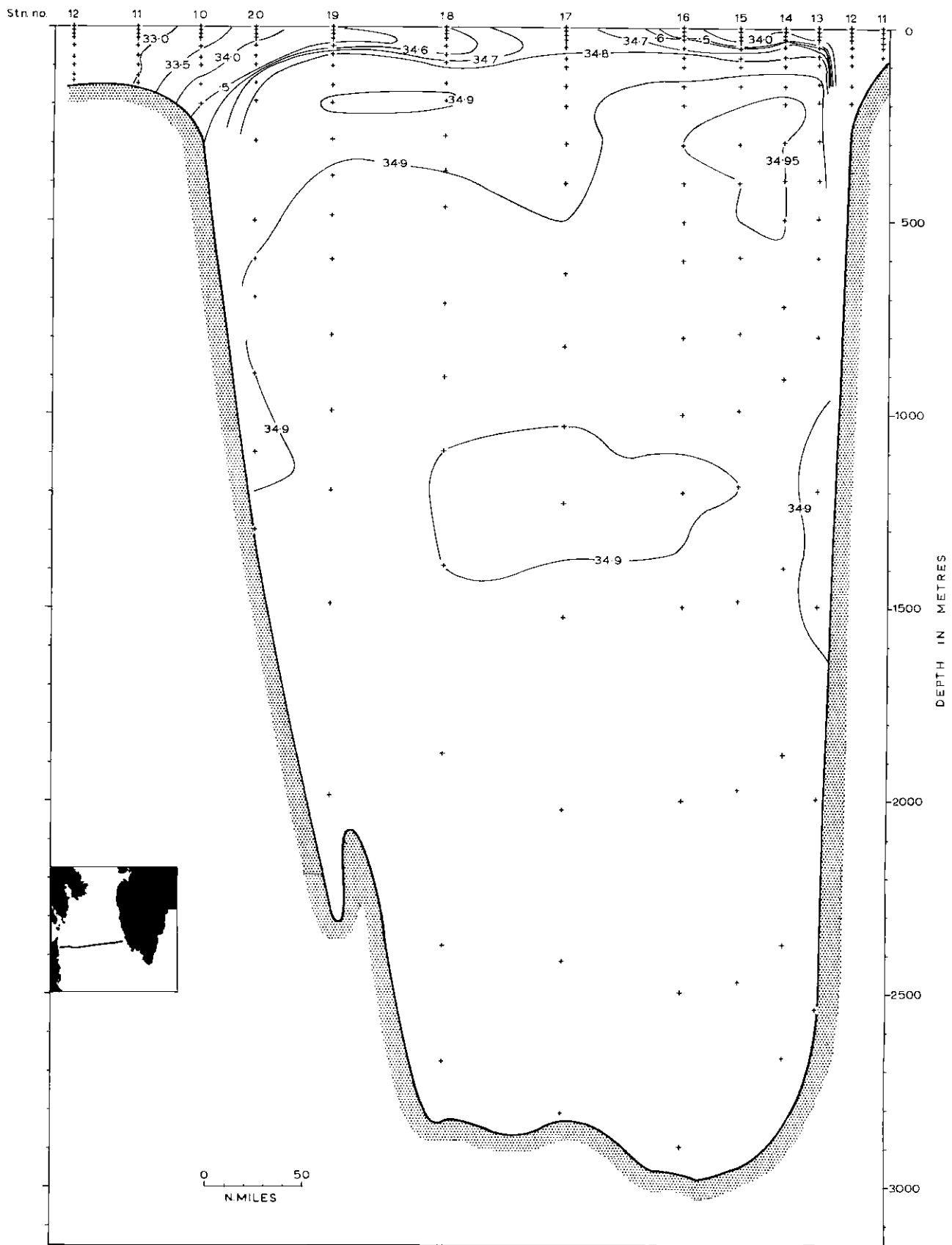


Chart 109. NORWESTLANT 2: Section 10: 29 May-5 June: Salinity (‰).

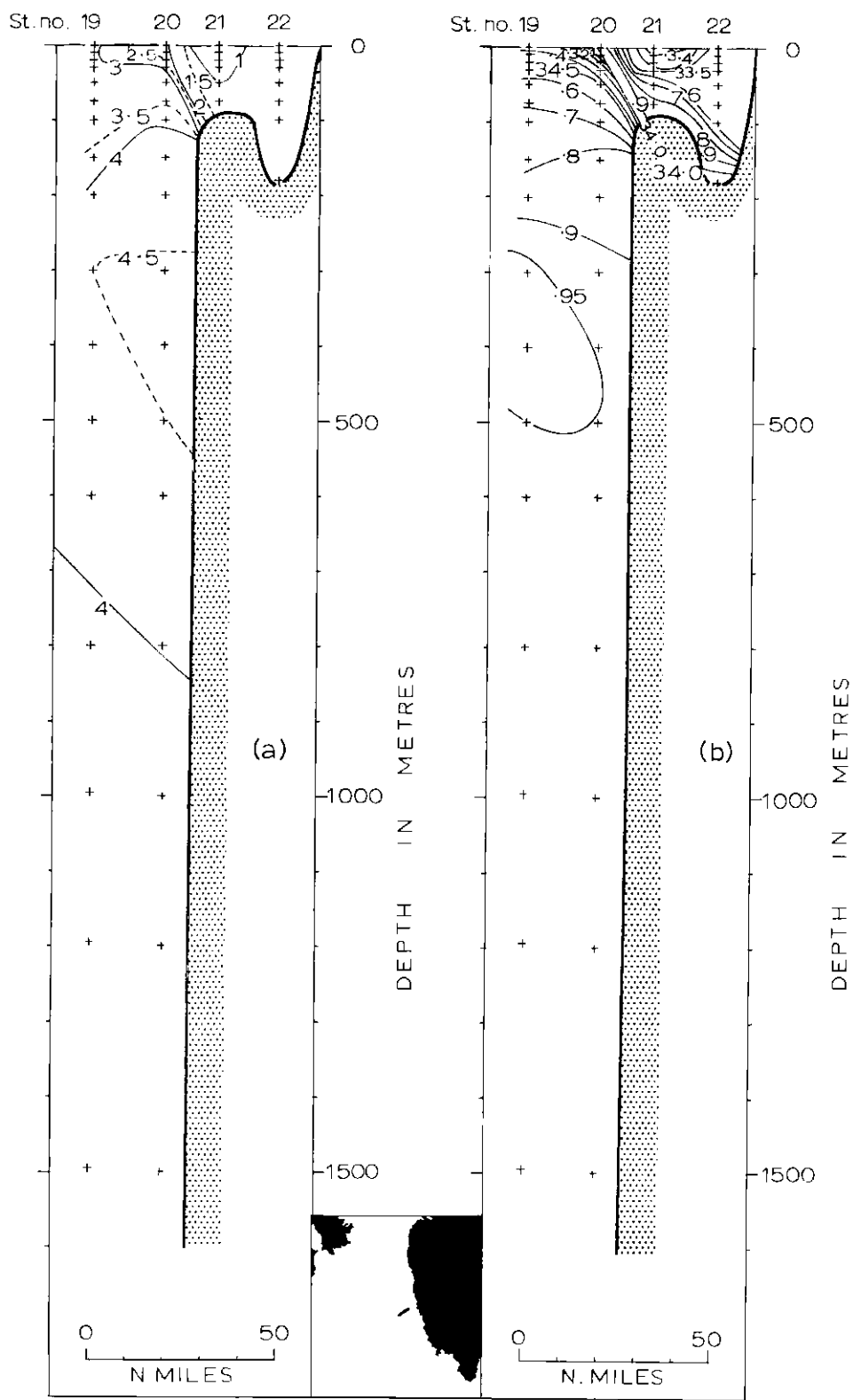


Chart 110. NORWESTLANT 2: Section K: 3-4 June: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

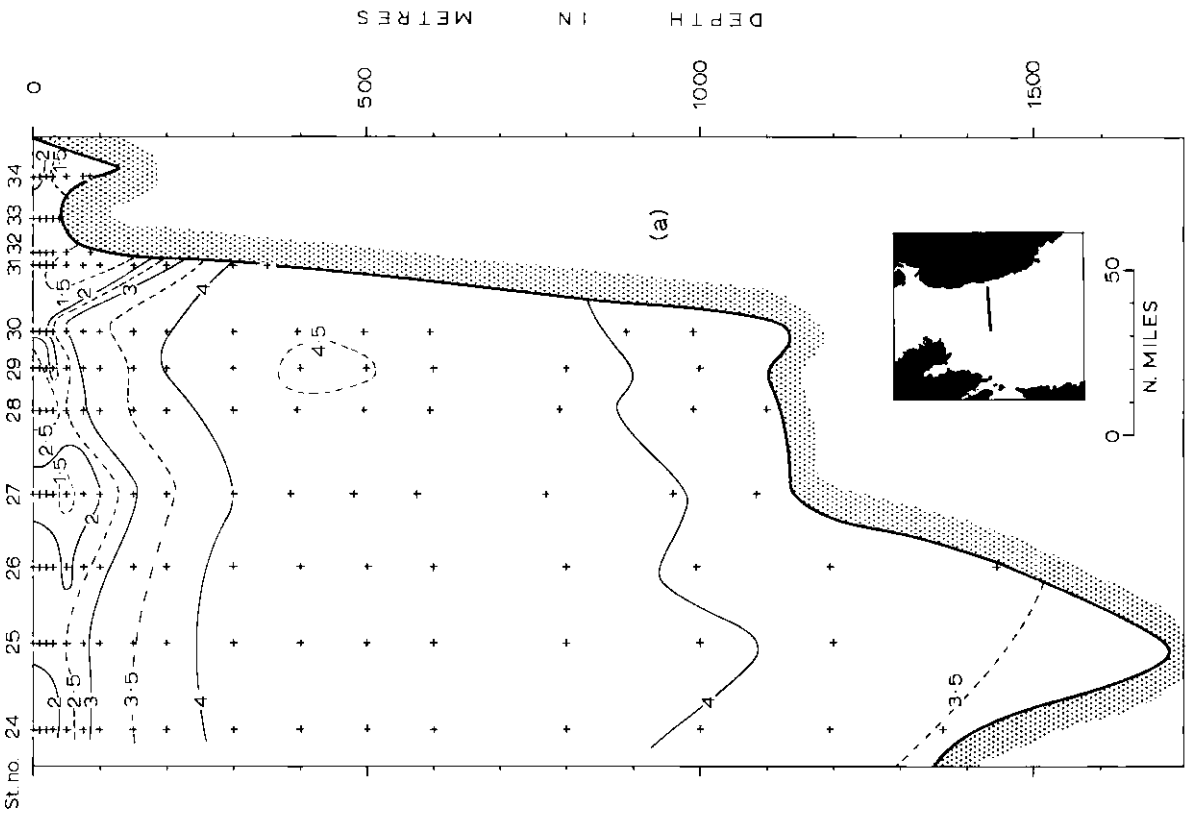


Chart 111. NORWESTLANT 2: Section 11: 9-11 June: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $^{\circ}/_{\text{oo}}$ ).

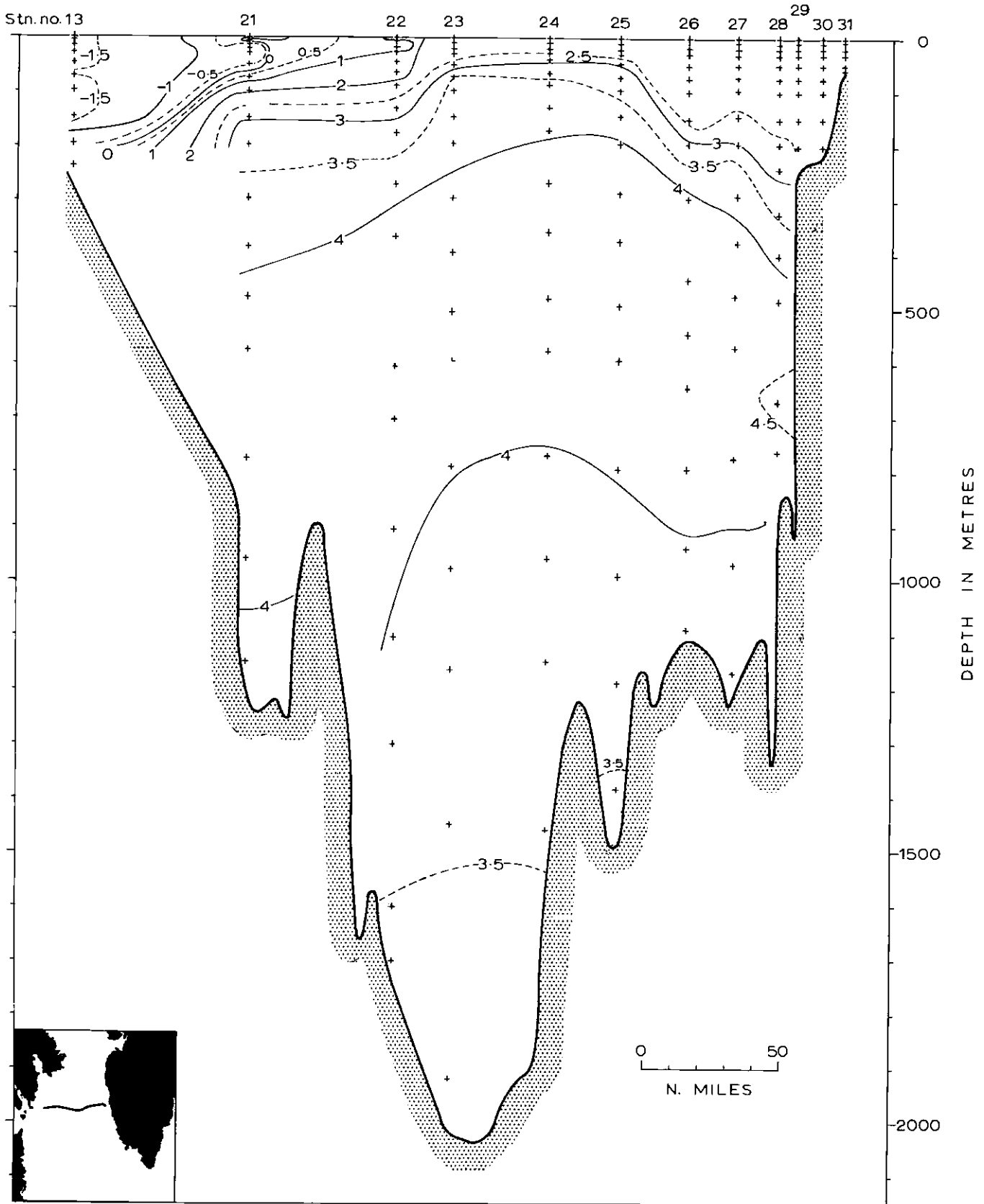


Chart 112. NORWESTLANT 2: Section 11: 31 May-7 June: Temperature (°C).

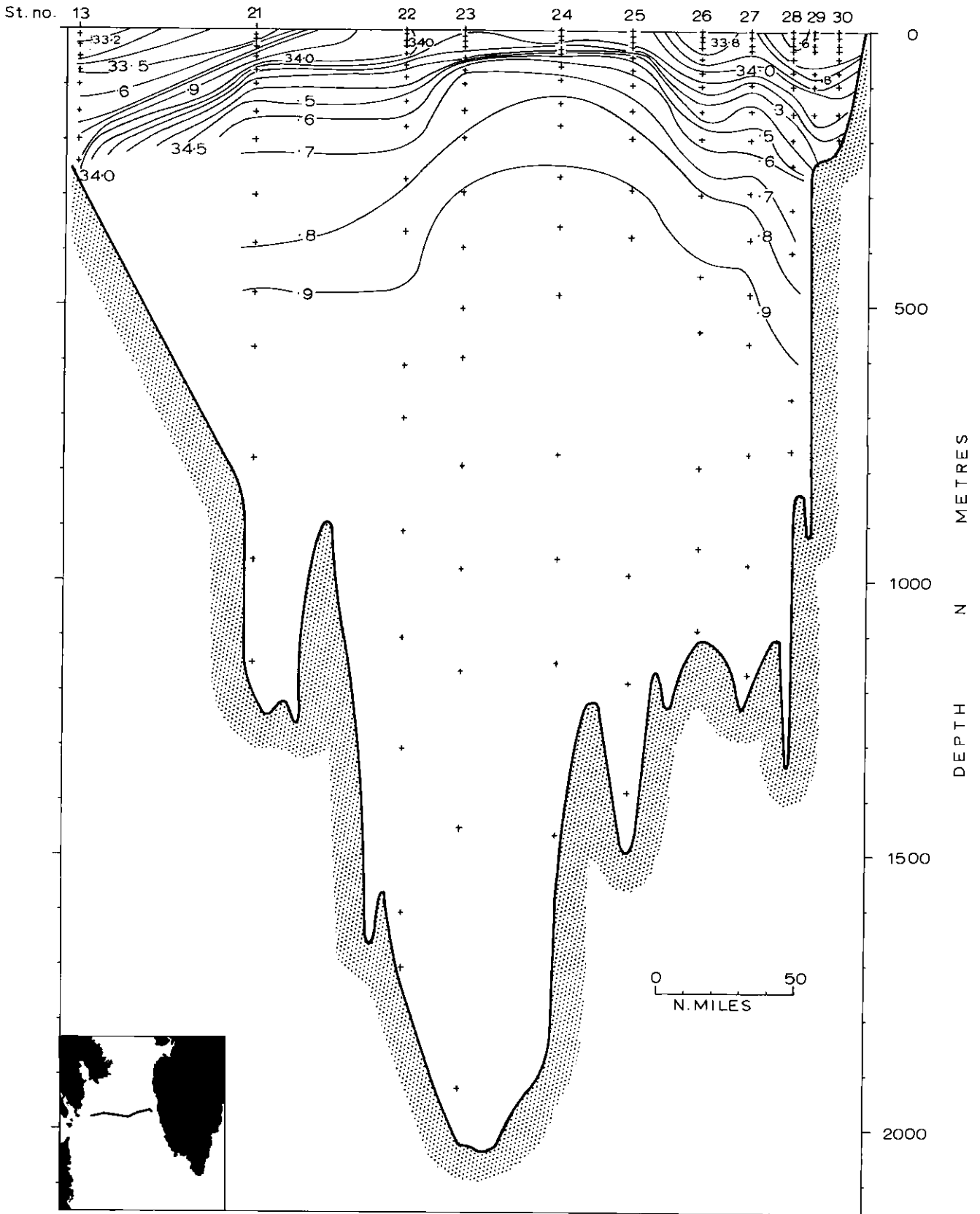


Chart 113. NORWESTLANT 2: Section 11: 31 May-7 June: Salinity (‰).

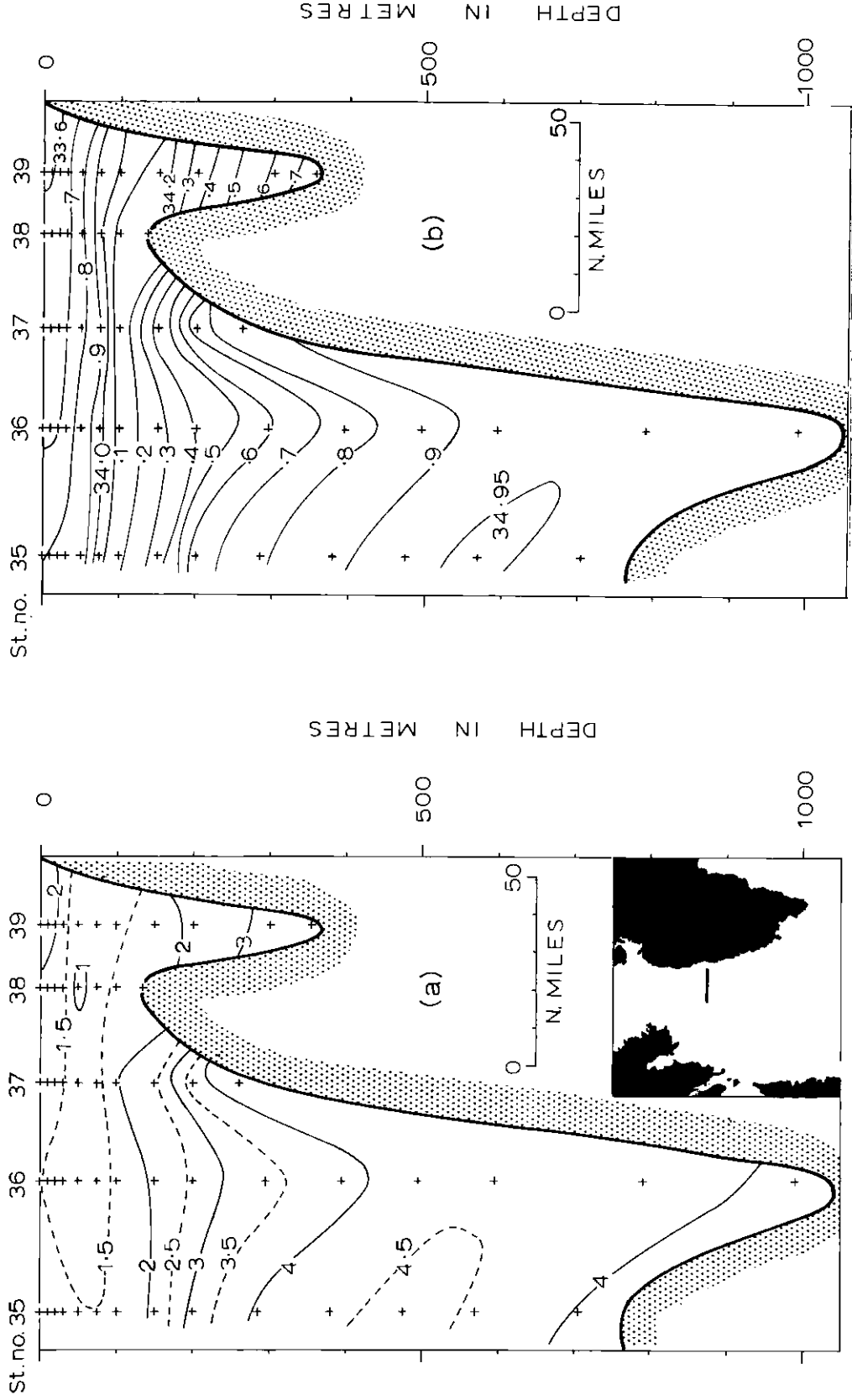


Chart 114. NORWESTLANT 2: Section 12: 13-14 June: (a) Temperature (°C); (b) Salinity (‰).

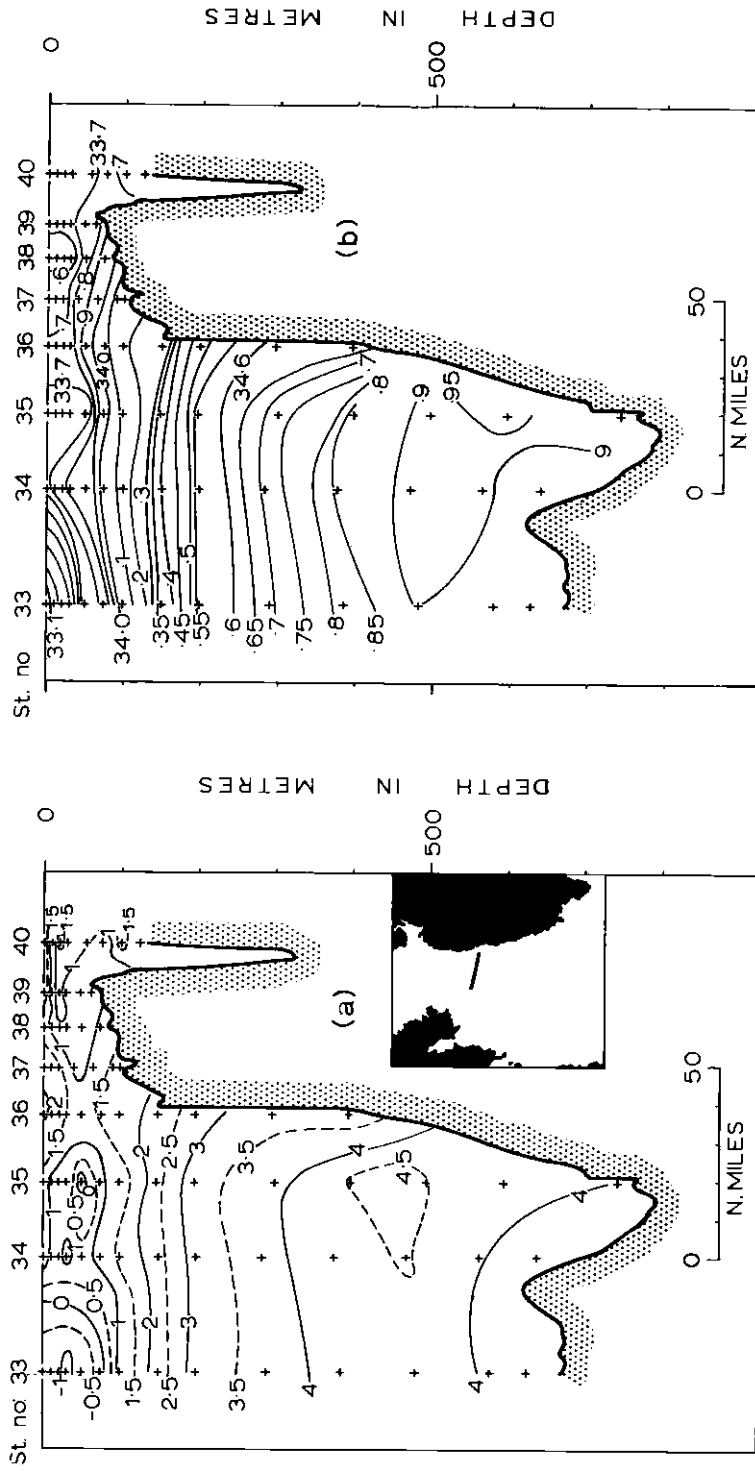


Chart 115. NORWESTLANT 2: Section 13: 7-8 June: (a) Temperature (°C); (b) Salinity (‰).



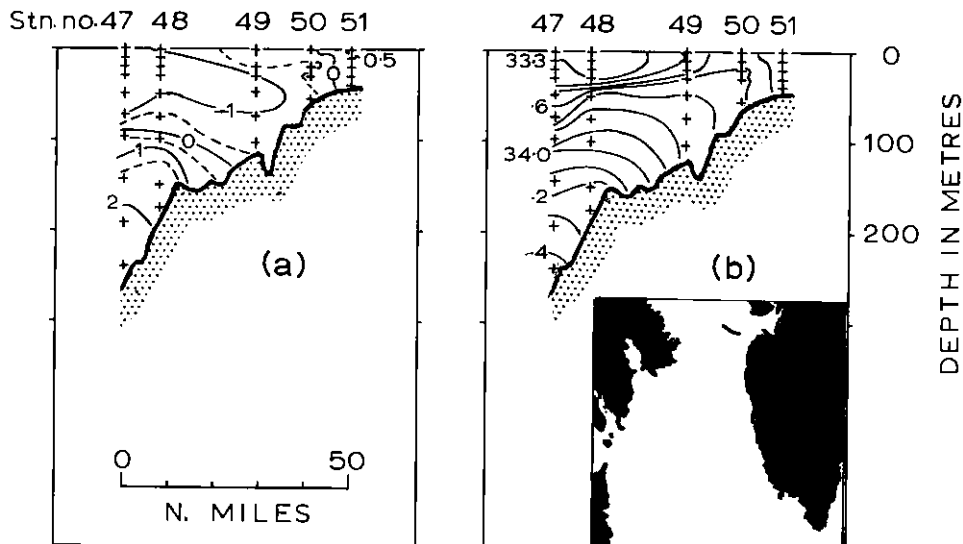
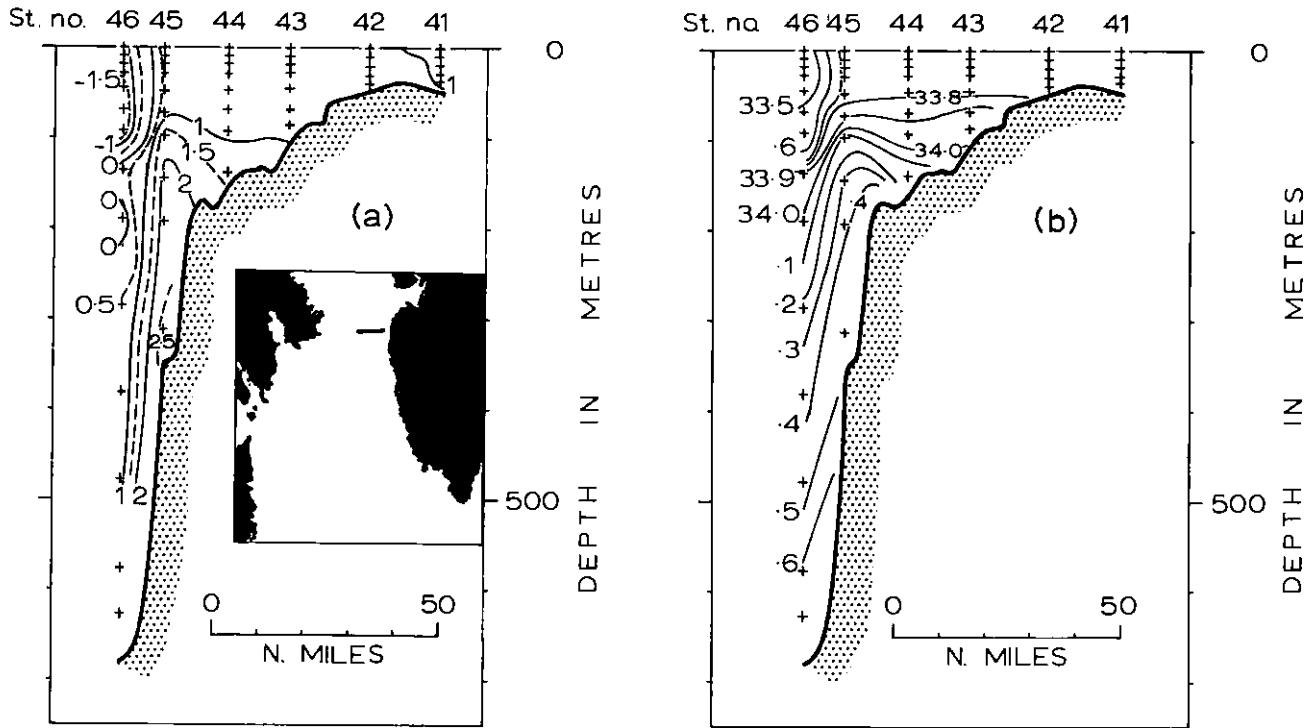


Chart 116. NORWESTLANT 2: Above: Section 14: 10 June. Below: Section 15: 11 June. (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

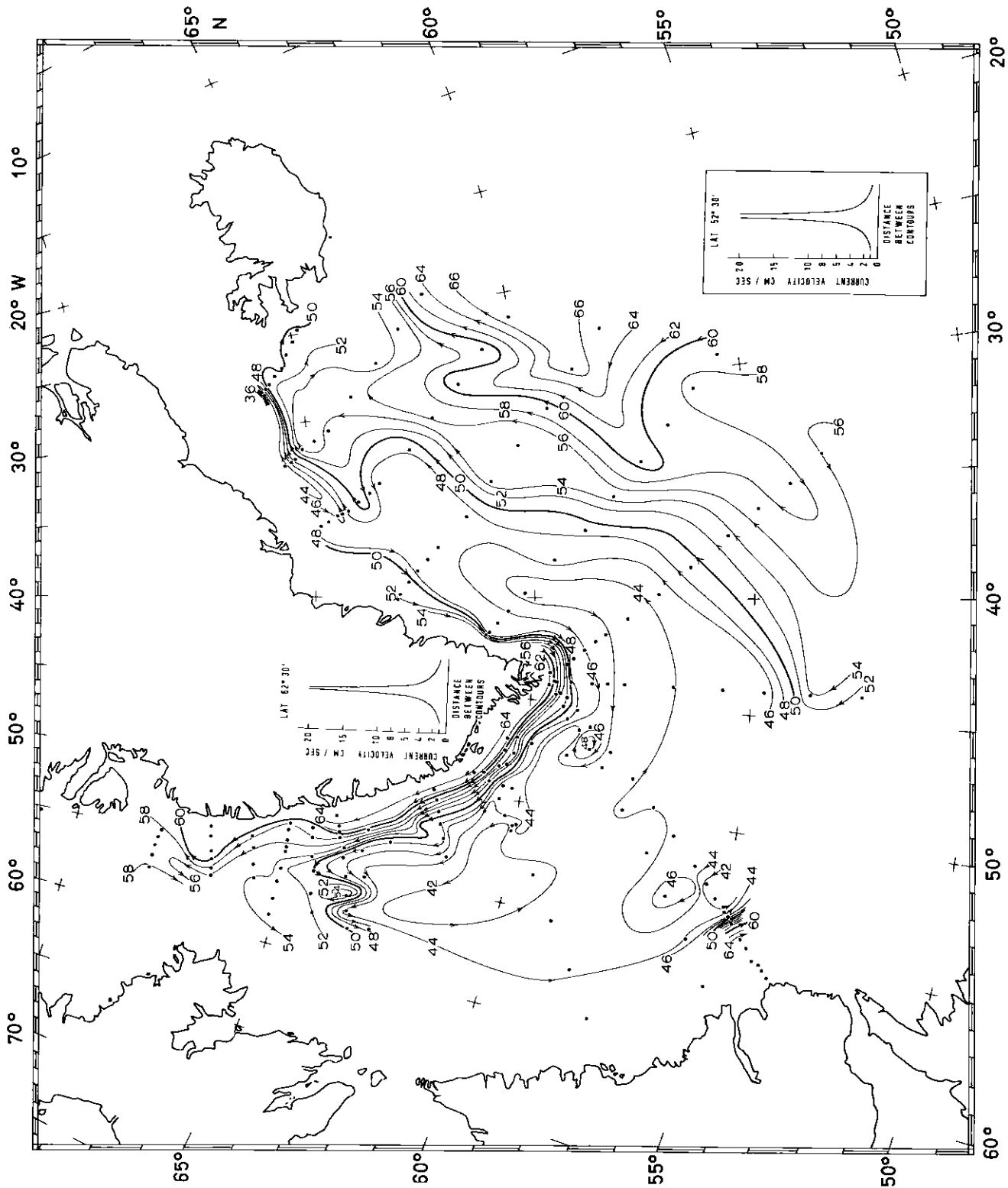


Chart 117. NORWESTLANT 3: 30 June-3 August: Dynamic topography of the sea surface relative to the pressure surface at 1,000 m. (Units: Dyn cms).

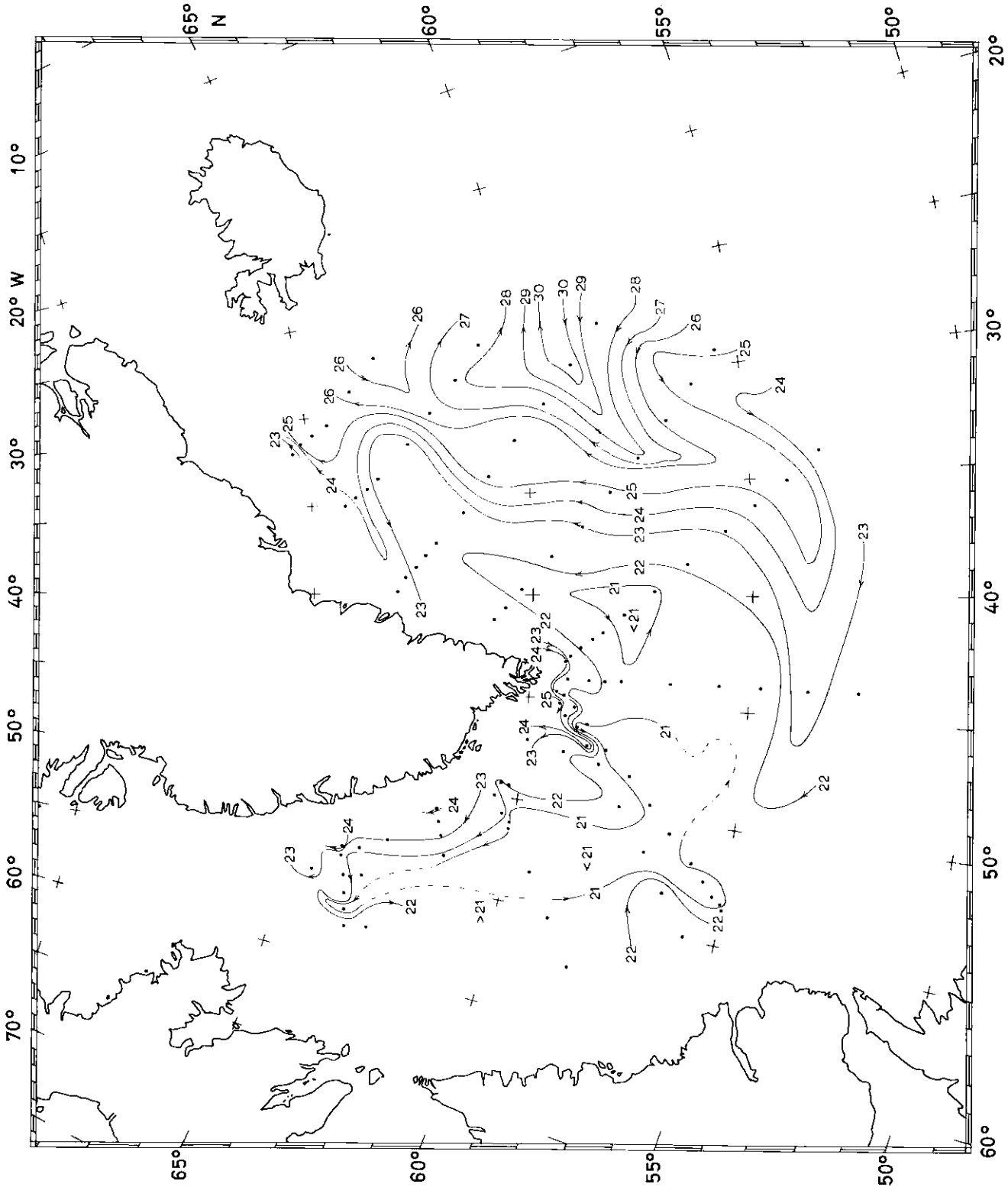


Chart 118. NORWESTLANT 3: 30 June-3 August: Potential energy anomaly in units of  $10^8$  ergs/cm<sup>2</sup> relative to the pressure surface at 1,000 m. Transport between contours is about 1 million metric tons per second.

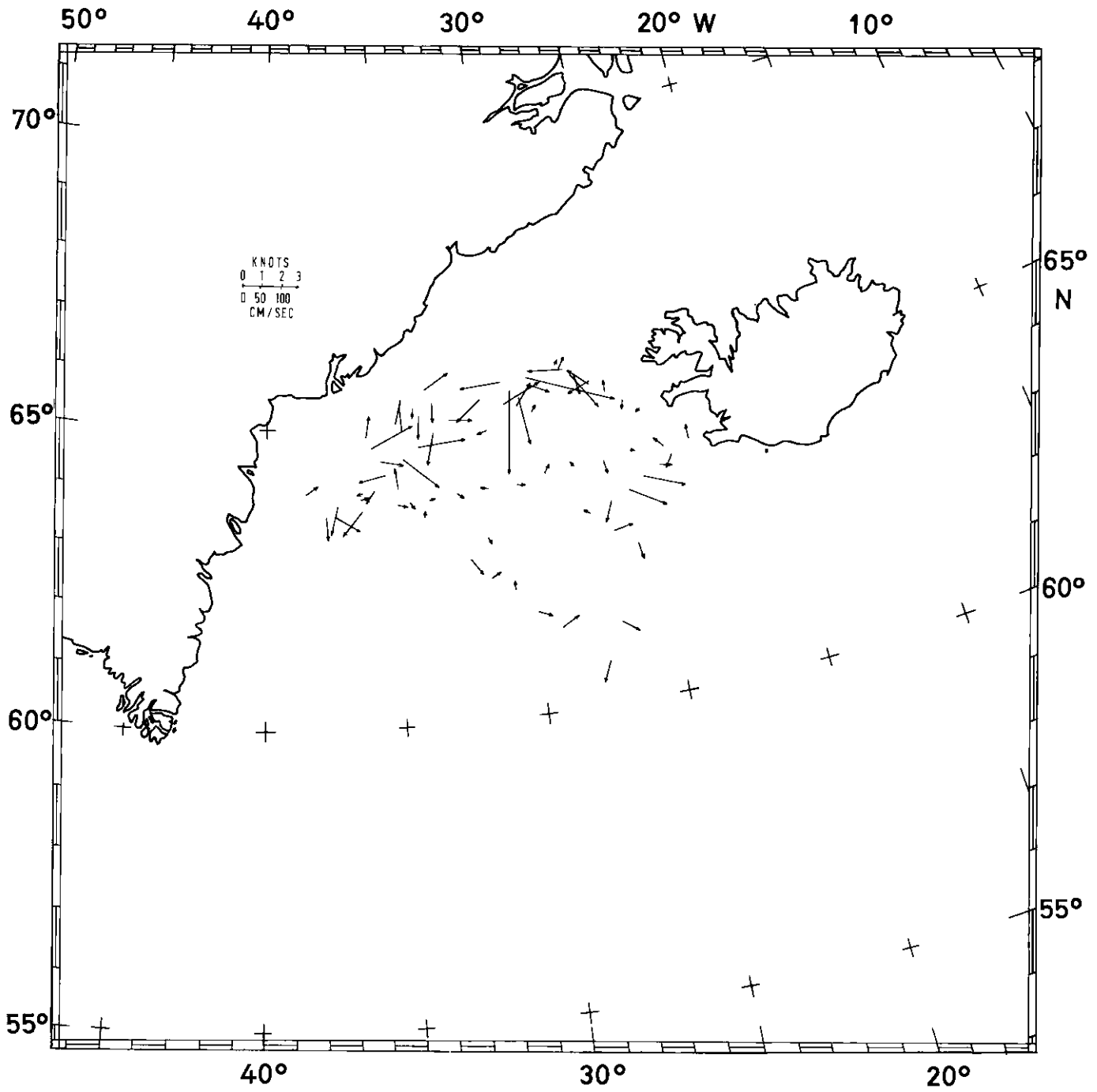


Chart 119. NORWESTLANT 3: 2-18 July: GEK observations.

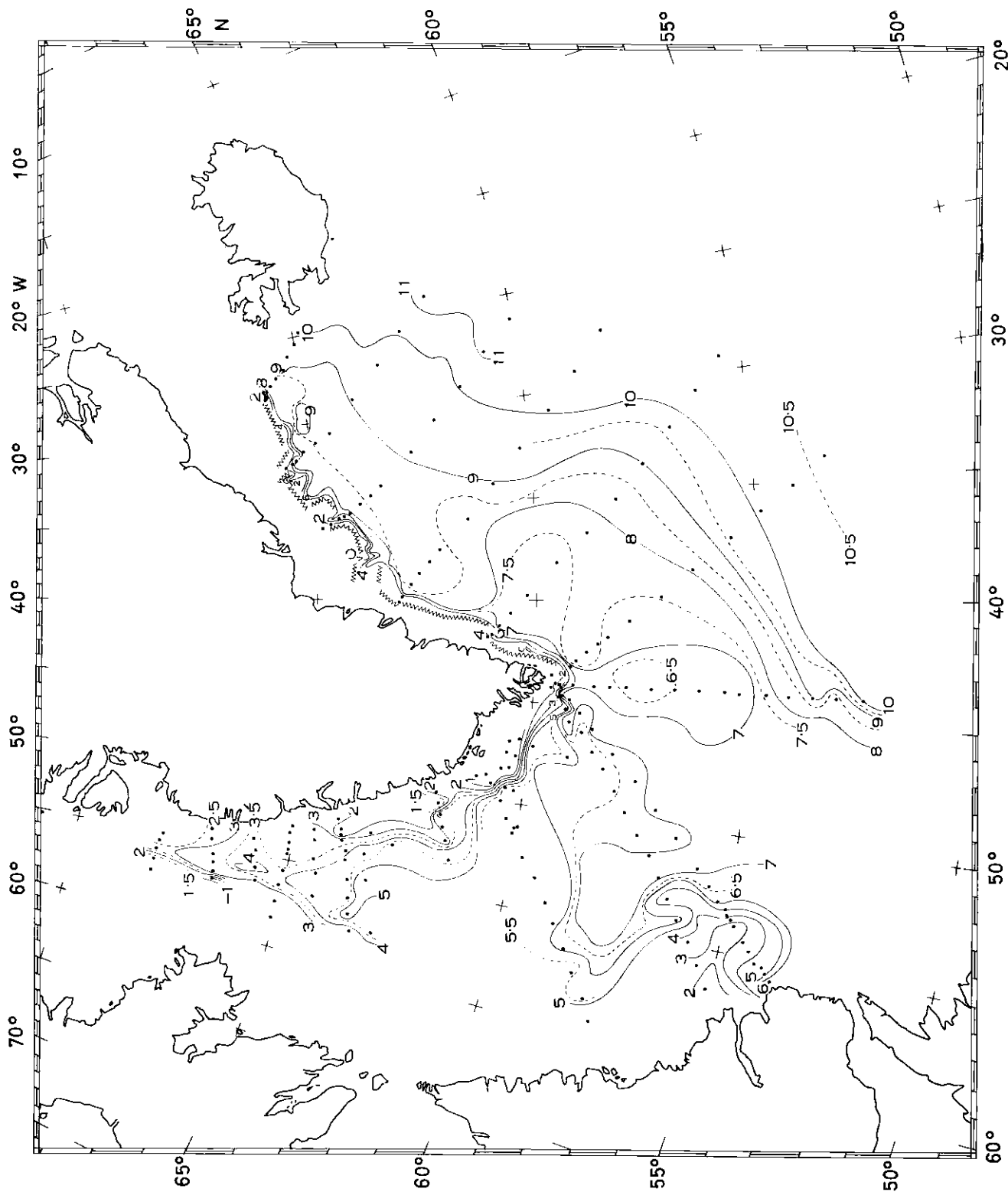


Chart 120. NORWESTLANT 3: 30 June-3 August: Temperature (°C) at 0 m.

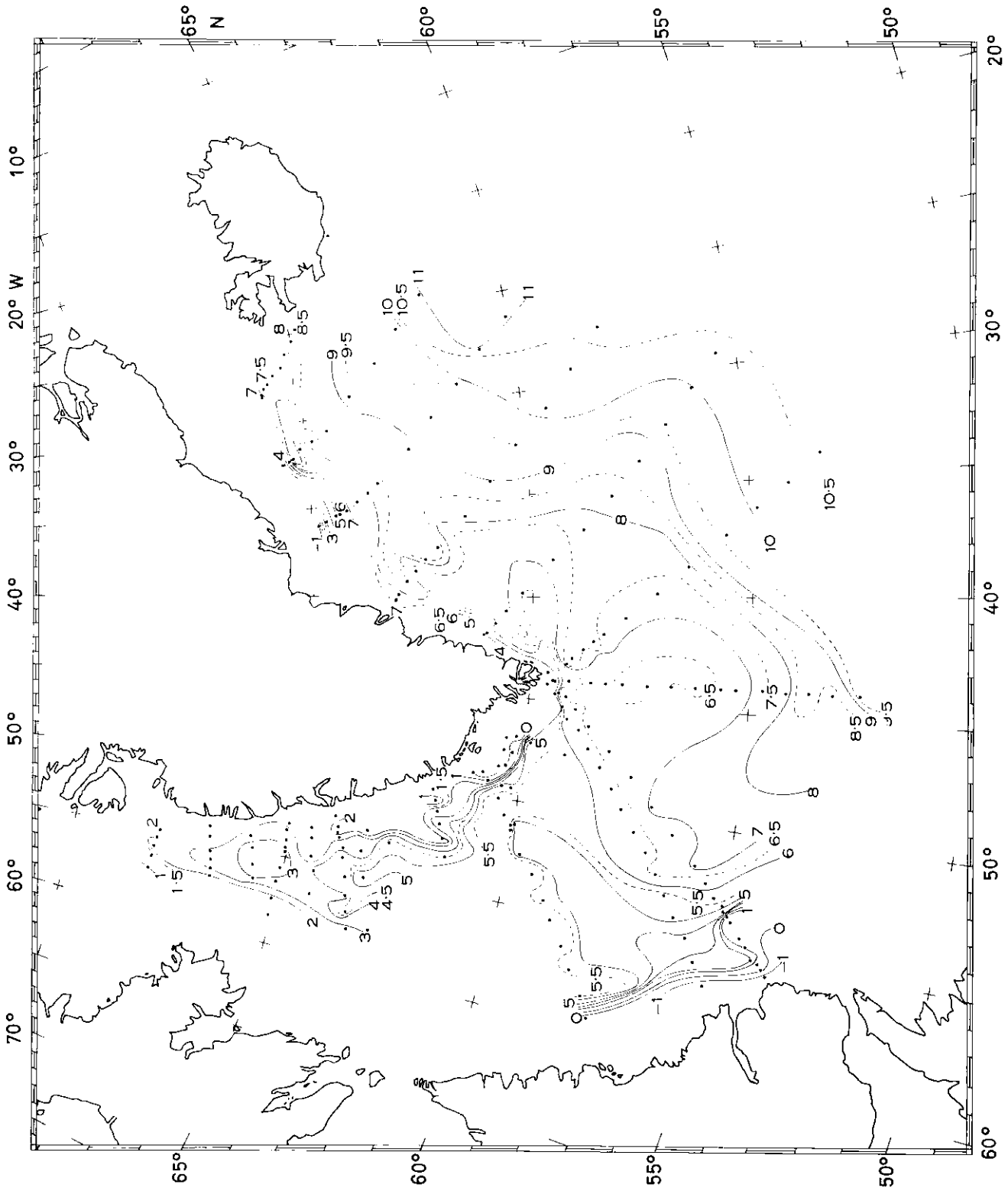


Chart 121. NORWESTLANT 3: 30 June-3 August: Temperature (°C) at 20 m.

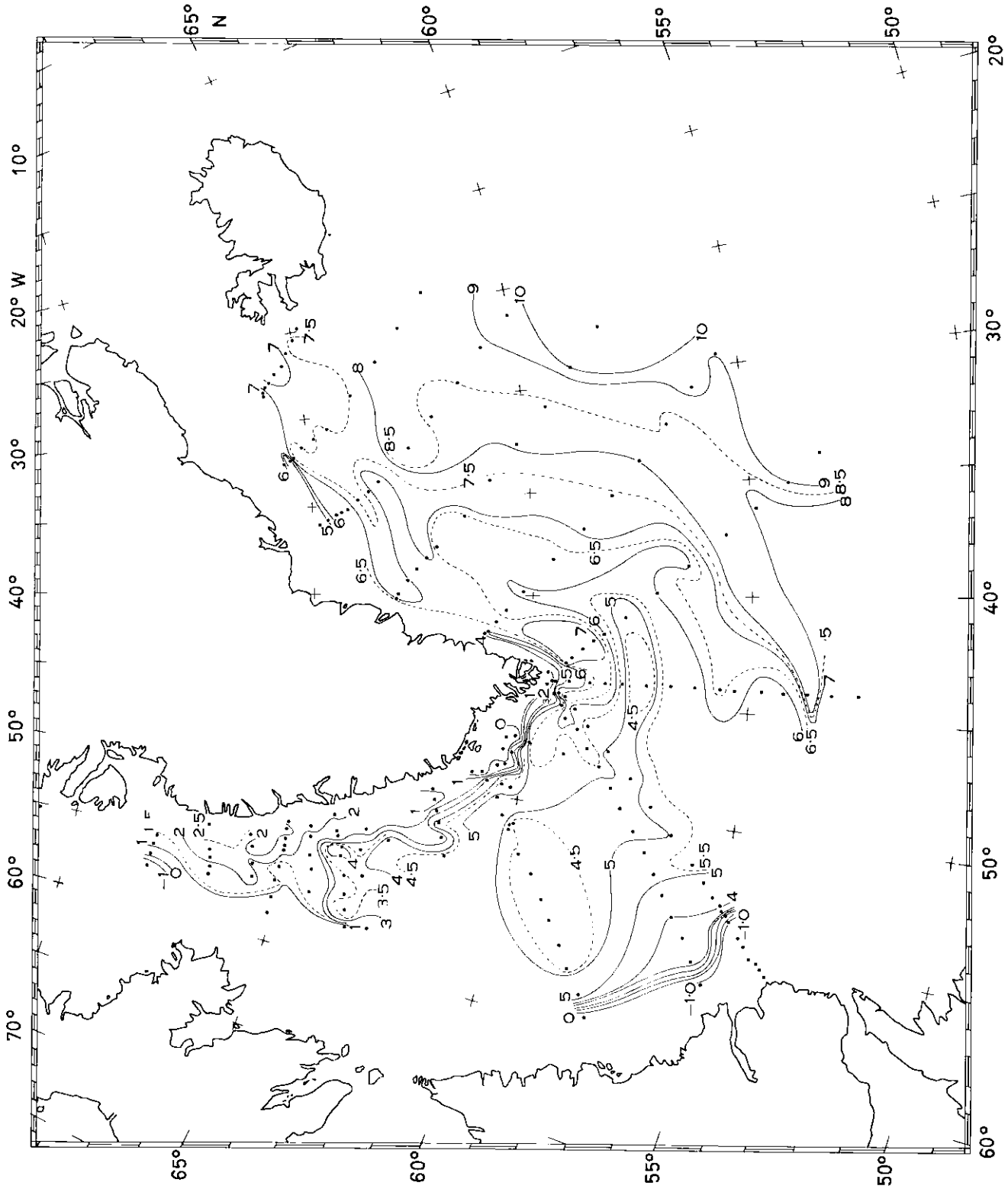


Chart 122. NORWESTLANT 3: 30 June-3 August: Temperature (°C) at 50 m.

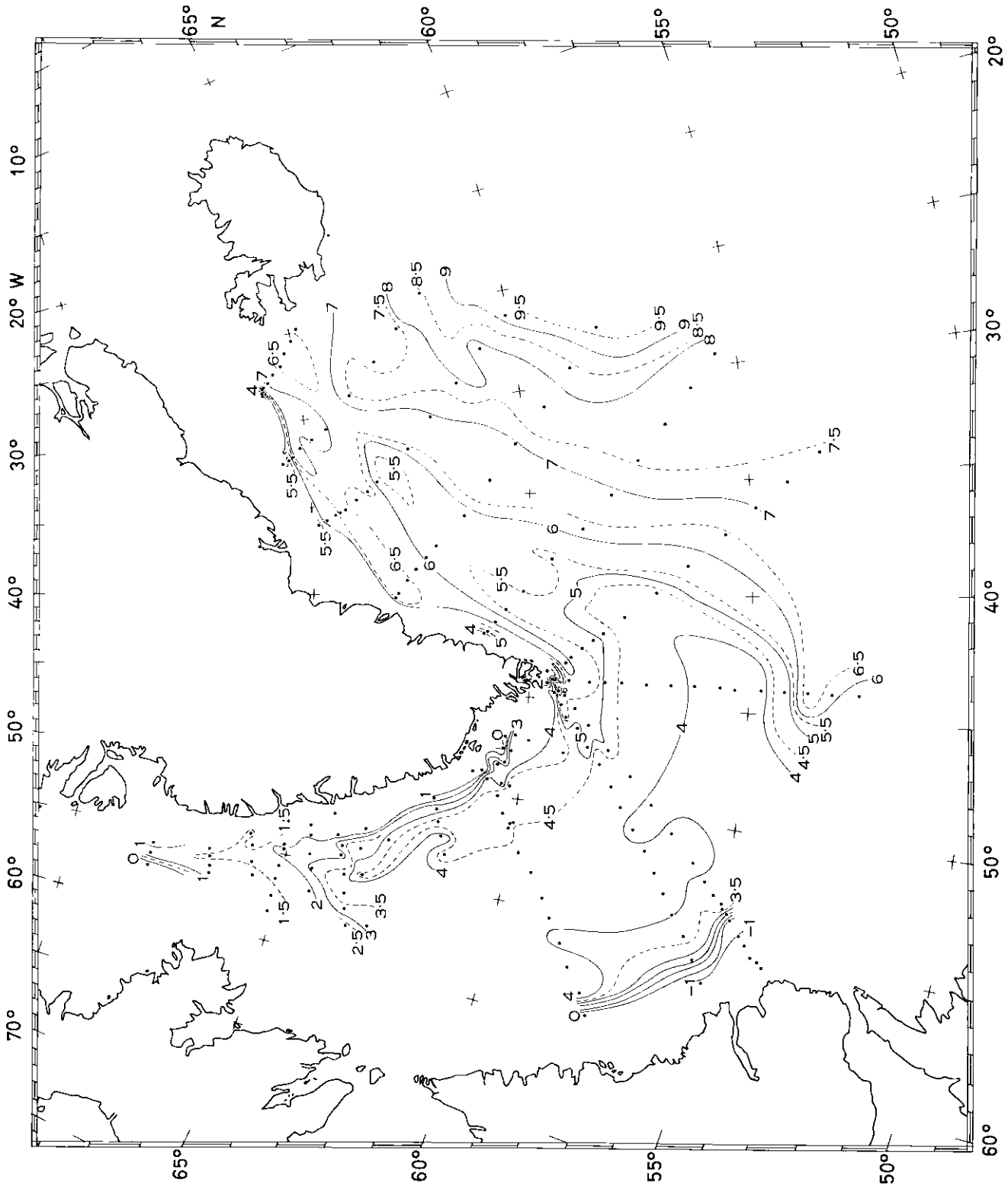


Chart 123. NORWESTLANT 3: 30 June-3 August: Temperature (°C) at 100 m.



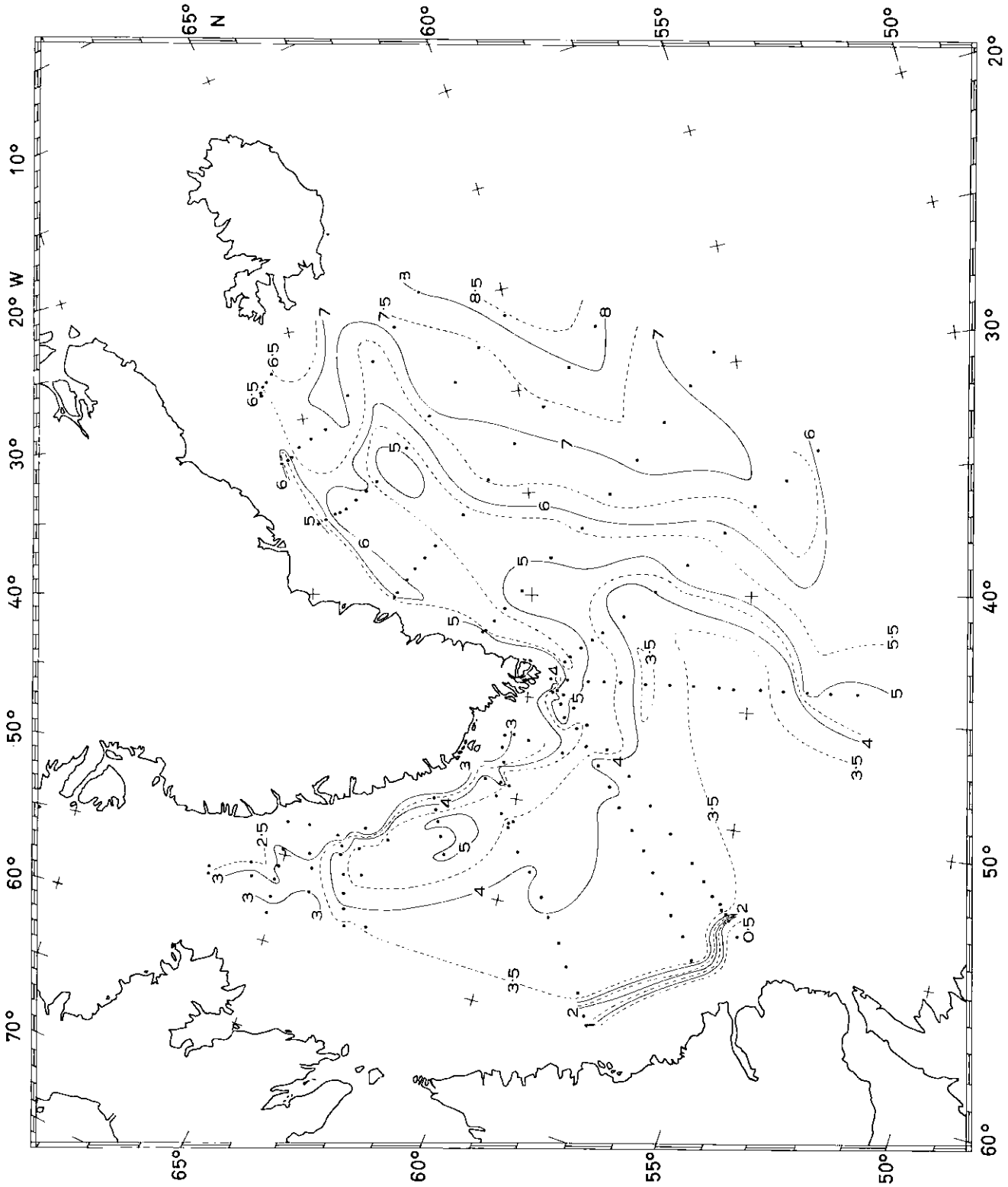


Chart 124. NORWESTLANT 3: 30 June-3 August: Temperature (°C) at 200 m.

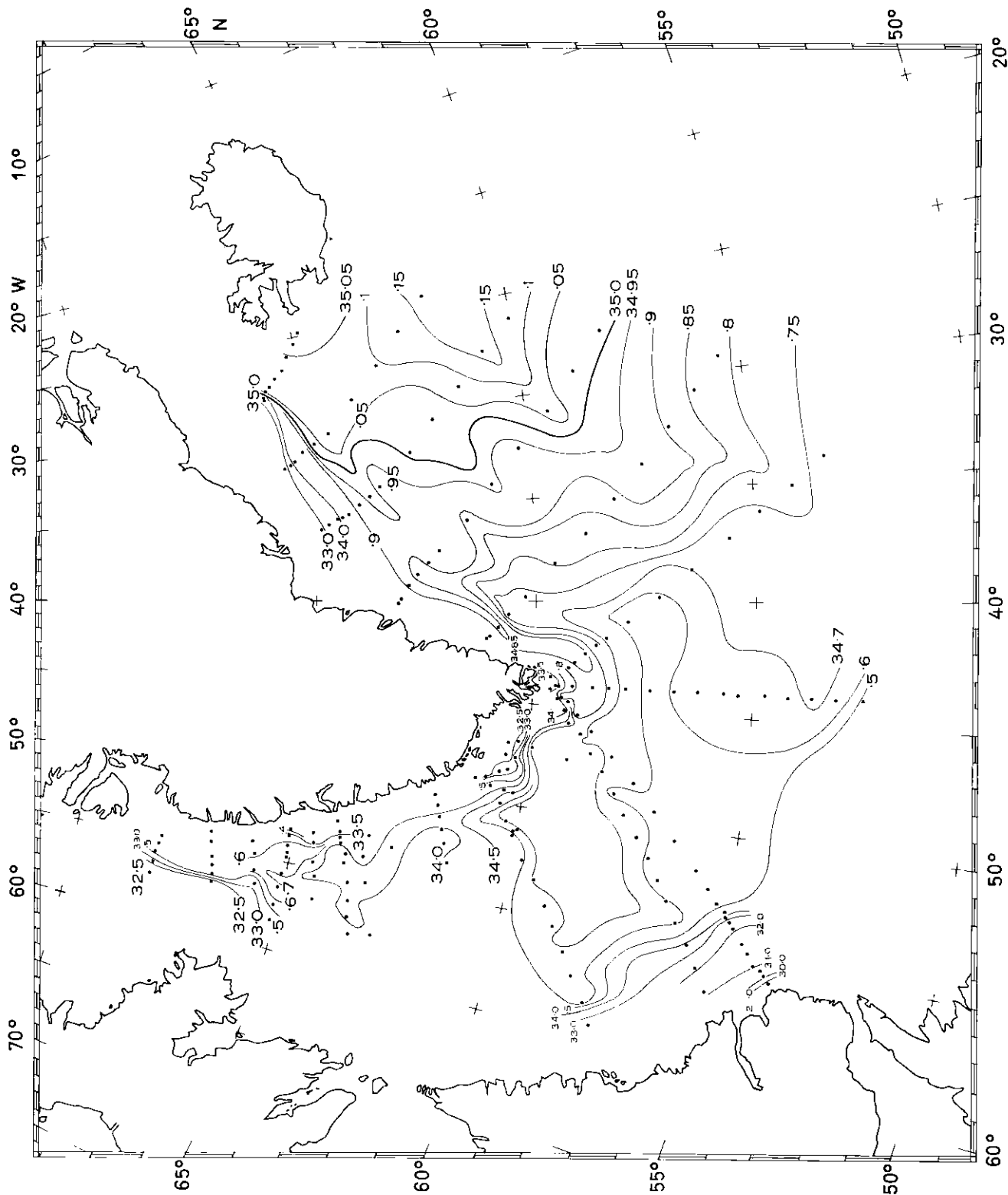


Chart 125. NORWESTLANT 3: 50 June-3 August: Salinity (‰) at 0 m.

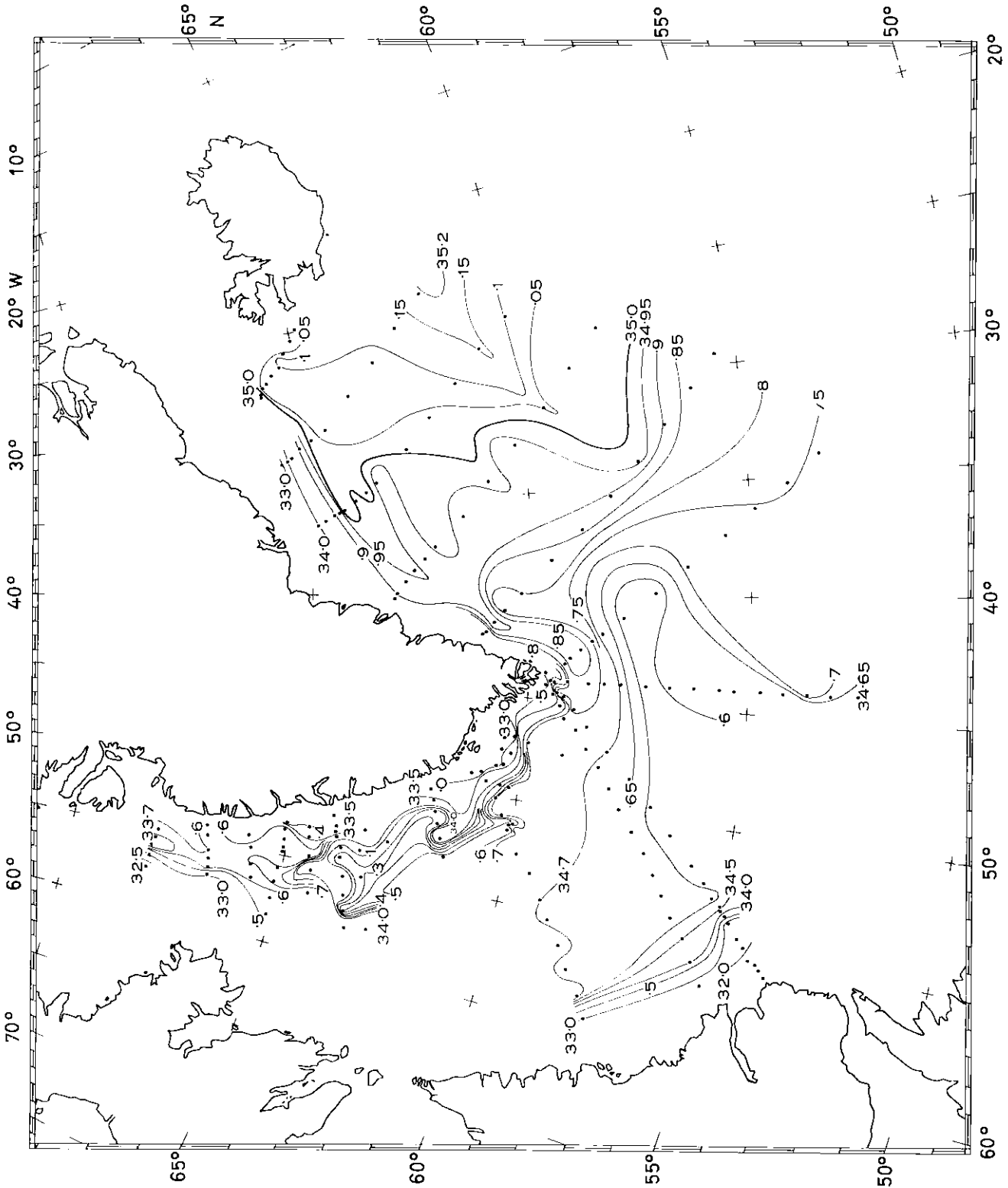


Chart 126. NORWESTLANT 3: 30 June-3 August: Salinity (‰) at 20 m.

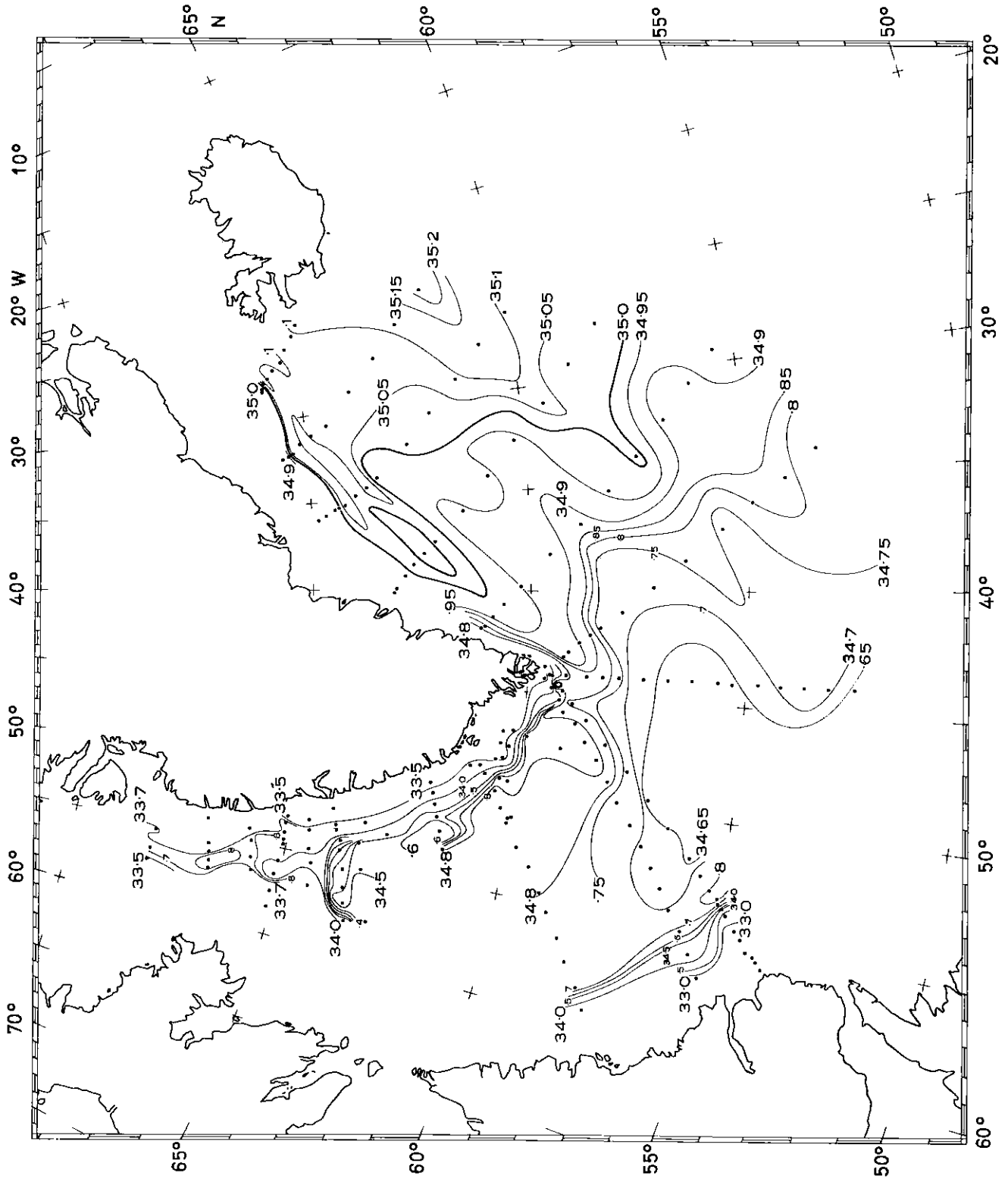


Chart 127. NORWESTLANT 3: 30 June-3 August: Salinity (‰) at 50 m.

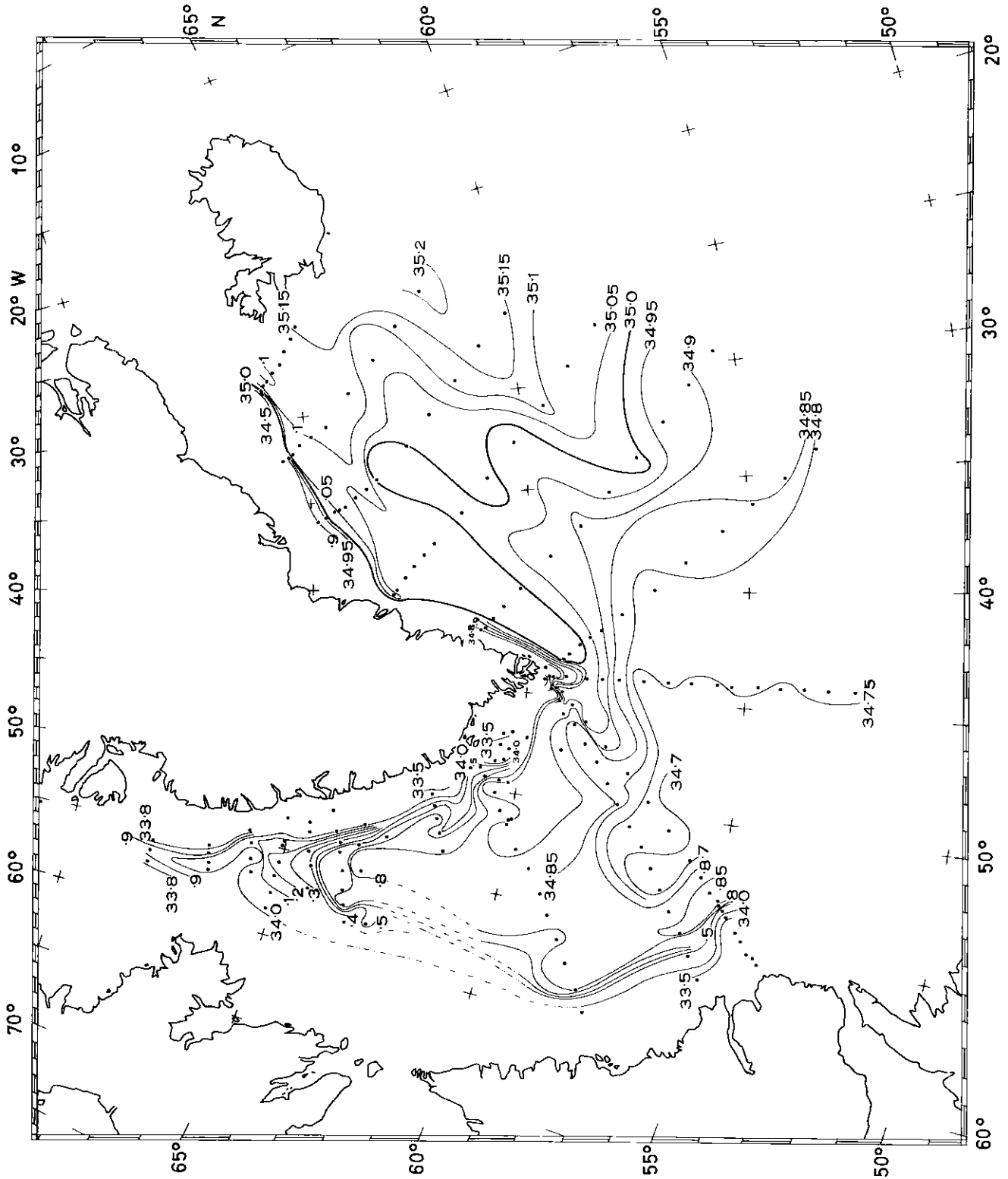


Chart 126. NORWESTLANT 3; 30 June-3 August: Salinity (‰) at 100 m.

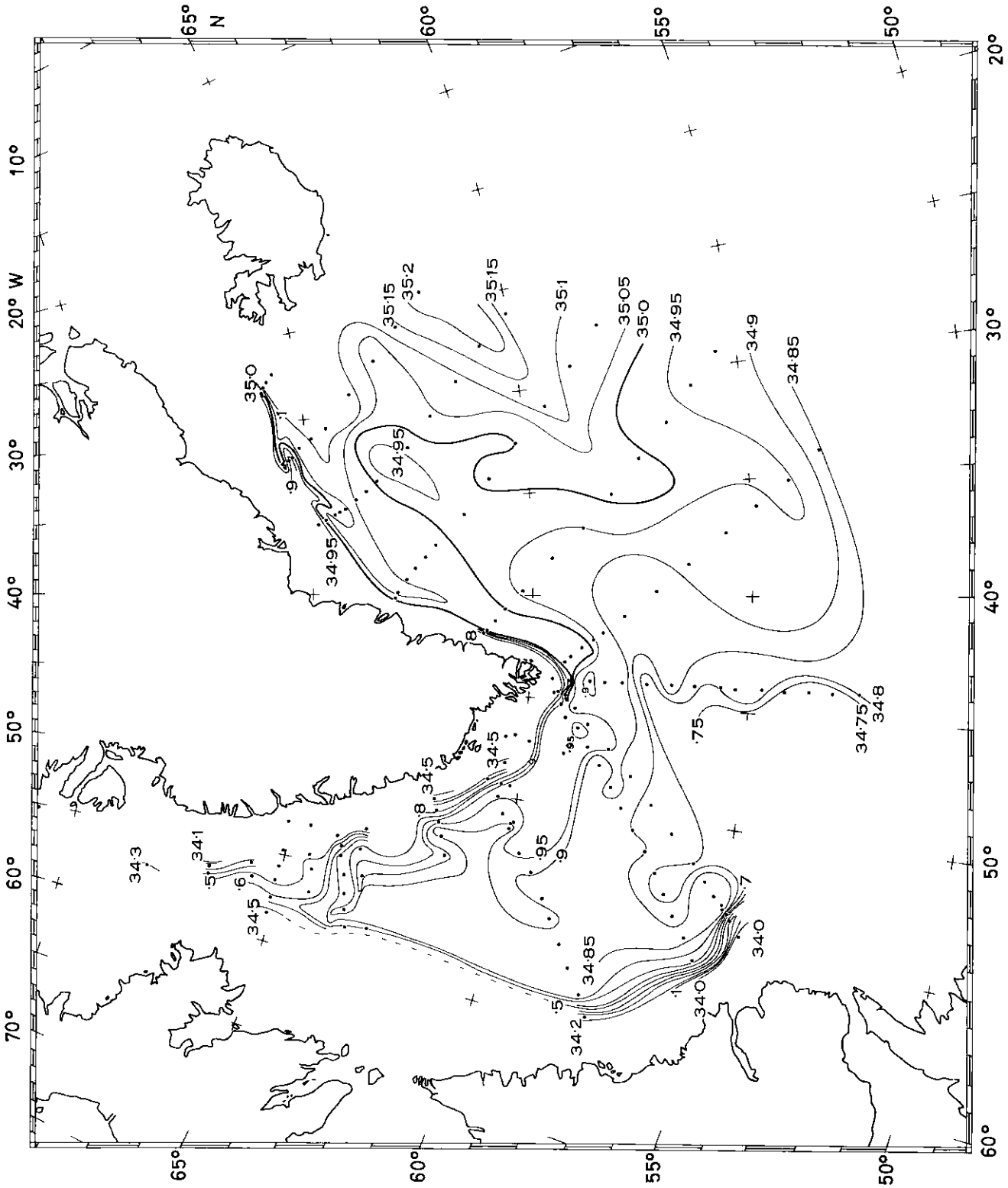


Chart 129. NORWESTLANT 3: 30 June-3 August: Salinity (‰) at 200 m.

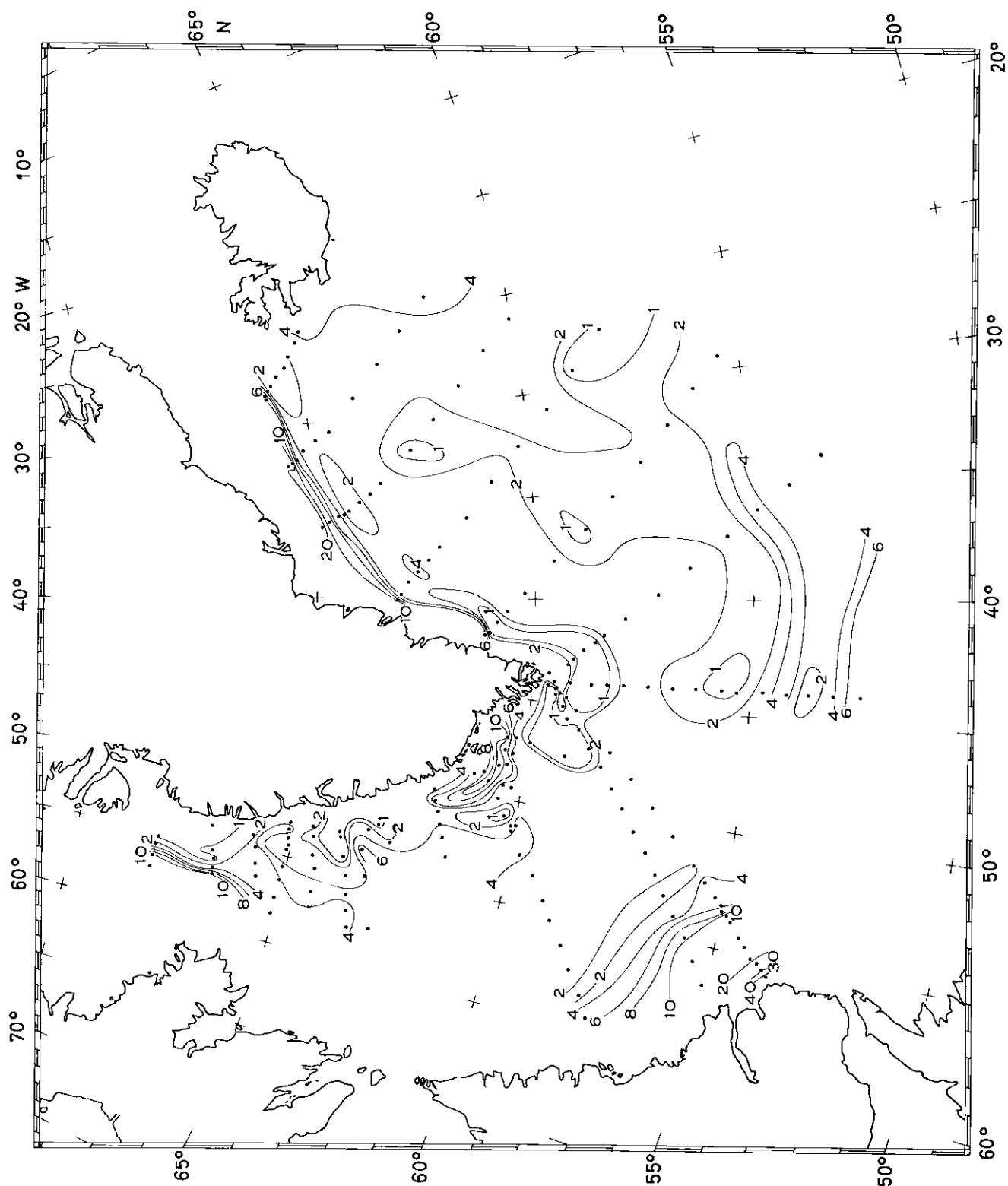


Chart 130. NORWESTLANT 3: 30 June-3 August: Stability:  $10 \times (50 \text{ m Sigma-t minus } 0 \text{ m Sigma-t})$ .

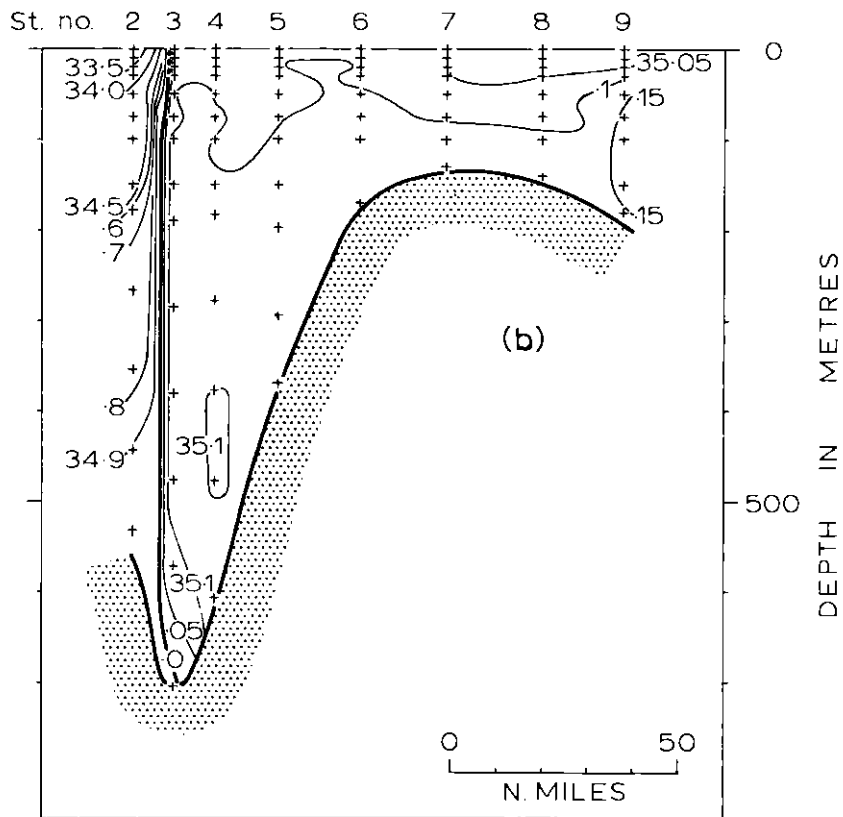
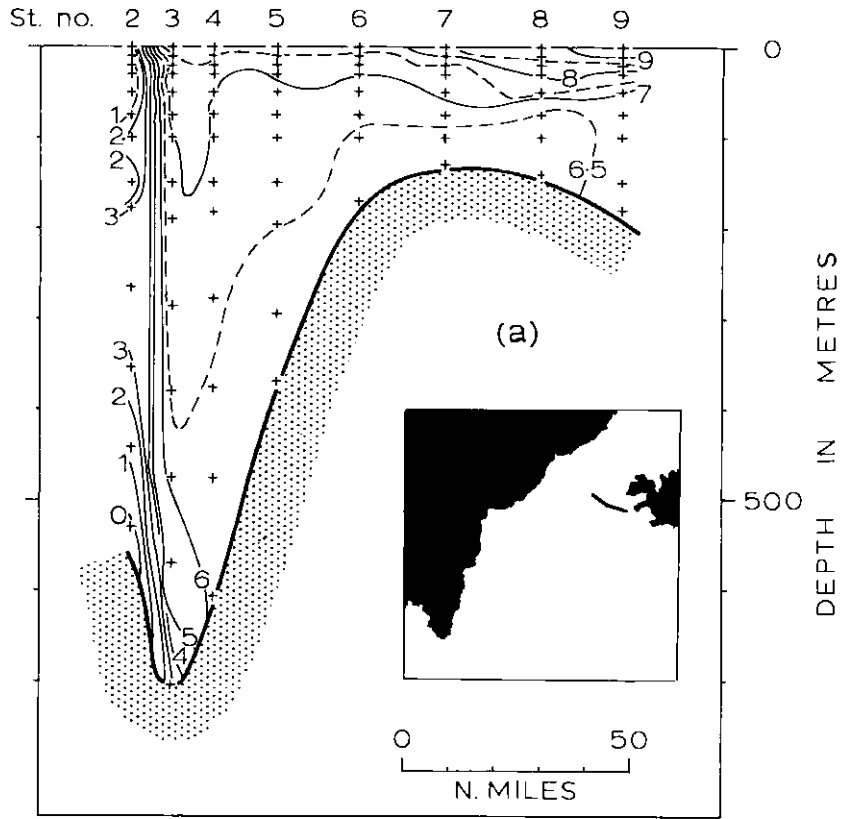


Chart 131. NORWESTLANT 3: Section 1: 30 June-1 July:  
 (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).



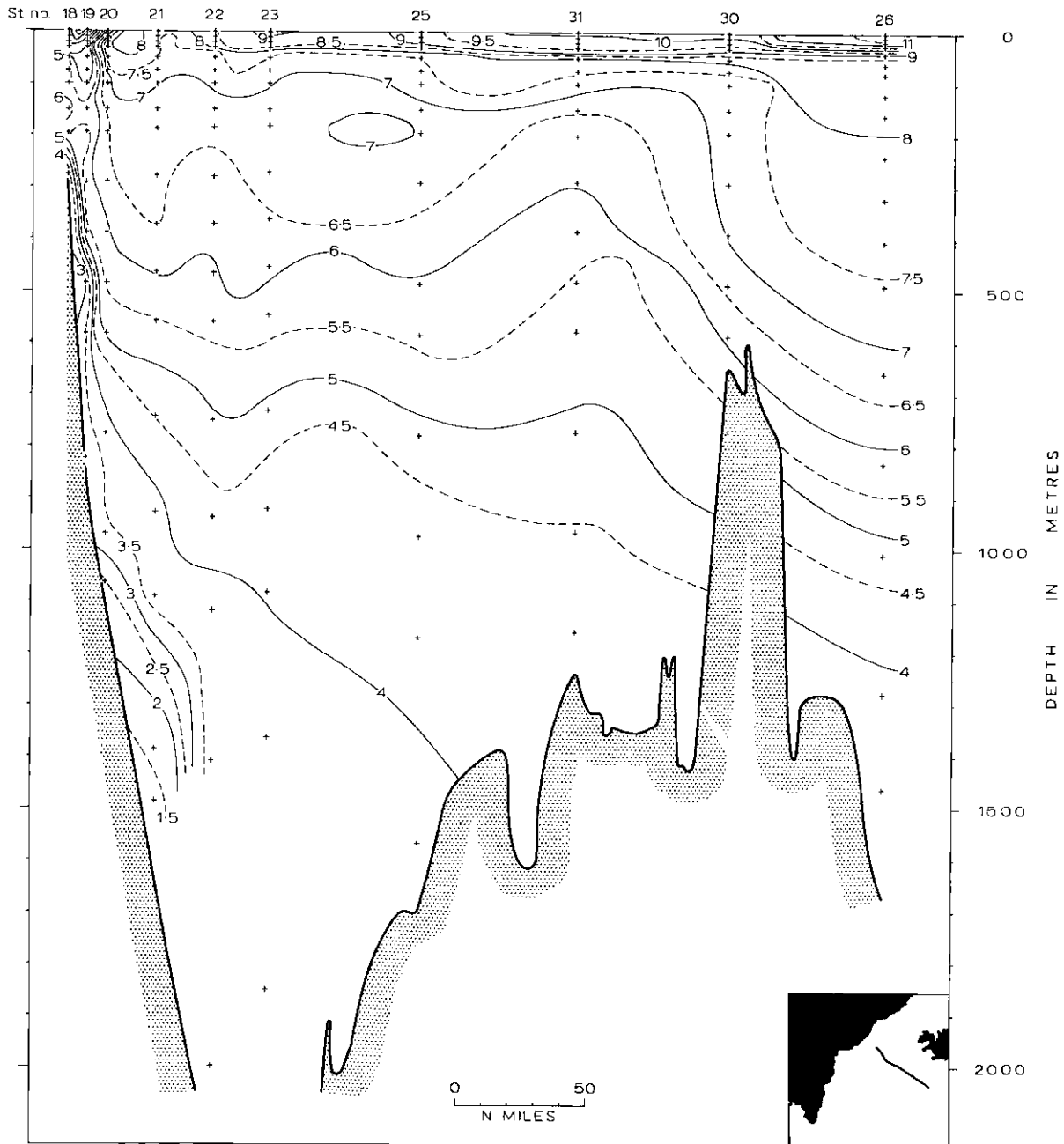


Chart 132. NORWESTLANT 3: Section 2: 8-18 July: Temperature (°C).

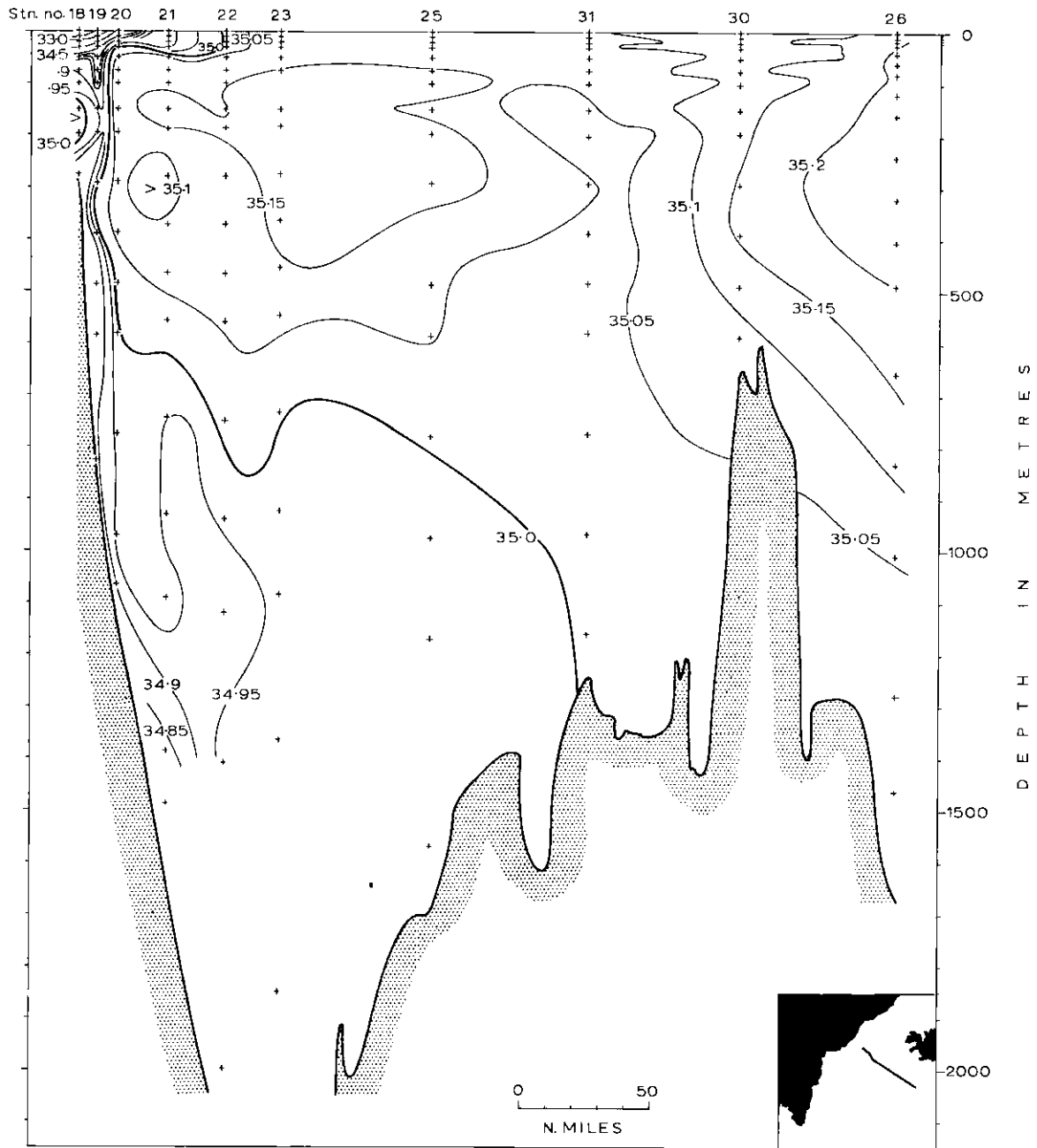


Chart 133. NORWESTLANT 3: Section 2: 8-18 July: Salinity (‰).

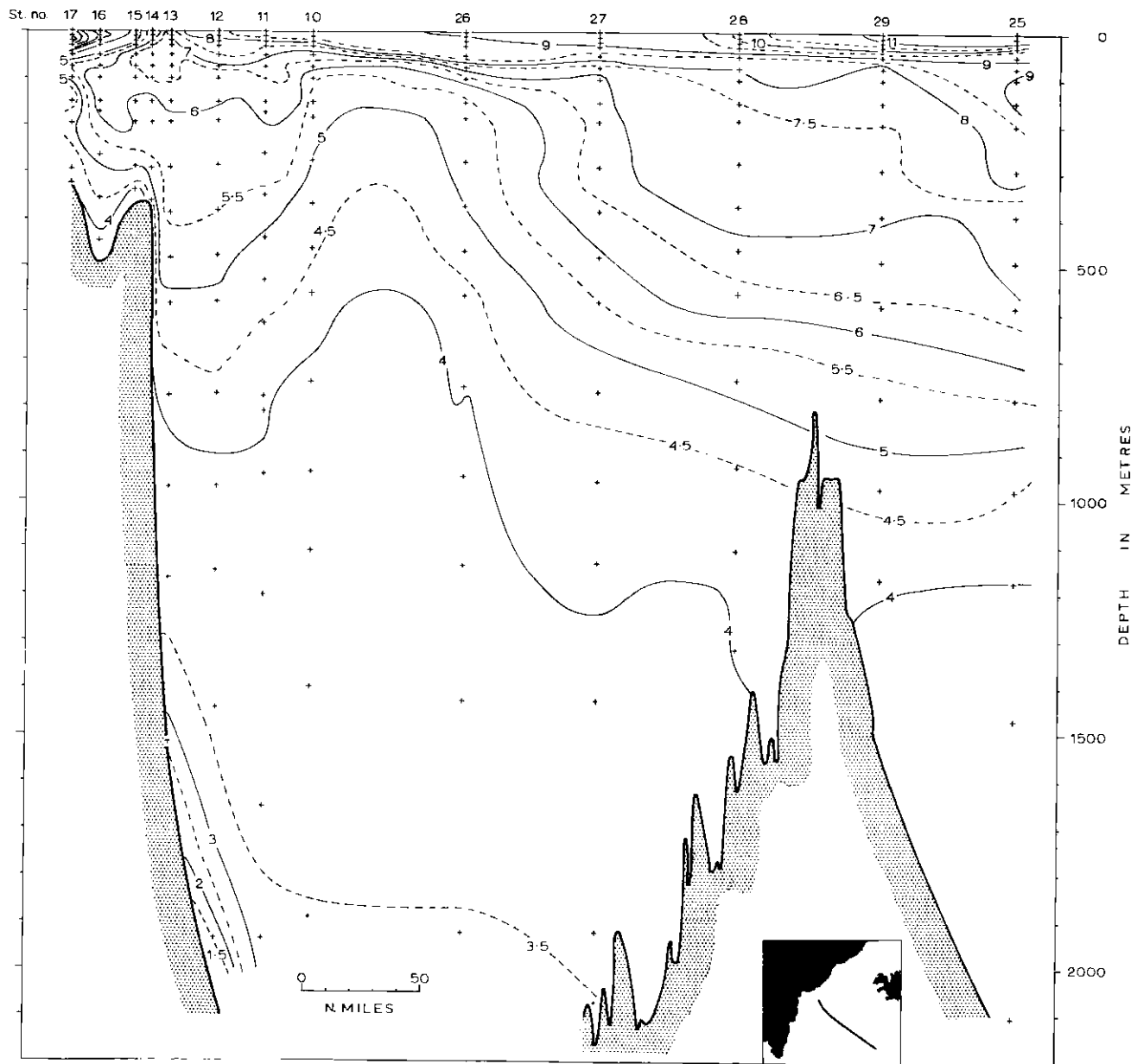


Chart 134. NORTHWESTLANT 3: Section 3: 5-17 July: Temperature ( $^{\circ}$ C).

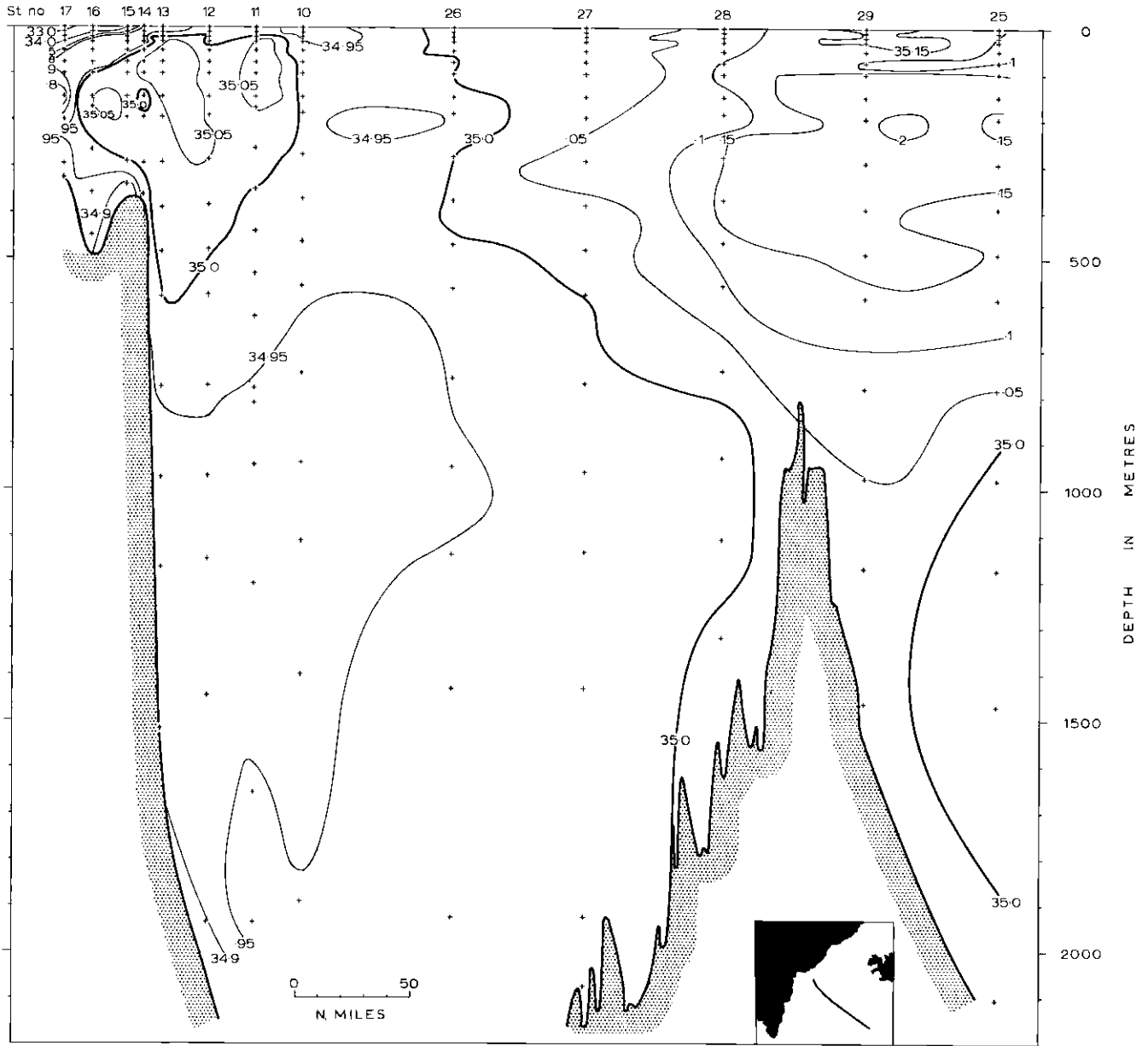


Chart 135. NORWESTLANT 3: Section 3: 5-17 July: Salinity (‰).

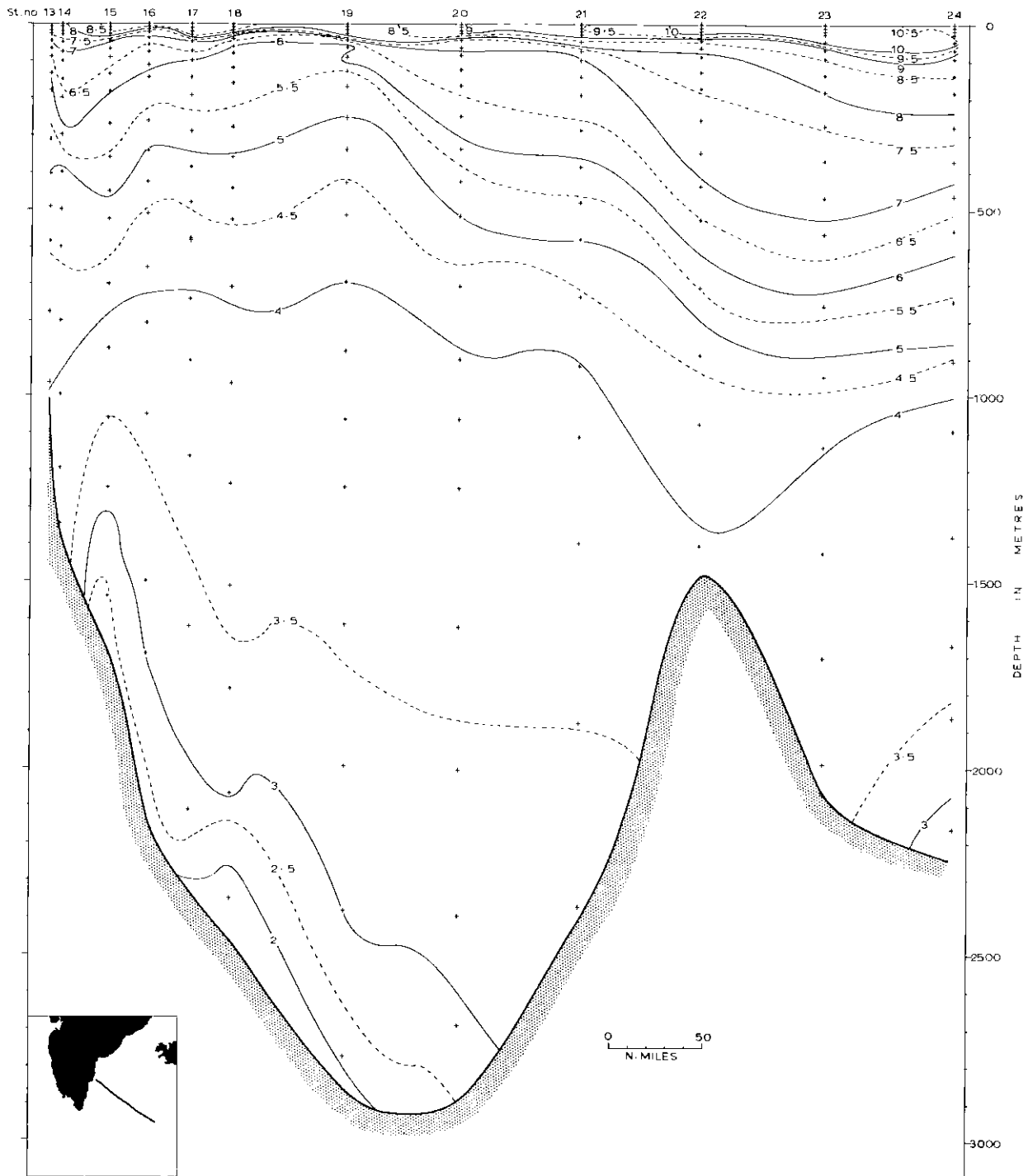


Chart 136. NORWESTLANT 3: Section 4: 11-15 July: Temperature (°C).



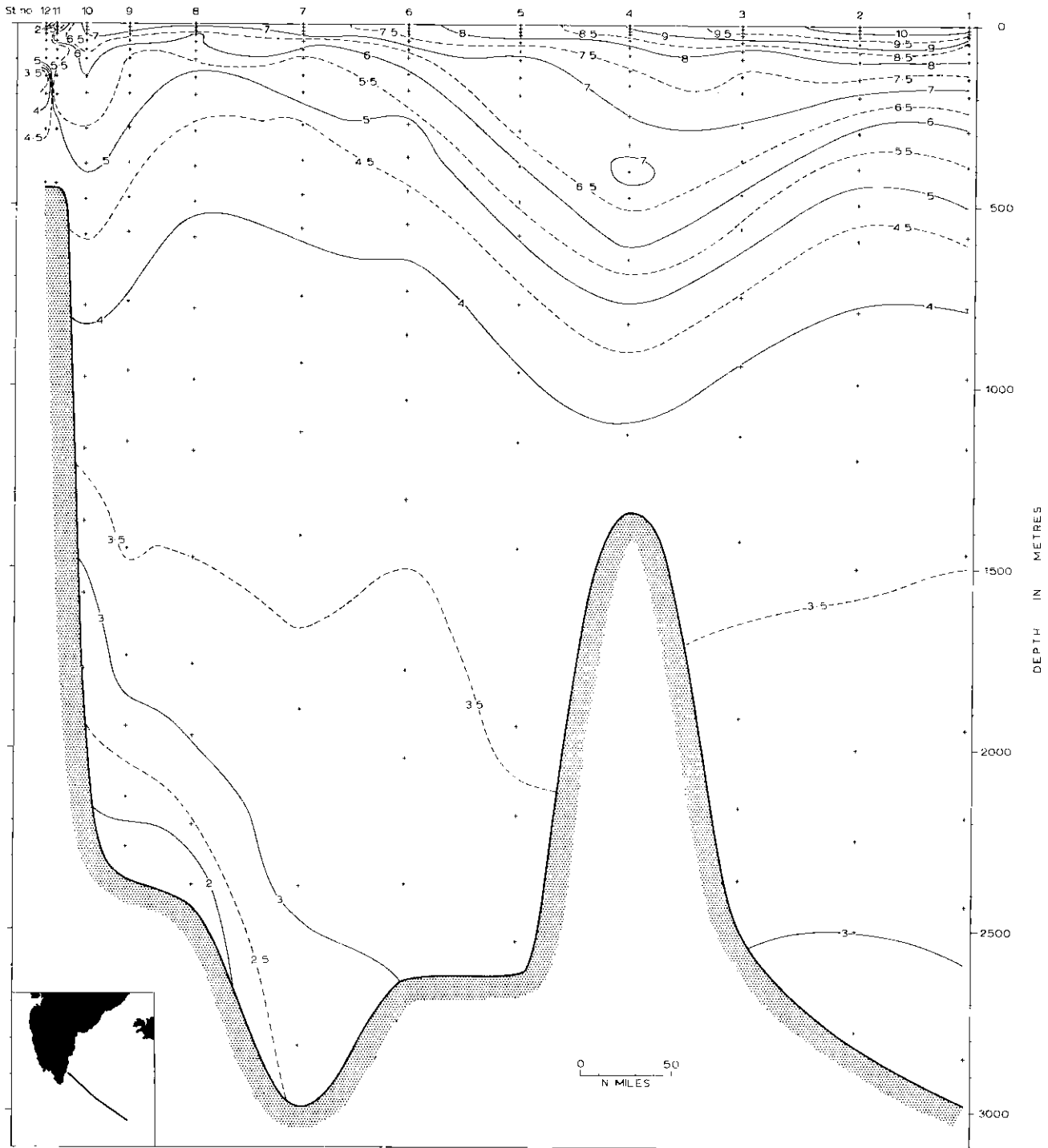


Chart 138. NORWESTLANT 3: Section 5: 2-5 July: Temperature (°C).

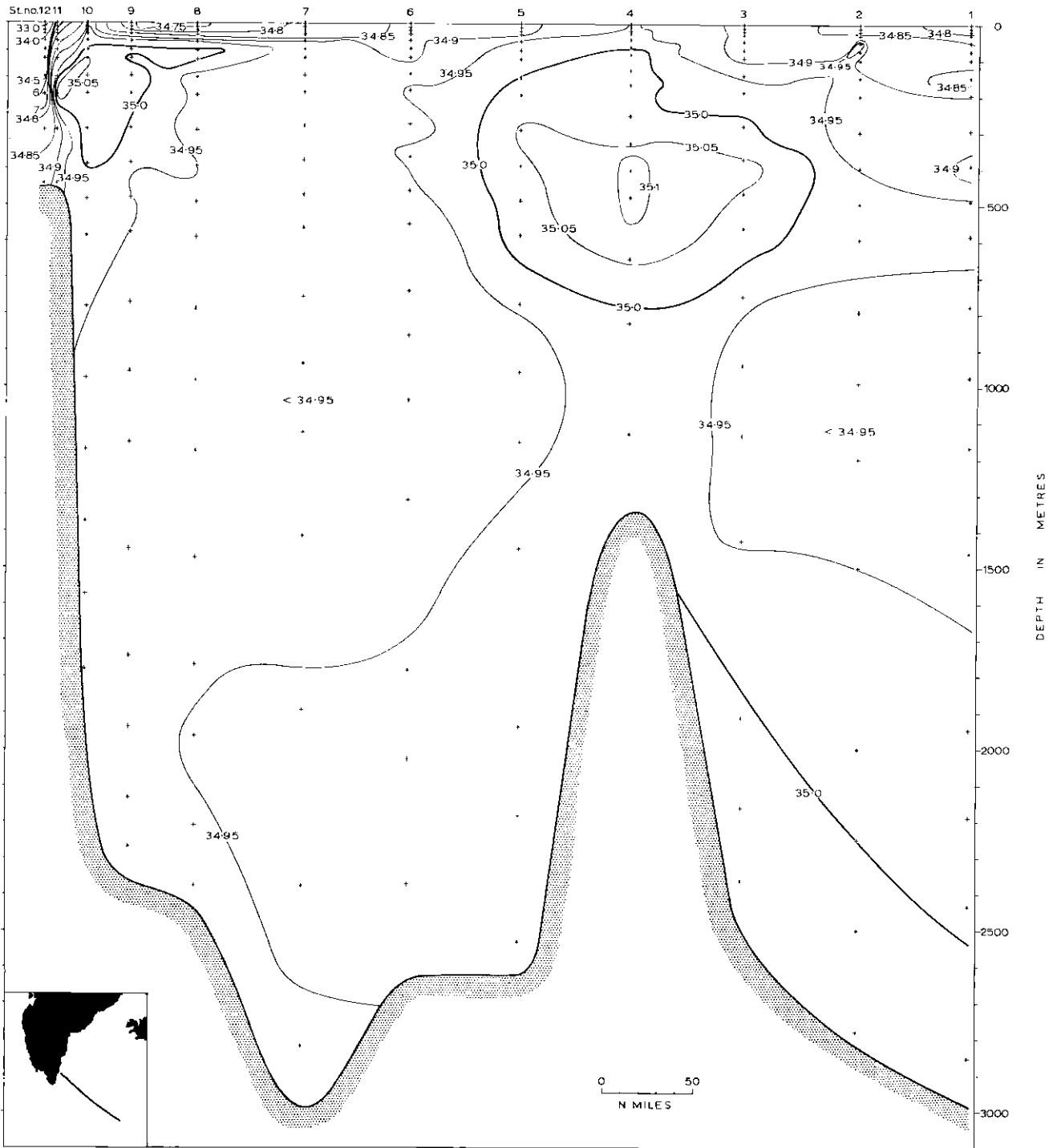


Chart 139. NORWESTLANT 3: Section 5: 2-5 July: Salinity (‰).



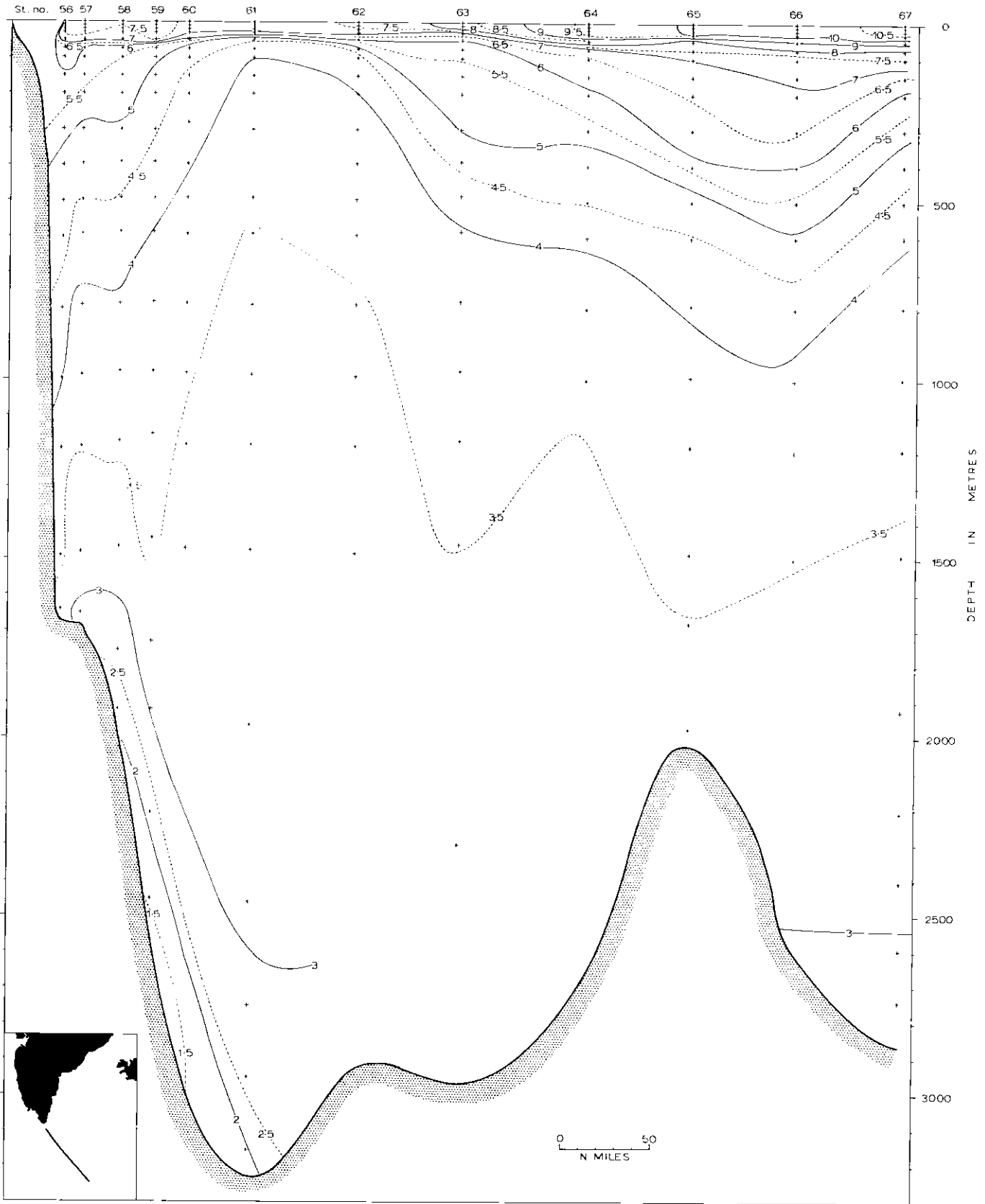


Chart 140. NORWESTLANT 3: Section 6: 31 July-3 August: Temperature (°C).

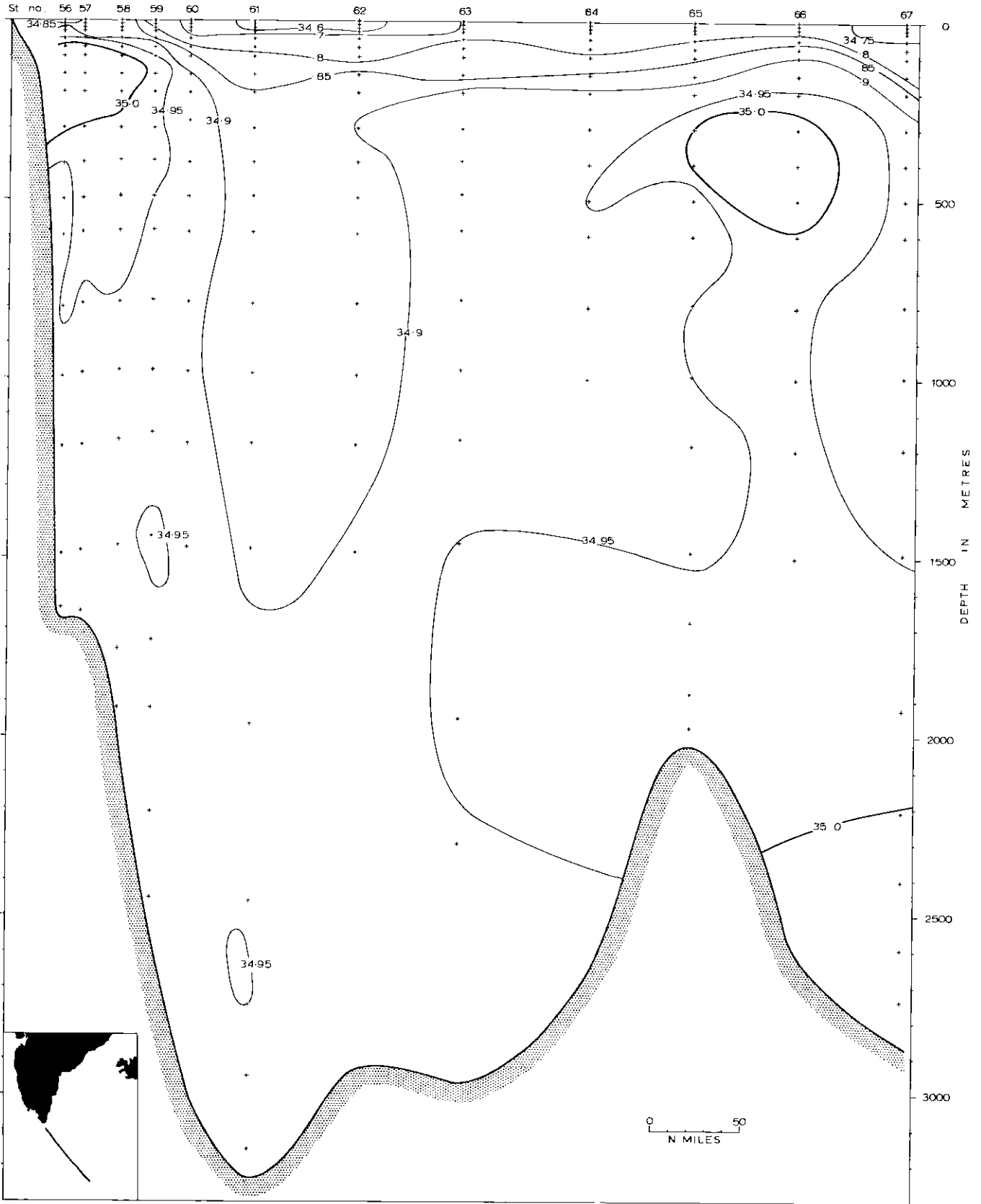


Chart 141. NORWESTLANT 3: Section 6: 31 July-3 August: Salinity (‰).

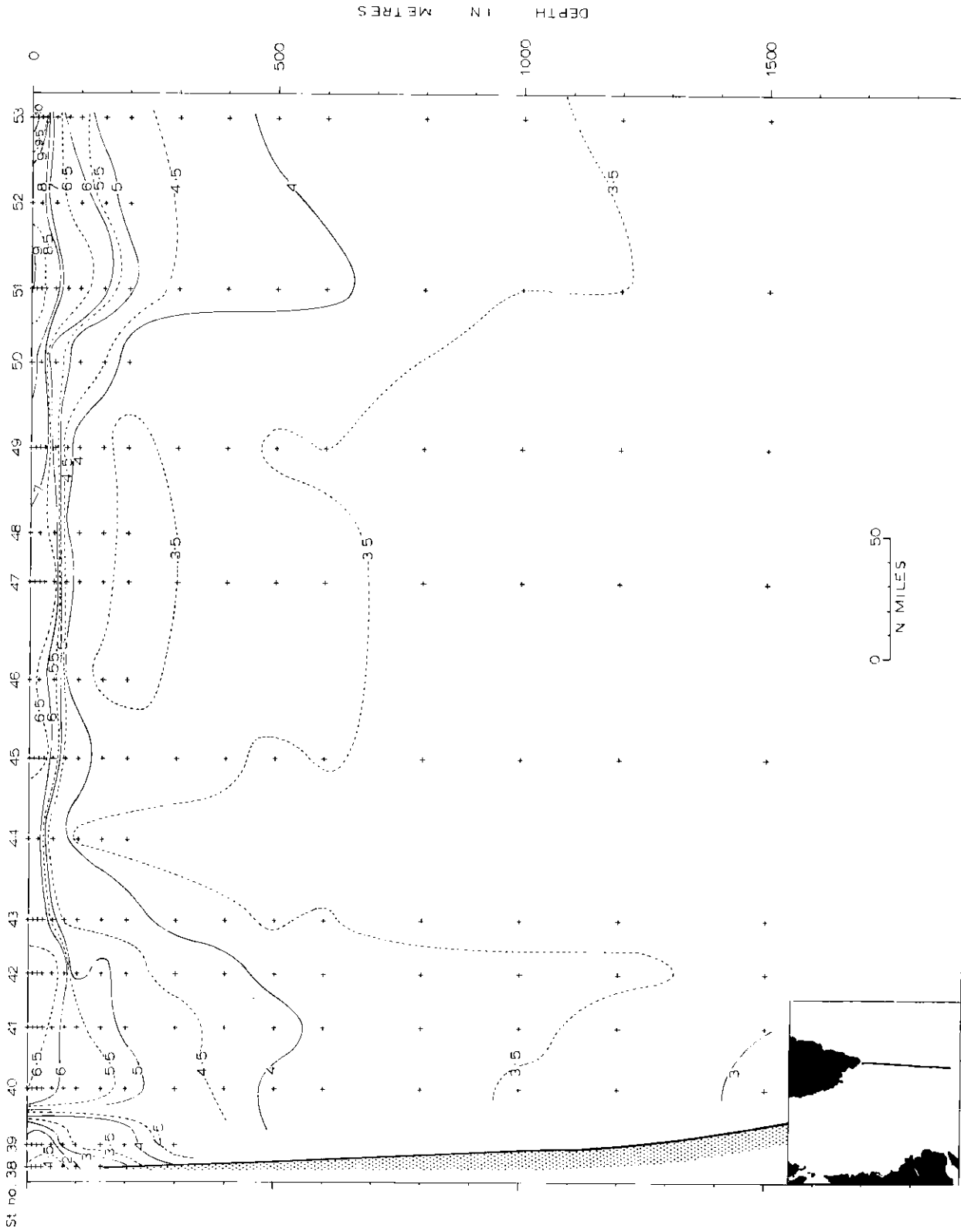


Chart 142. NORWESTLANT 3: Section 7: 14-17 July: Temperature (°C).

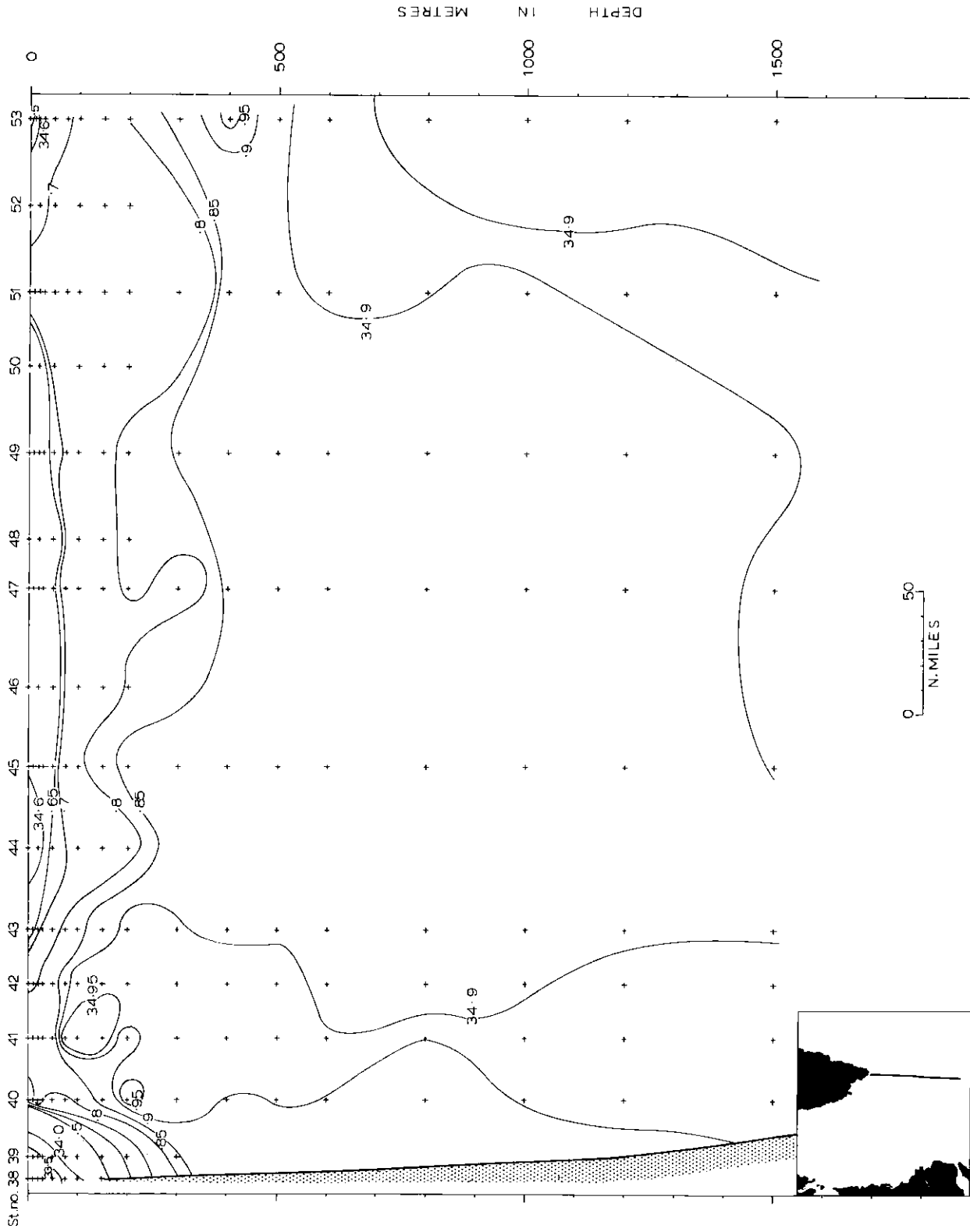


Chart 143. NORWESTLANT 3: Section 7: 14-17 July: Salinity (‰).

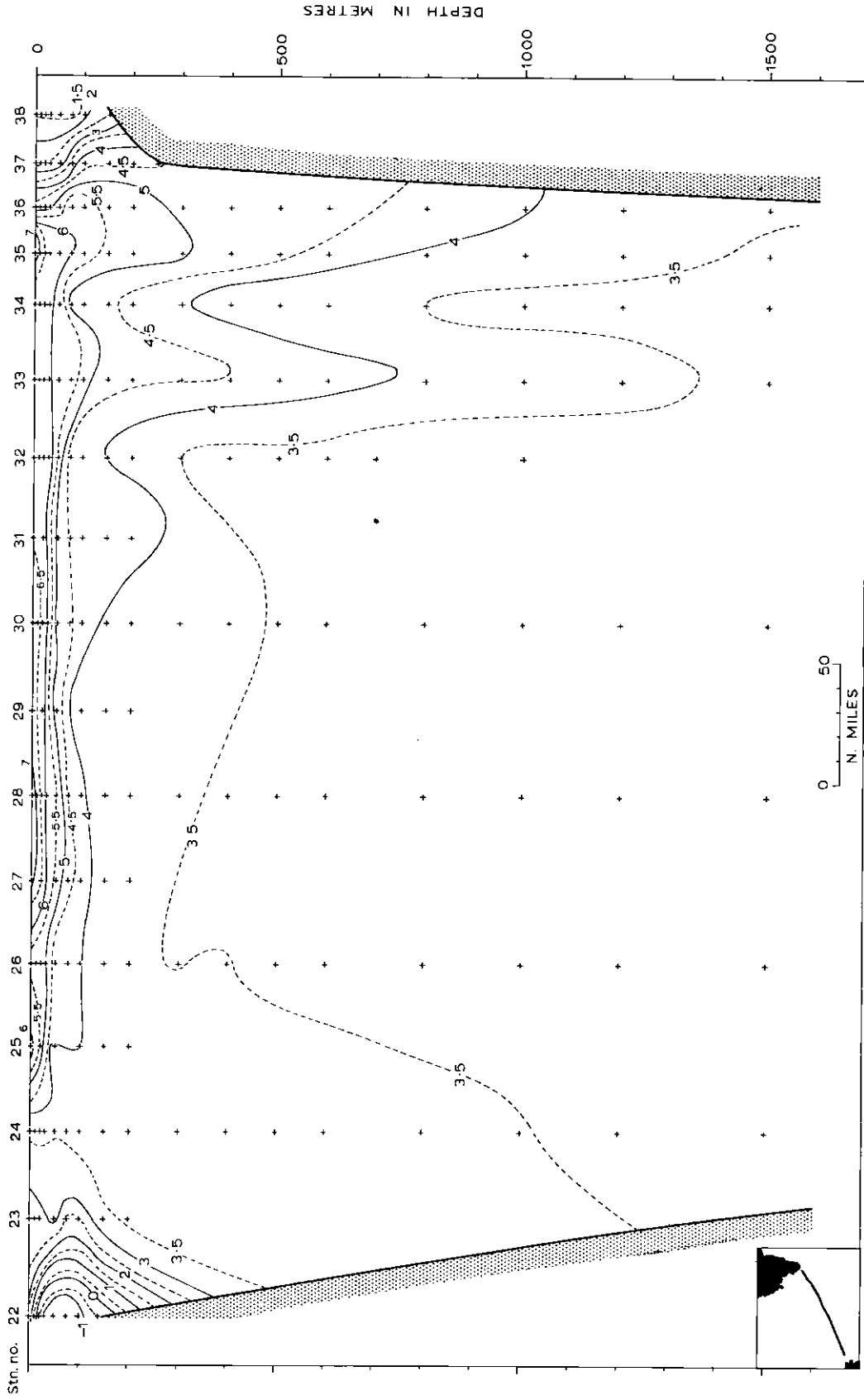


Chart 144. NORWESTLANT 3: Section 8: 10-14 July: Temperature (°C).

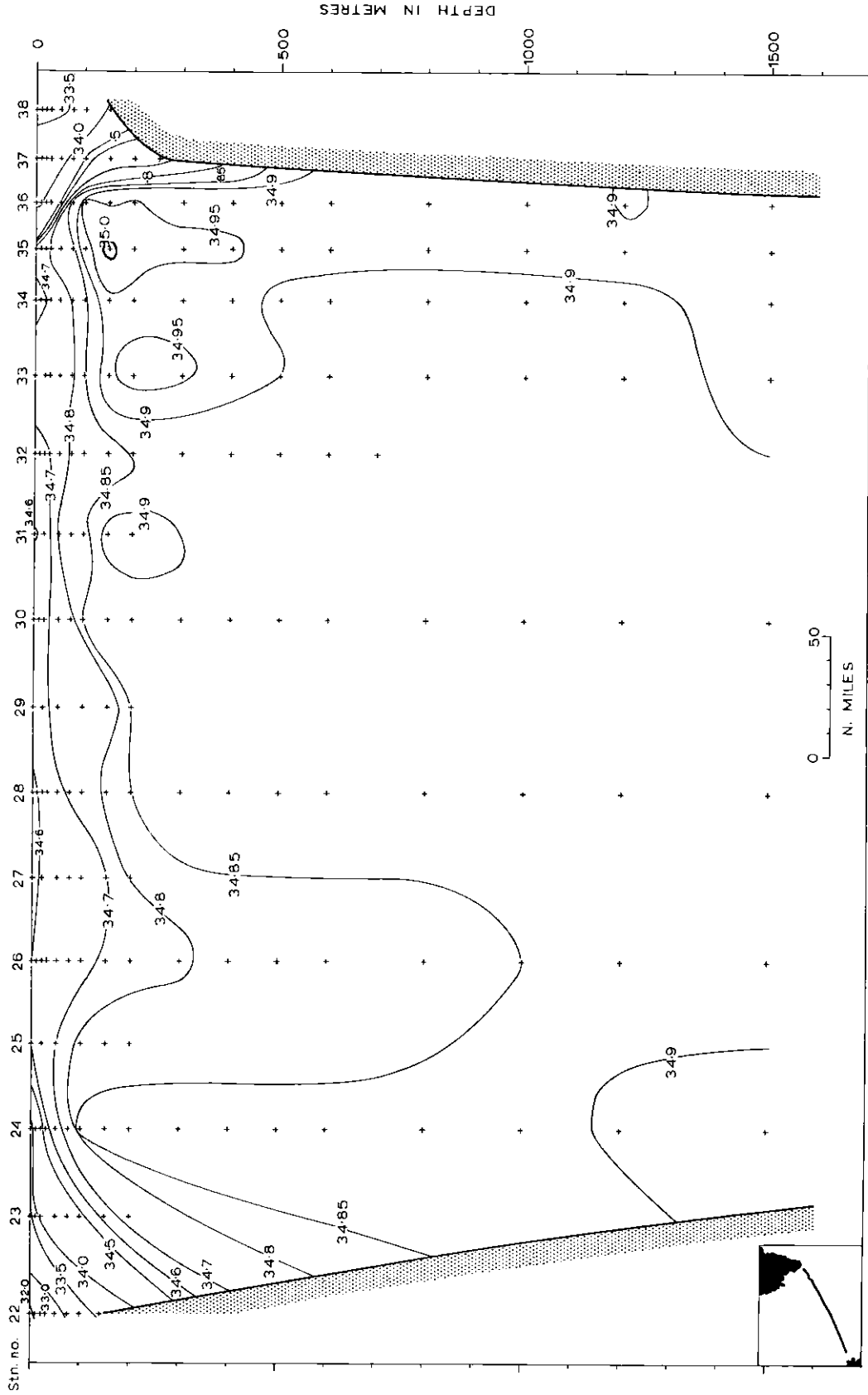


Chart 145. NORWESTLANT 3: Section 8: 10-14 July: Salinity (‰).

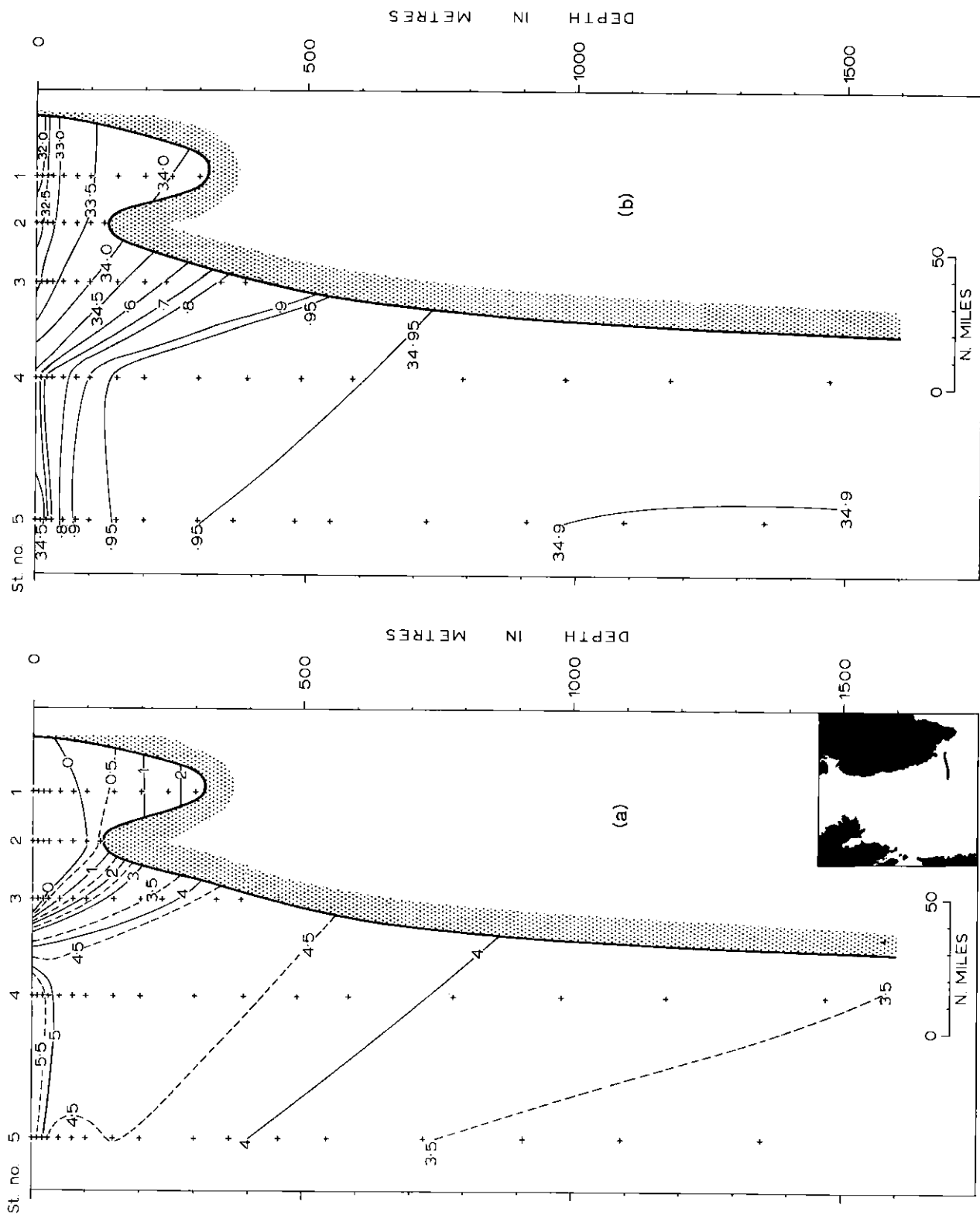


Chart 146. NORWESTLANT 3: Section L: 30 June-1 July: (a) Temperature (°C); (b) Salinity (‰).

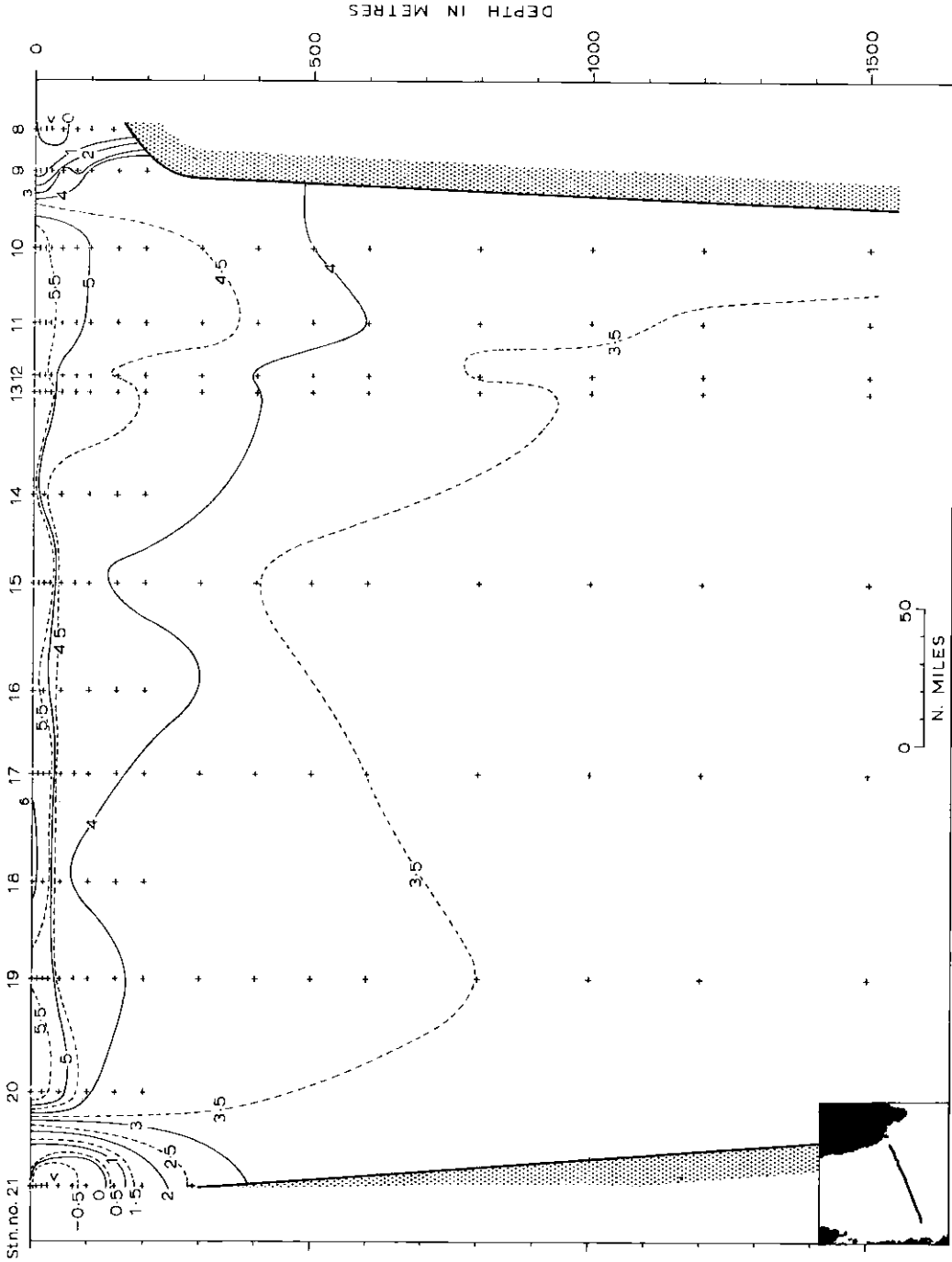


Chart 147. NORWESTLANT 3: Section 9: 3-9 July: Temperature (°C).



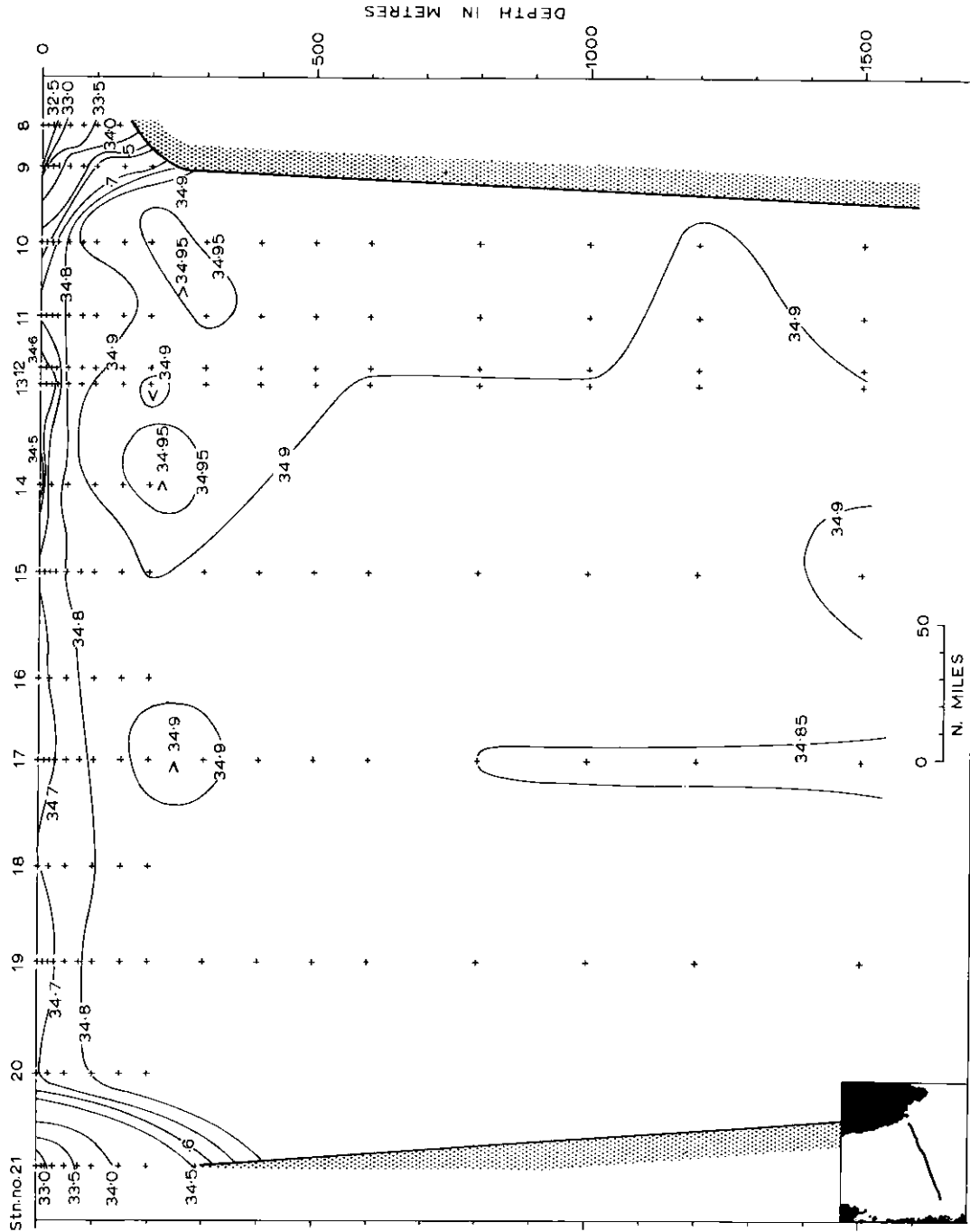


Chart 148. NORWESTLANT 3: Section 9: 3-9 July: Salinity (‰).

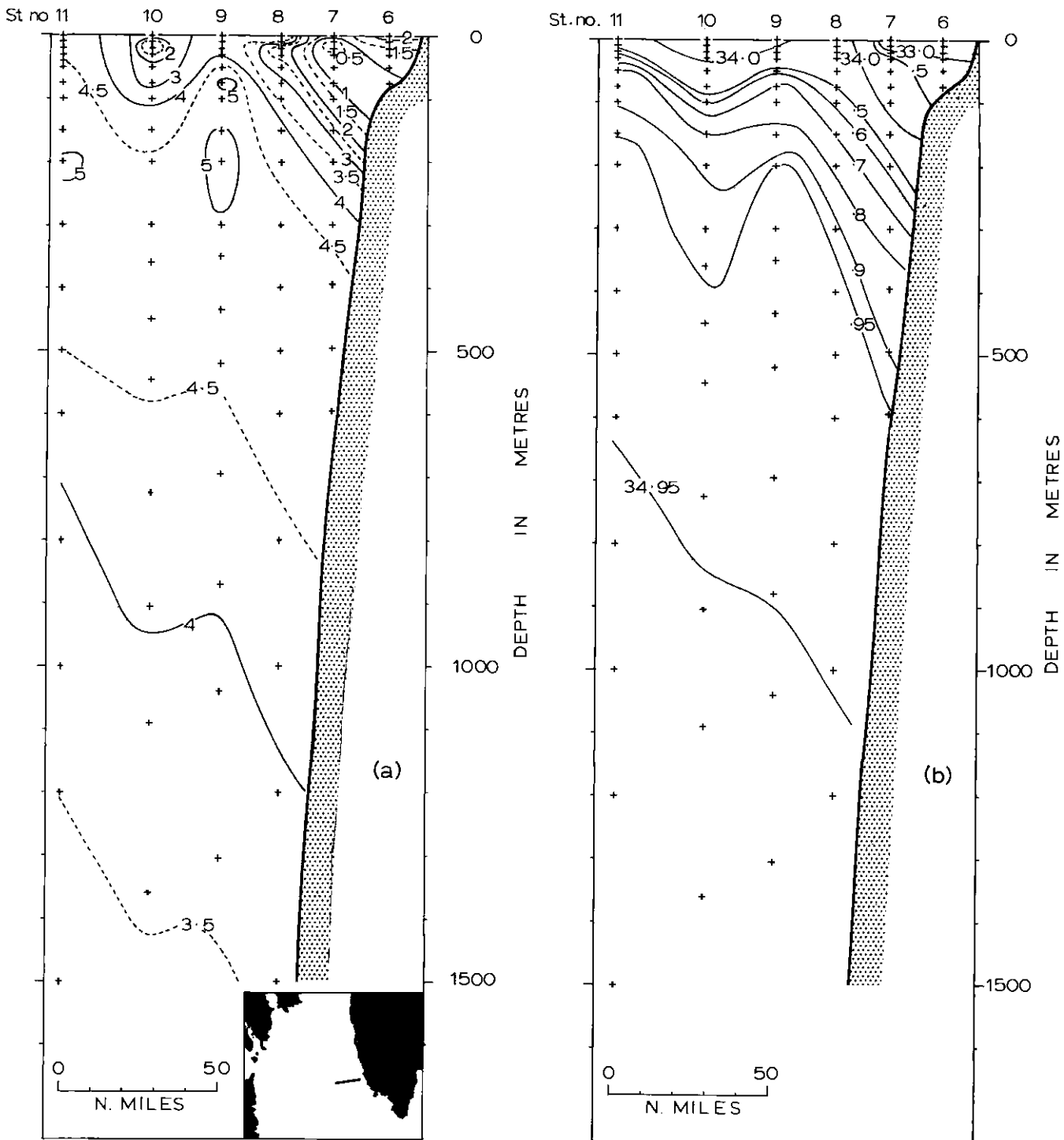


Chart 149. NORWESTLANT 3: Section 10: 2-3 July: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

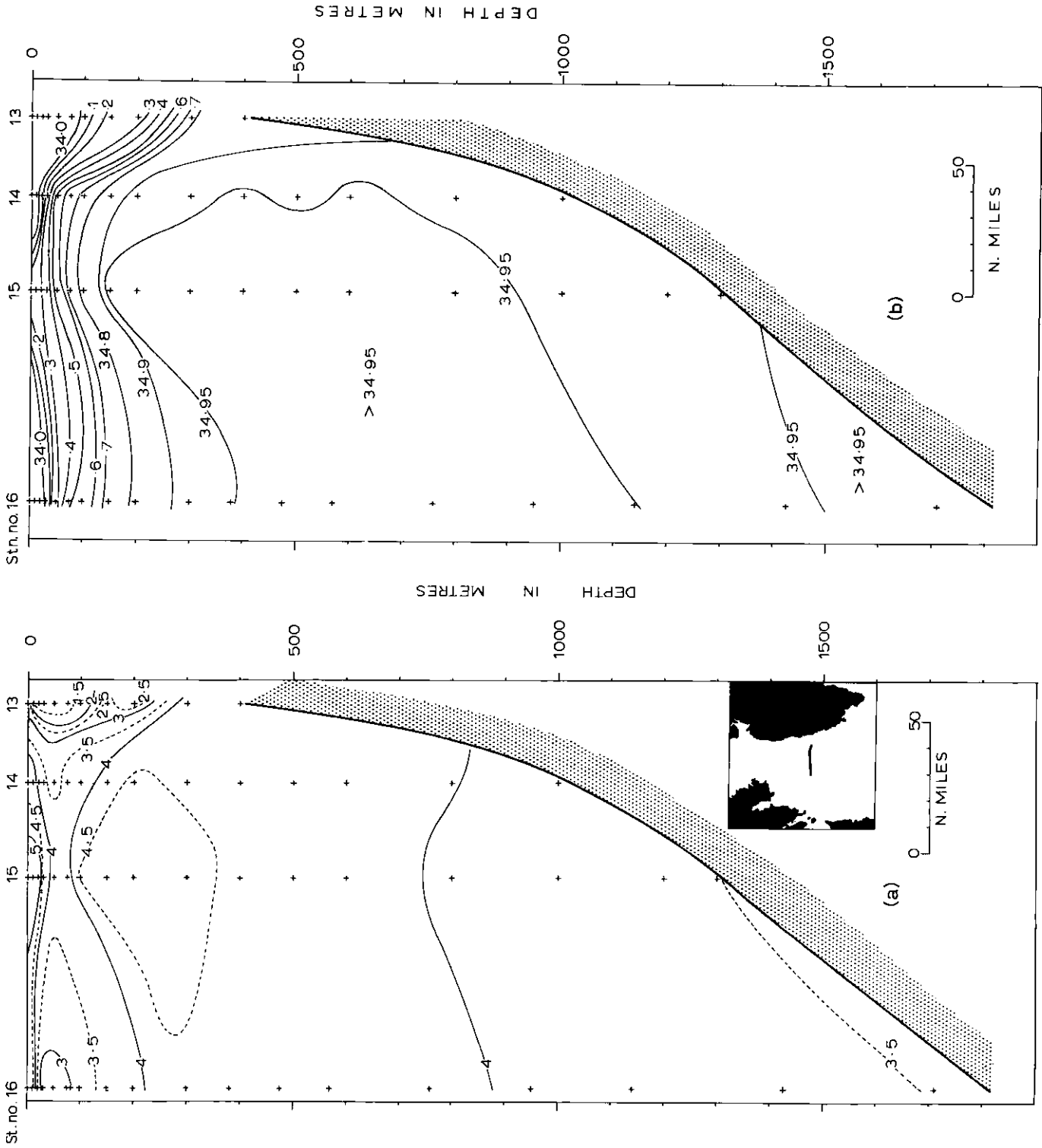


Chart 150. NORWESTLANT 3: Section M: 4-5 July: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $^{\circ}/_{\text{oo}}$ ).

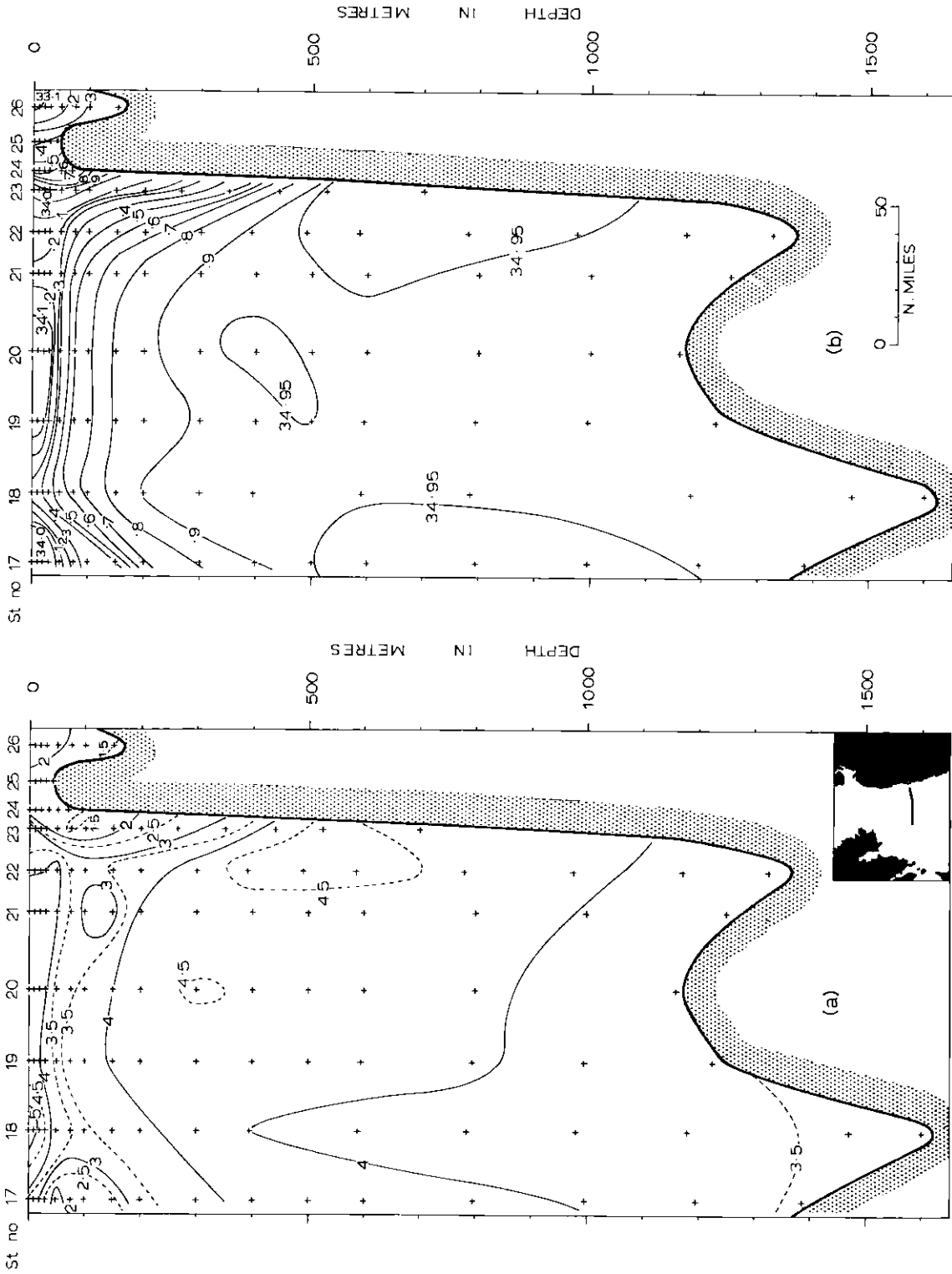


Chart 151. NORWESTLANT 3: Section 11: 5-7 July: (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).

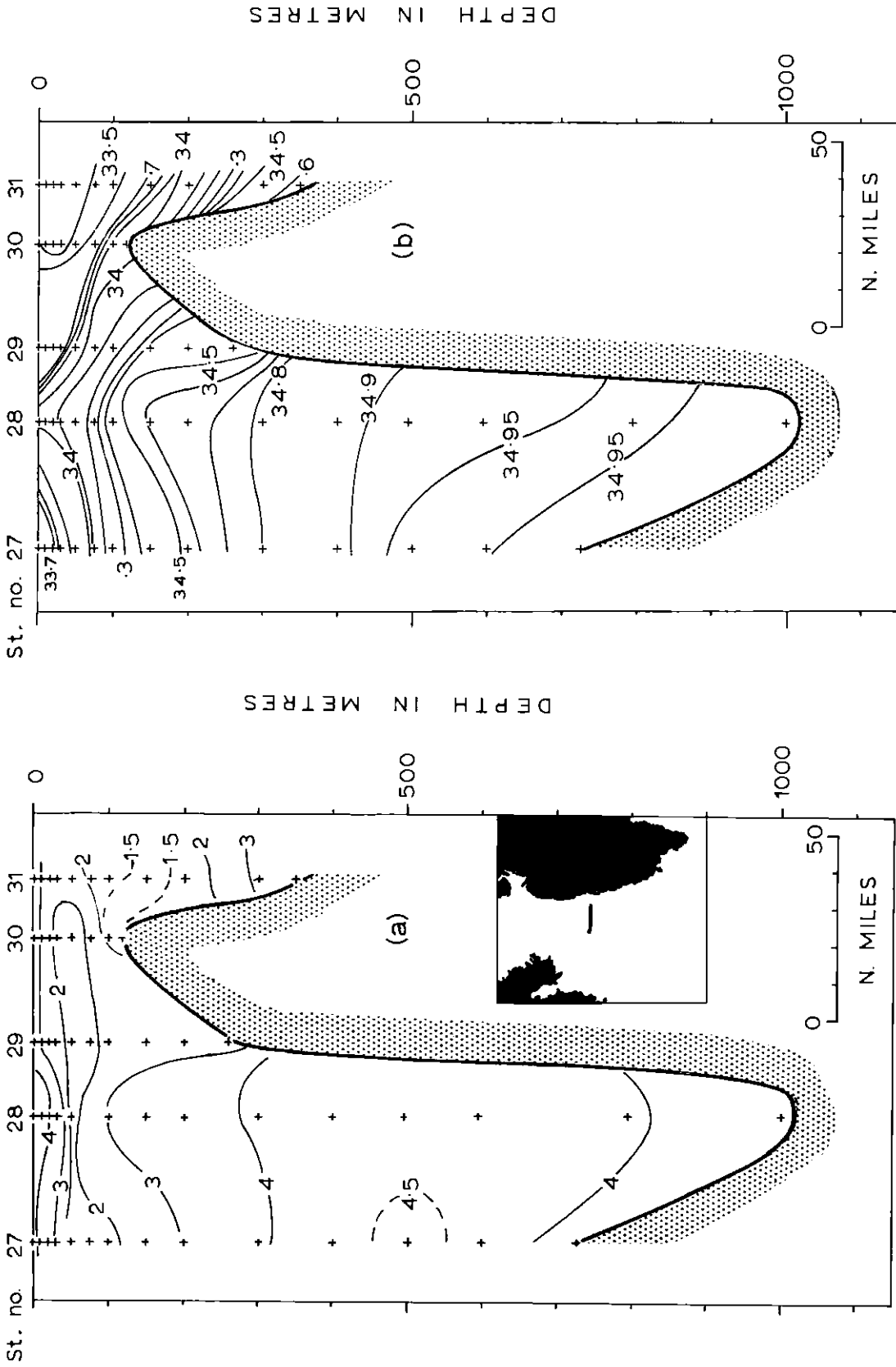


Chart 152A. NORWESTLANT 3: Section 12: 9-10 July: (a) Temperature (°C); (b) Salinity (‰).

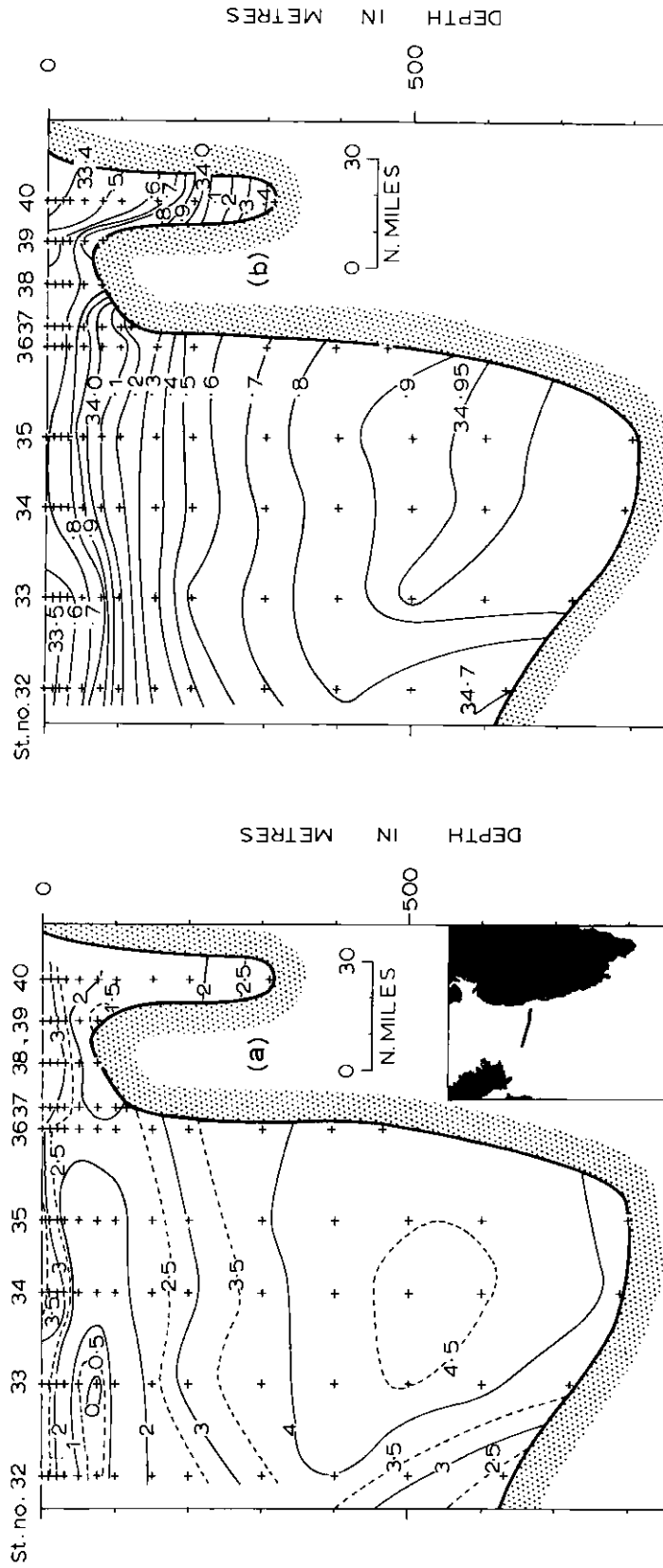


Chart 152B. NORWESTLANT 3: Section 13: 10-12 July: (a) Temperature (°C); (b) Salinity (‰).

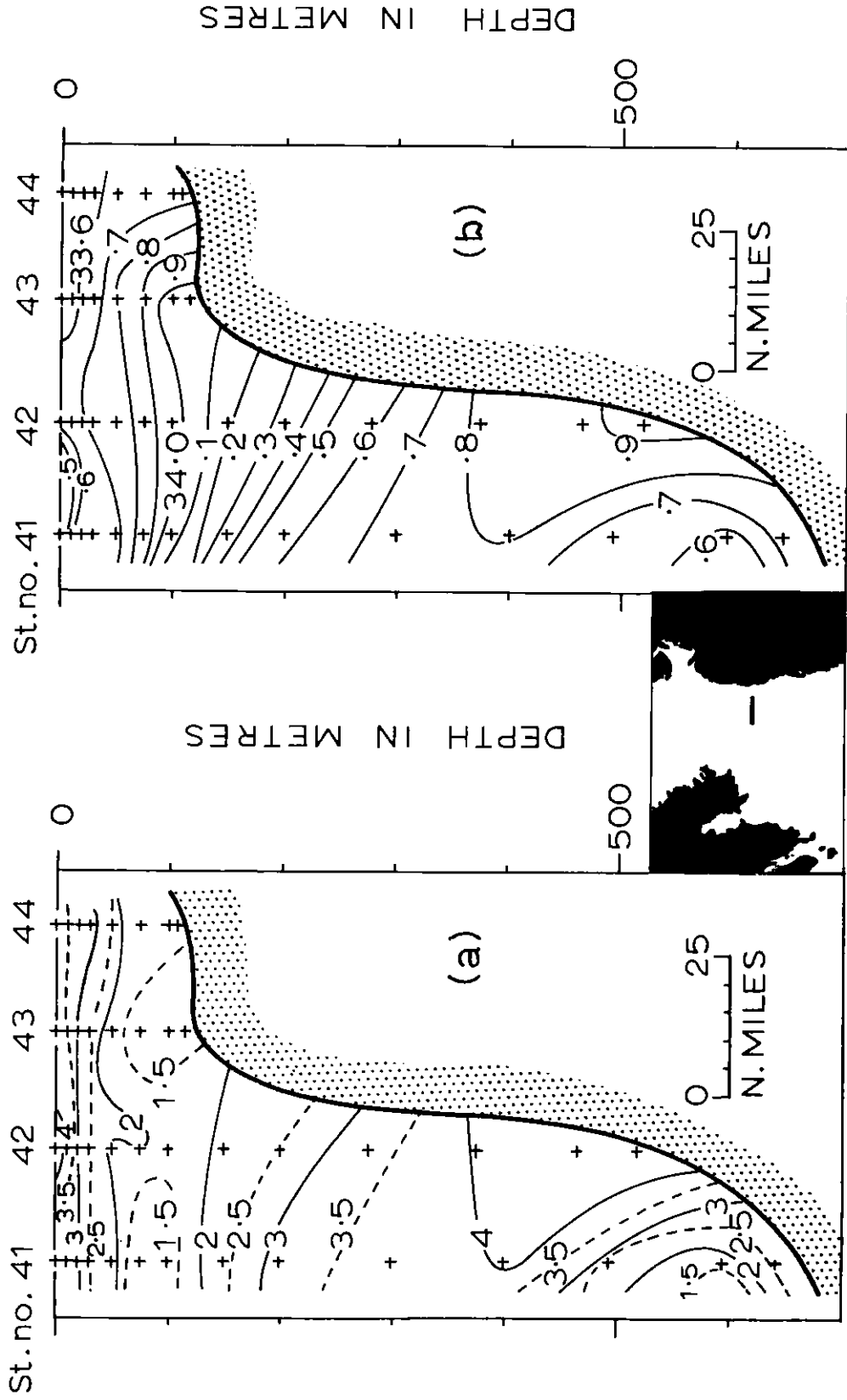


Chart 153A. NORWESTLANT 3: Section N: 12-13 July: (a) Temperature (°C); (b) Salinity (‰).

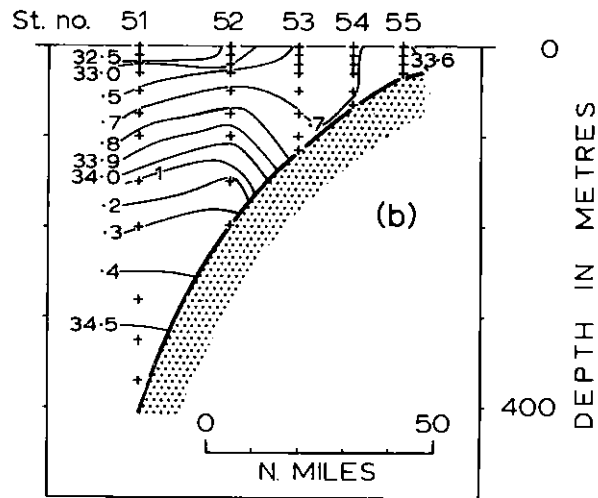
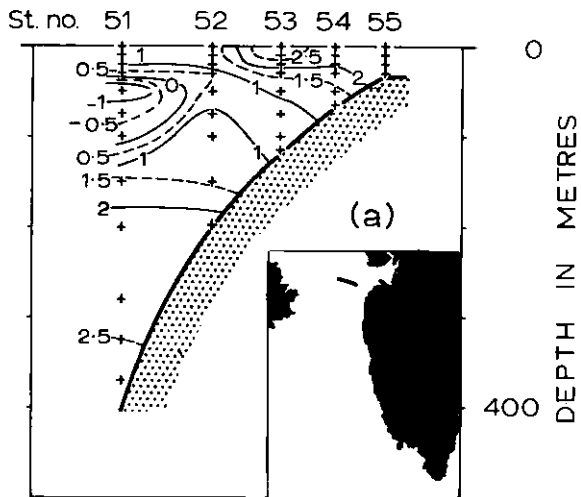
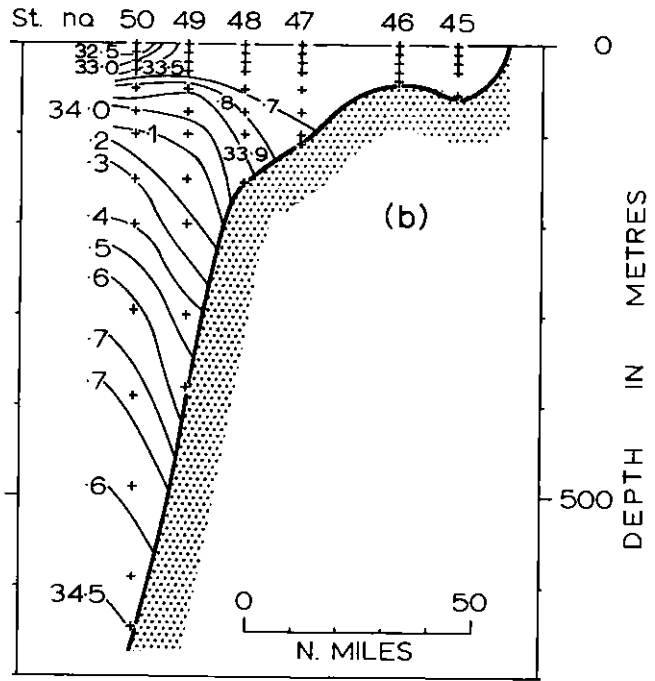
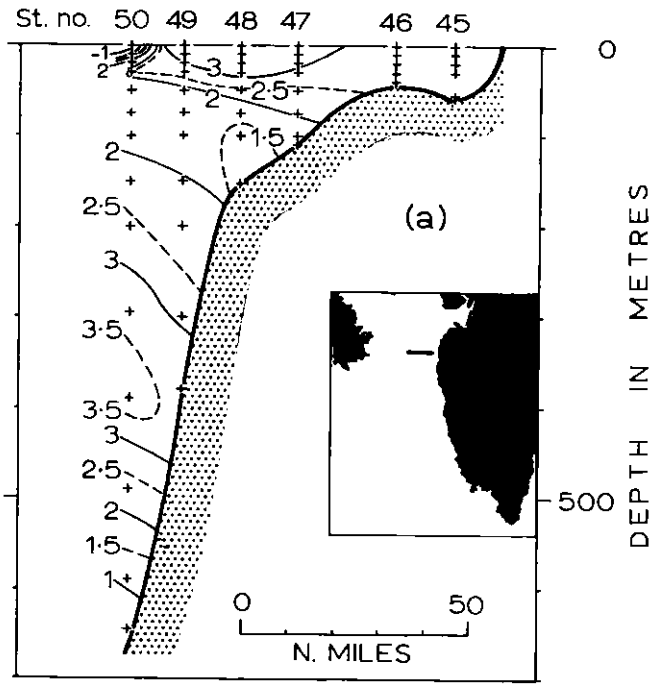


Chart 153B. NORWESTLANT 3: Top: Section 14: 13-14 July. Bottom: Section 15: 15-16 July. (a) Temperature ( $^{\circ}\text{C}$ ); (b) Salinity ( $\text{‰}$ ).



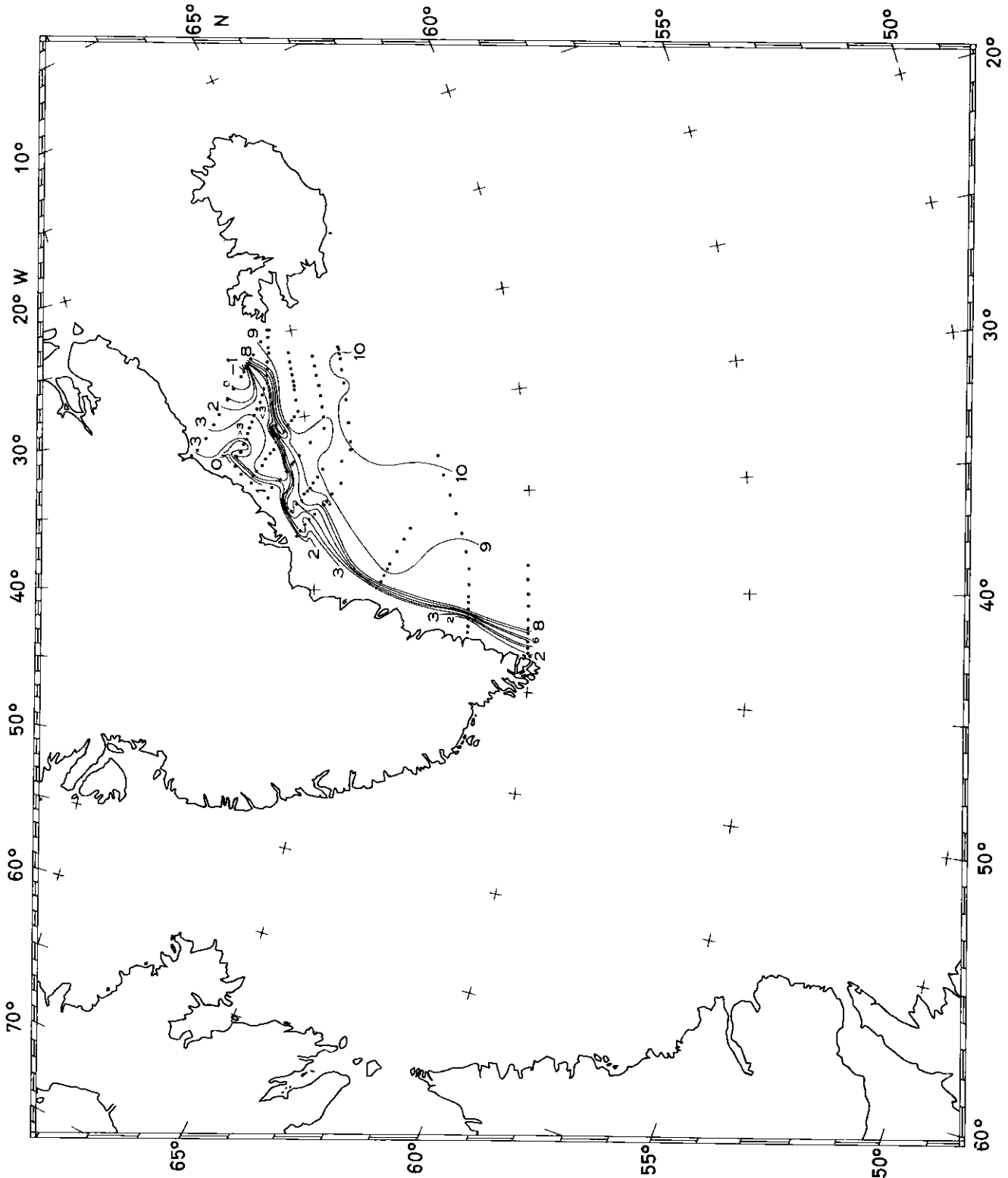


Chart 154. Temperature at 0 m off East Greenland: 17 August-11 September 1963.

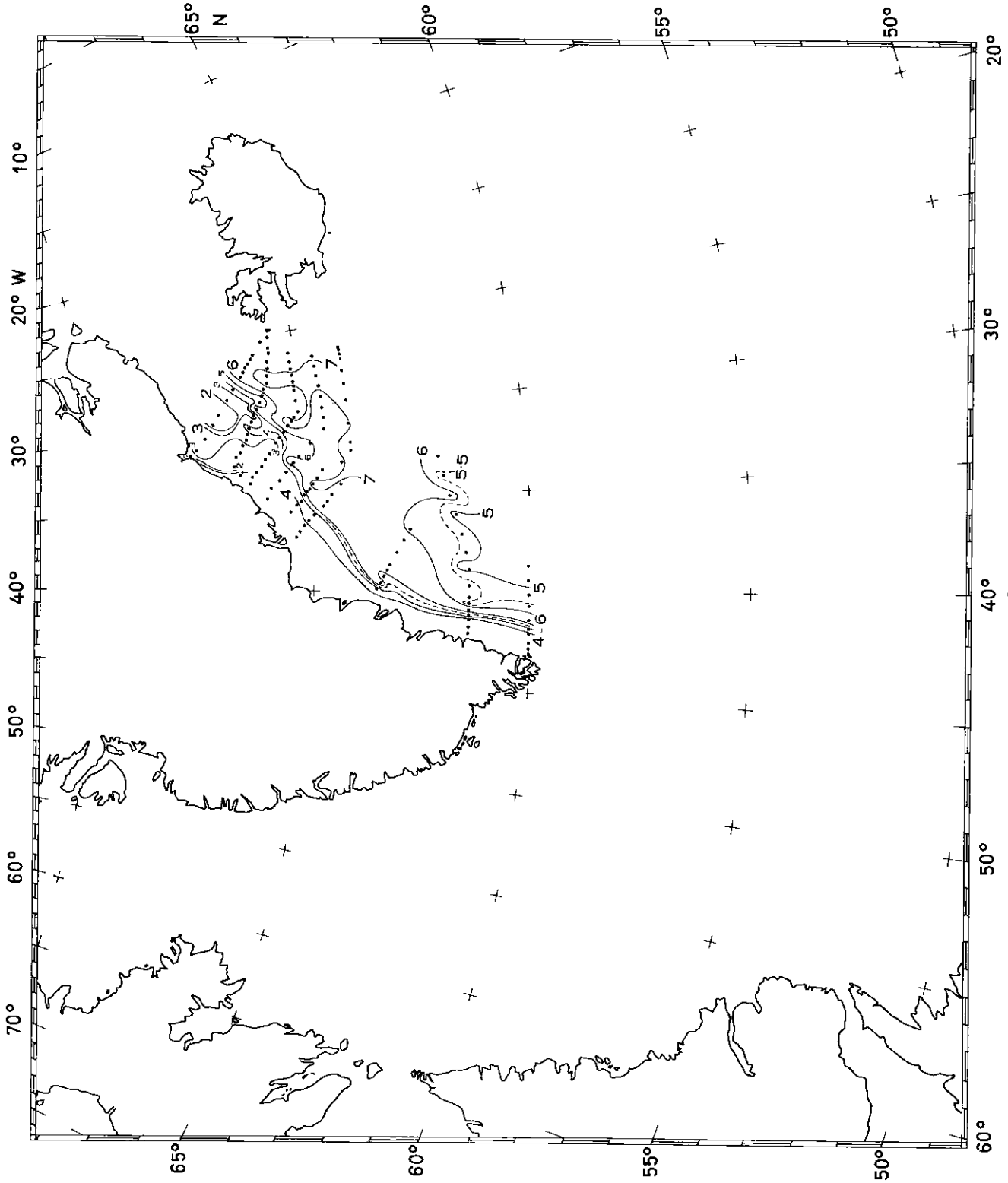


Chart 155. Temperature at 200 m off East Greenland: 17 August-11 September 1963.

STANDARD OPERATING PROCEDURE

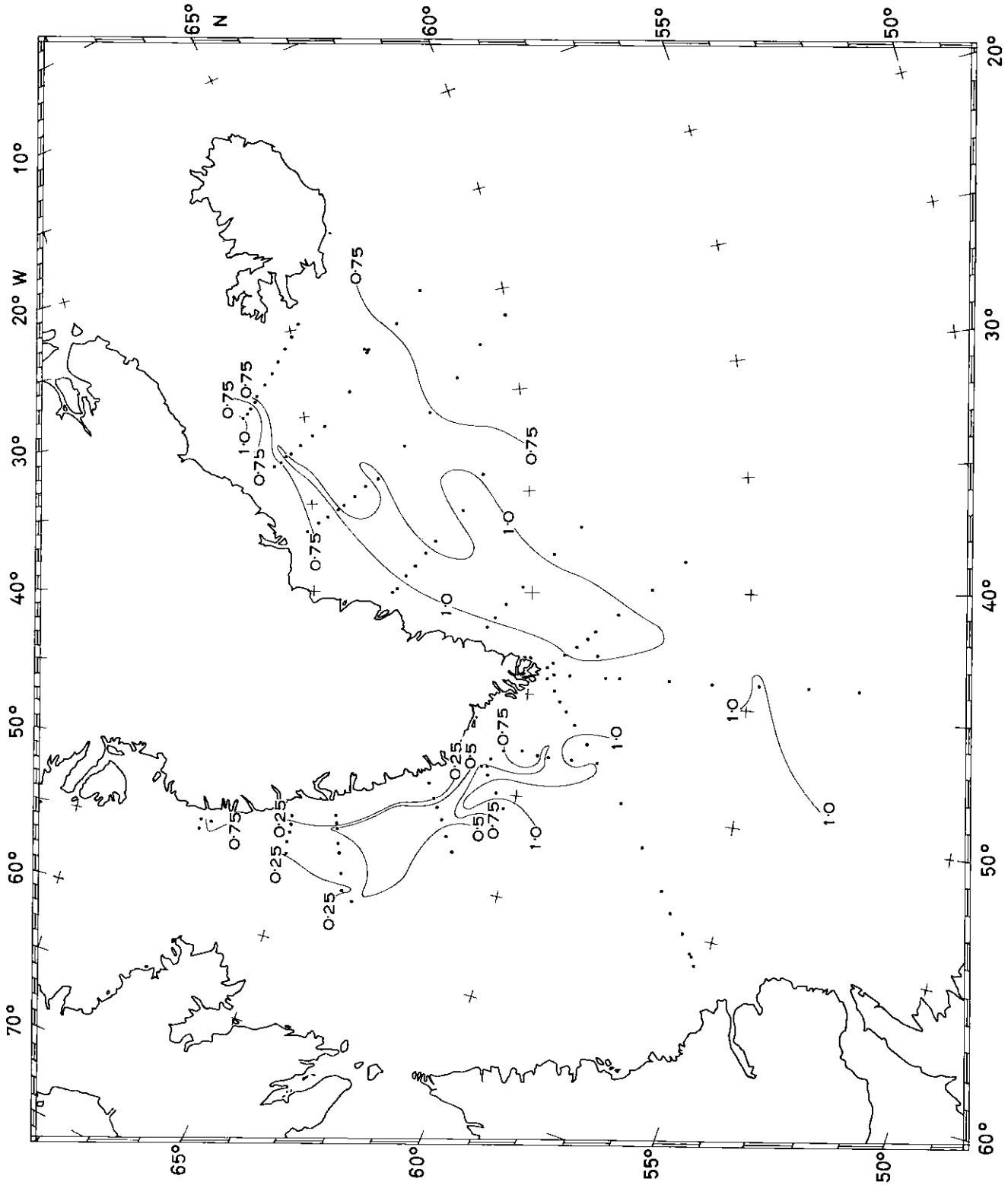


Chart 156. NORWESTLANT 1:  $\mu\text{g atom PO}_4\text{-P/l}$ : 20 m: 31 March-1 May.

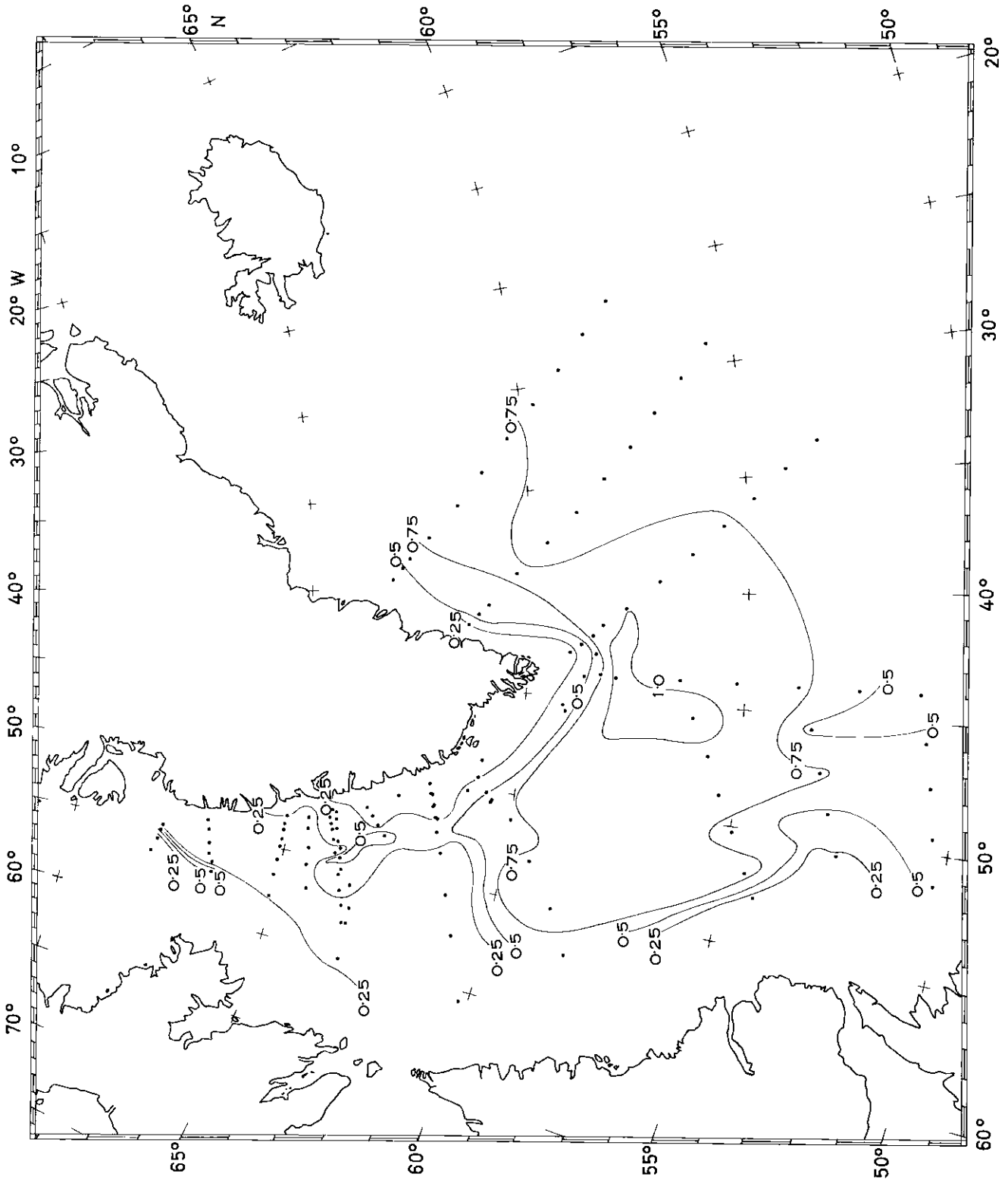


Chart 157. NORWESTLANT 2: μg atom PO<sub>4</sub>-P/I: 20 m: 26 May-18 June.

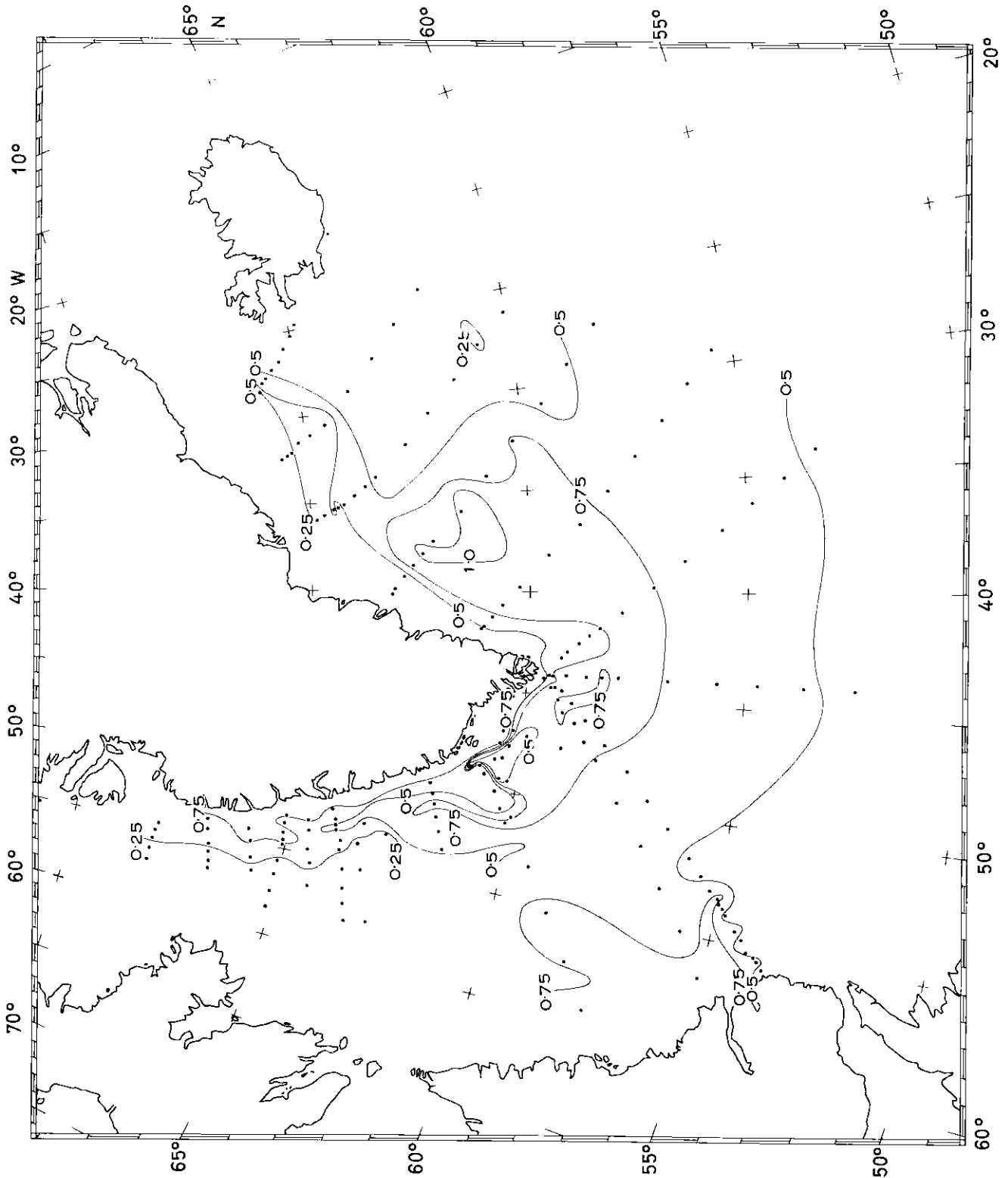


Chart 156. NORWESTLANT 3:  $\mu\text{g atom PO}_4\text{-P/l}$ : 20 m: 30 June-3 August.

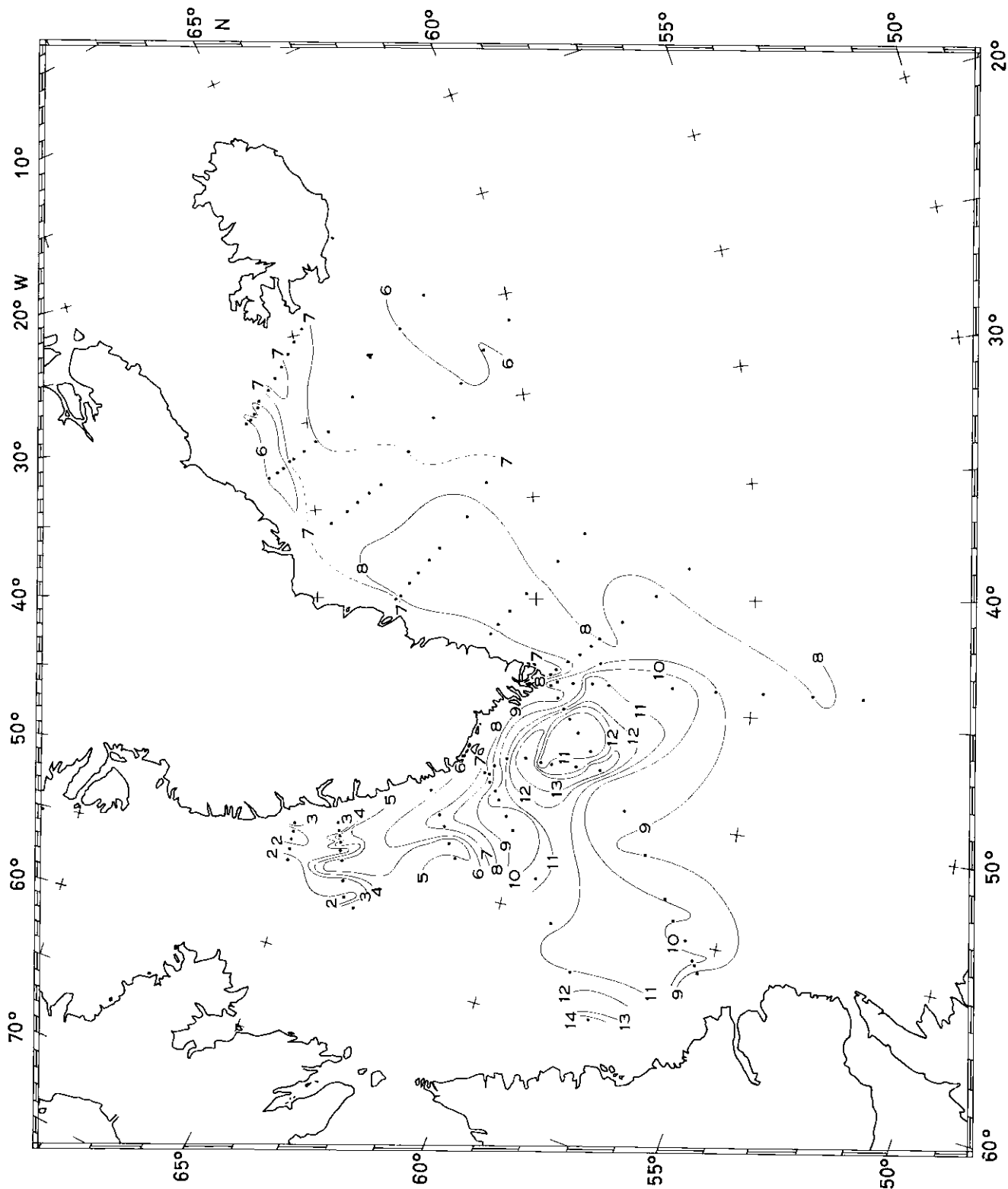


Chart 159. NORWESTLANT 1:  $\mu\text{g atom SiO}_3\text{-Si(IV)}$ : 20 m: 31 March-1 May.

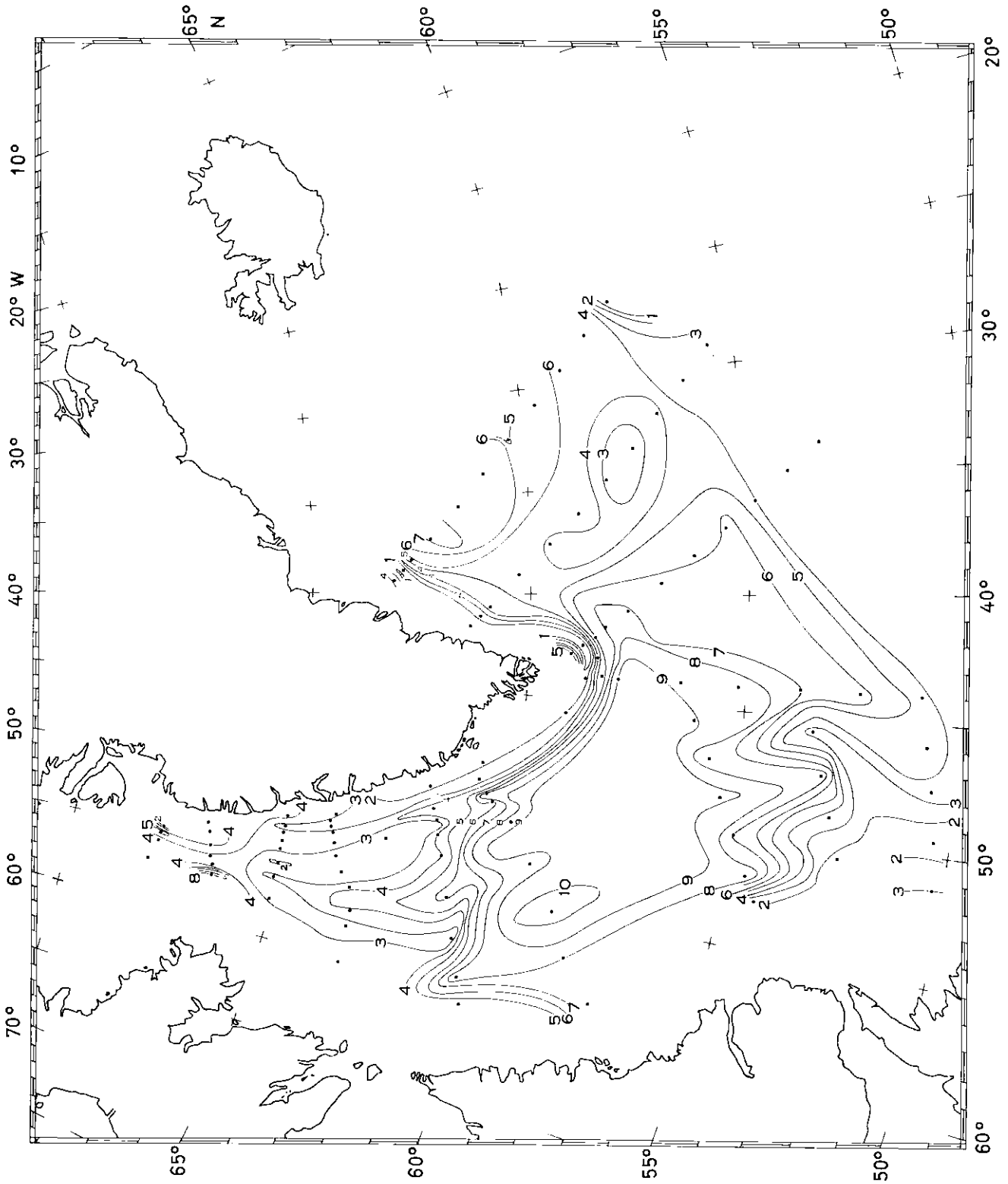


Chart 160. NORWESTLANT 2:  $\mu\text{g atom SiO}_3\text{-Si(IV)/l}$ : 20 m: 26 May-18 June.



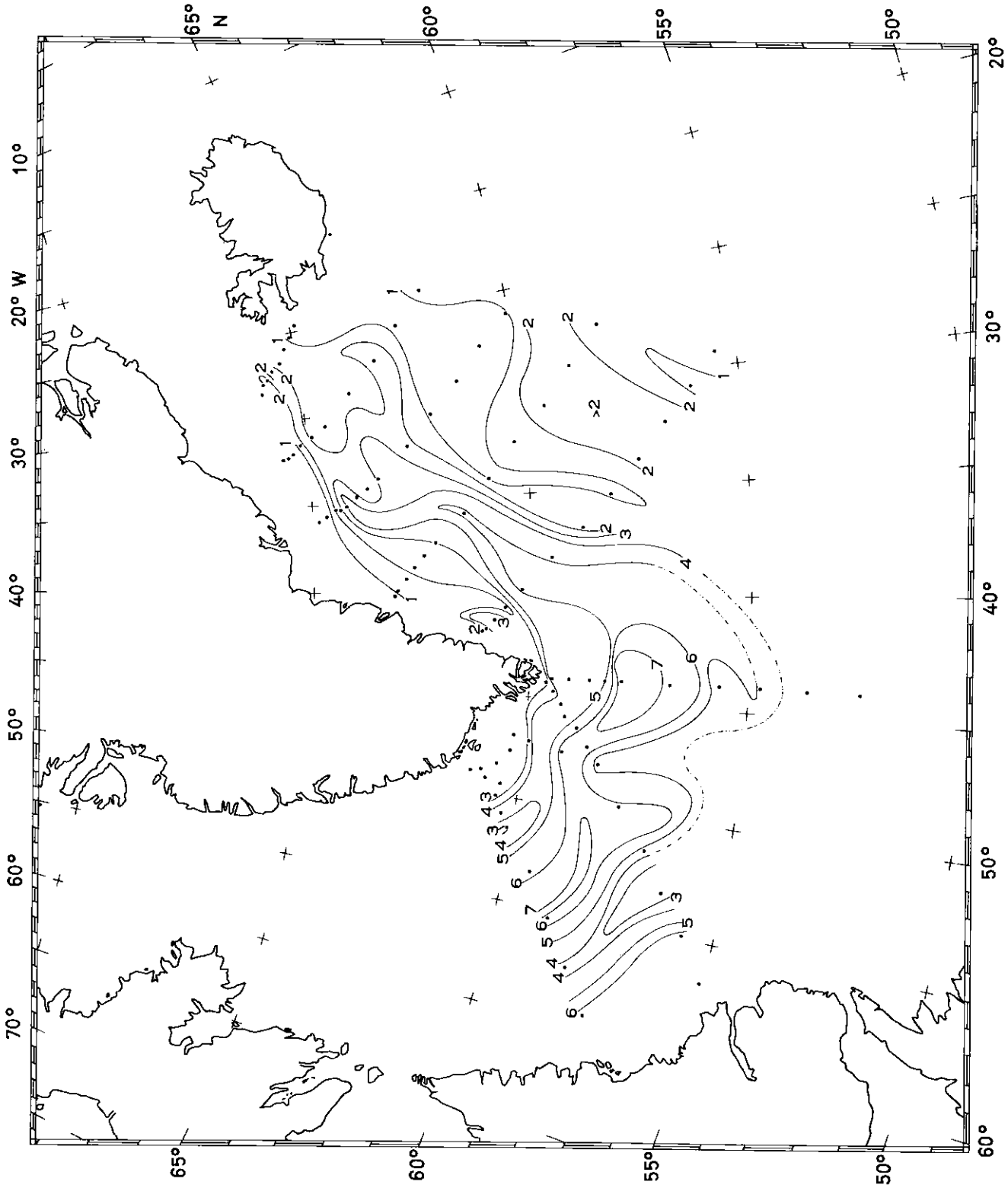


Chart 161. NORWESTLANT 3:  $\mu\text{g atom SiO}_3\text{-Si(IV)}$ : 20 m: 30 June-3 August.

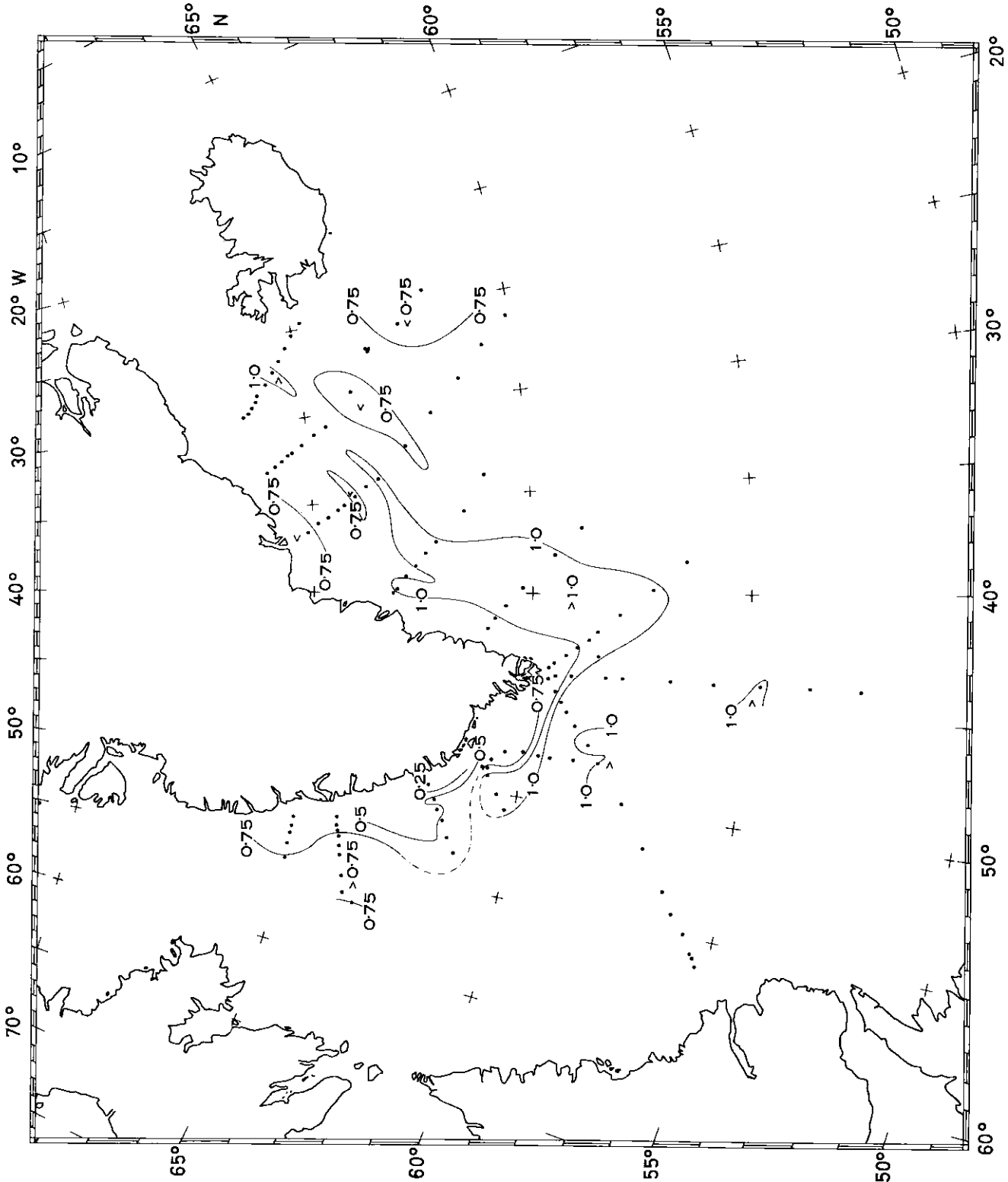


Chart 162. NORWESTLANT 1:  $\mu\text{g atom PO}_4\text{-P/l}$ : 100 m: 31 March-1 May.

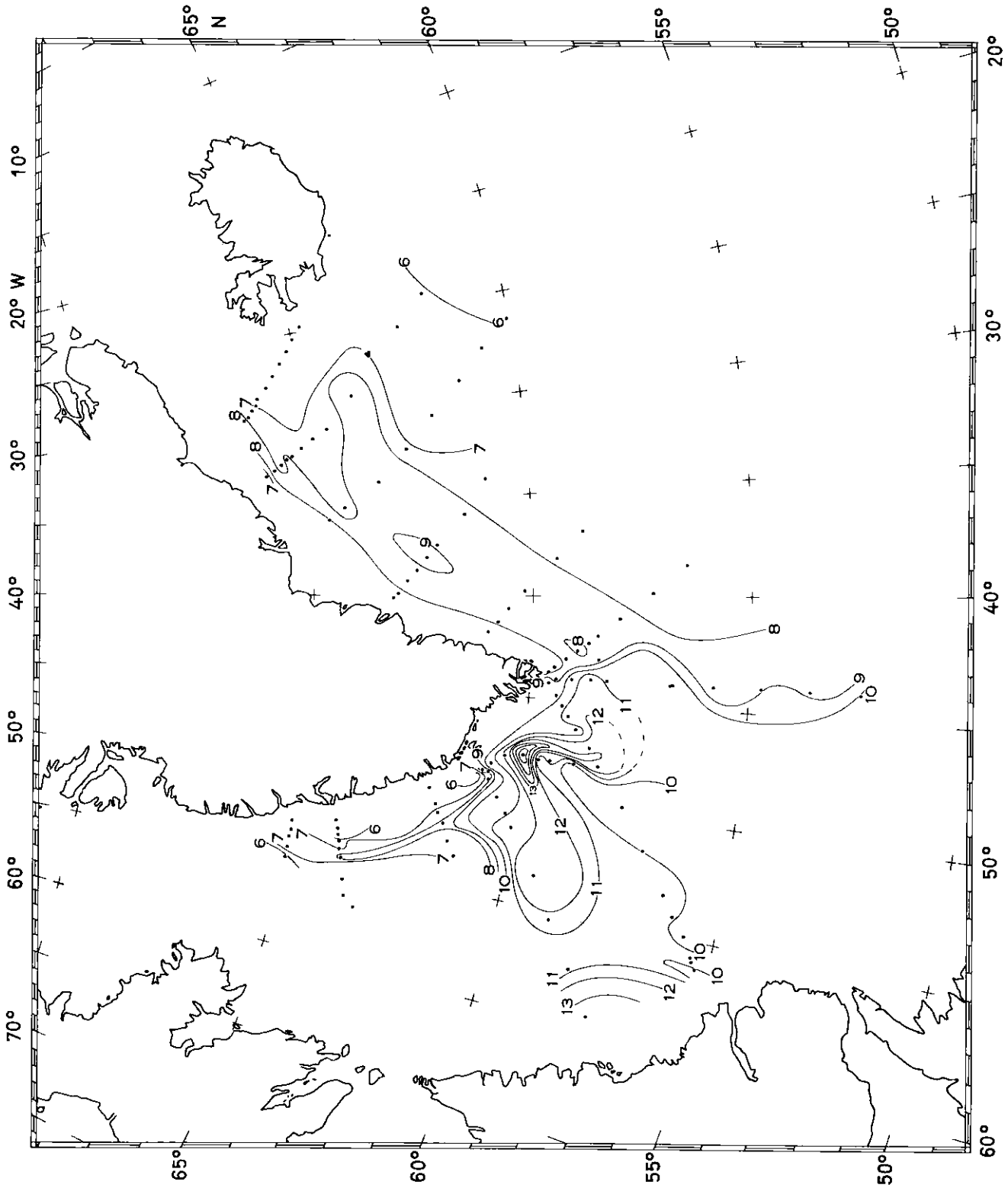


Chart 163. NORWESTLANT 1:  $\mu\text{g atom SiO}_3\text{-Si/l}$ : 100 m: 31 March-1 May.

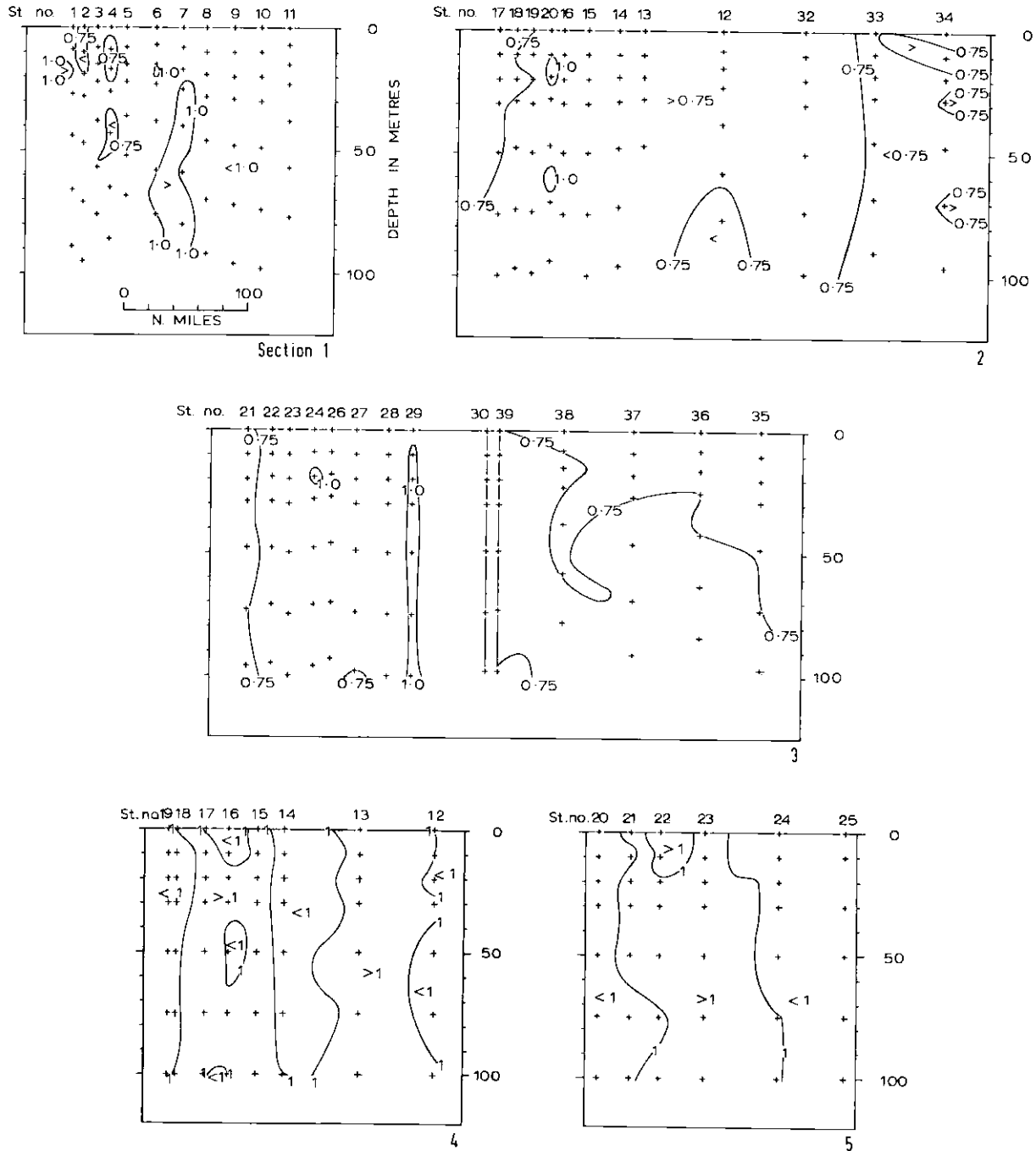


Chart 164A. NORWESTLANT 1:  $\mu\text{g atom PO}_4\text{-P/l}$ : Section 1: 31 March-2 April. Section 2: 3-25 April. Section 3: 5-27 April. Section 4: 25-28 April. Section 5: 30 April-1 May.

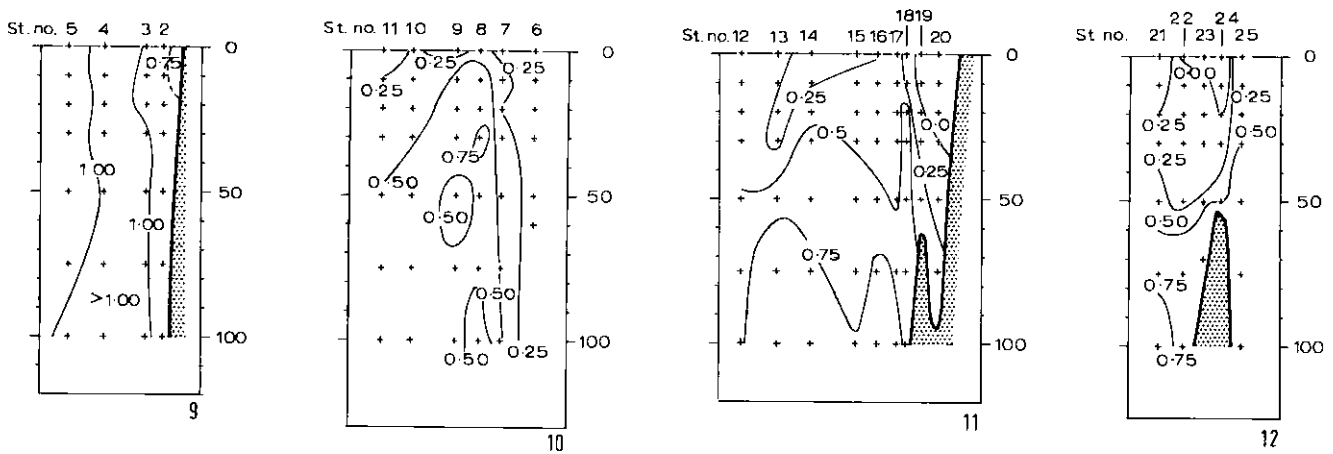
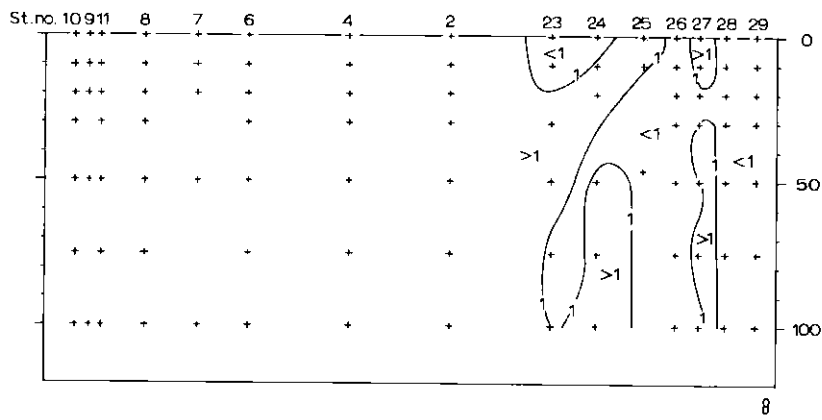
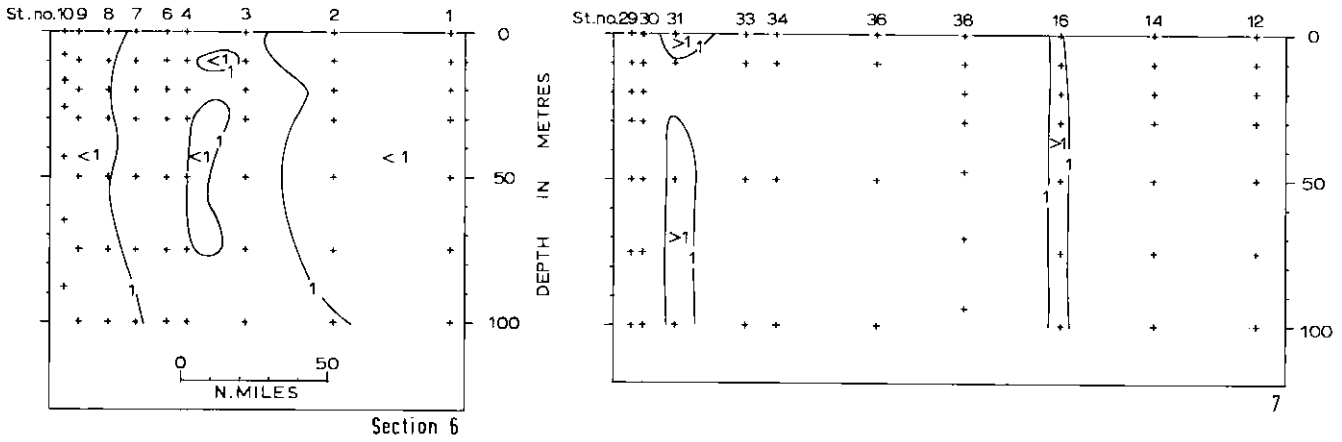


Chart 164B. NORWESTLANT 1:  $\mu\text{g atom PO}_4\text{-P/l}$ : Section 6: 9-11 April. Section 7: 18-21 April. Section 8: 15-18 April. Section 9: 10 April. Section 10: 11-12 April. Section 11: 17-18 April. Section 12: 20-21 April.

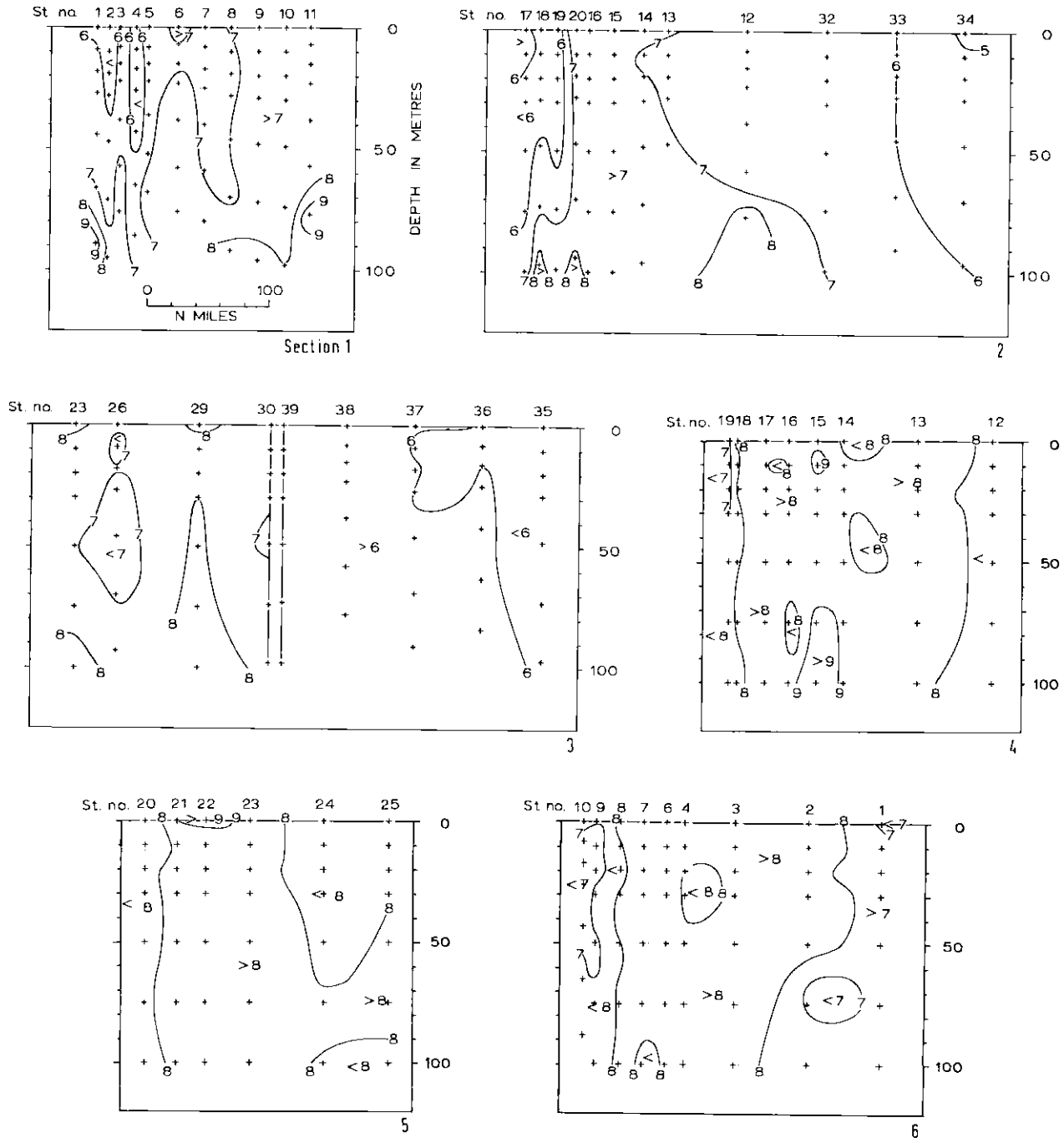


Chart 165A. NORWESTLANT 1:  $\mu\text{g atom SiO}_3\text{-Si/l}$ ; Section 1: 31 March-2 April. Section 2: 3-25 April. Section 3: 5-27 April. Section 4: 25-28 April. Section 5: 30 April-1 May. Section 6: 9-11 April.

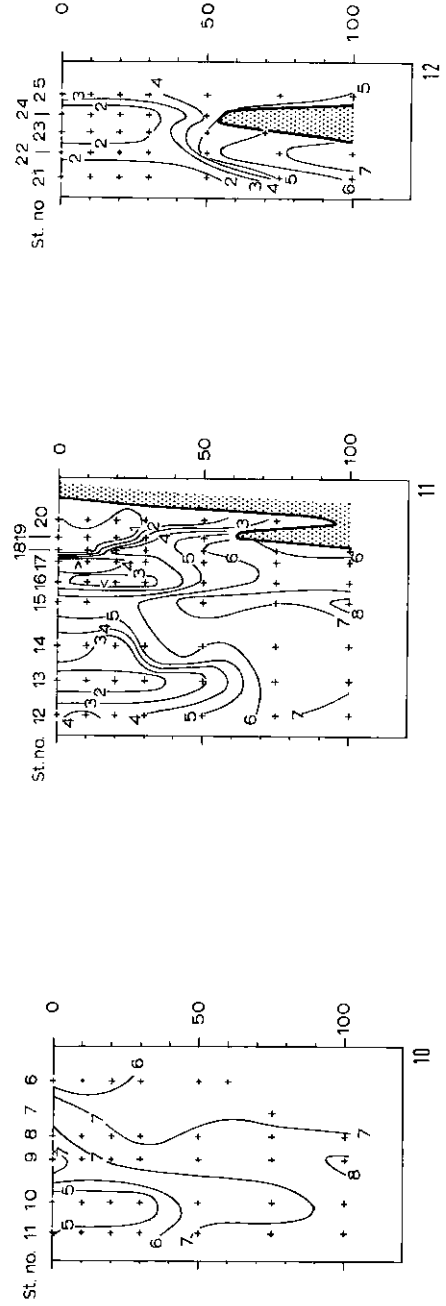
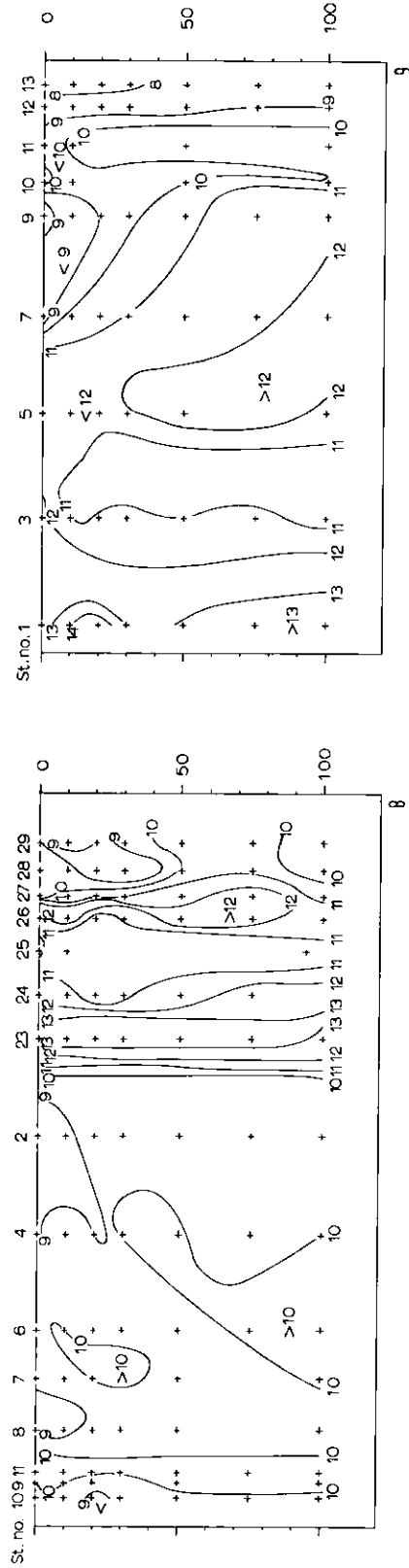
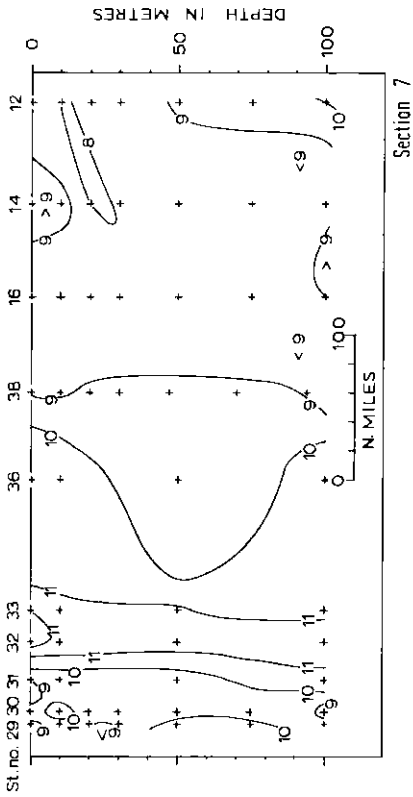


Chart 165B. NORWESTLANT 1:  $\mu\text{g atom SiO}_3\text{-Si/l}$ : Section 7: 18-21 April. Section 8: 15-18 April. Section 9: 10-13 April. Section 10: 11-12 April. Section 11: 17-18 April. Section 12: 20-21 April.

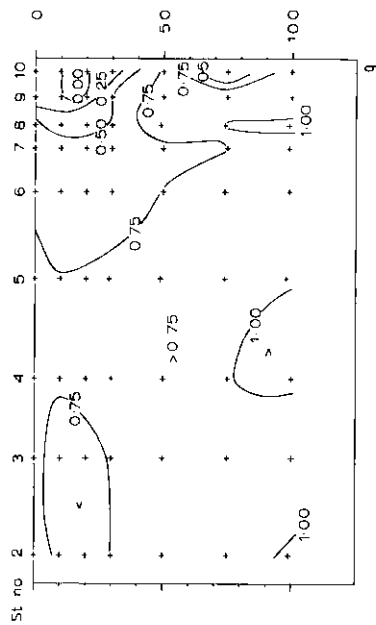
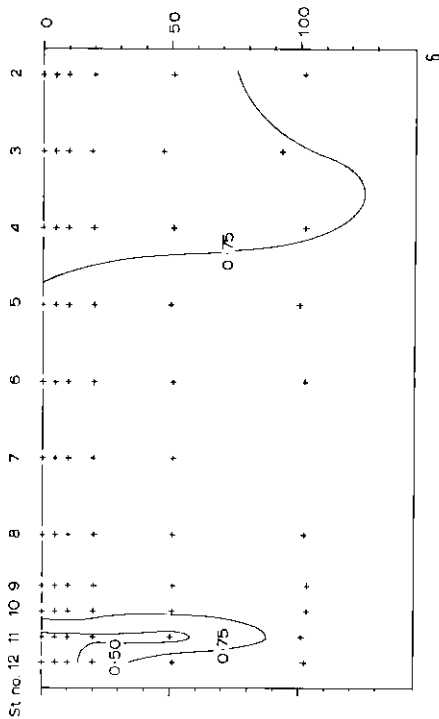
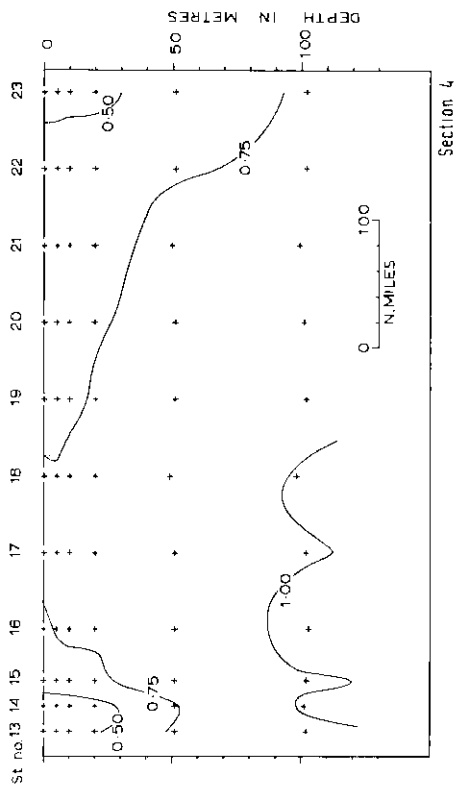
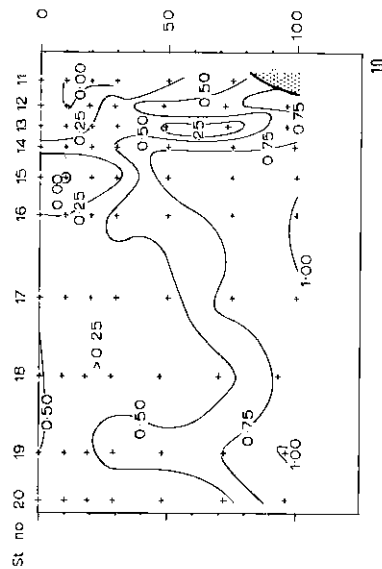
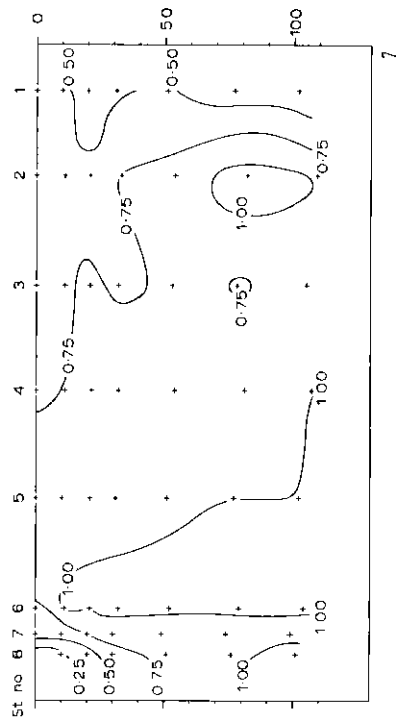
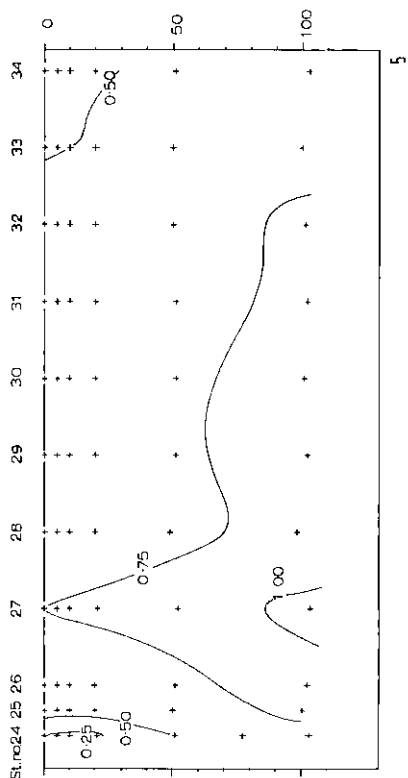


Chart 166A. NORWESTLANT 2:  $\mu\text{g atom PO}_4\text{-P/l}$ ; Section 4: 4-8 June. Section 5: 15-18 June. Section 6: 28 May-1 June. Section 7: 26-28 May. Section 9: 26-28 May. Section 10: 29-31 May.



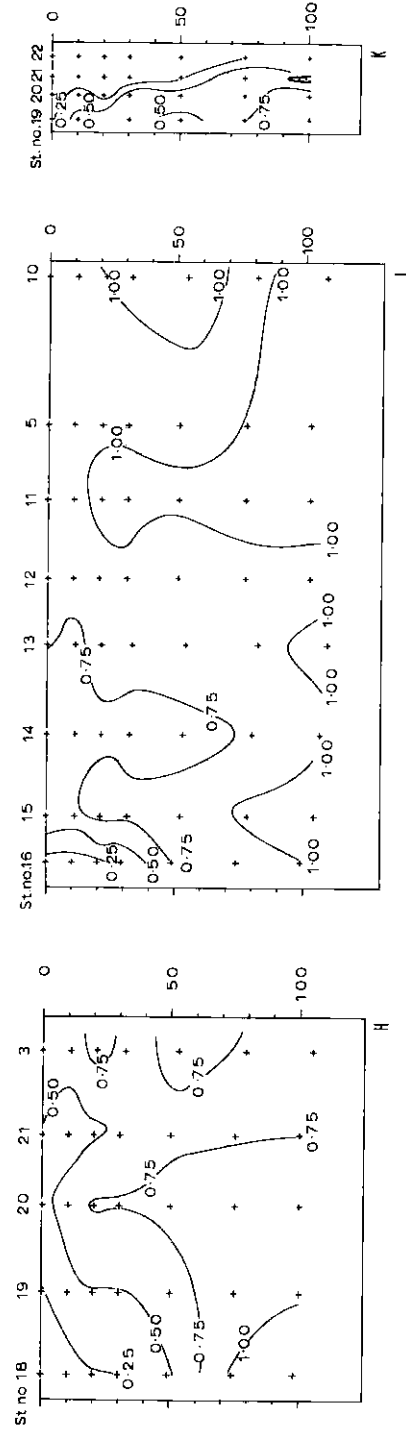
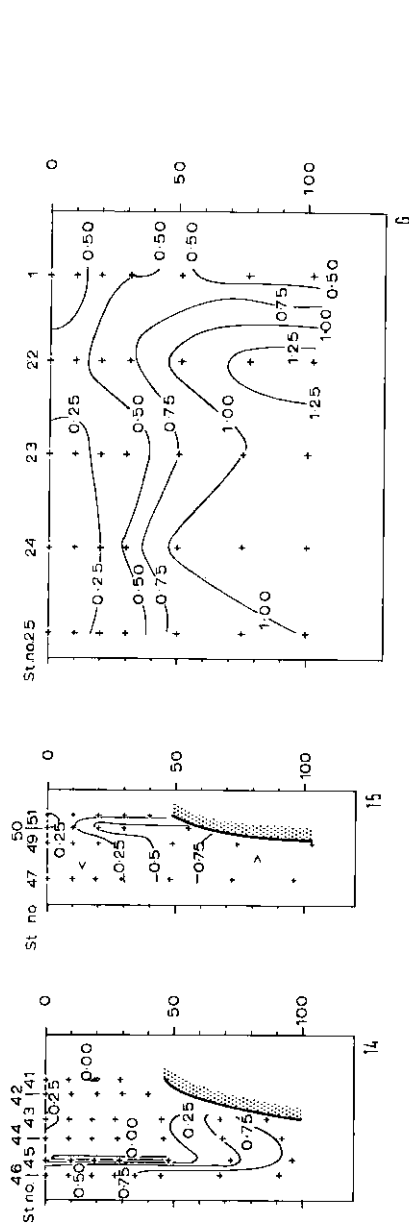
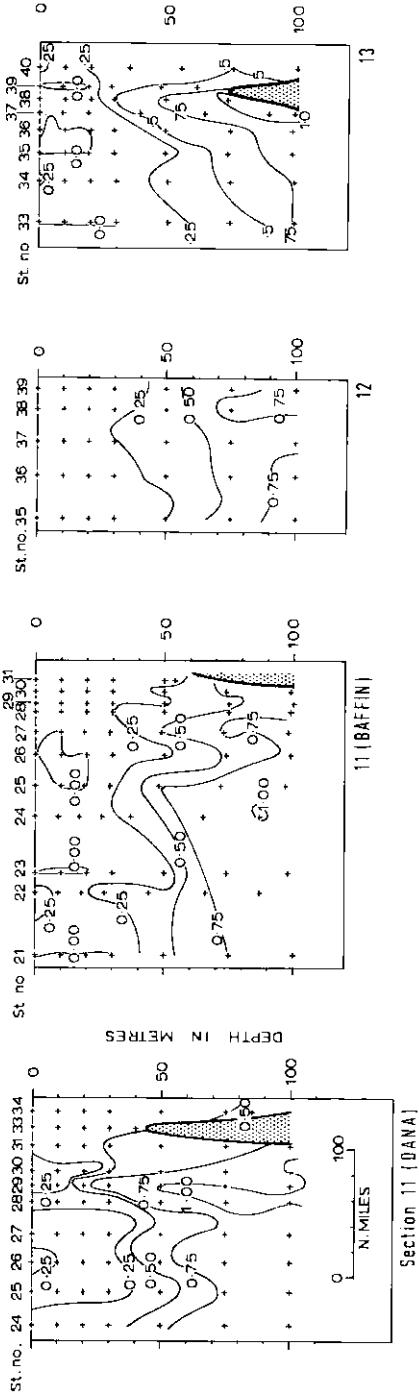


Chart 166B. NORWESTLANT 2:  $\mu\text{g}$  atom  $\text{PO}_4\text{-P/l}$ : Section 11: 9-11 June. Section 11: 31 May-2 June. Section 12: 13-14 June. Section 13: 7-8 June. Section 14: 10 June. Section 15: 11 June. Section G: 26 May-14 June. Section H: 27 May-12 June. Section J: 28 May-2 June. Section K: 3-4 June.

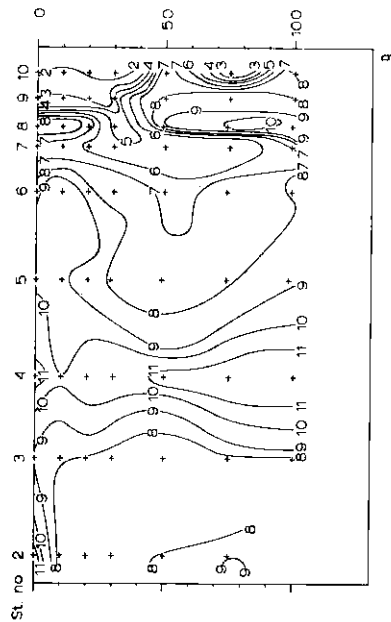
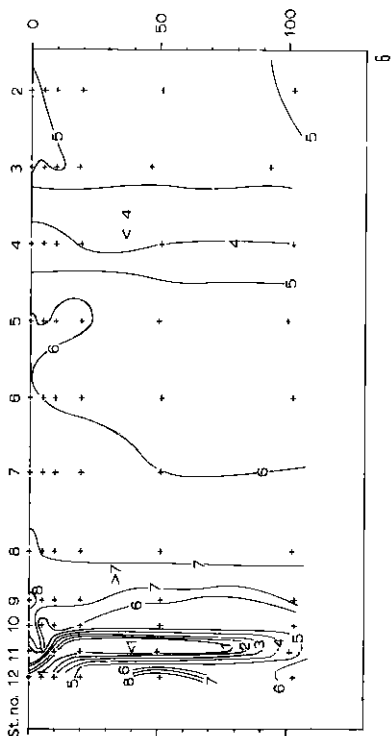
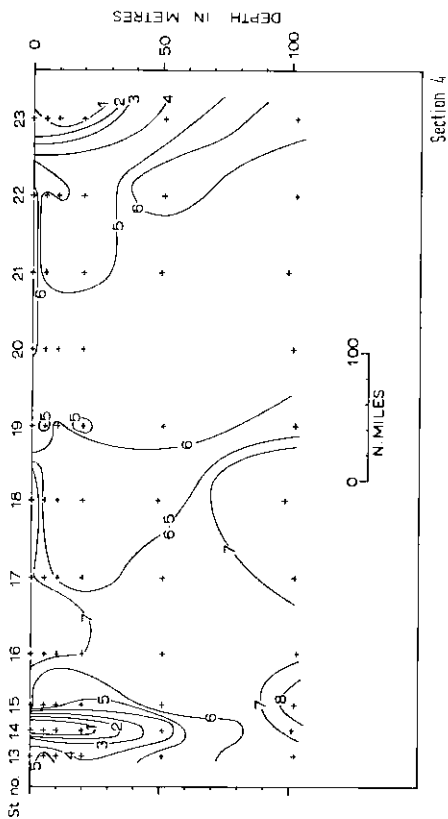
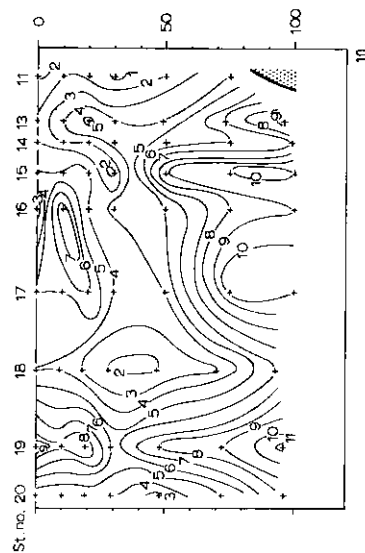
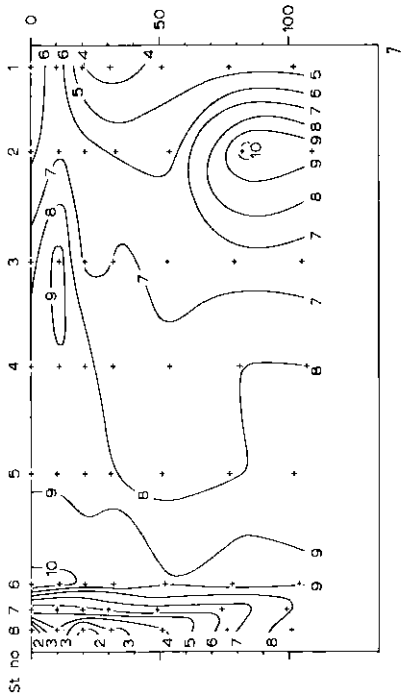
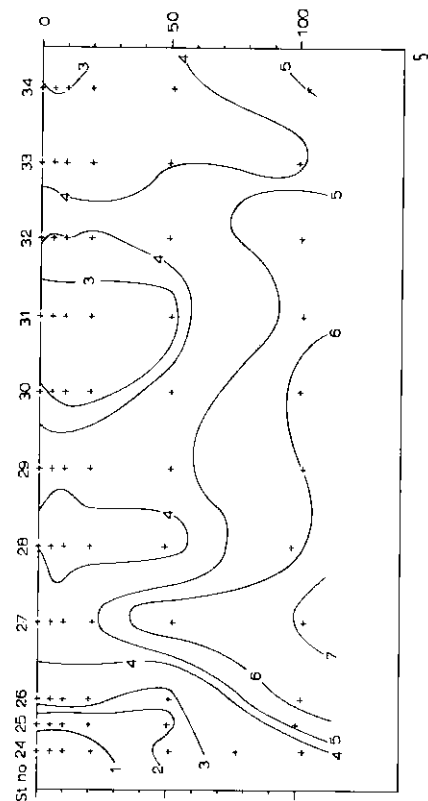


Chart 167A. NORWESTLANT 2: µg atom SiO<sub>3</sub>-Si/l: Section 4: 4-8 June, Section 5: 15-18 June, Section 6: 28 May-1 June, Section 7: 26-28 May, Section 9: 26-28 May, Section 10: 29-31 May.



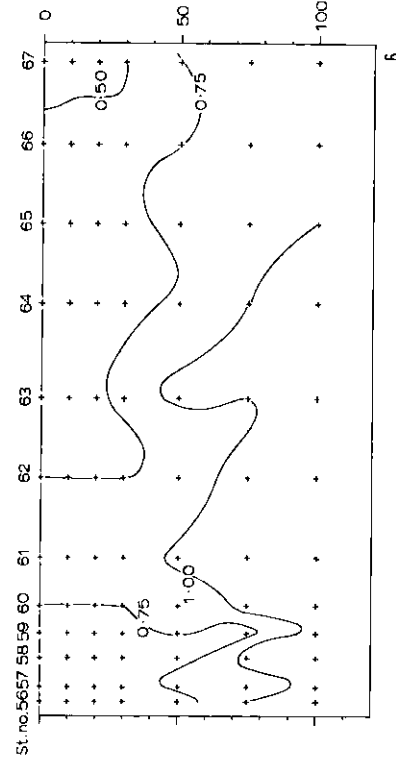
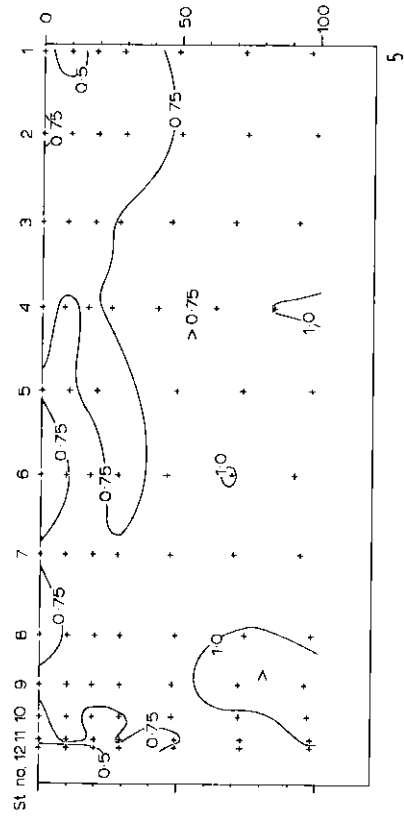
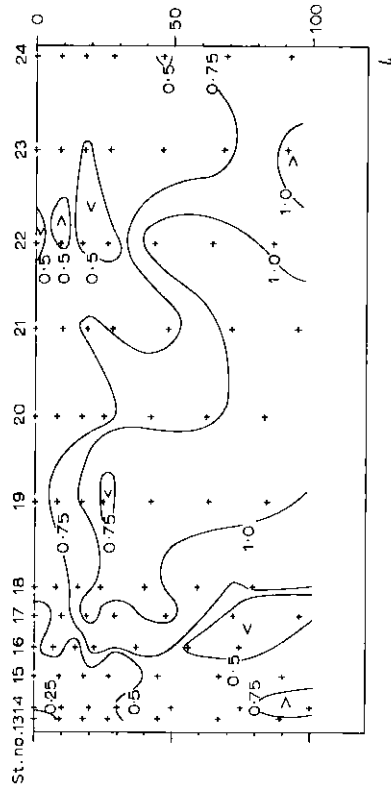
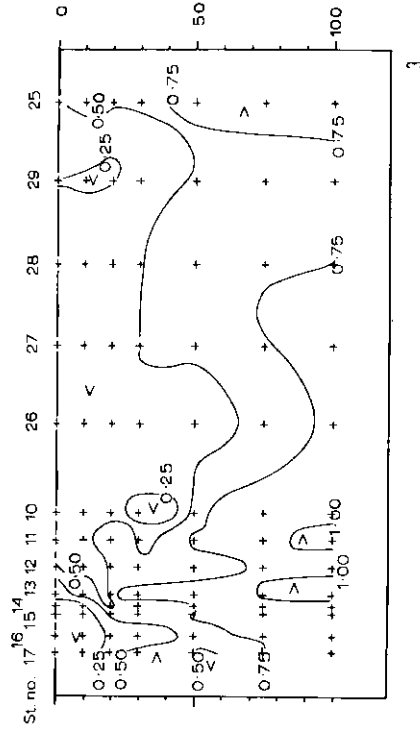
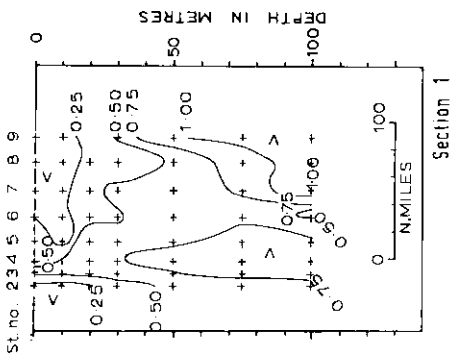
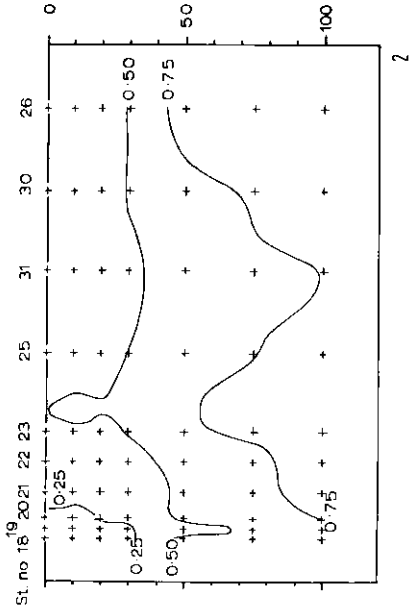


Chart 168A. NORWESTLANT 3:  $\mu\text{g atom PO}_4\text{-P/l}$ : Section 1: 30 June-1 July, Section 2: 8-18 July, Section 3: 5-17 July, Section 4: 11-15 July, Section 5: 2-5 July, Section 6: 31 July-2 August.

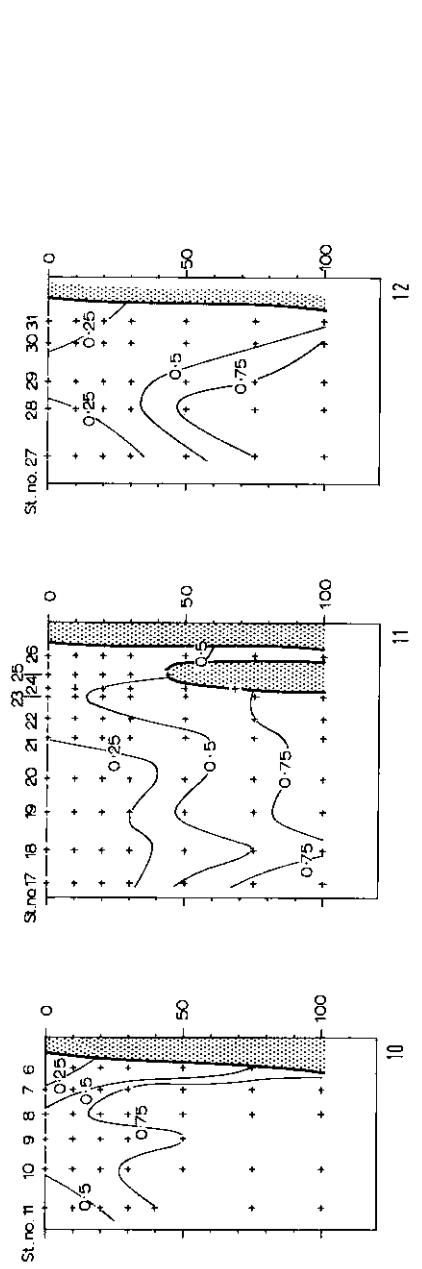
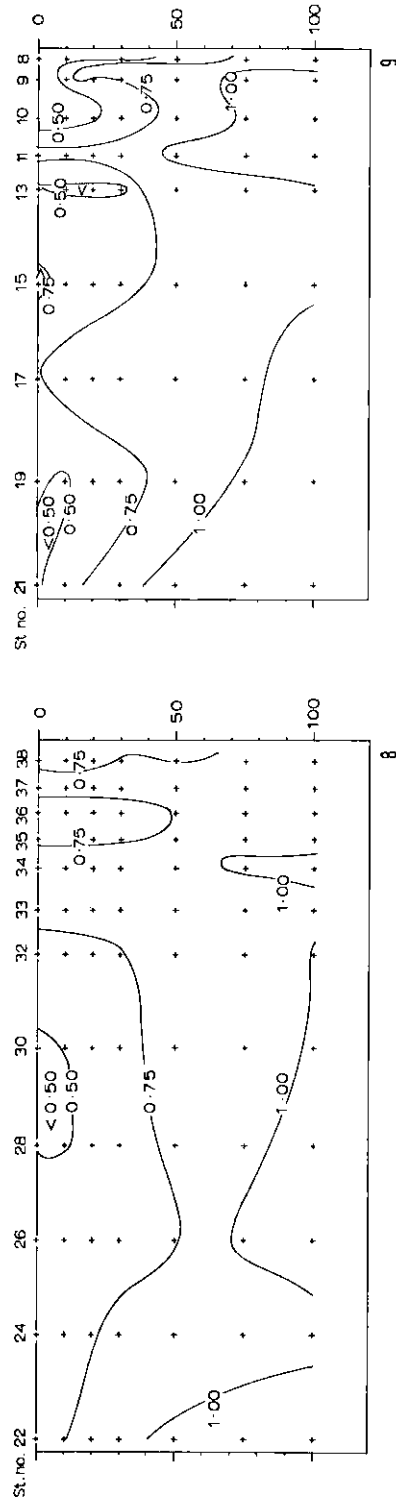
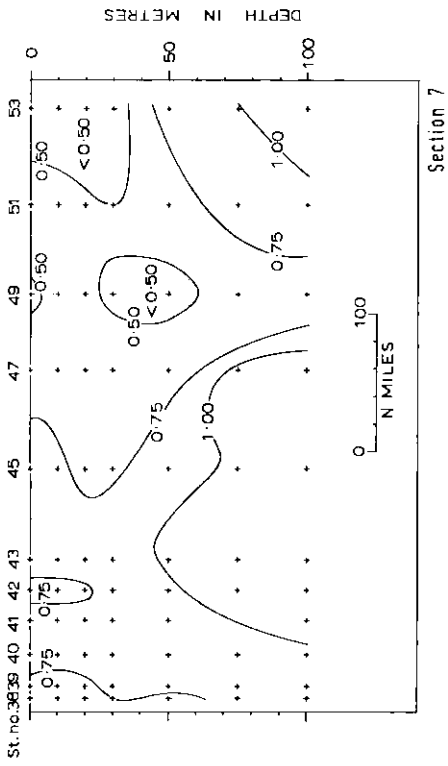


Chart 168B. NORWESTLANT 3:  $\mu\text{g}$  atom  $\text{PO}_4\text{-P/l}$ : Section 7: 14-17 July. Section 8: 10-14 July. Section 9: 3-9 July. Section 10: 2-3 July. Section 11: 5-7 July. Section 12: 9-10 July.

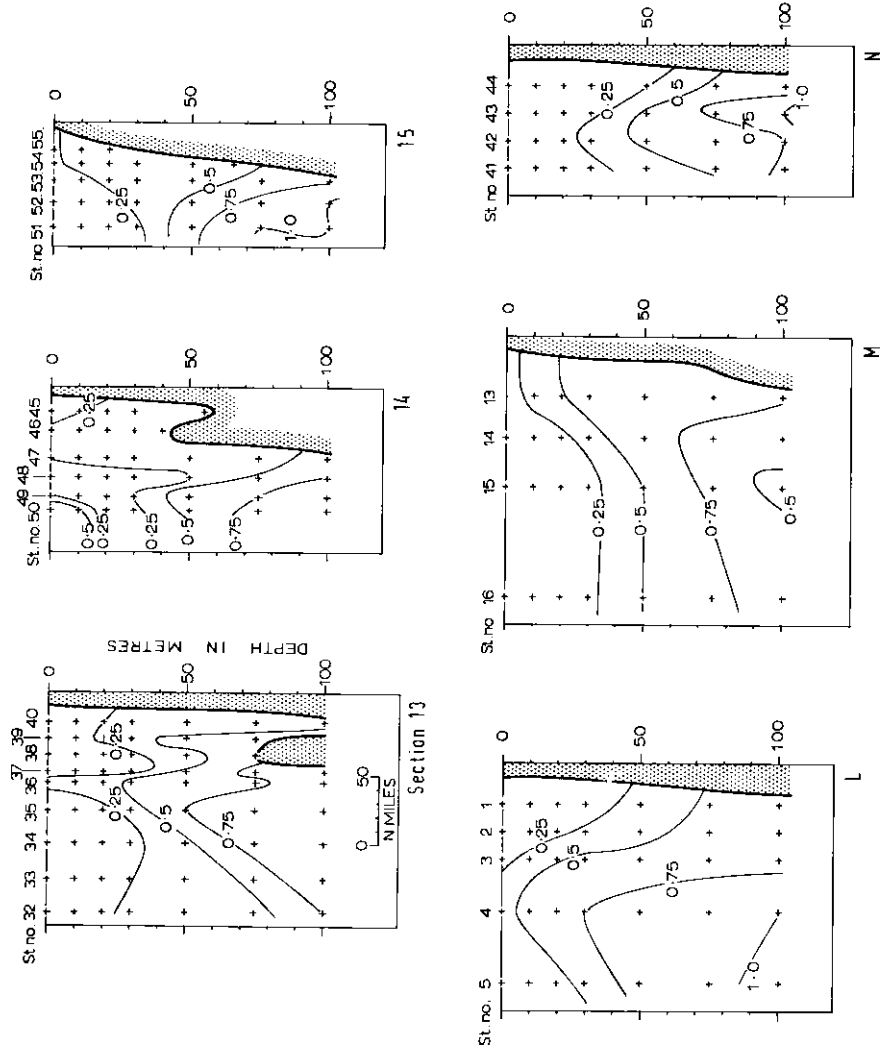


Chart 168C. NORWESTLANT 3:  $\mu\text{g atom PO}_4\text{-P/l}$ : Section 13: 10-12 July, Section 14: 13-14 July, Section 15: 15-16 July, Section L: 30 June-1 July, Section M: 4-5 July, Section N: 12-13 July.

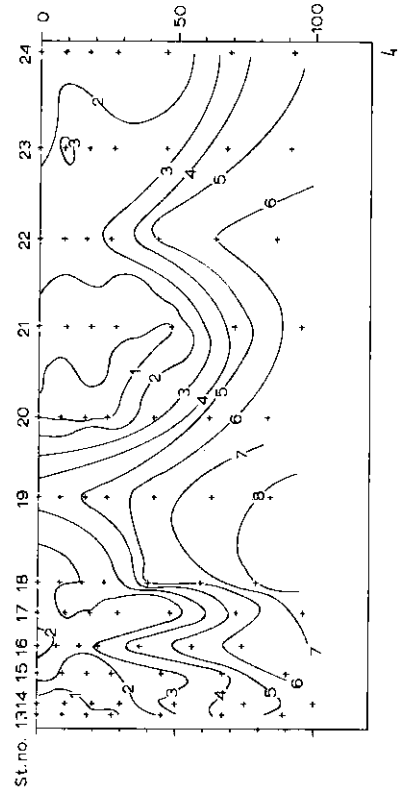
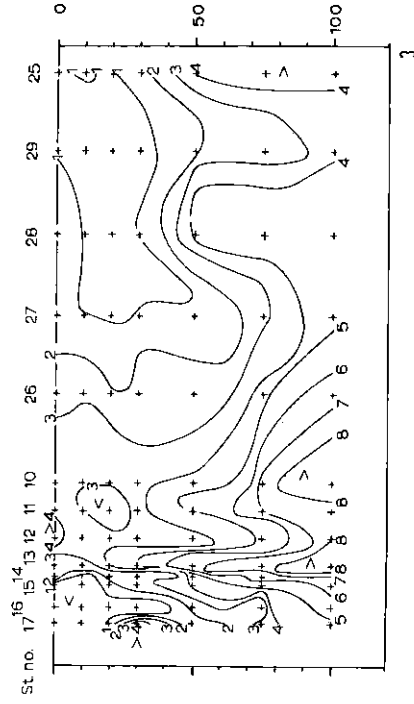
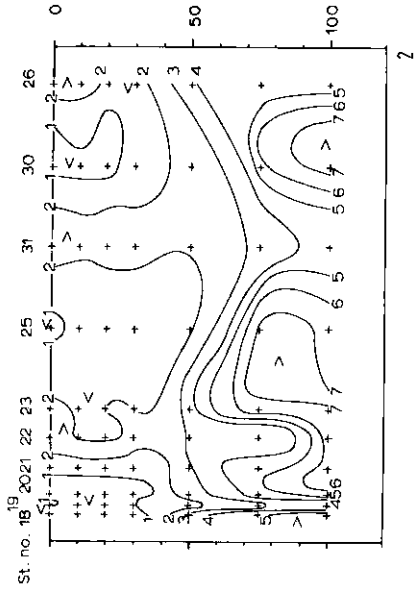
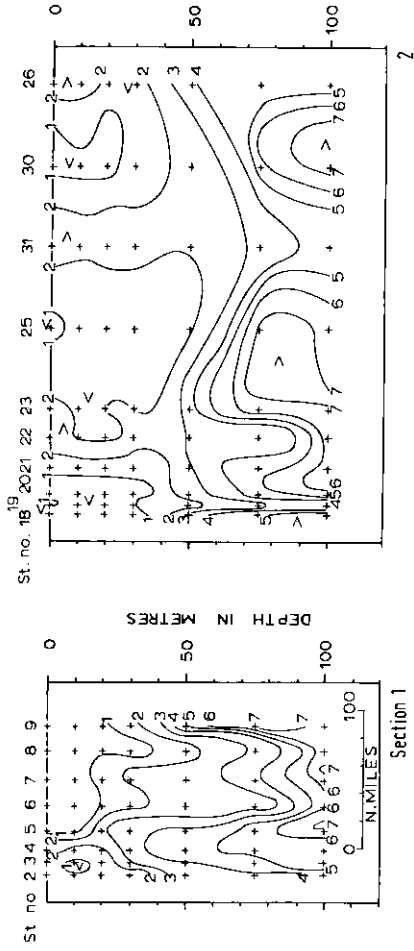


Chart 169A. NORWESTLANT 3:  $\mu\text{g}$  atom  $\text{SiO}_3\text{-Si}/\text{l}$ : Section 1: 30 June-1 July. Section 2: 8-18 July. Section 3: 5-17 July. Section 4: 11-15 July.

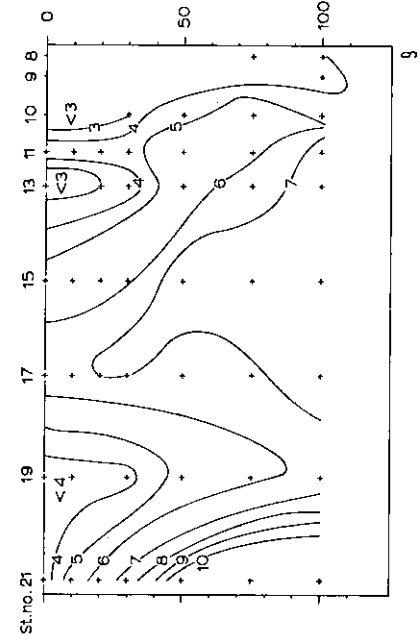
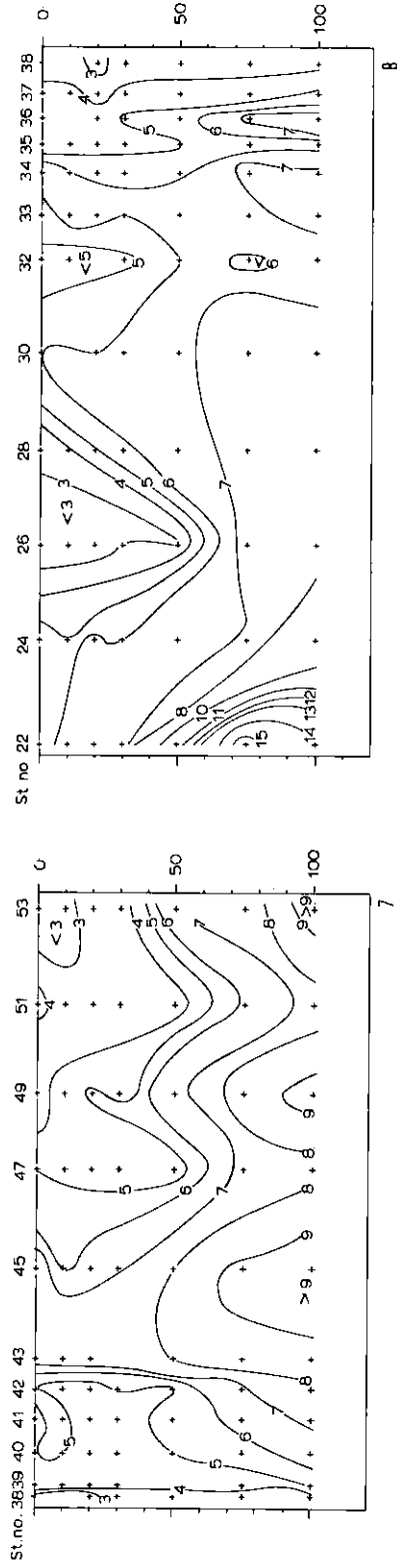
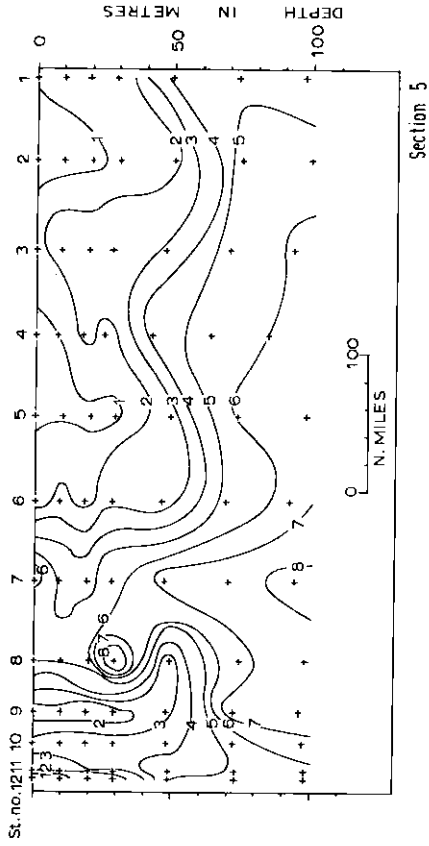


Chart 169B. NORWESTLANT 3:  $\mu\text{g atom SiO}_3\text{-Si/l}$ : Section 5: 2-5 July. Section 7: 14-17 July. Section 8: 10-14 July. Section 9: 3-9 July.



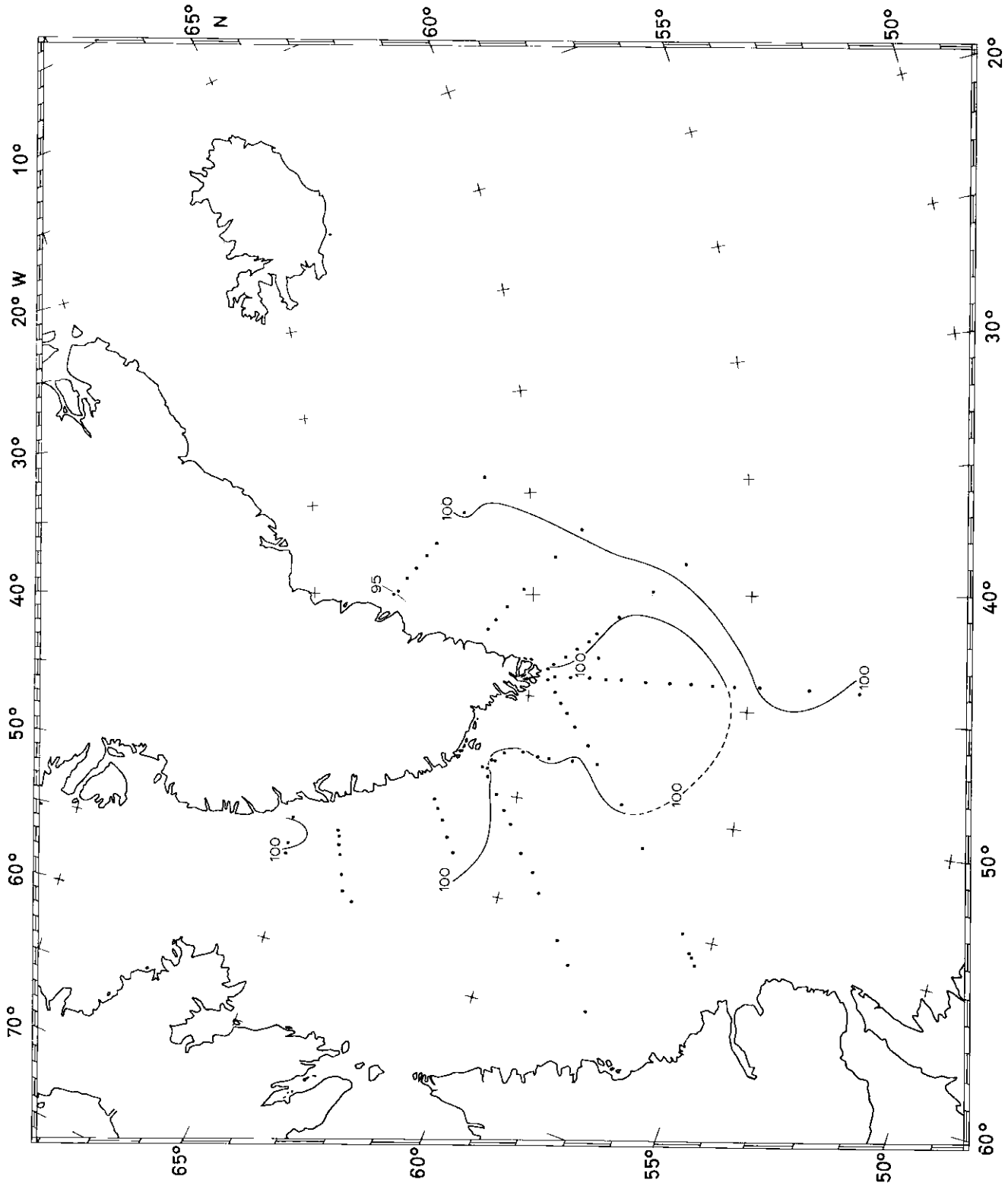


Chart 170. NORMESTLANT 1: O<sub>2</sub>% Saturation: 100 m: 31 March-1 May.

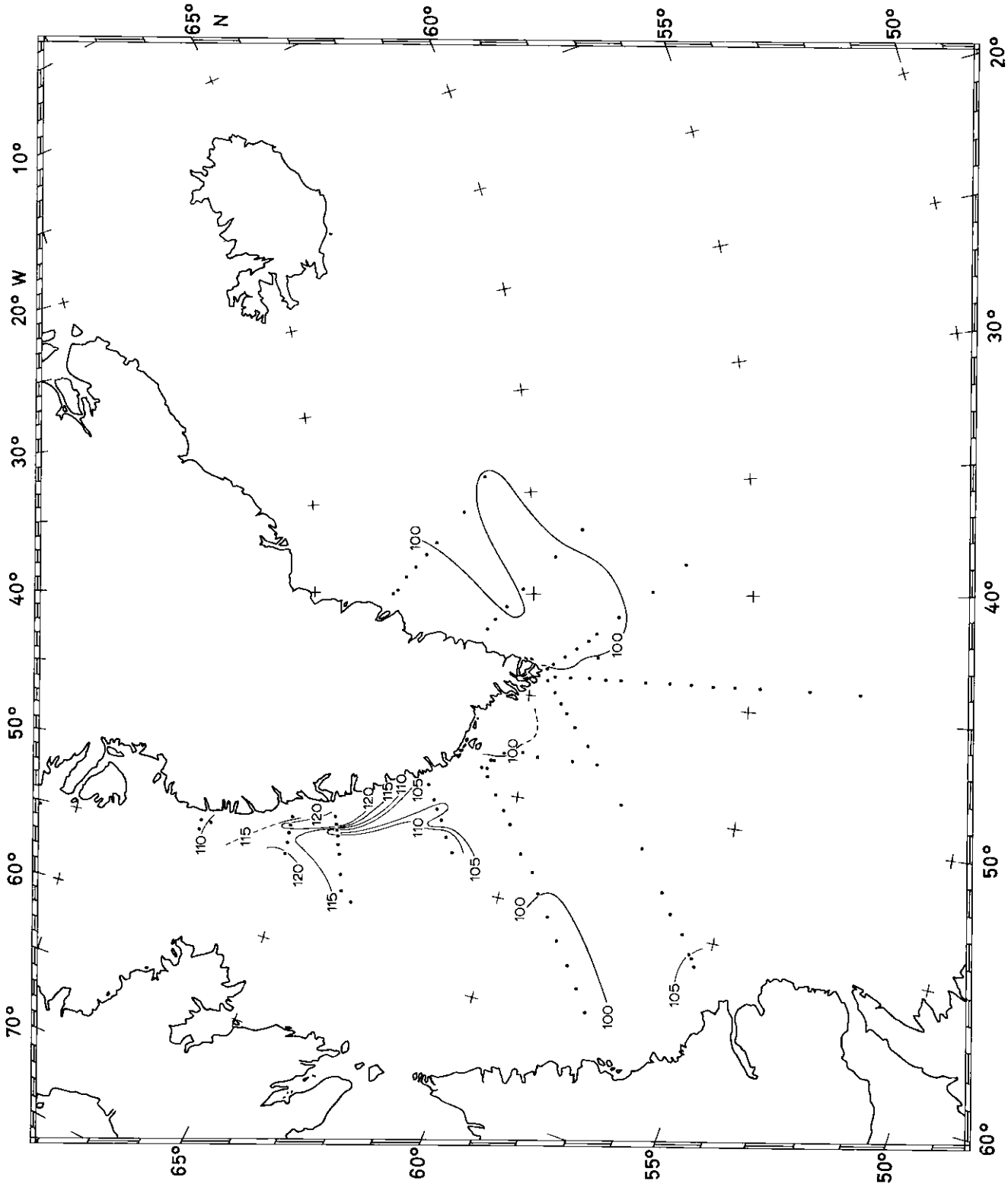


Chart 171. NORWESTLANT 1: O<sub>2</sub>% Saturation: 20 m: 31 March-1 May.

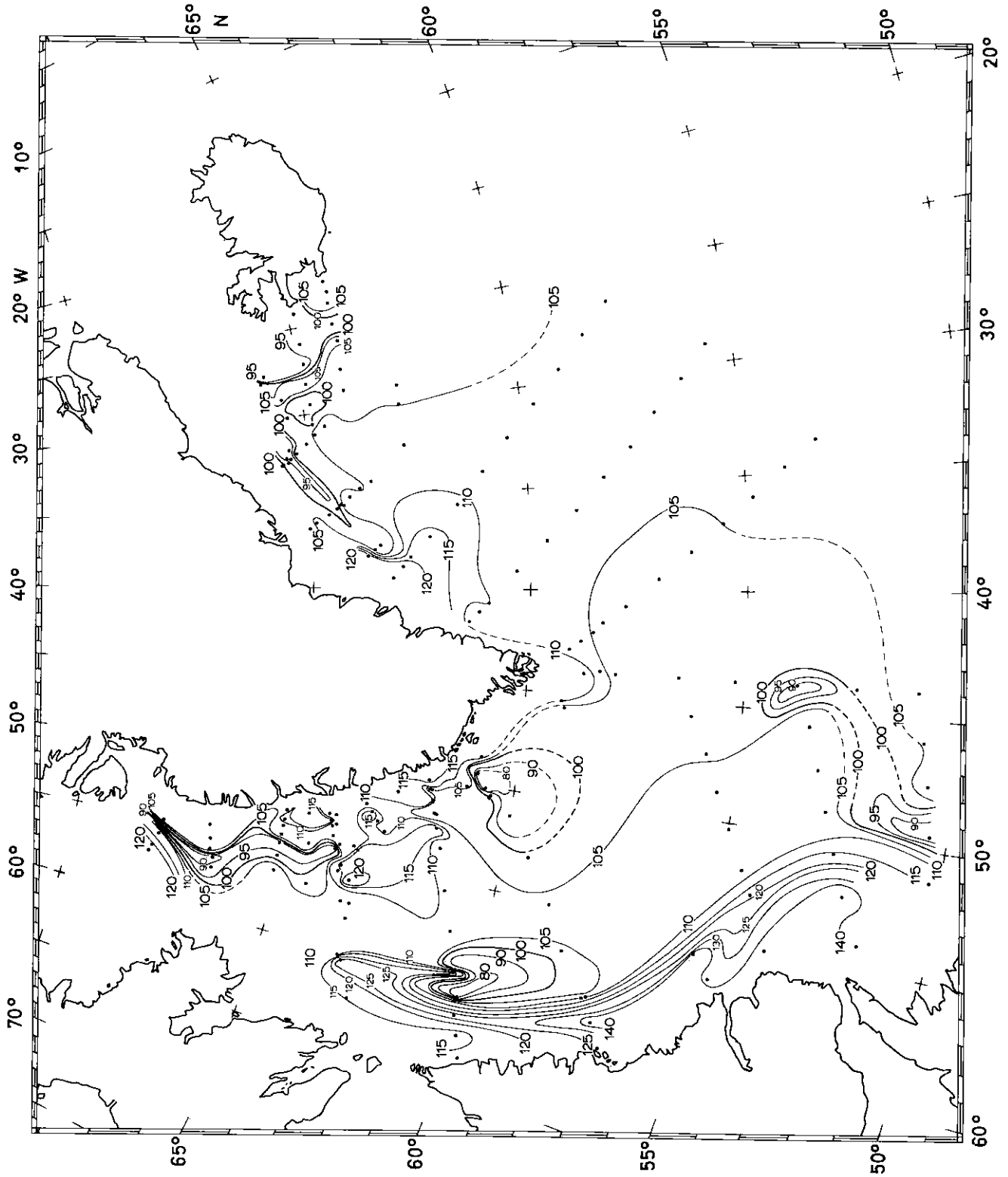


Chart 172. NORWESTLANT 2: O<sub>2</sub>% Saturation: 20 m: 26 May-18 June.

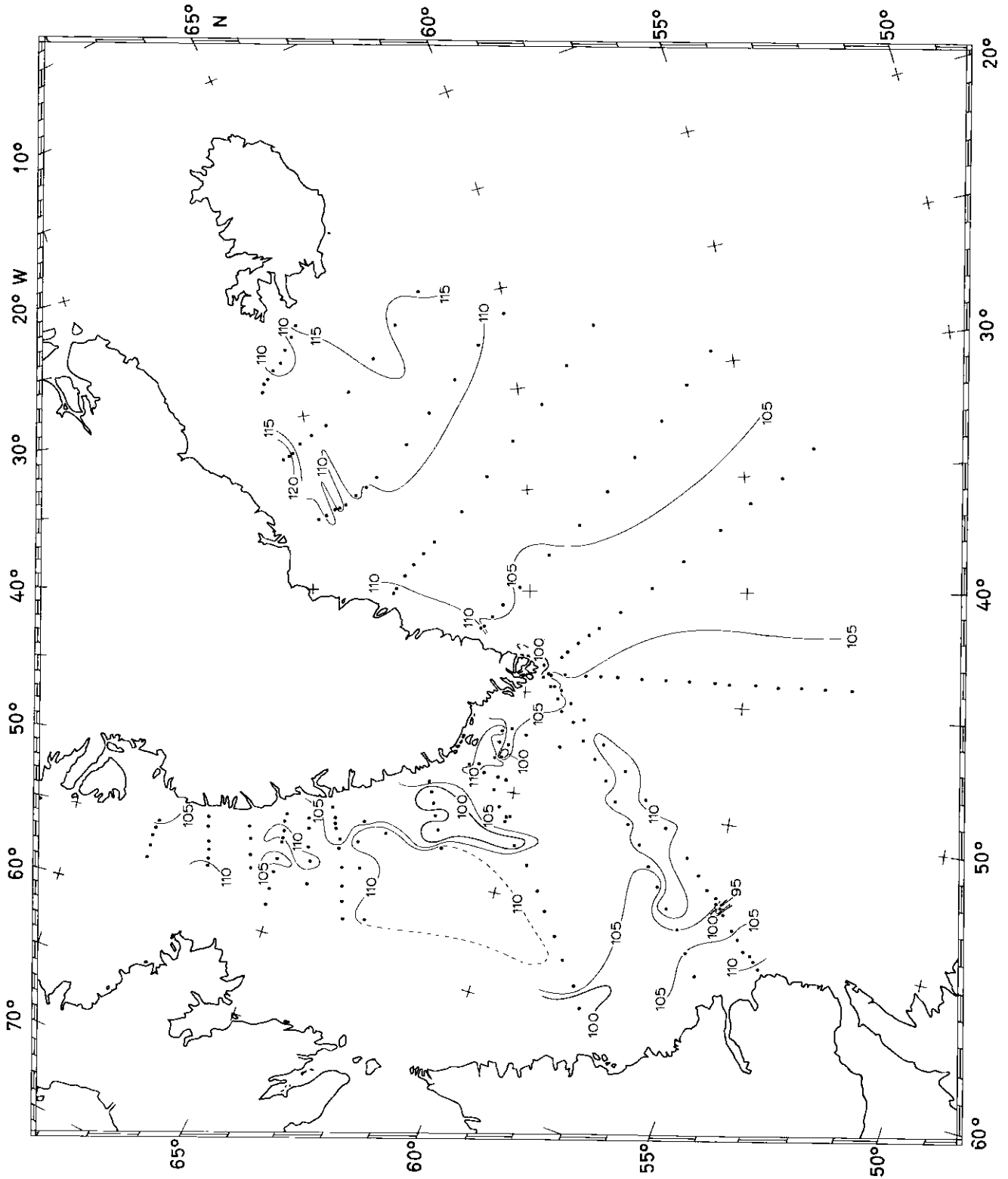


Chart 173. NORWESTLANT 3: O<sub>2</sub> Saturation: 20 m: 30 June-3 August.

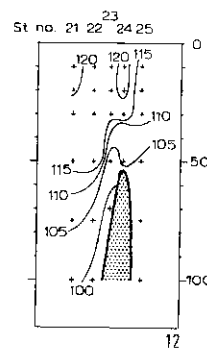
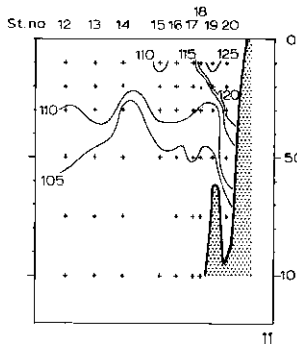
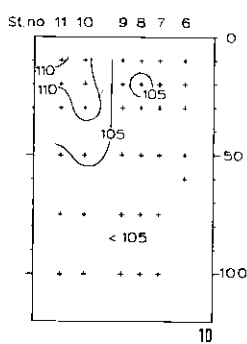
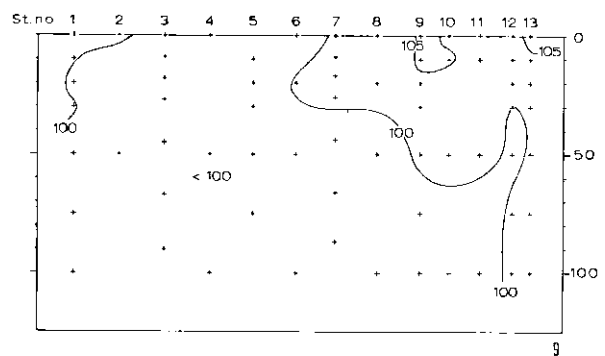
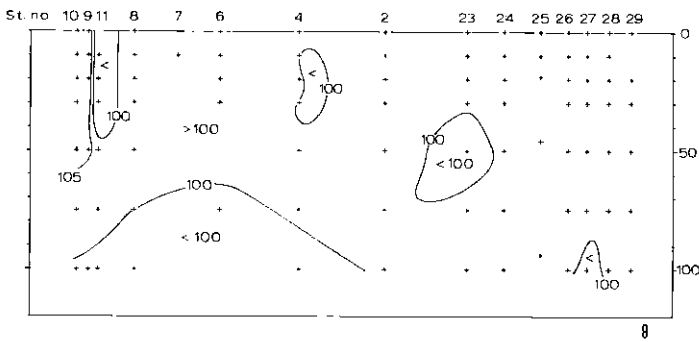
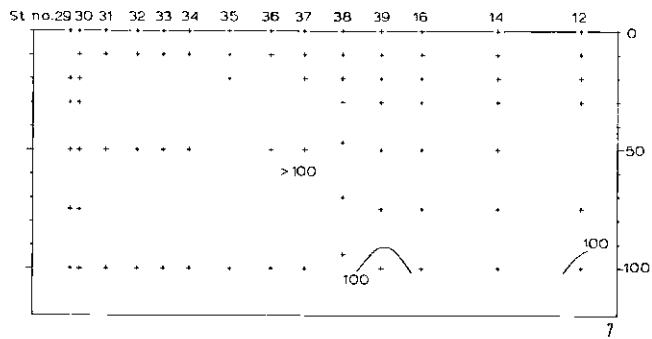
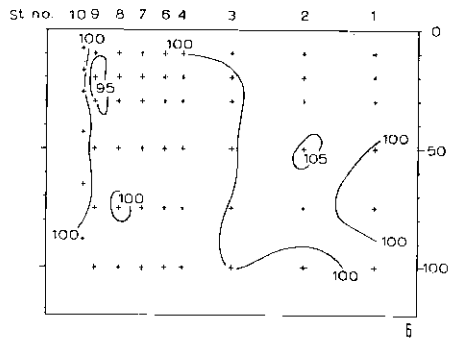
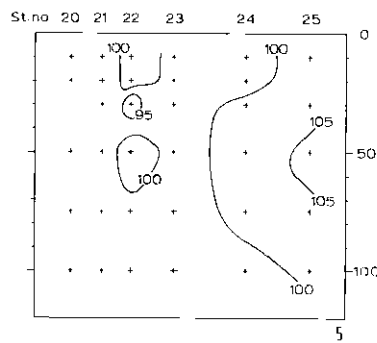
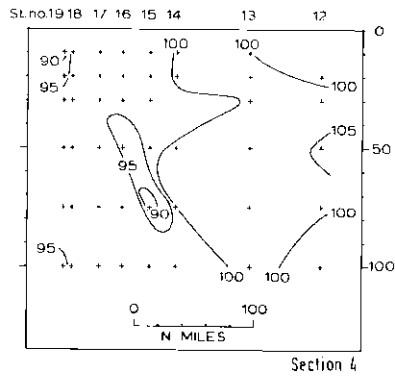


Chart 174. NORWESTLANT 1: O<sub>2</sub>% Saturation: Section 4: 25-28 April. Section 5: 30 April-1 May. Section 6: 9-11 April. Section 7: 18-21 April. Section 8: 15-18 April. Section 9: 10-13 April. Section 10: 11-12 April. Section 11: 17-18 April. Section 12: 20-21 April.

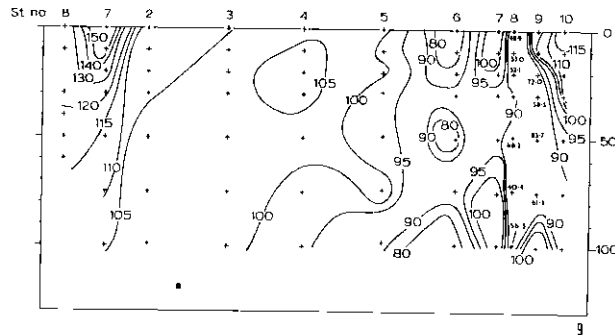
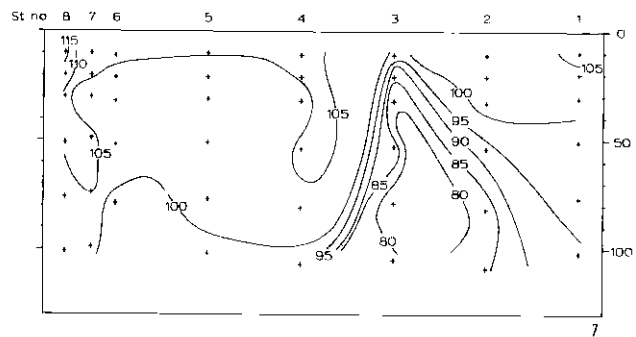
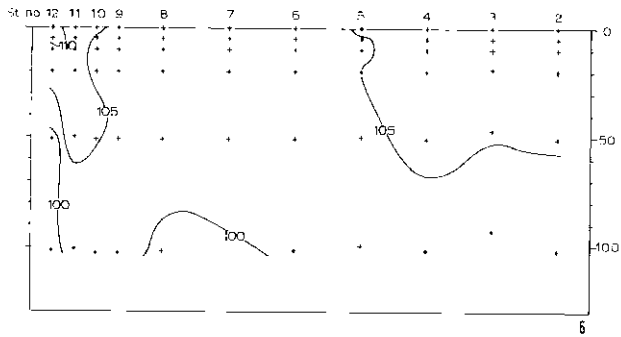
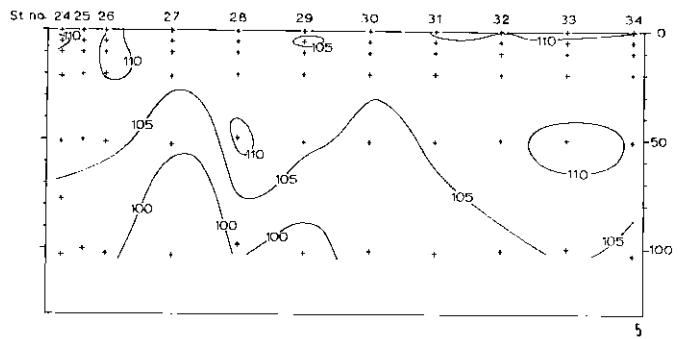
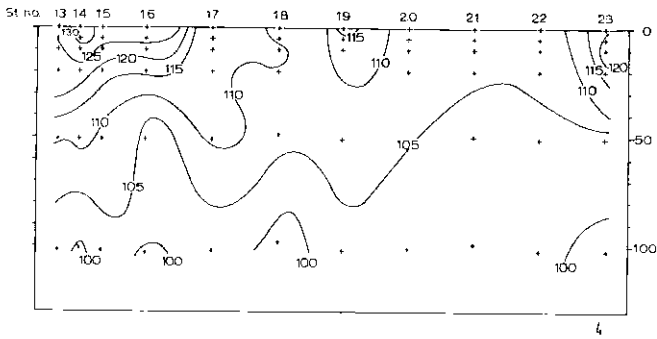
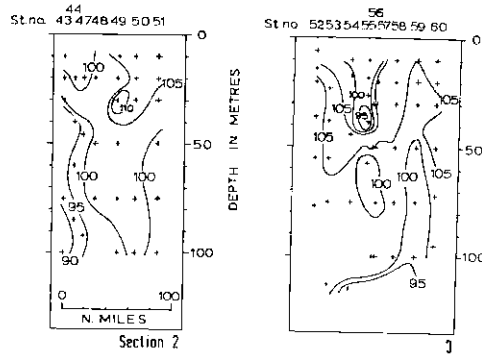


Chart 175A. NORWESTLANT 2: O<sub>2</sub>% Saturation: Section 2: 23-24 May. Section 3: 25-26 May. Section 4: 4-8 June. Section 5: 15-18 June. Section 6: 28 May-1 June. Section 7: 26-28 May. Section 9: 26 May-3 June.

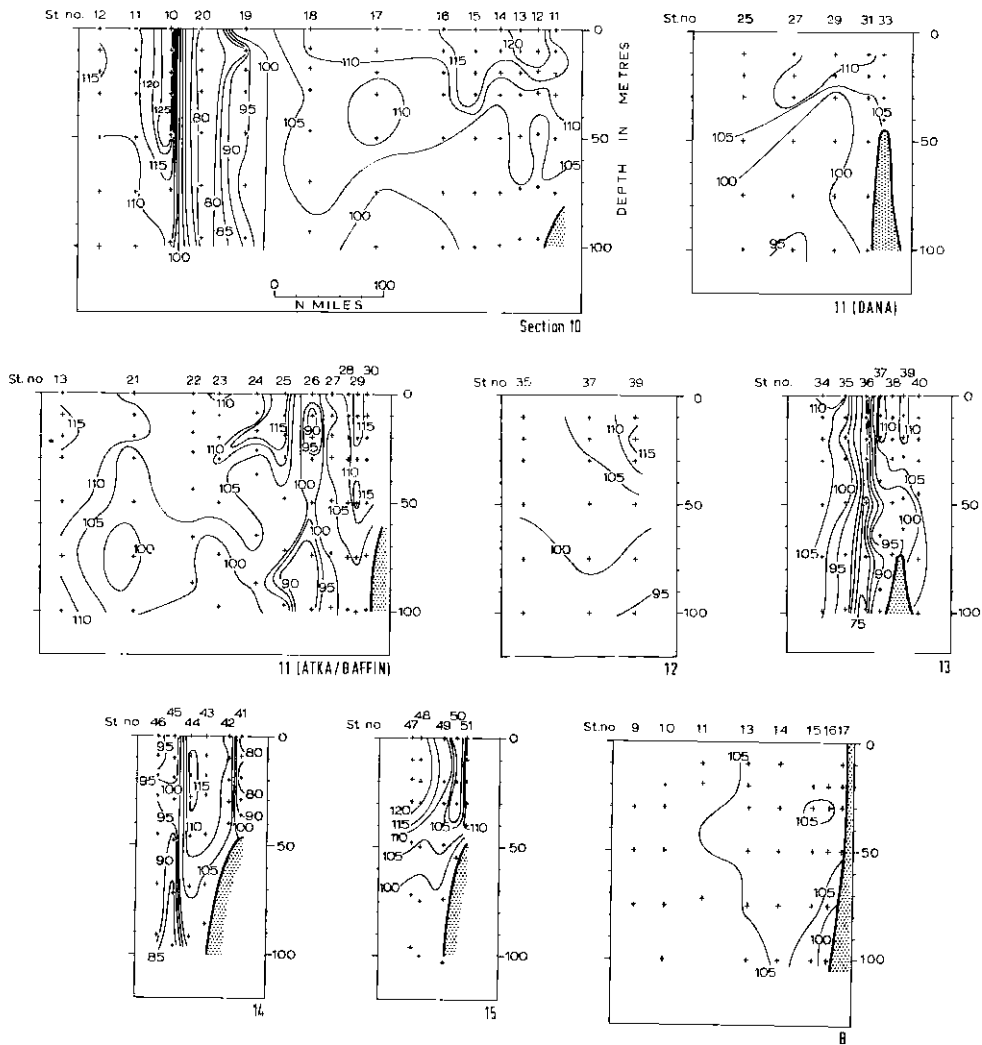


Chart 175B. NORWESTLANT 2:  $O_2\%$  Saturation: Section 10: 29 May-5 June.  
 Section 11: 10-11 June. Section 11: 31 May-7 June.  
 Section 12: 13-14 June. Section 13: 7-8 June. Section 14:  
 10 June. Section 15: 11 June. Section B: 15-16 May.

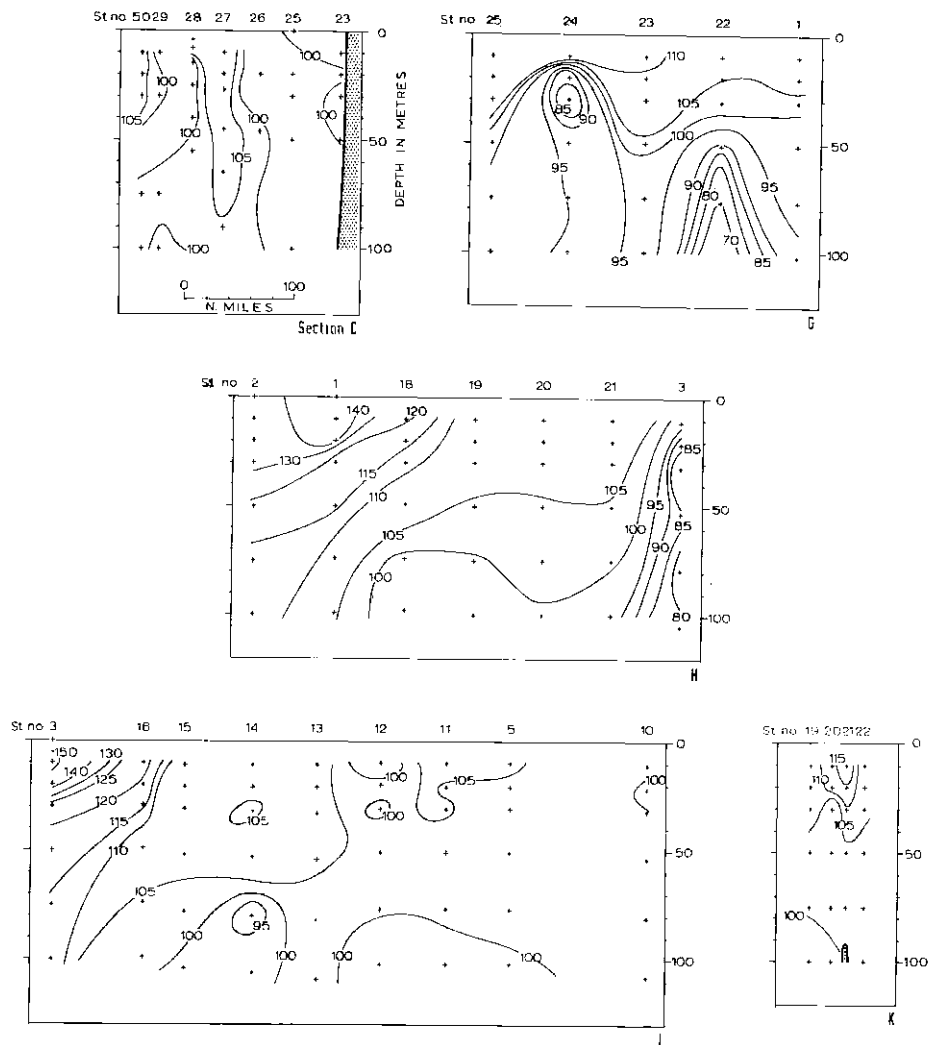


Chart 175C. NORWESTLANT 2: O<sub>2</sub>% Saturation: Section C: 19-24 May.  
 Section G: 26 May-14 June. Section H: 27 May-12 June.  
 Section J: 28 May-2 June. Section K: 3-4 June.



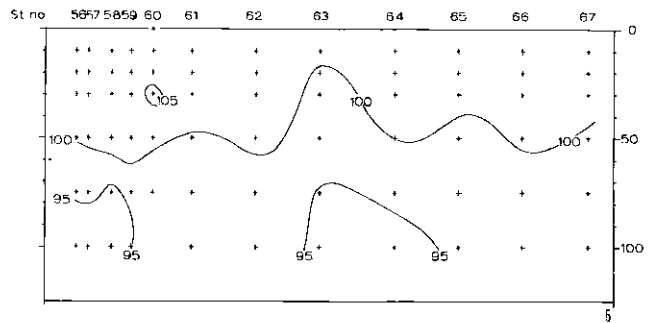
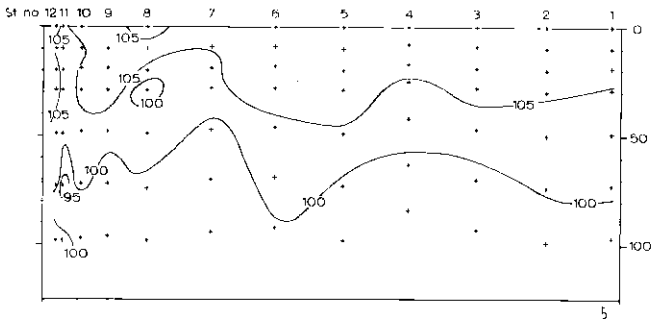
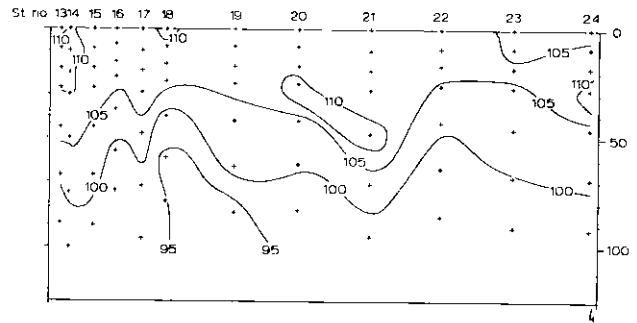
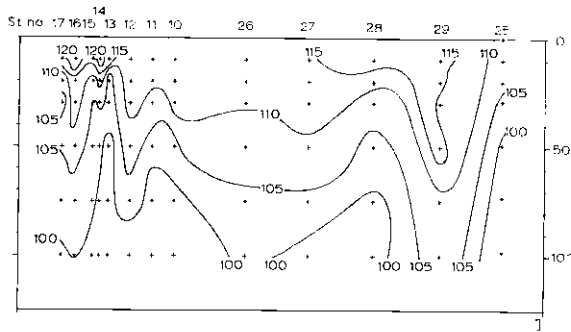
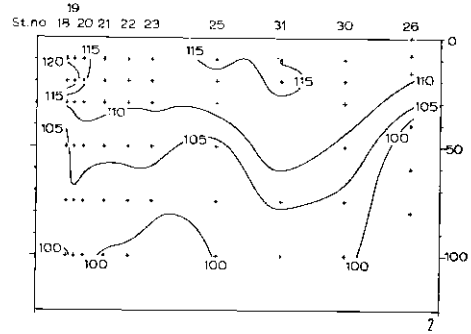
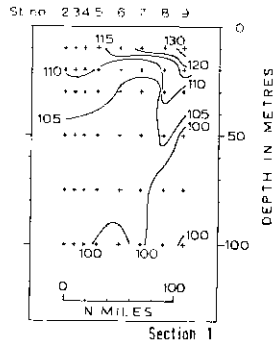


Chart 176A. NORWESTLANT 3: O<sub>2</sub>% Saturation: Section 1: 30 June-1 July. Section 2: 8-18 July. Section 3: 5-17 July. Section 4: 11-15 July. Section 5: 2-5 July. Section 6: 31 July-2 August.

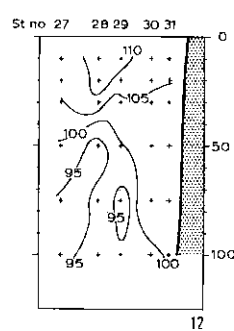
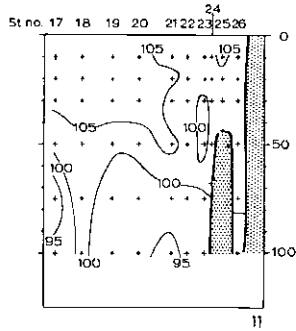
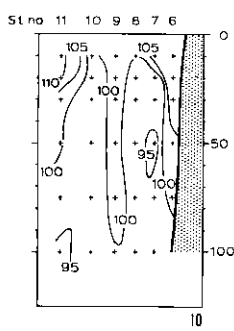
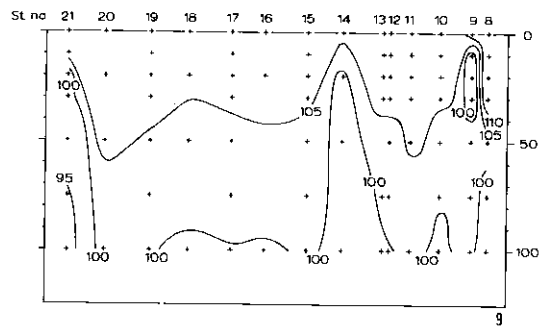
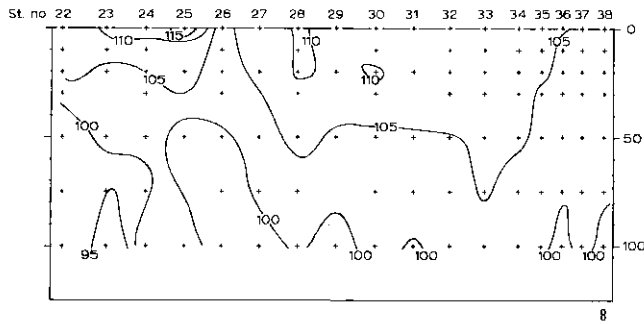
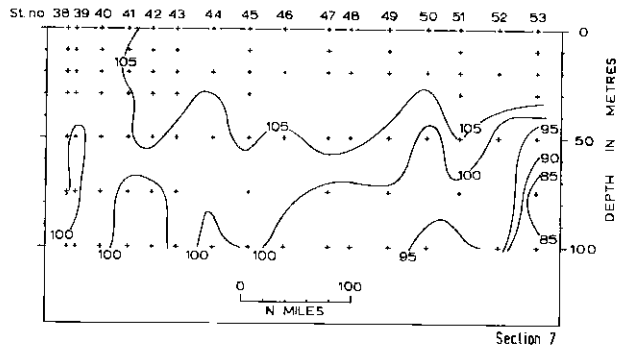


Chart 176B. NORWESTLANT 3: O<sub>2</sub>% Saturation: Section 7: 14-17 July. Section 8: 10-14 July. Section 9: 3-9 July. Section 10: 2-3 July. Section 11: 5-7 July. Section 12: 9-10 July.

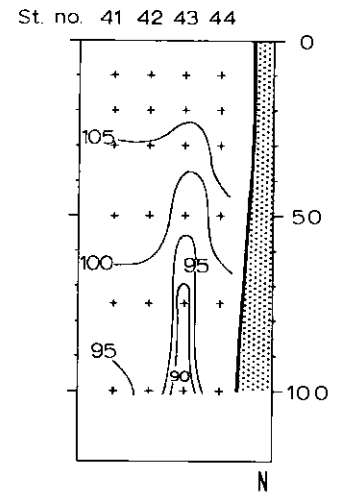
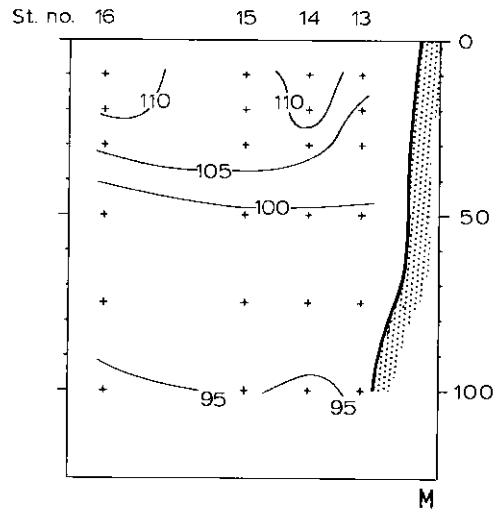
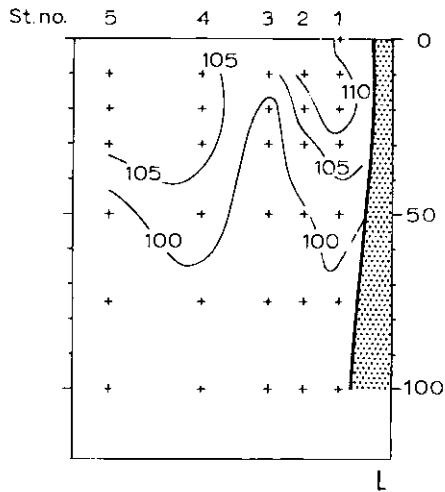
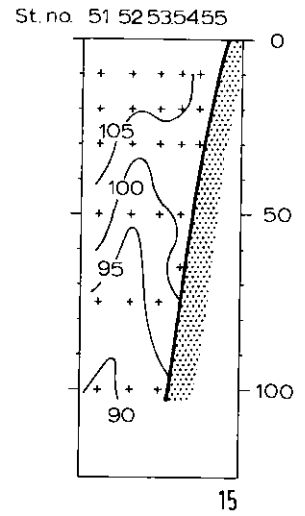
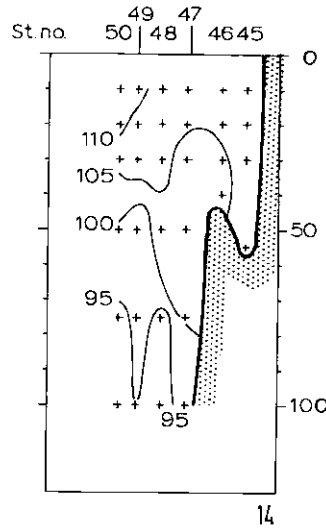
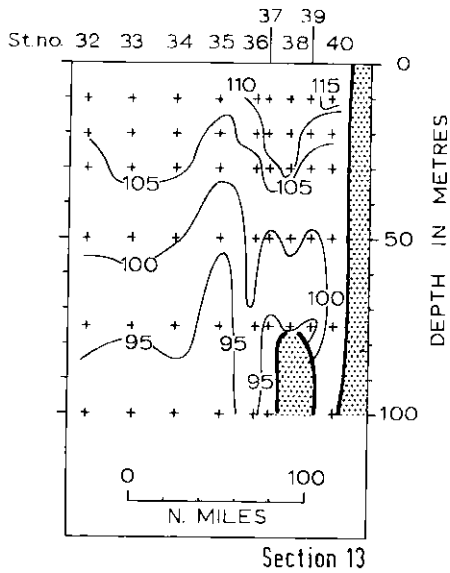


Chart 176C. NORWESTLANT 3: O<sub>2</sub>% Saturation: Section 13: 10-12 July. Section 14: 13-14 July. Section 15: 15-16 July. Section L: 30 June-1 July. Section M: 4-5 July. Section N: 12-13 July.

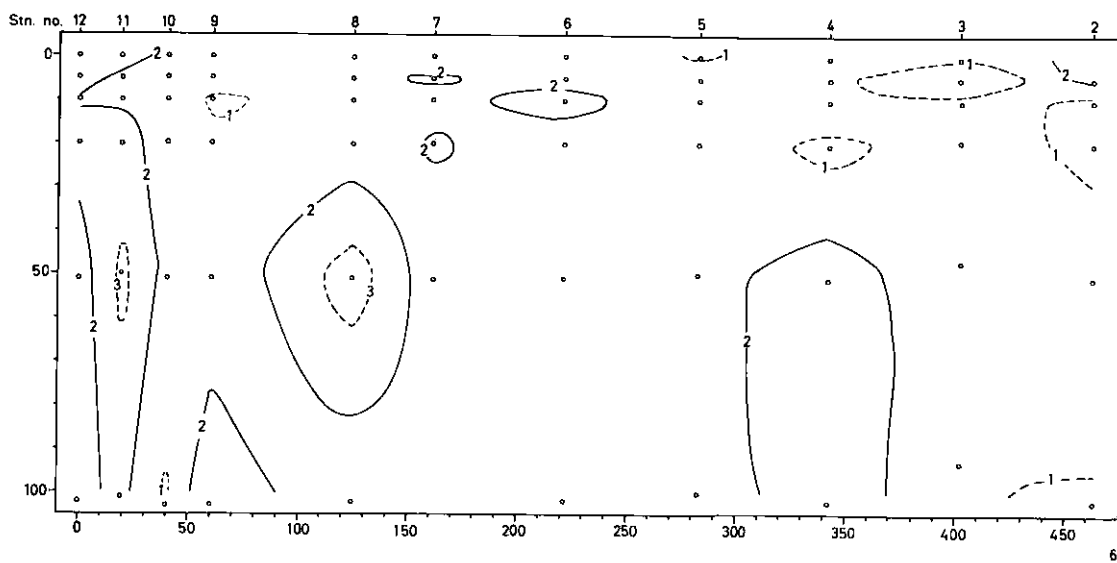
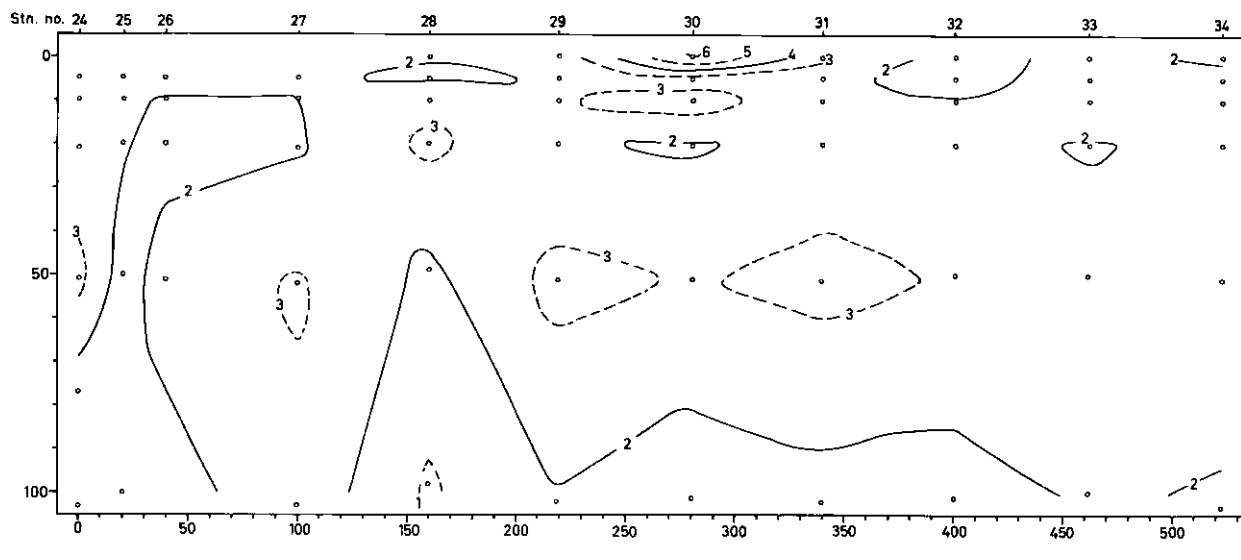
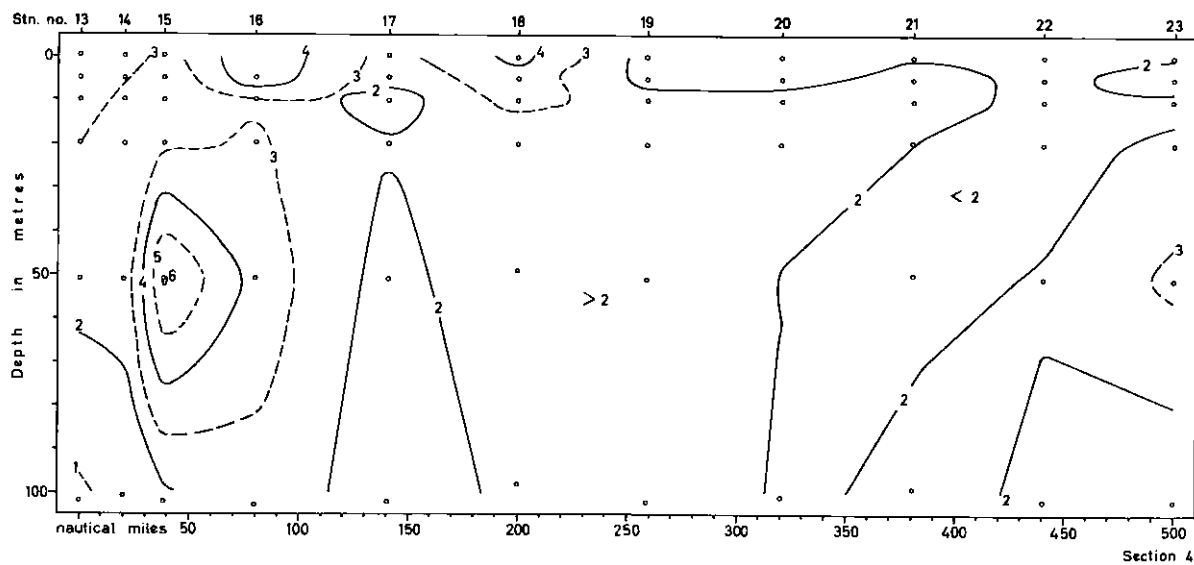


Chart 177. Ammonia ( $\mu\text{g}$  at  $\text{NH}_3\text{-N/l}$ ): Section 4: 4-8 June. Section 5: 15-18 June. Section 6: 28 May-1 June.

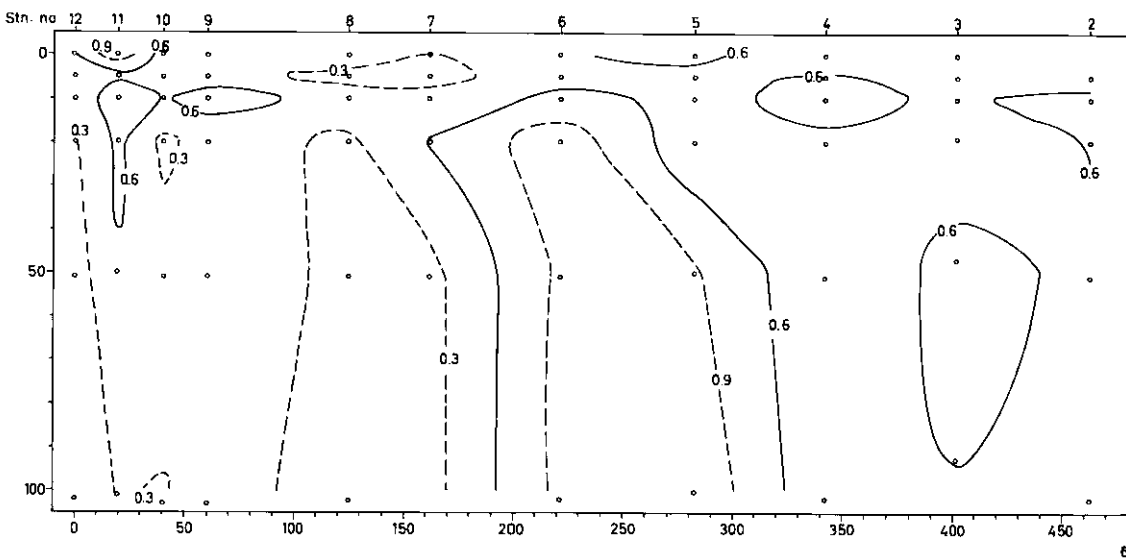
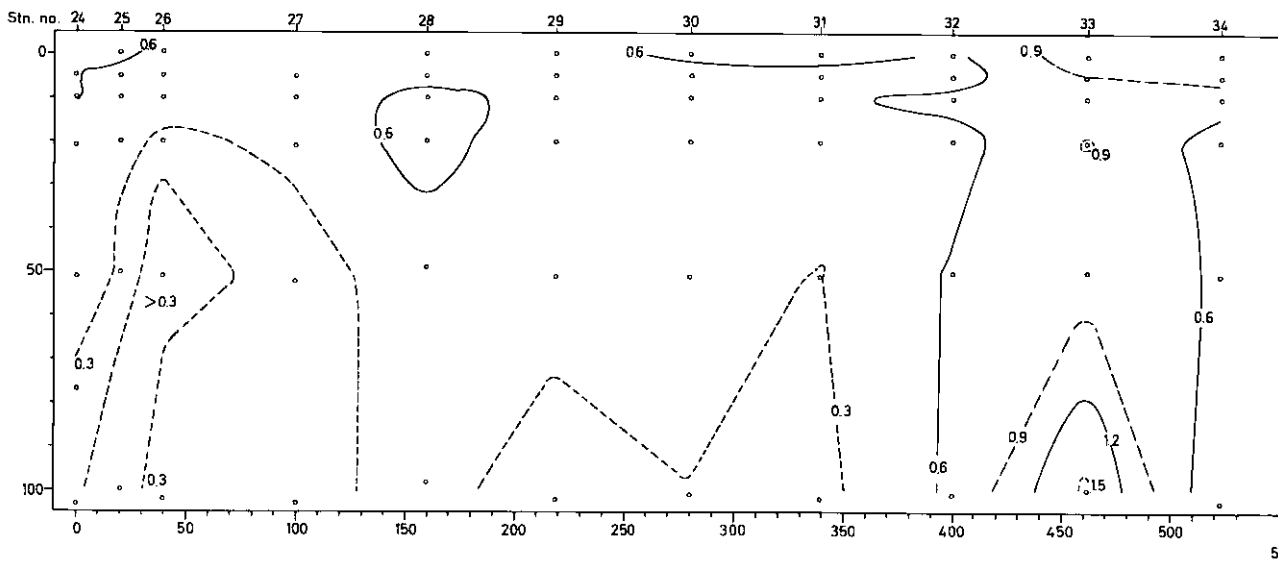
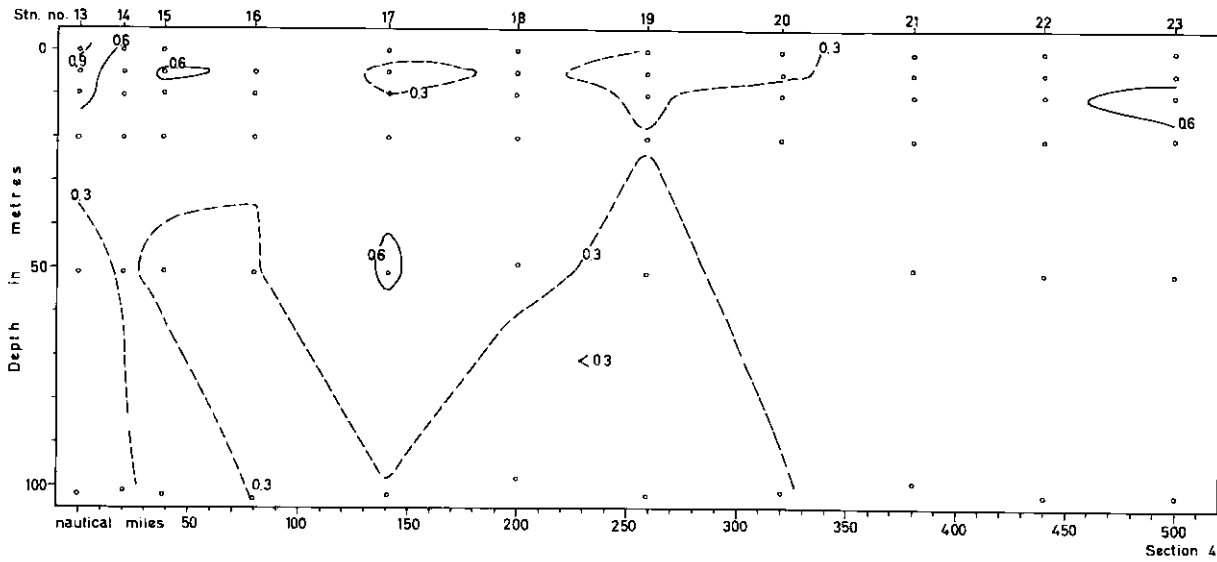
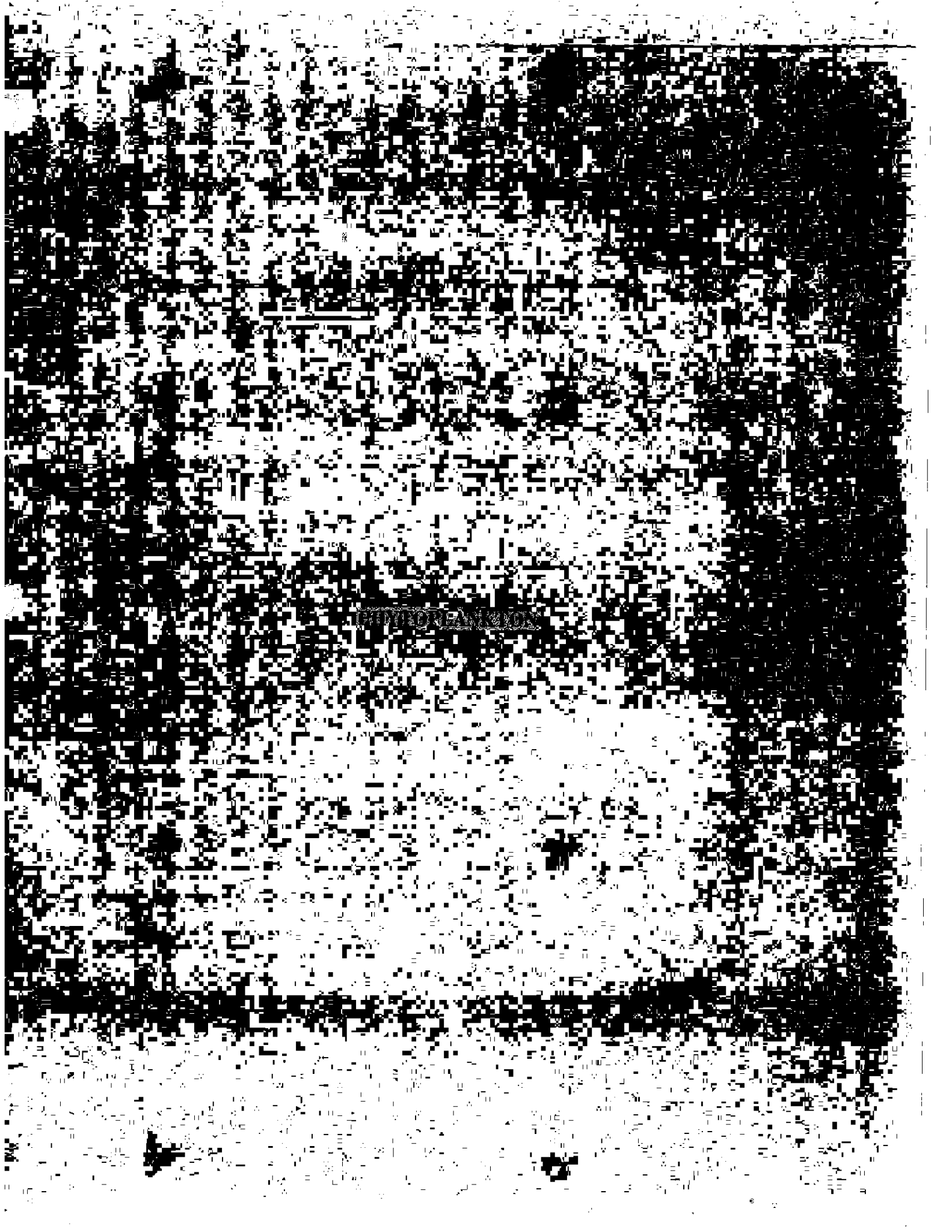


Chart 178. Organic carbon (mg C/l): Section 4: 4-8 June. Section 5: 15-18 June. Section 6: 28 May-1 June.



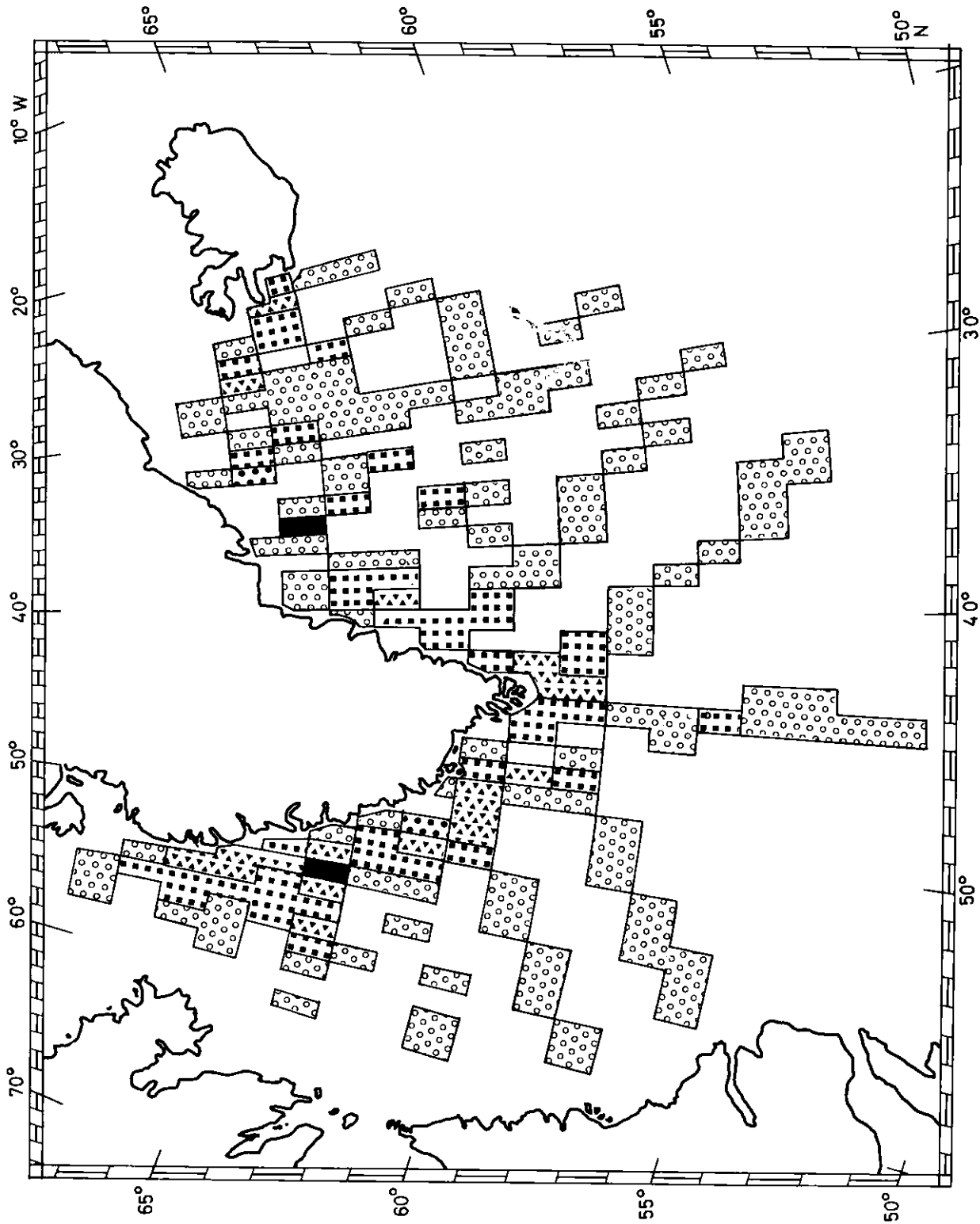


Chart 179. Total number of samples (from 10 m) taken in one degree squares during all NORWESTLANT Surveys.

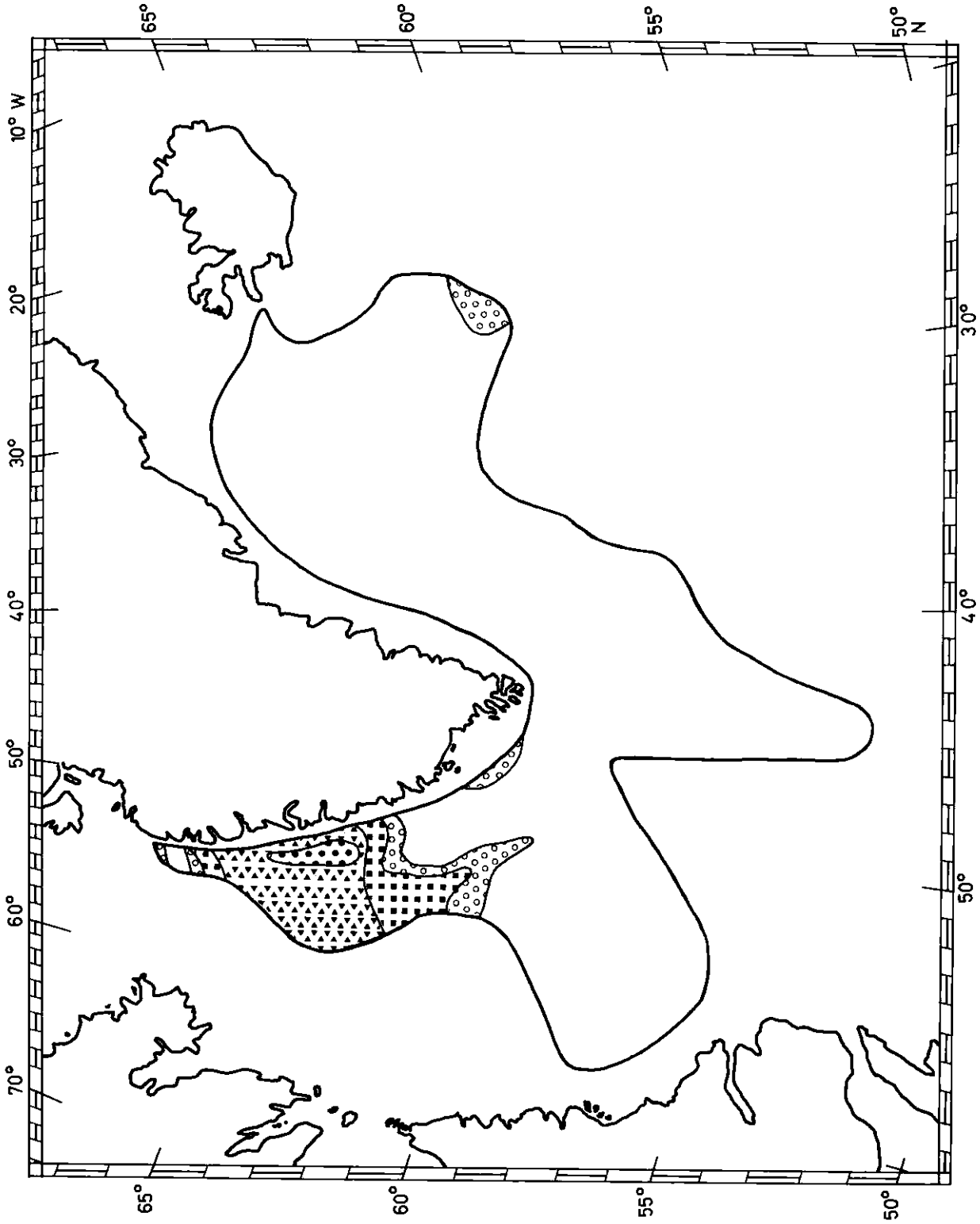


Chart 180. Phytoplankton distribution at 10 m in  $\mu\text{g C/l}$  during NORWESTLANT 1. Contour levels at 5, 10, 20, 50, and 100  $\mu\text{g C/l}$ . The thick line encloses the area investigated.



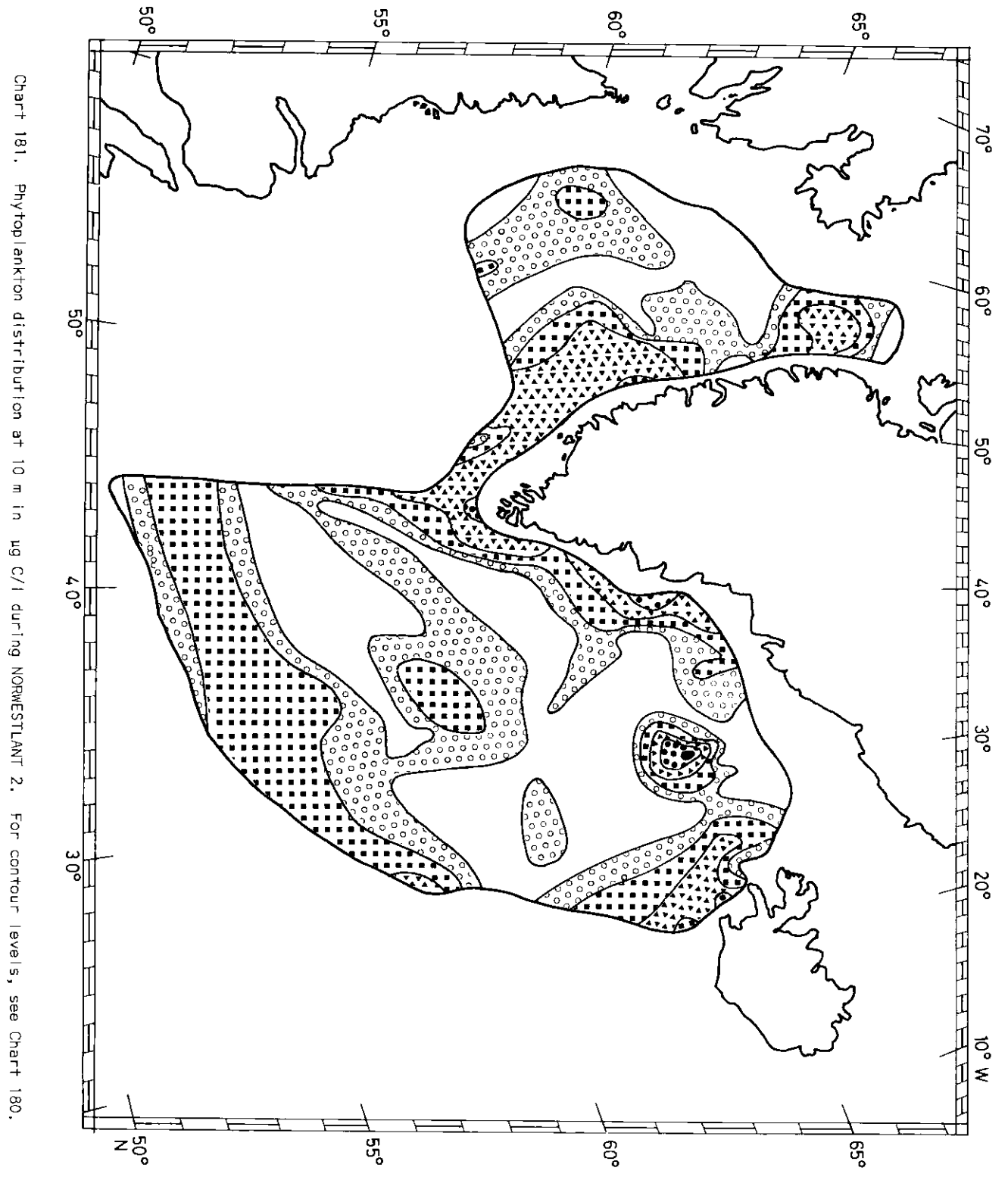
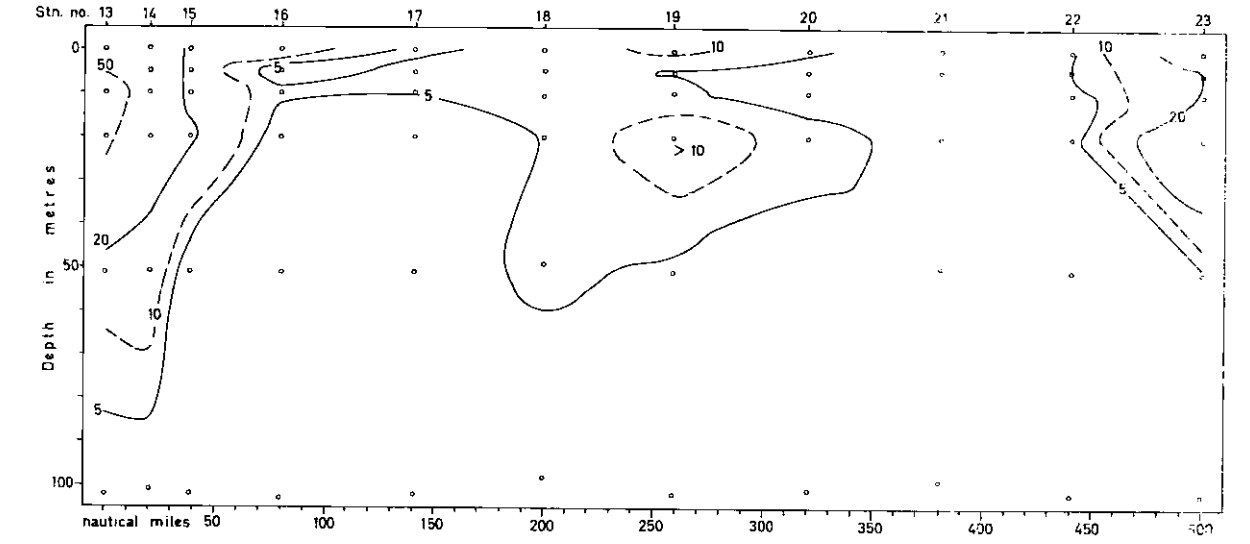
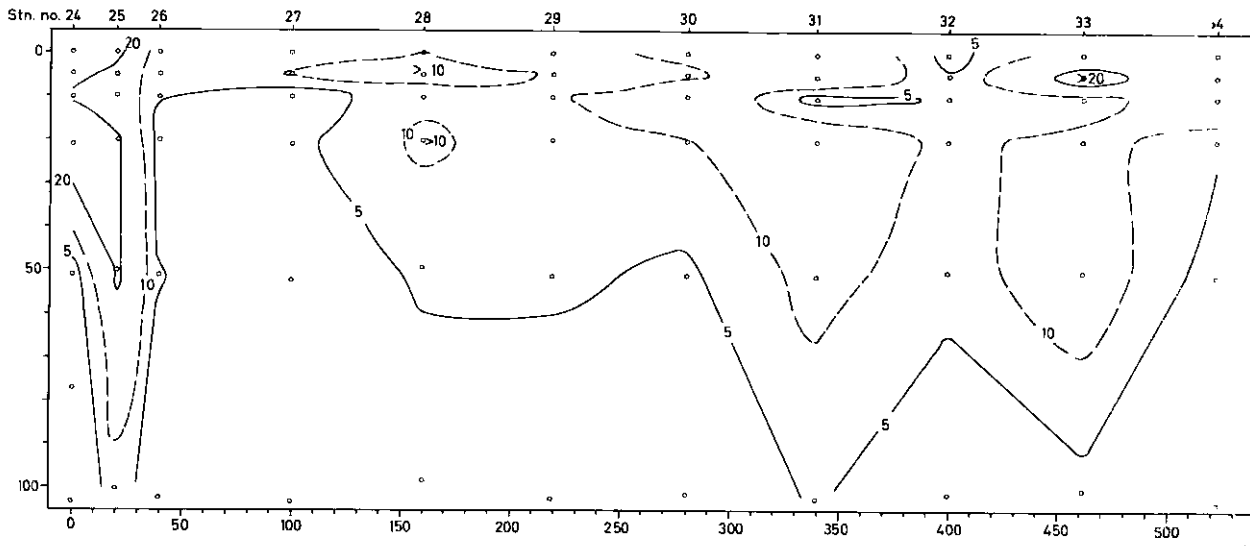


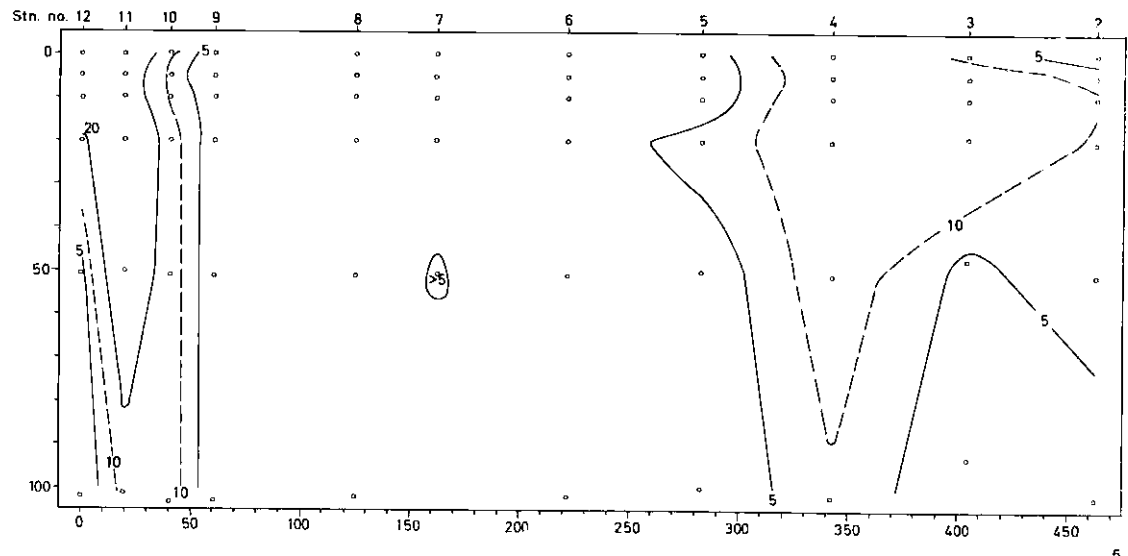
Chart 181. Phytoplankton distribution at 10 m in  $\mu\text{g C/l}$  during NORWESTLANT 2. For contour levels, see Chart 180.



Section 4



5



6

Chart 182. Phytoplankton distribution from the surface to 100 m: Sections 4-6: R/V *Anton Dohrn*: NORWESTLANT 2. The values are given in  $\mu\text{g C/l}$ . For dates of sections, see Chart 177.

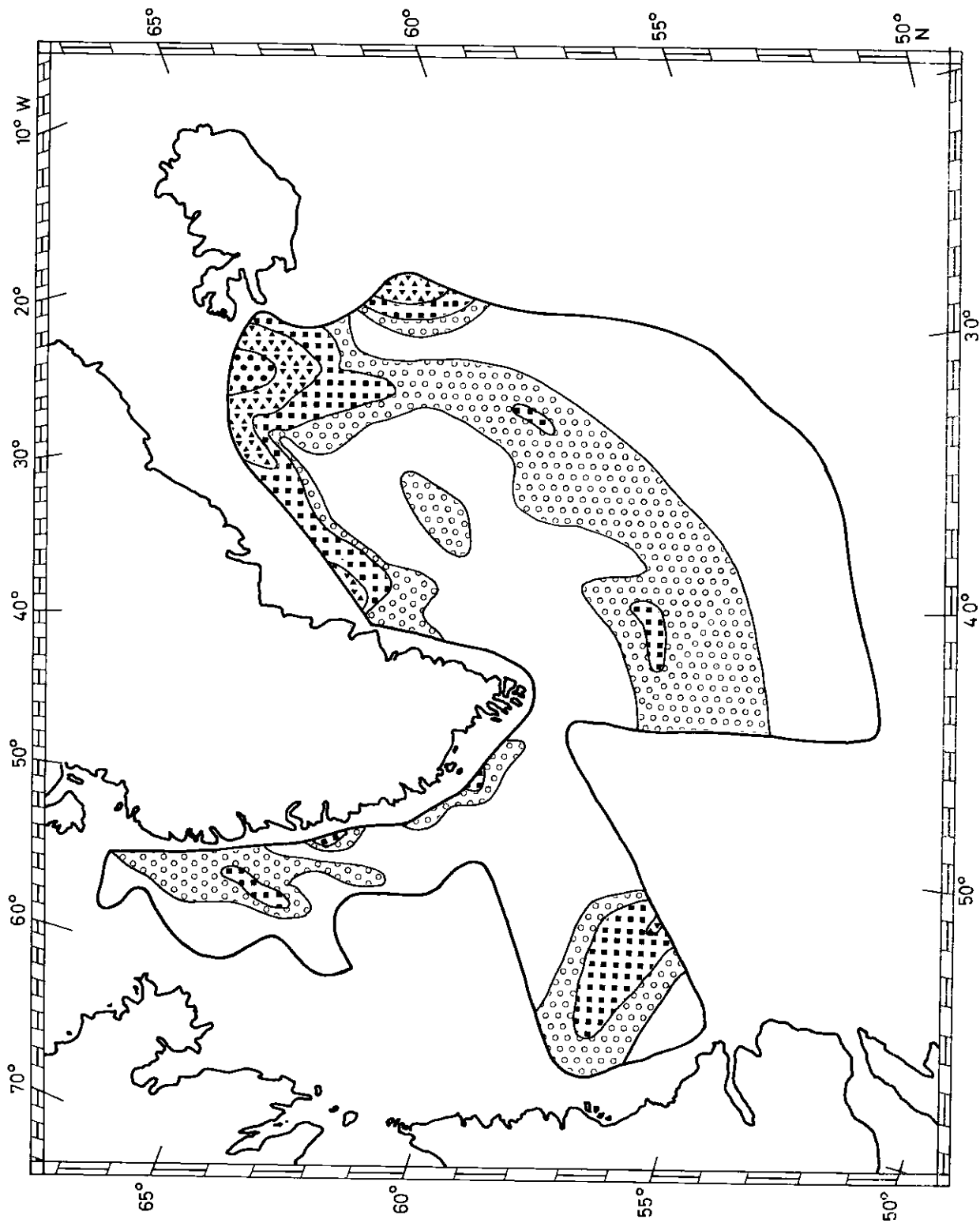


Chart 183. Phytoplankton distribution at 10 m in  $\mu\text{g C/l}$  during NORWESTLANT 3. For contour levels, see Chart 180.

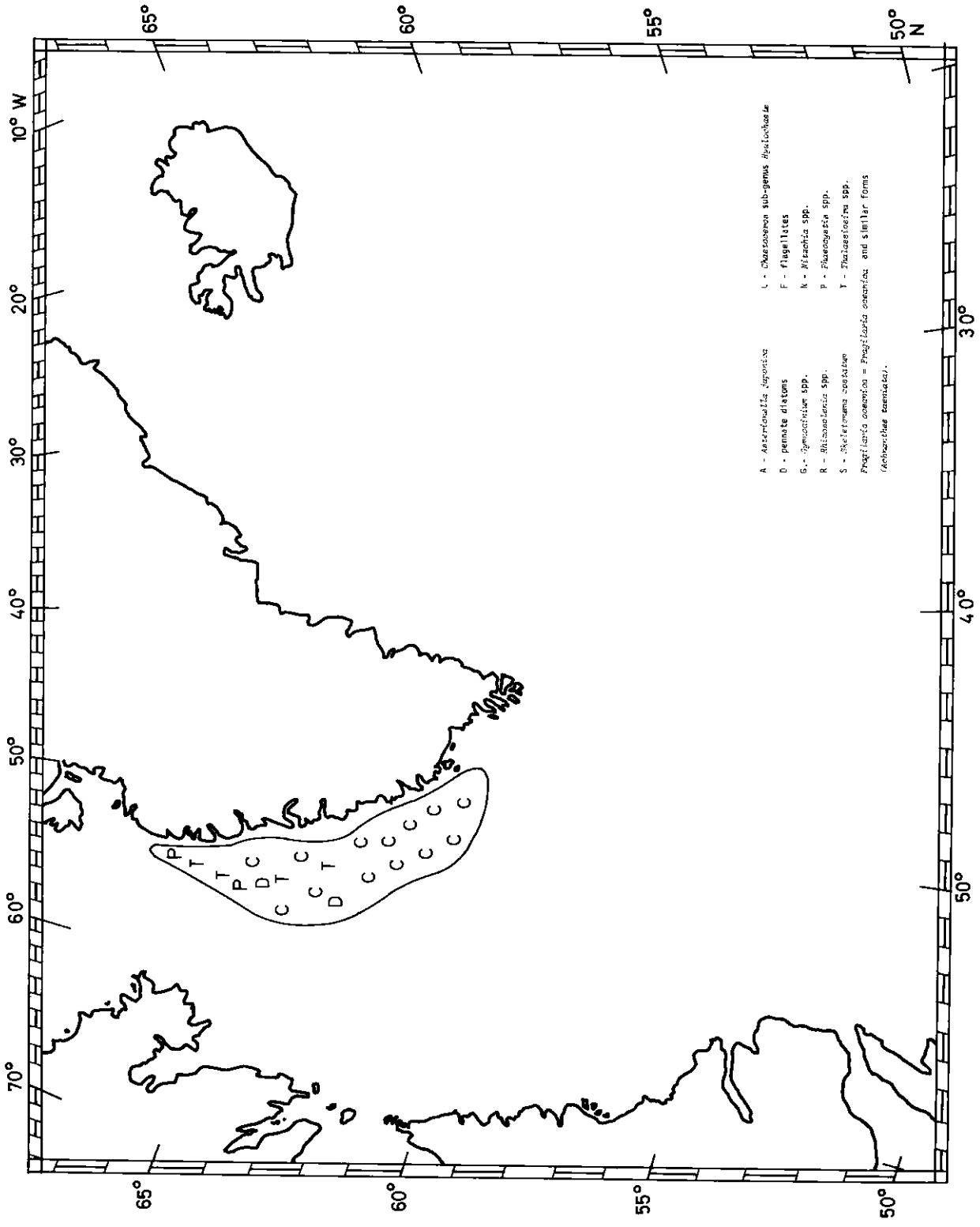


Chart 184. Distributions of individual species or groups of species during NORWESTLANT 1.

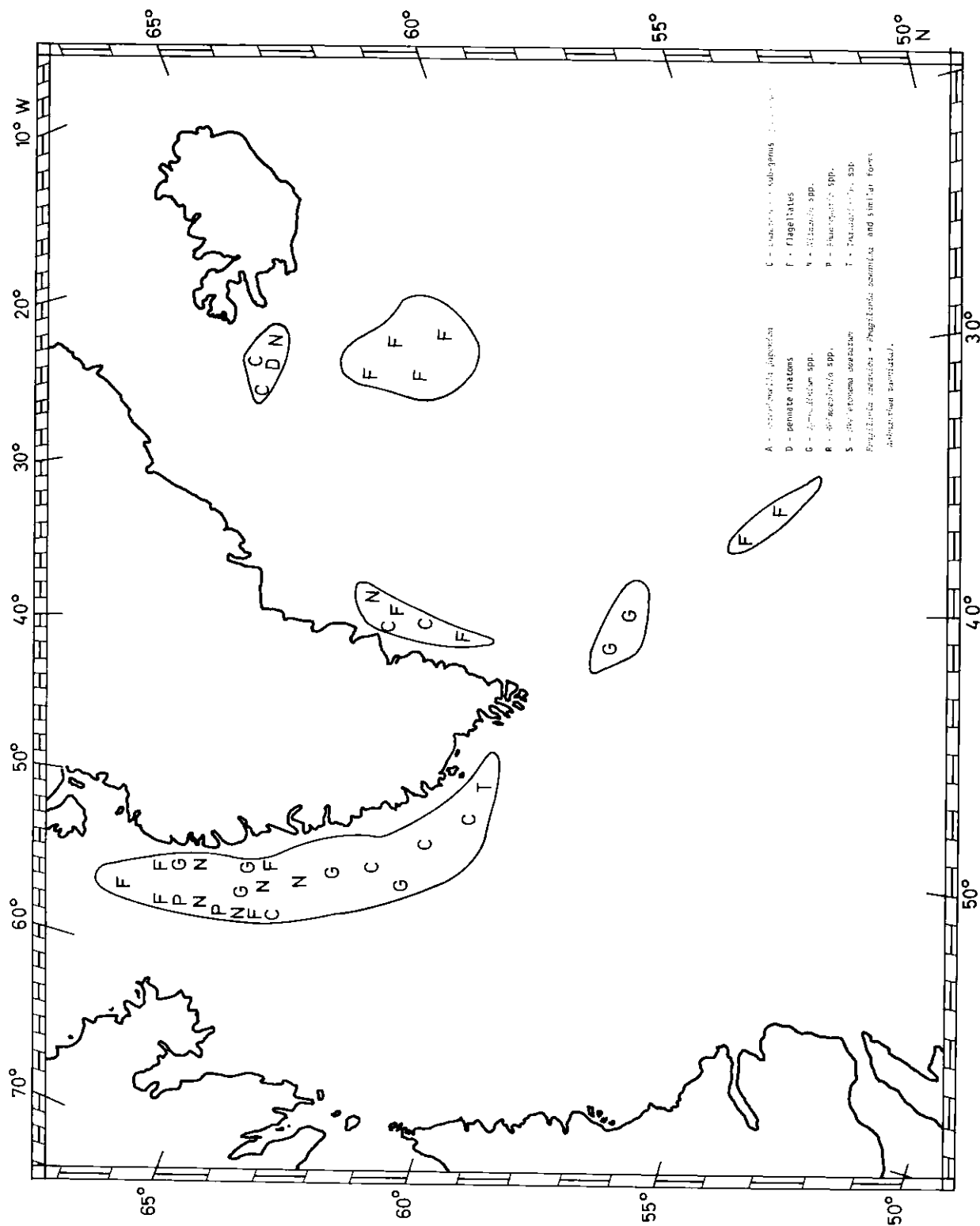


Chart 186. Distributions of individual species or groups of species during NORWESTLANT 3.

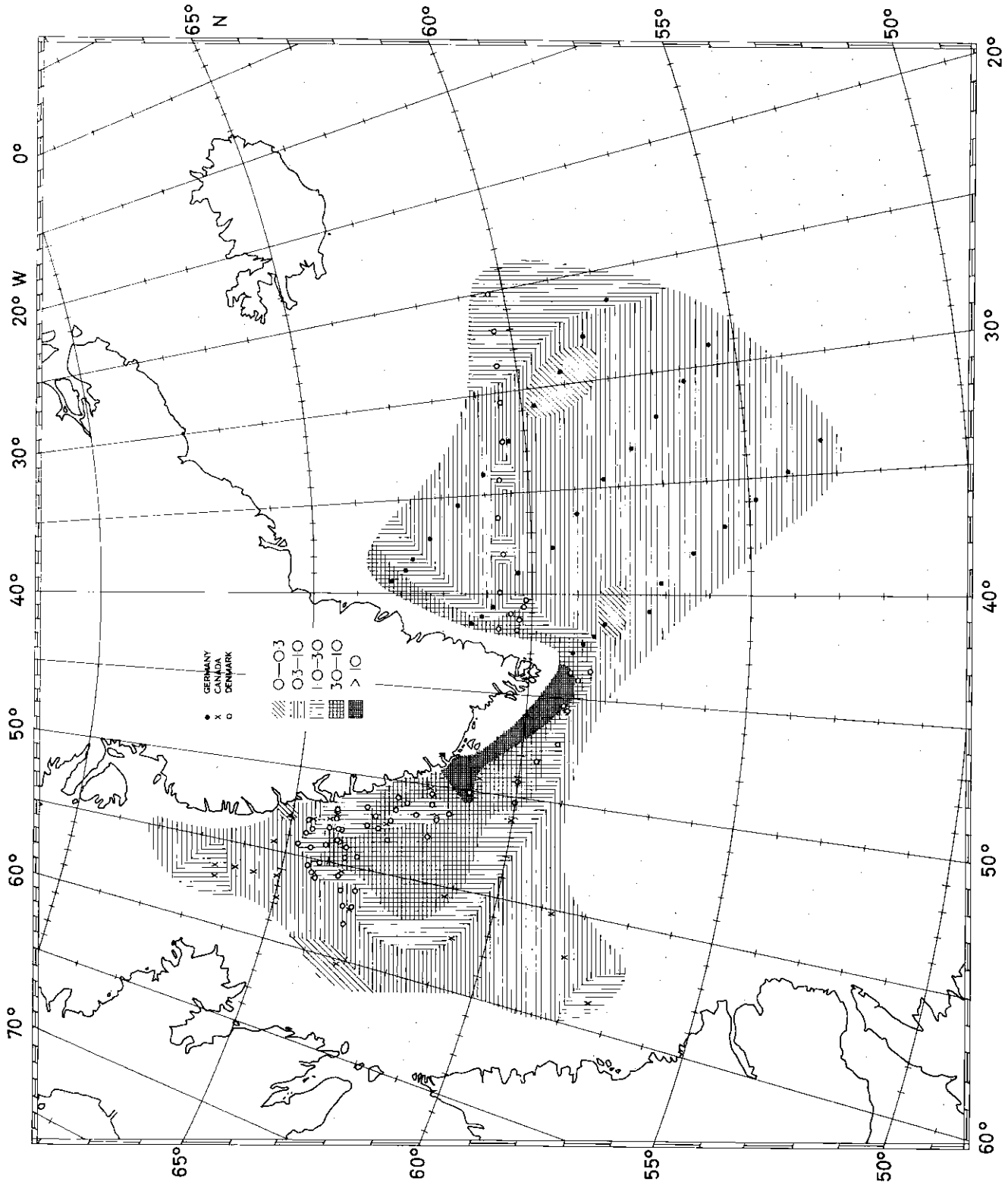


Chart 187. NORWESTLANT 2: Chlorophyll *a* ( $\mu\text{g/l}$ ): 21 May-18 June.

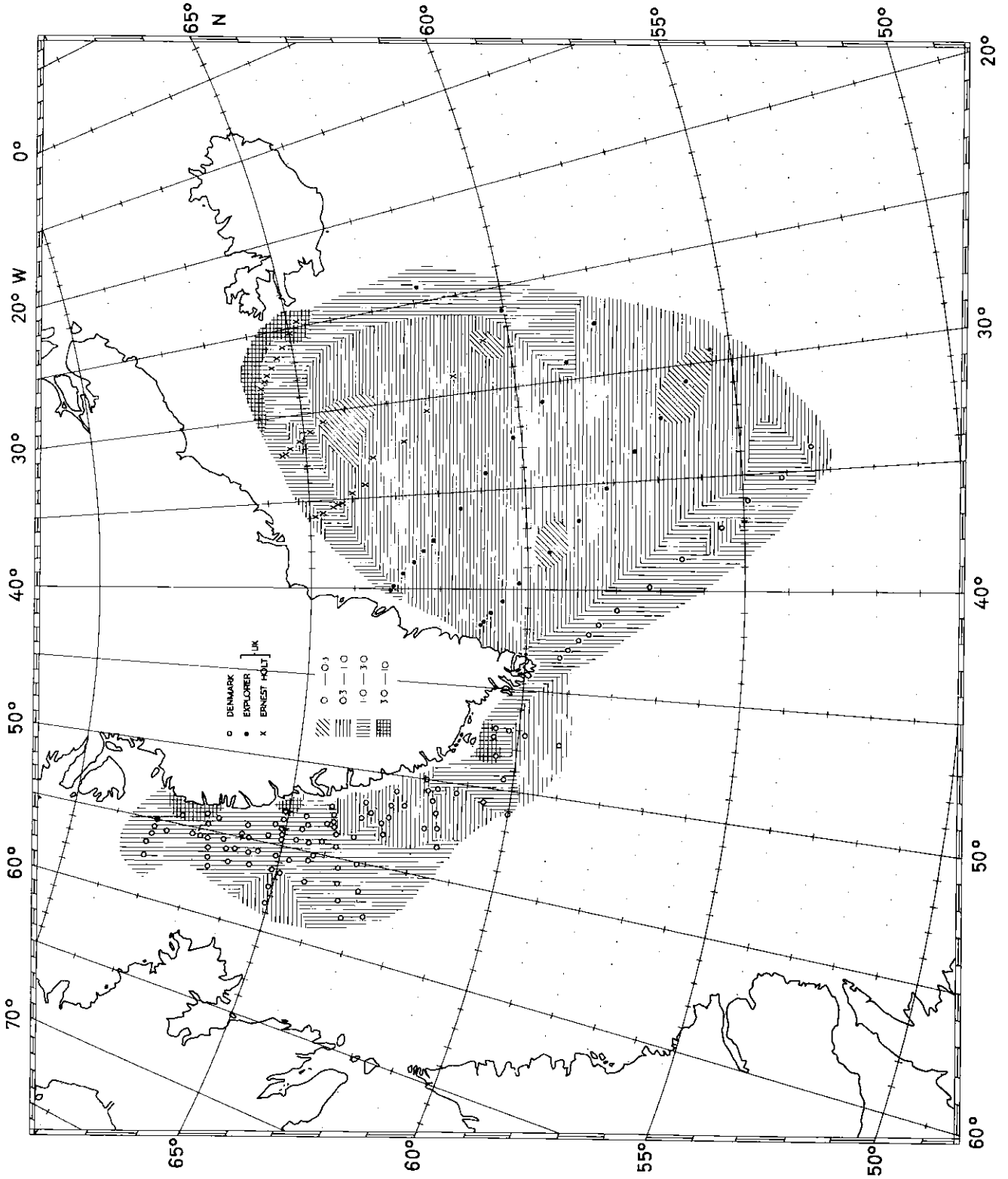


Chart 188. NORWESTLANT 5: Chlorophyll a (µg/l): 30 June-3 August.

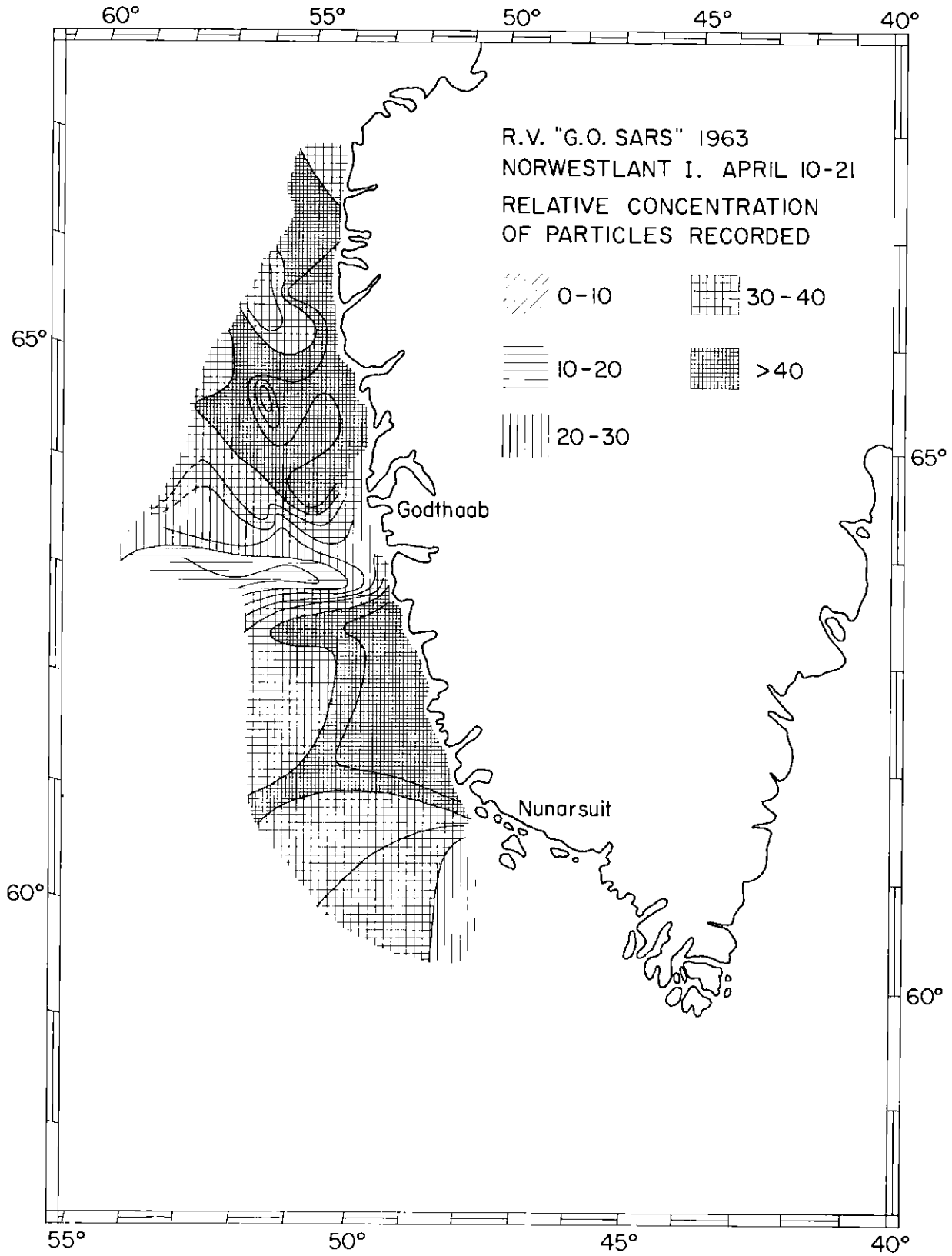


Chart 189. Relative concentration of particles recorded off West Greenland: R/V *G. O. Sars* — NORWESTLANT I from 10 to 21 April.



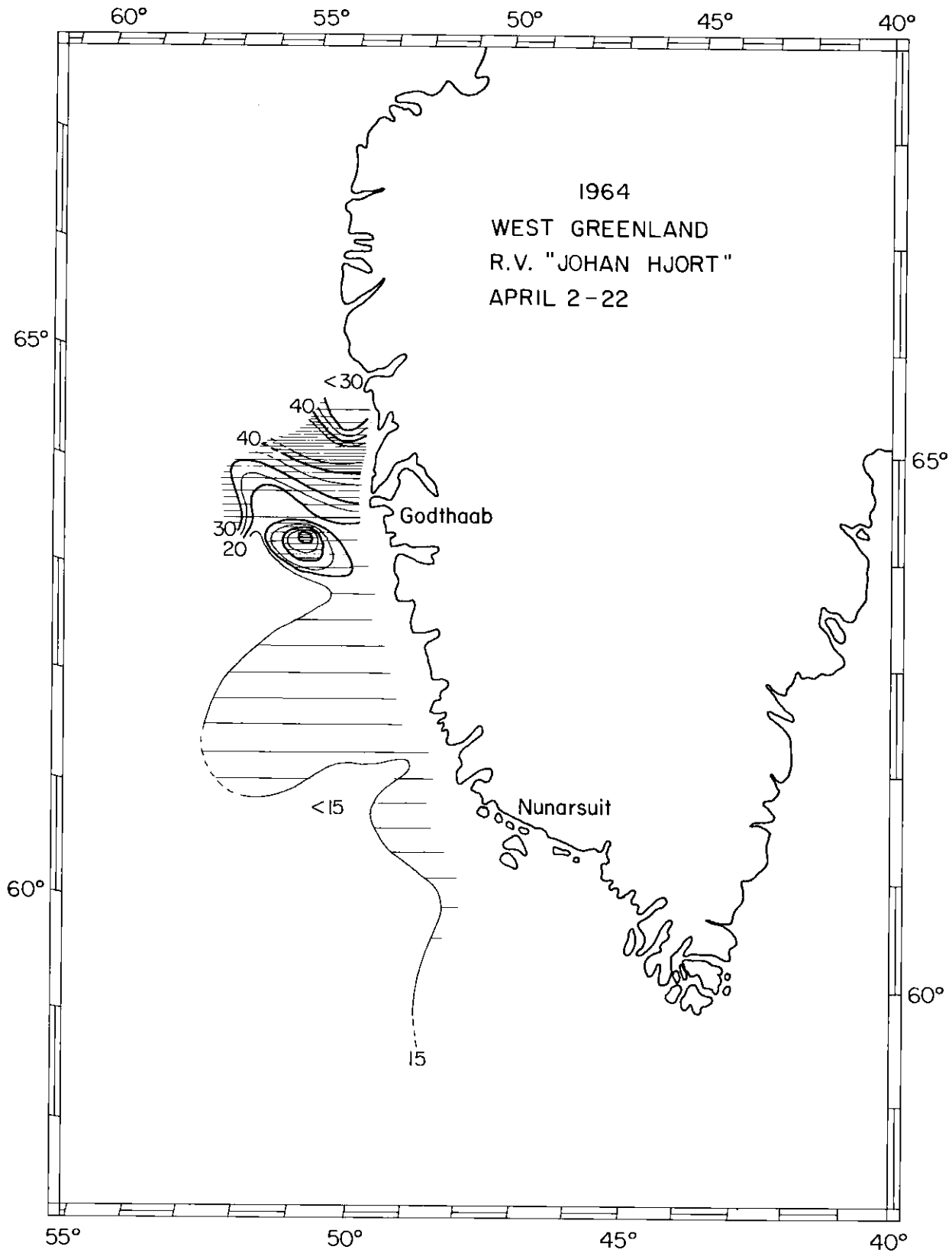


Chart 190. Relative concentration of particles recorded off West Greenland: R/V *Johan Hjort* — from 2 to 22 April 1964.

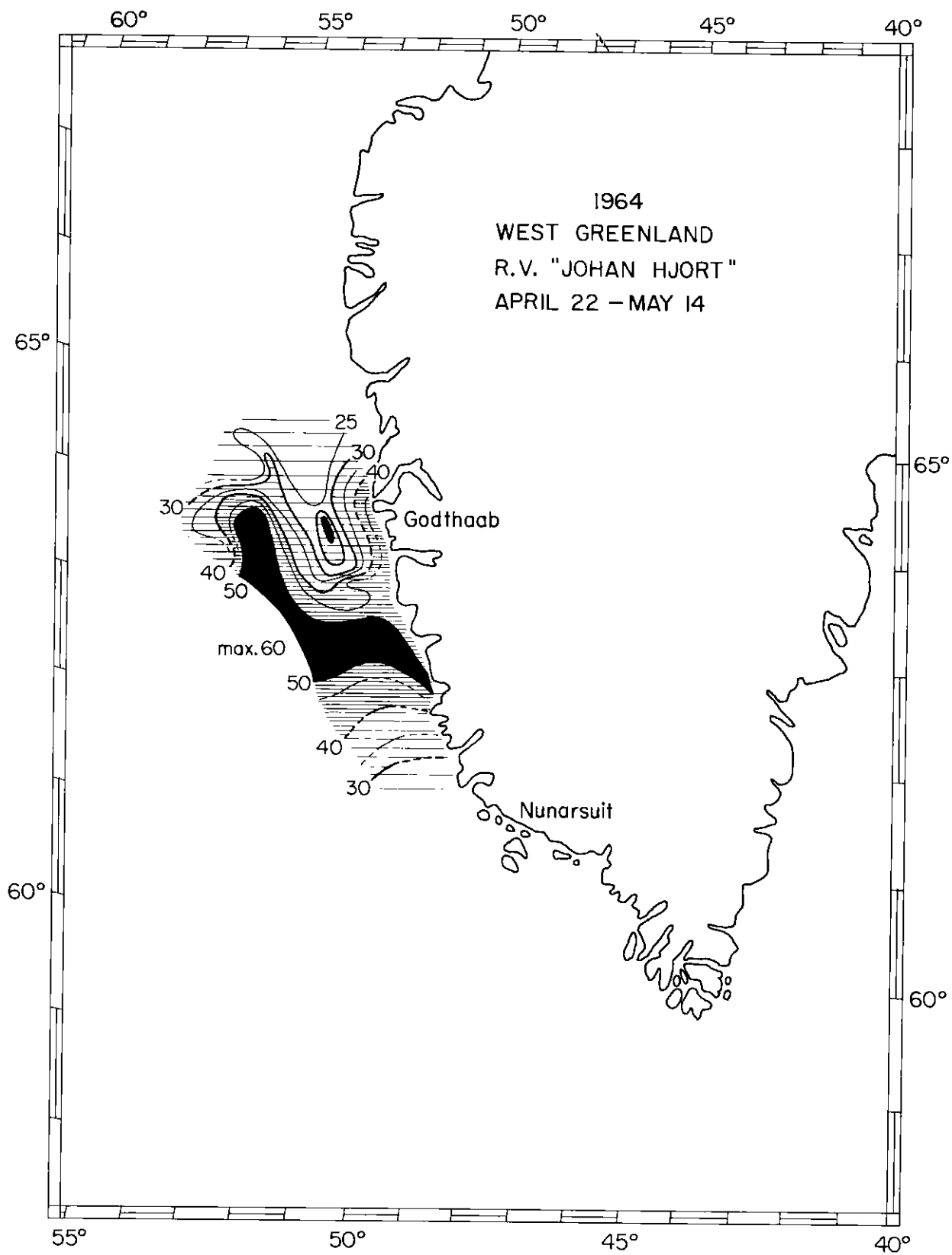
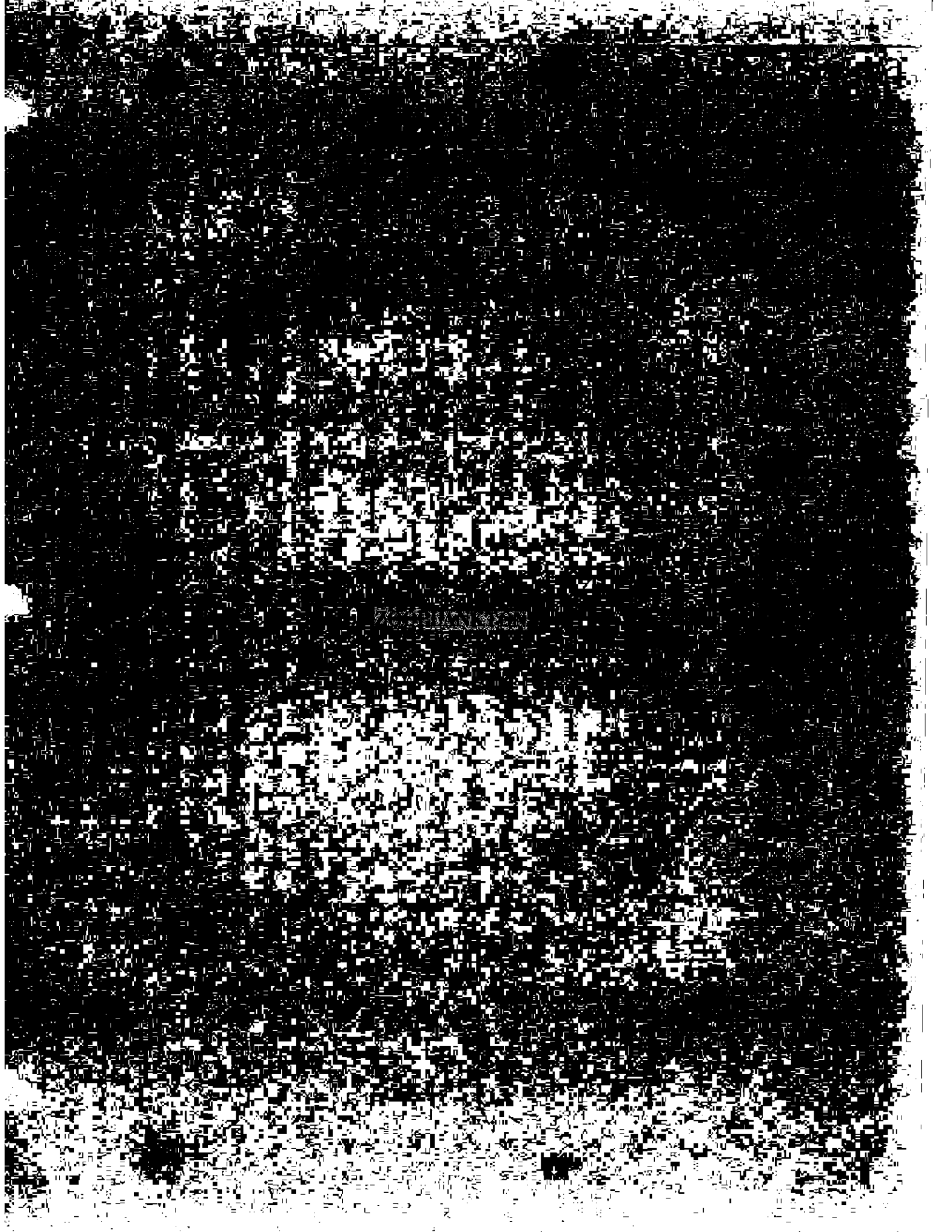


Chart 191. Relative concentration of particles recorded off West Greenland: R/V *Johan Hjort* — from 22 April to 14 May 1964.



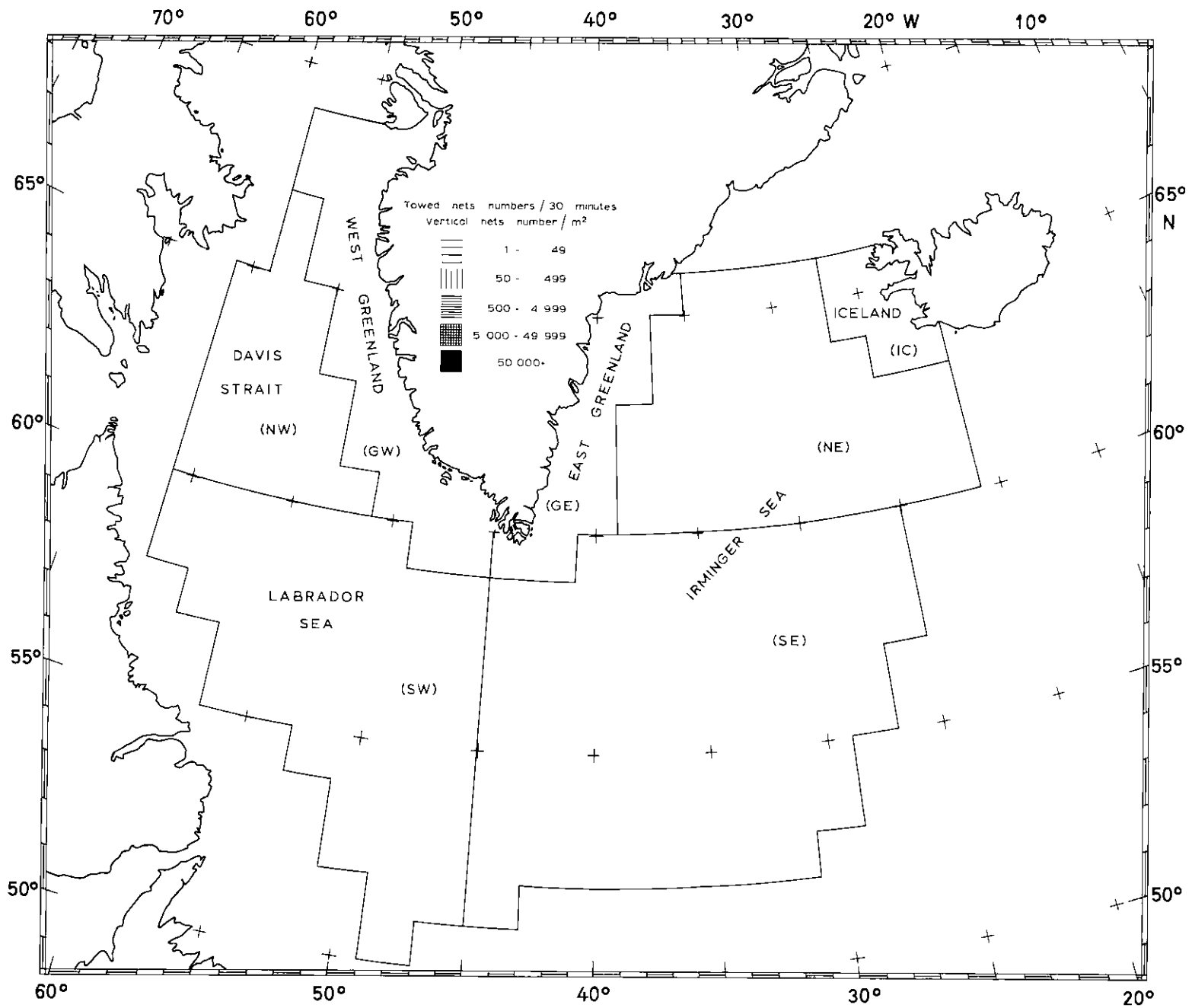


Chart 192. Key to shading in Charts 195-200, 205-212, 214-215, 220-226, and 228-229, and to areas referred to in Tables 16, 18, 19, and Figs. 26-28.

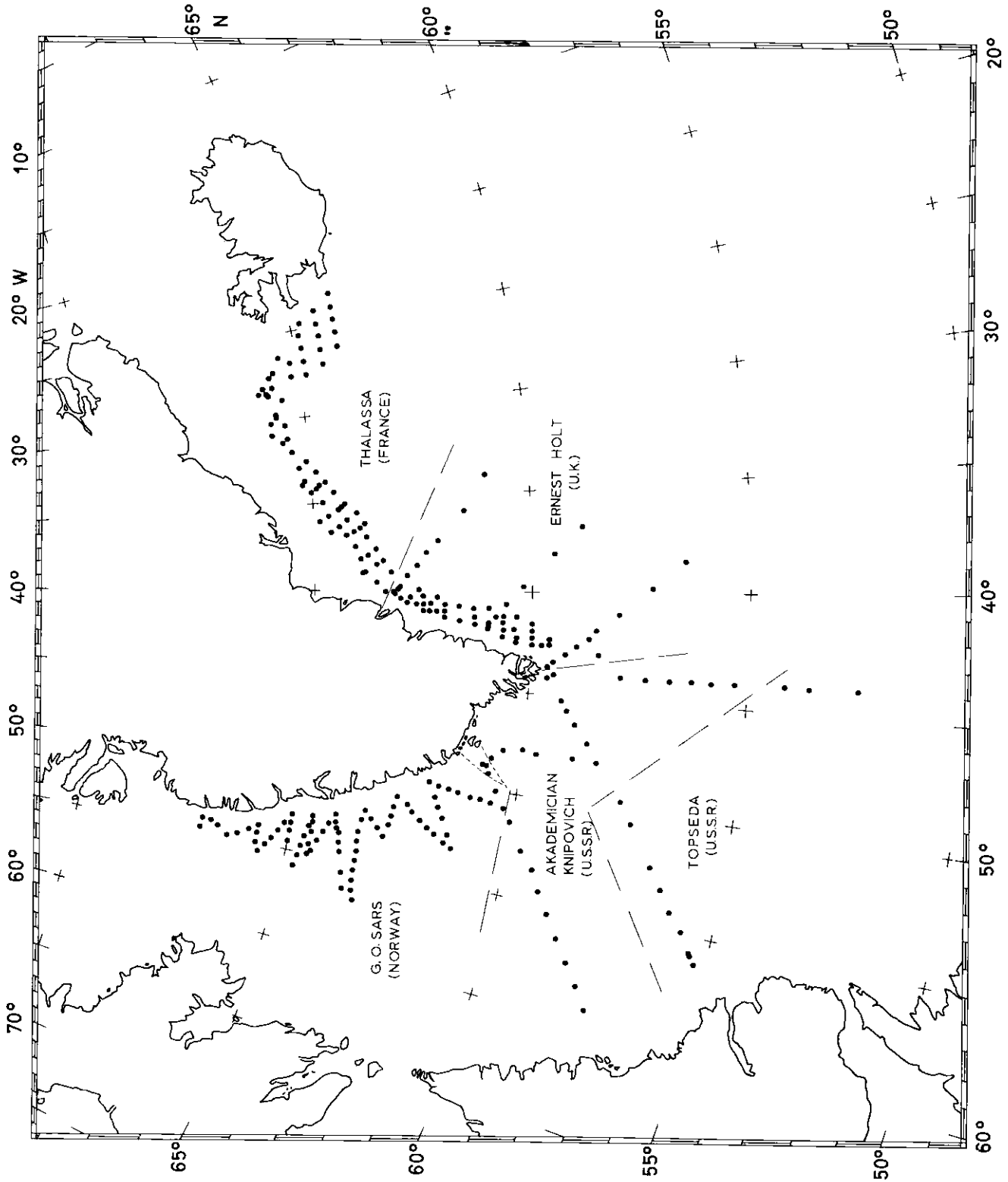


Chart 193, NORWESTLANT 1: 31 March-1 May — Positions of plankton stations.

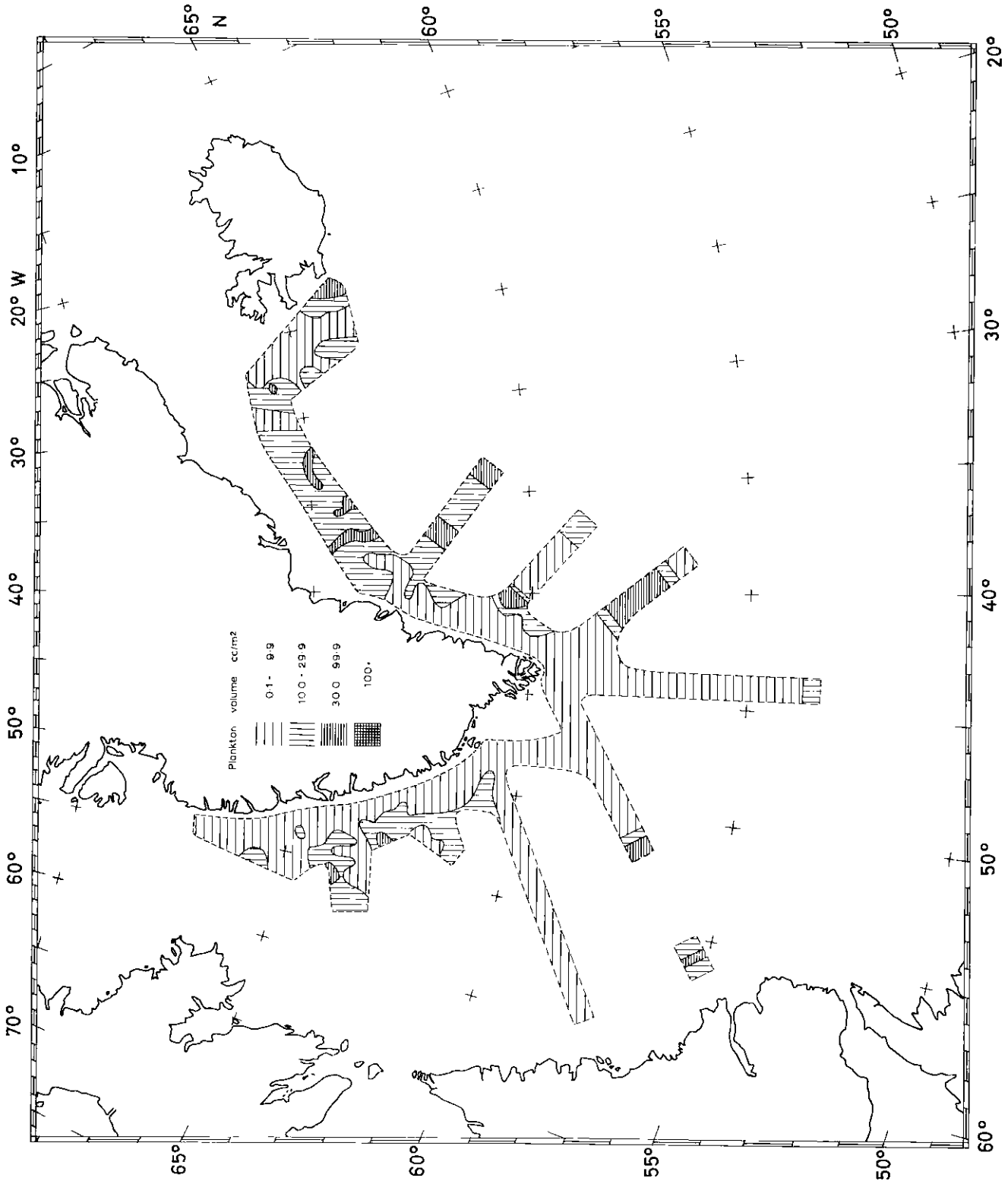


Chart 194. NORWESTLANT 1: 31 March-1 May — Plankton volumes from vertical nets as ml/m<sup>2</sup> of sea surface.

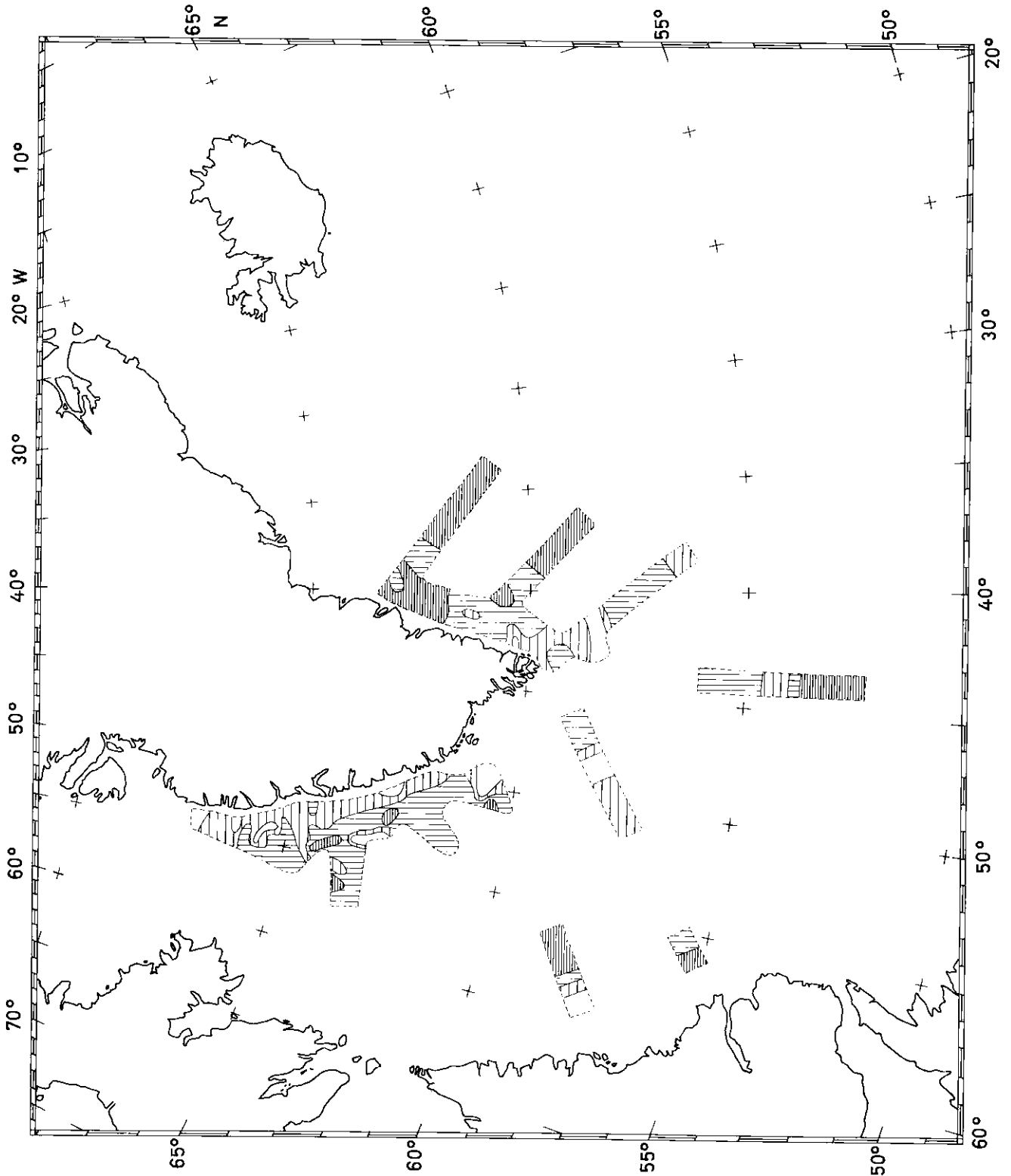


Chart 195. NORWESTLANT 1: 31 March-1 May — *Calanus*, stages I-IV from vertical nets (Key in Chart 192).

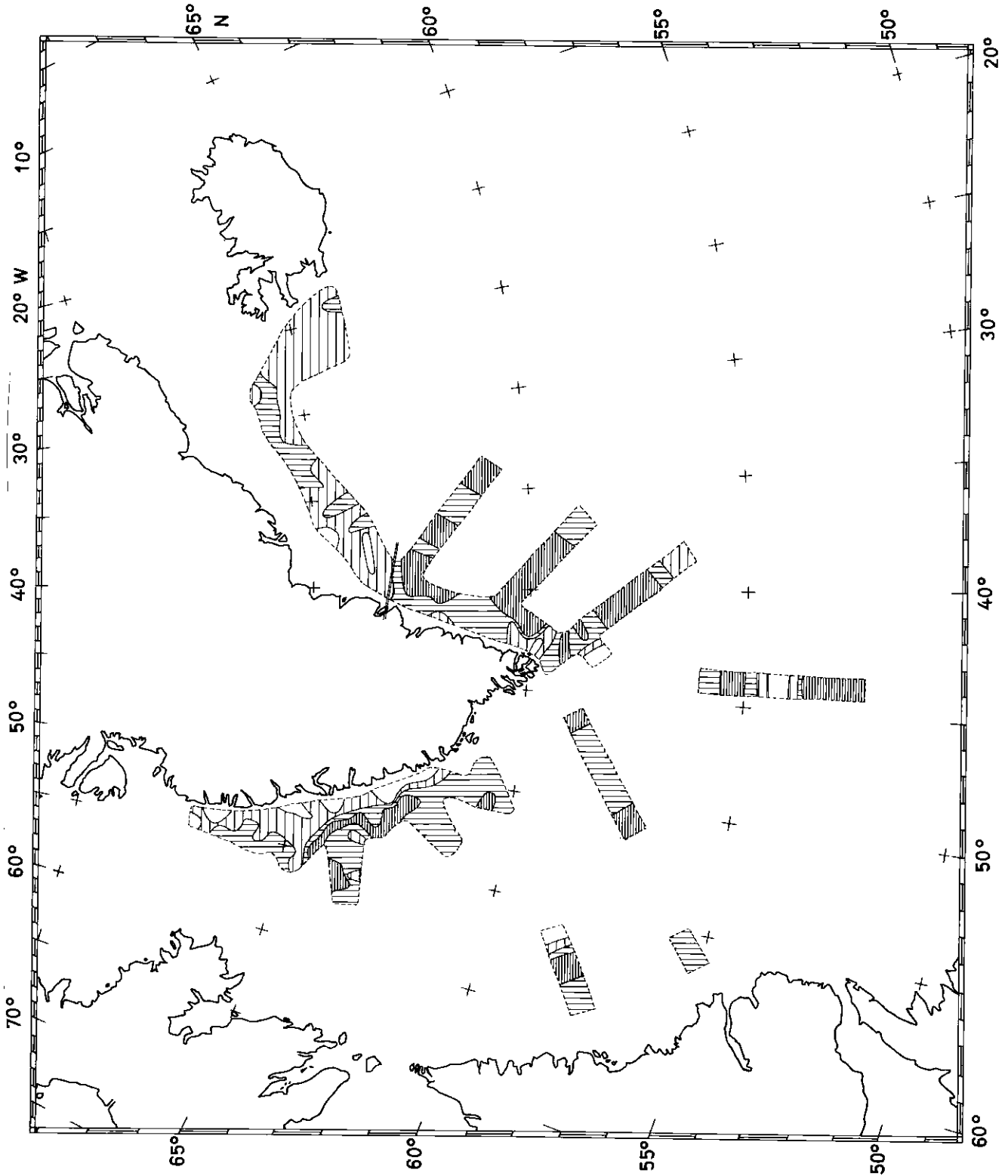


Chart 196. NORWESTLANT 1: 31 March-1 May — *Calanus*, stage V from vertical nets and from 2-m stramin net in the northeast sector (key in Chart 192).



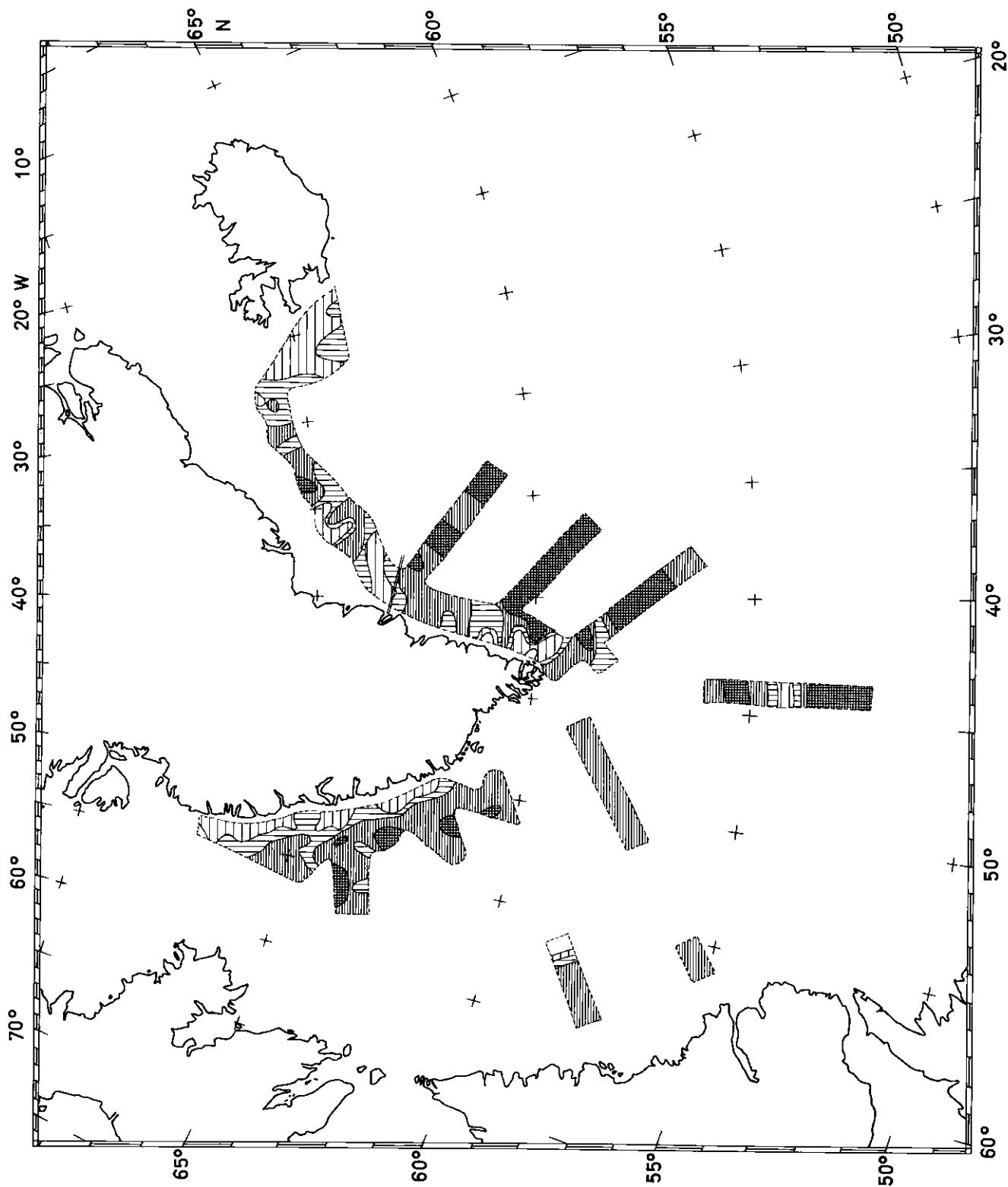


Chart 197. NORWESTLANT 1: 31 March-1 May — *Calanus*, stage VI from vertical nets and from 2-m stramin net in the northeast sector (Key in Chart 192).

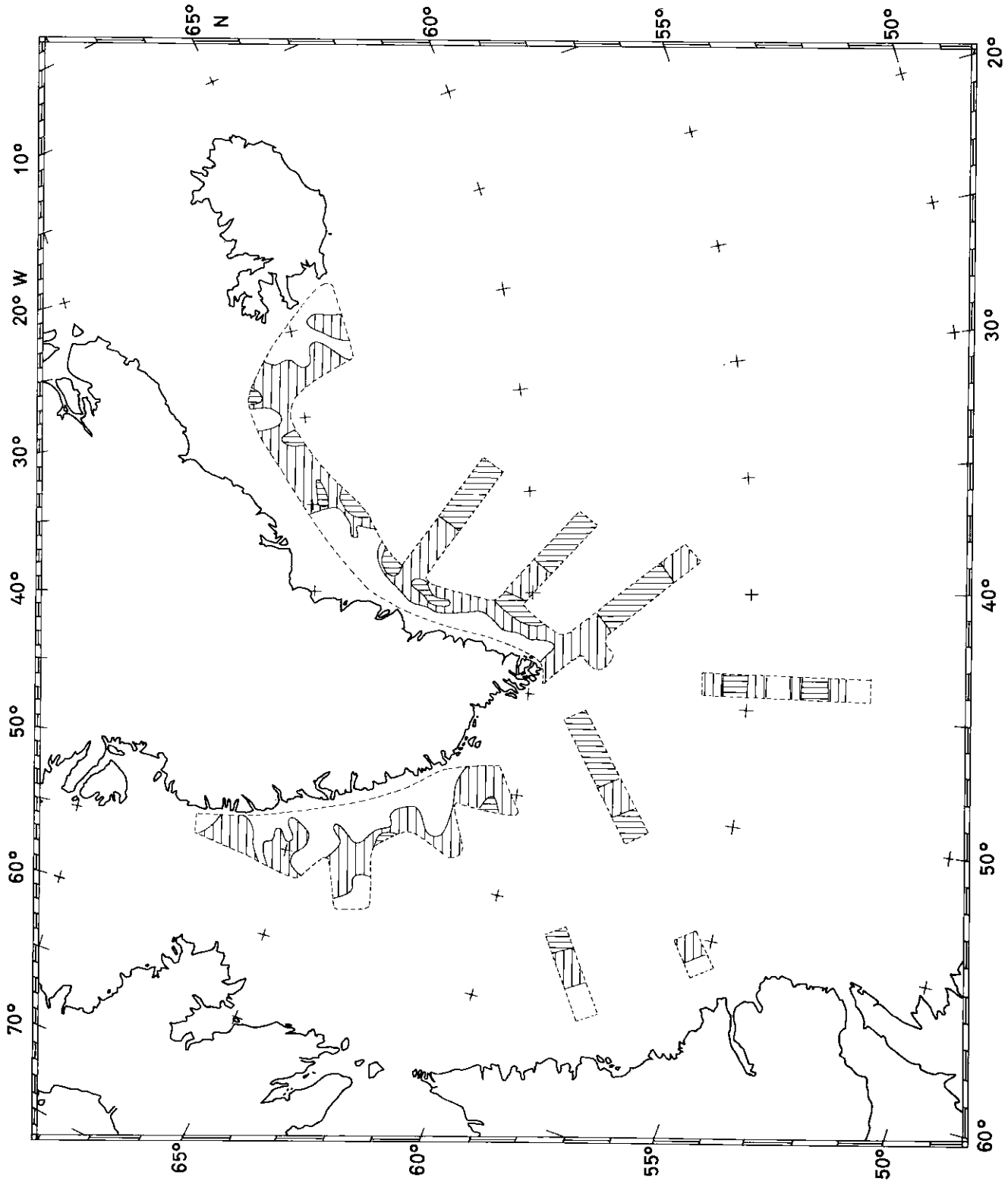


Chart 198. NORWESTLANT 1: 31 March-1 May — Total euphausiids from vertical nets (Key in Chart 192).

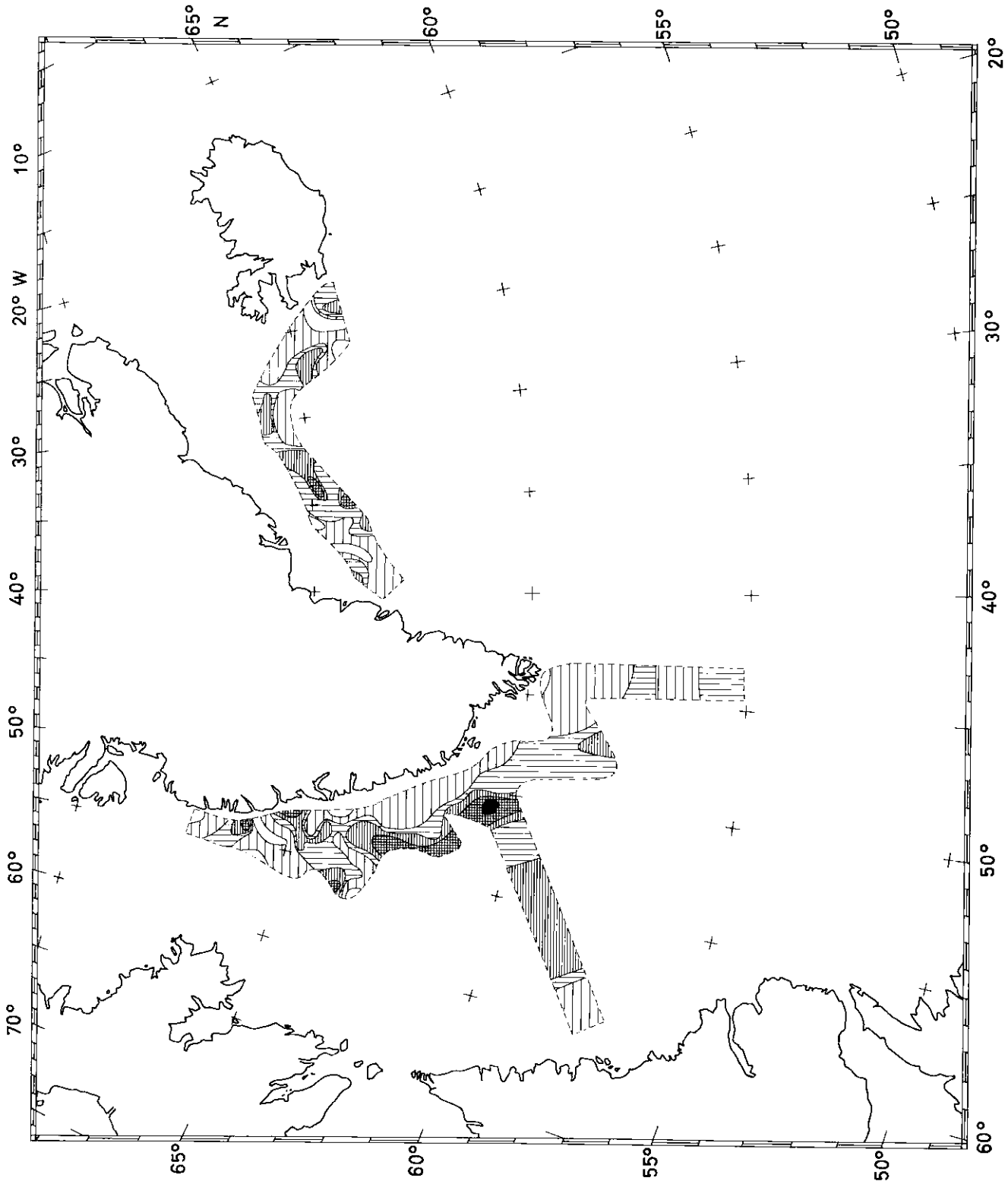


Chart 199. NORWESTLANT 1: 31 March-22 April — Total euphausiids (adults and furcillias) from towed nets: 2-m stramin net in French and Norwegian sectors, Icelandic High Speed Sampler in Russian sector (See Chart 192 and 193).

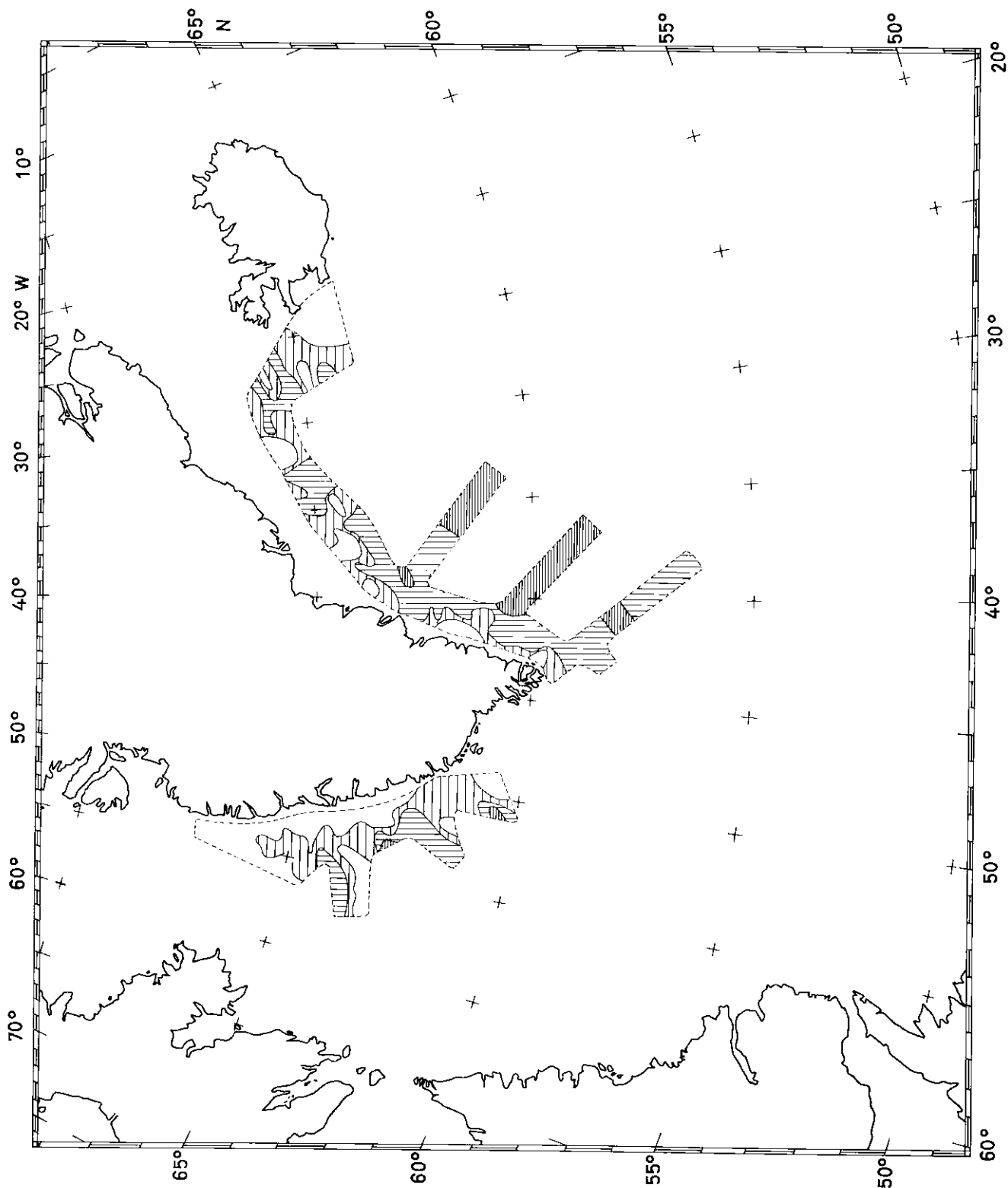


Chart 200. NORWESTLANT 1: 31 March-1 May — *Spiratella retroversa* from vertical nets (Key in Chart 192).

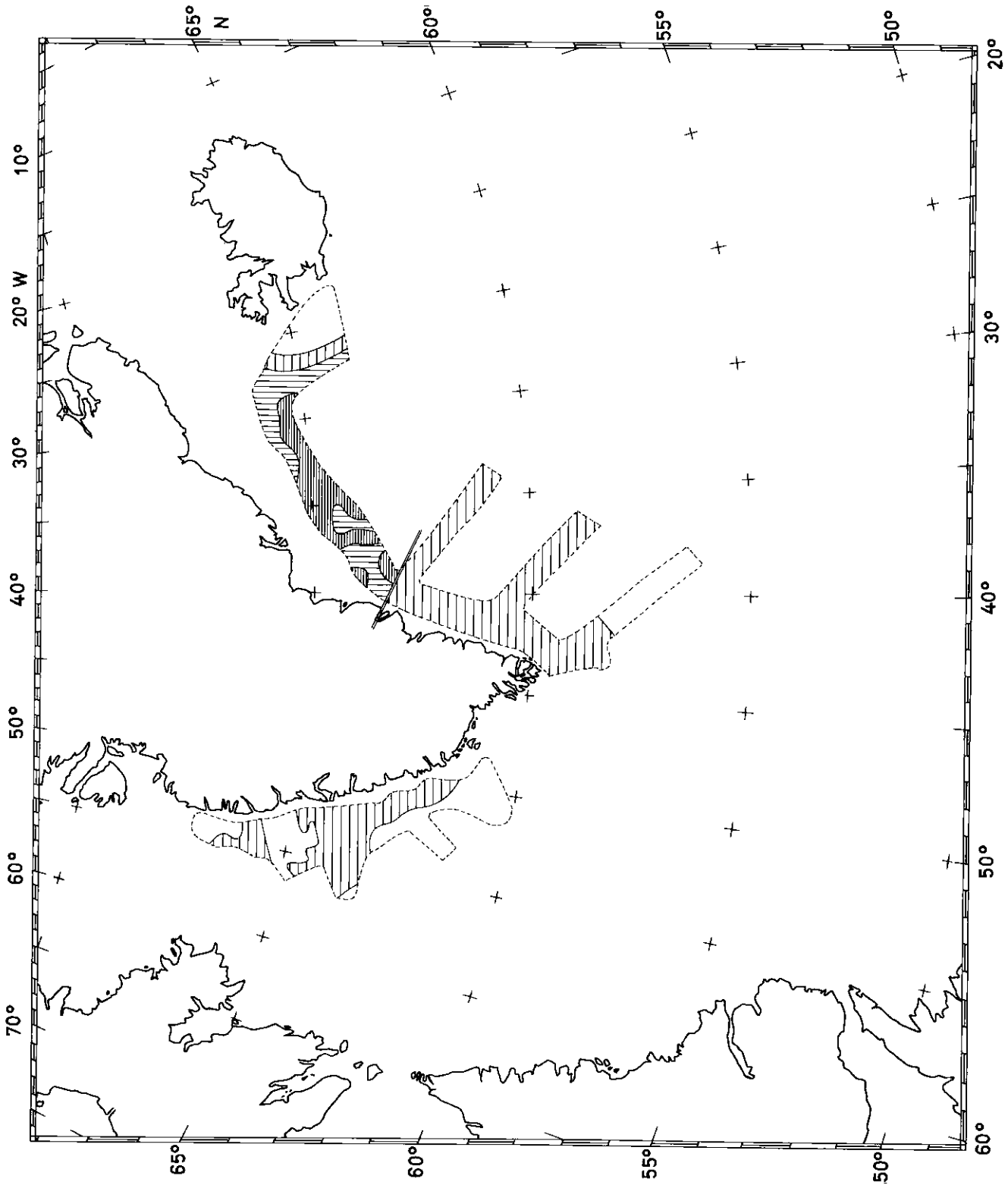


Chart 201. NORWETILANT 1: 31 March-1 May — *Aglantha digitale* in northeast from 2-m stramin net; in the rest of area only the presence in all nets is indicated (Key in Chart 192).

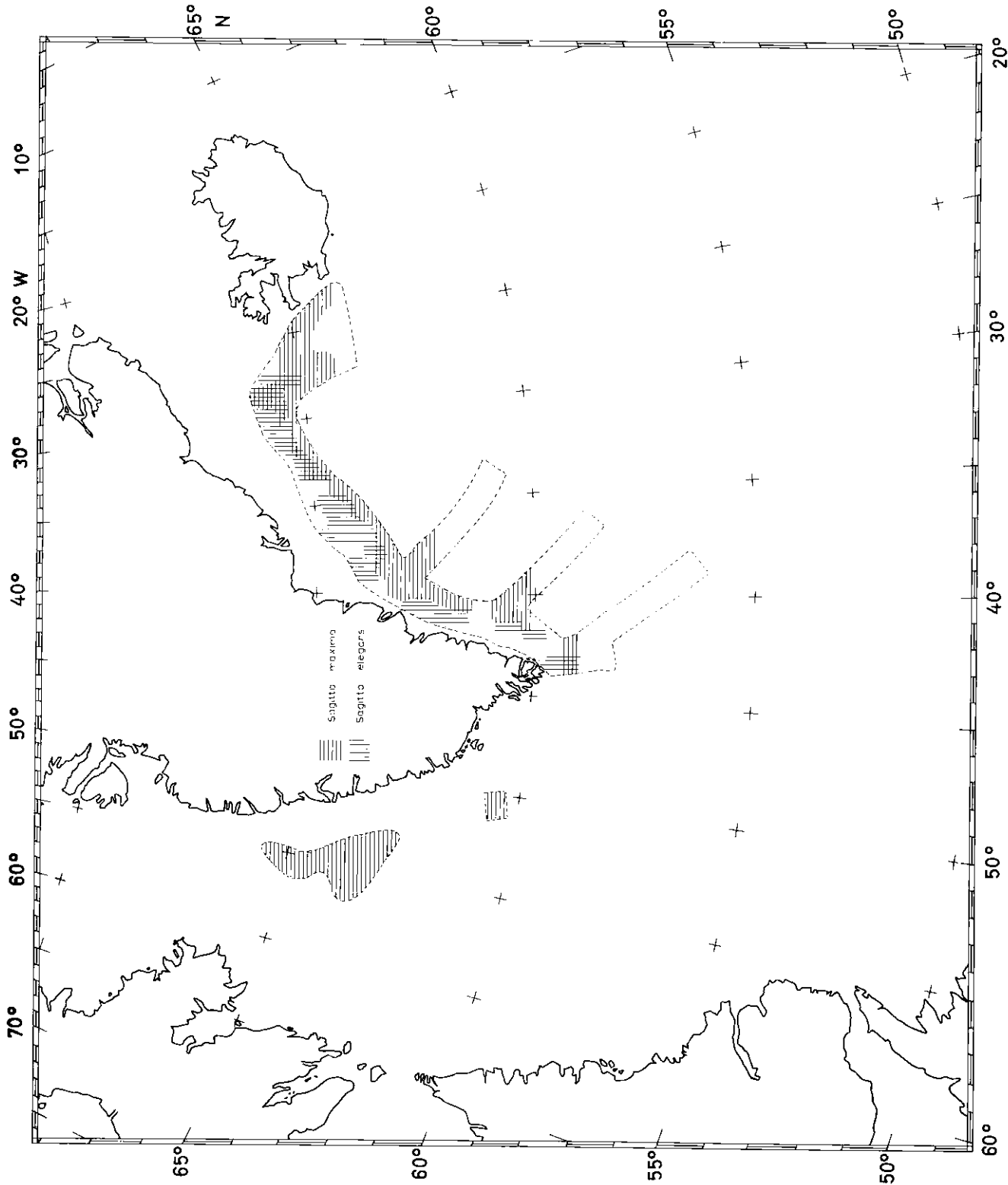


Chart 202. NORTHWESTLANT: 31 March-1 May — Distribution of chaetognath species from all nets (*Sagittia elegans* and *S. maxima*).

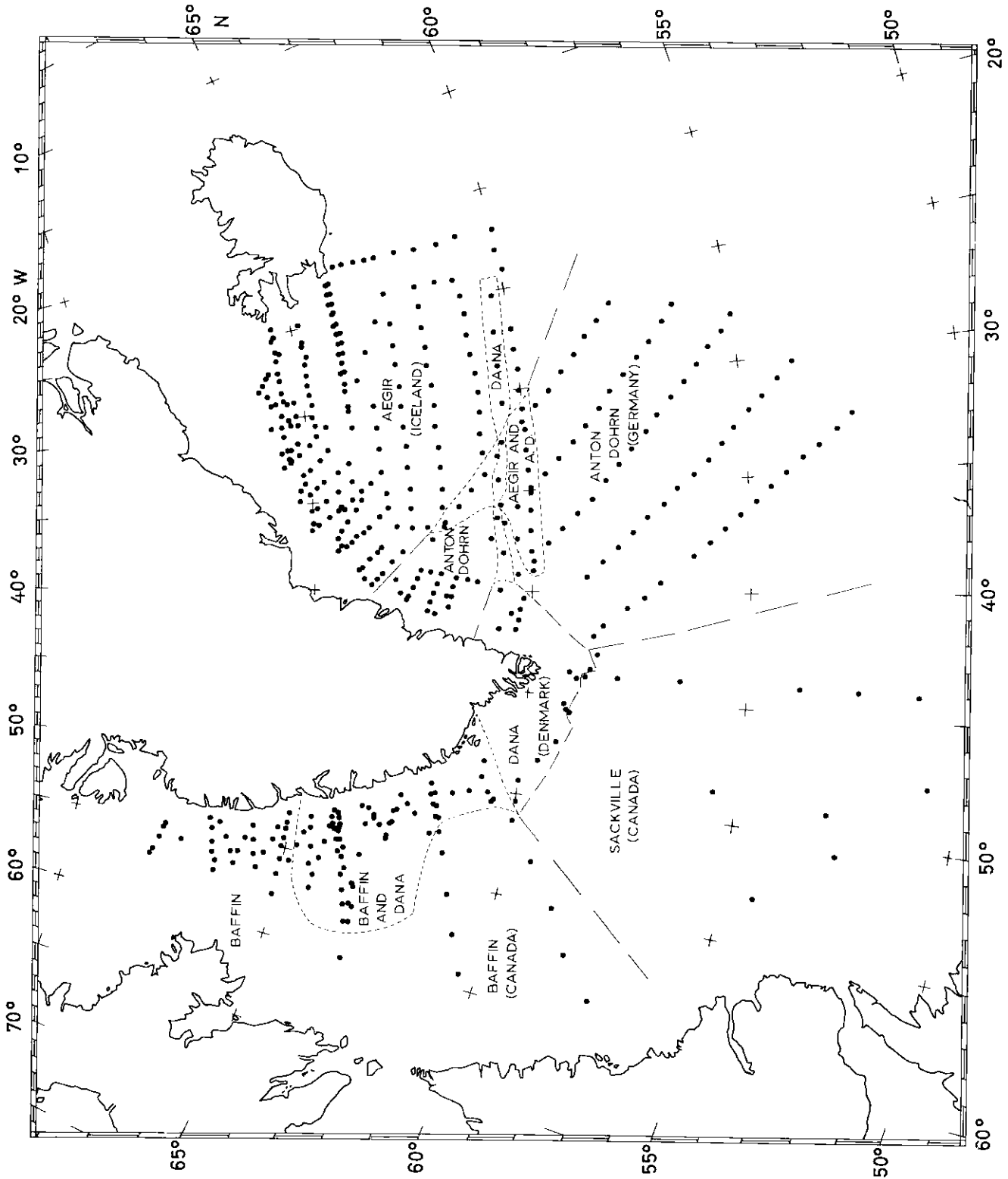


Chart 203. NORWESTLANT 2: 1 May-24 June — Positions of plankton stations.

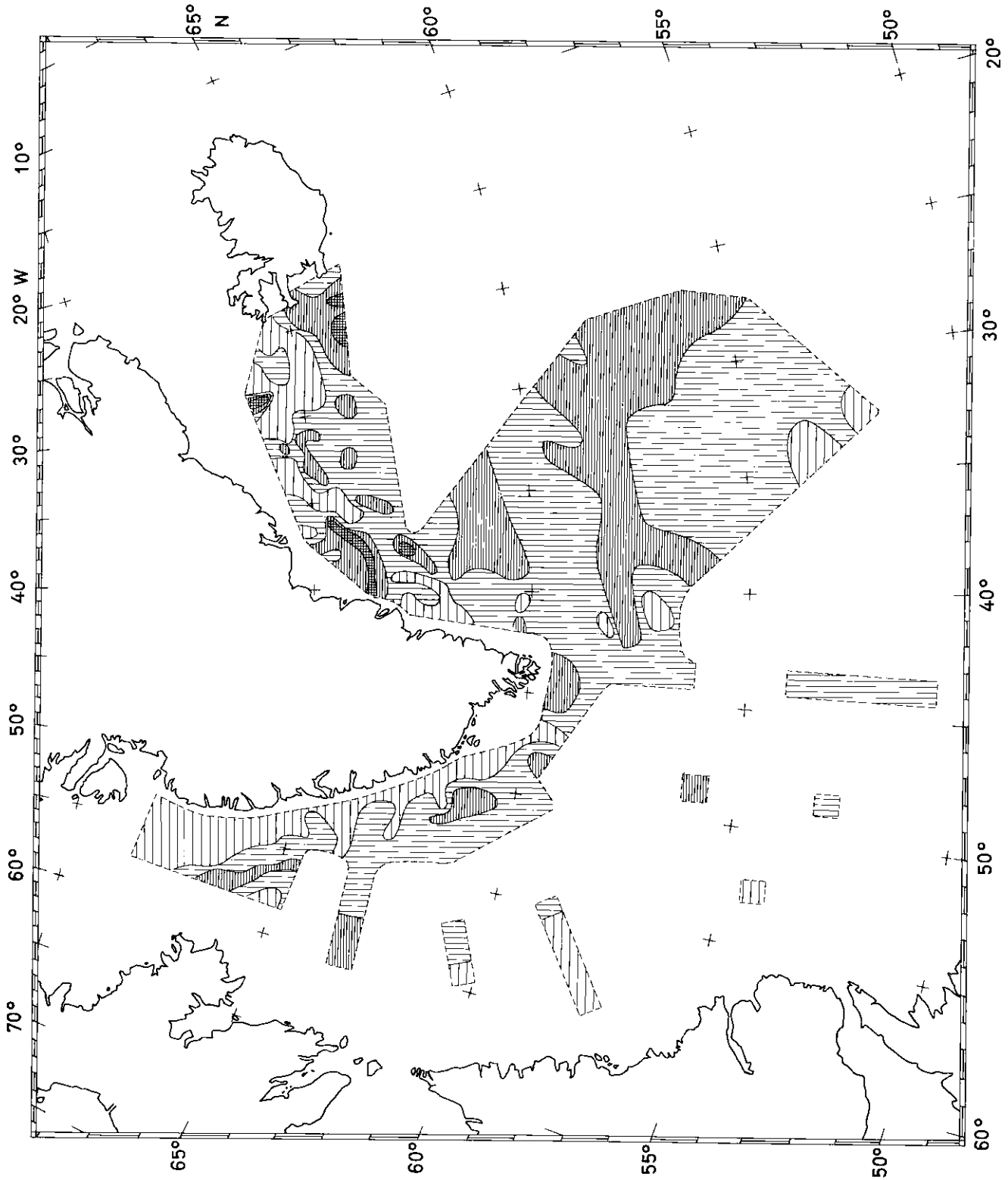


Chart 204. NORWESTLANT 2: 19 May-24 June — Plankton volumes from vertical nets as ml/m<sup>2</sup> of sea surface (Key in Chart 194).



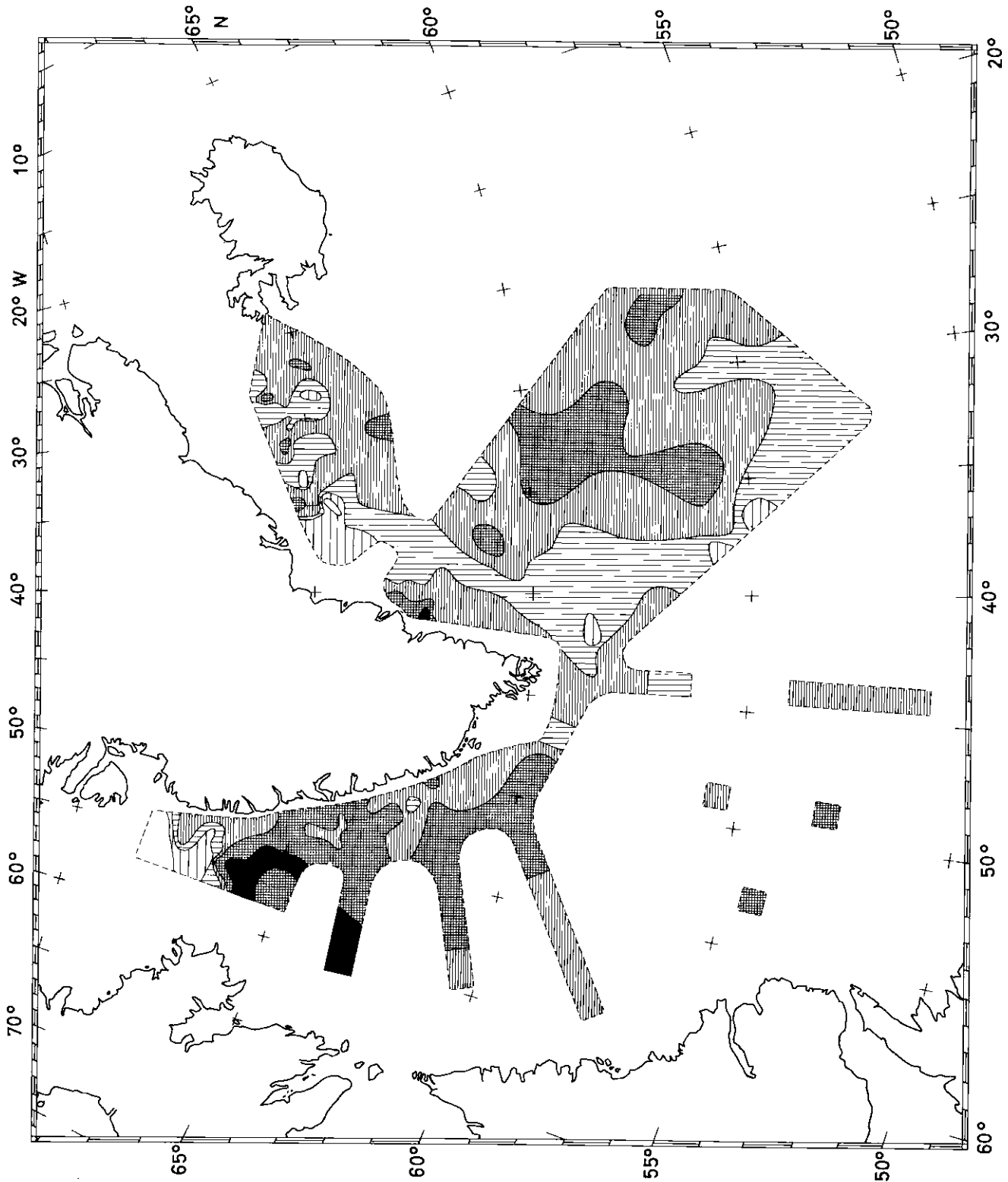


Chart 205. NORWESTLANT 2: 19 May-24 June — *Calanus*, stages I-IV from vertical nets (Key in Chart 192).

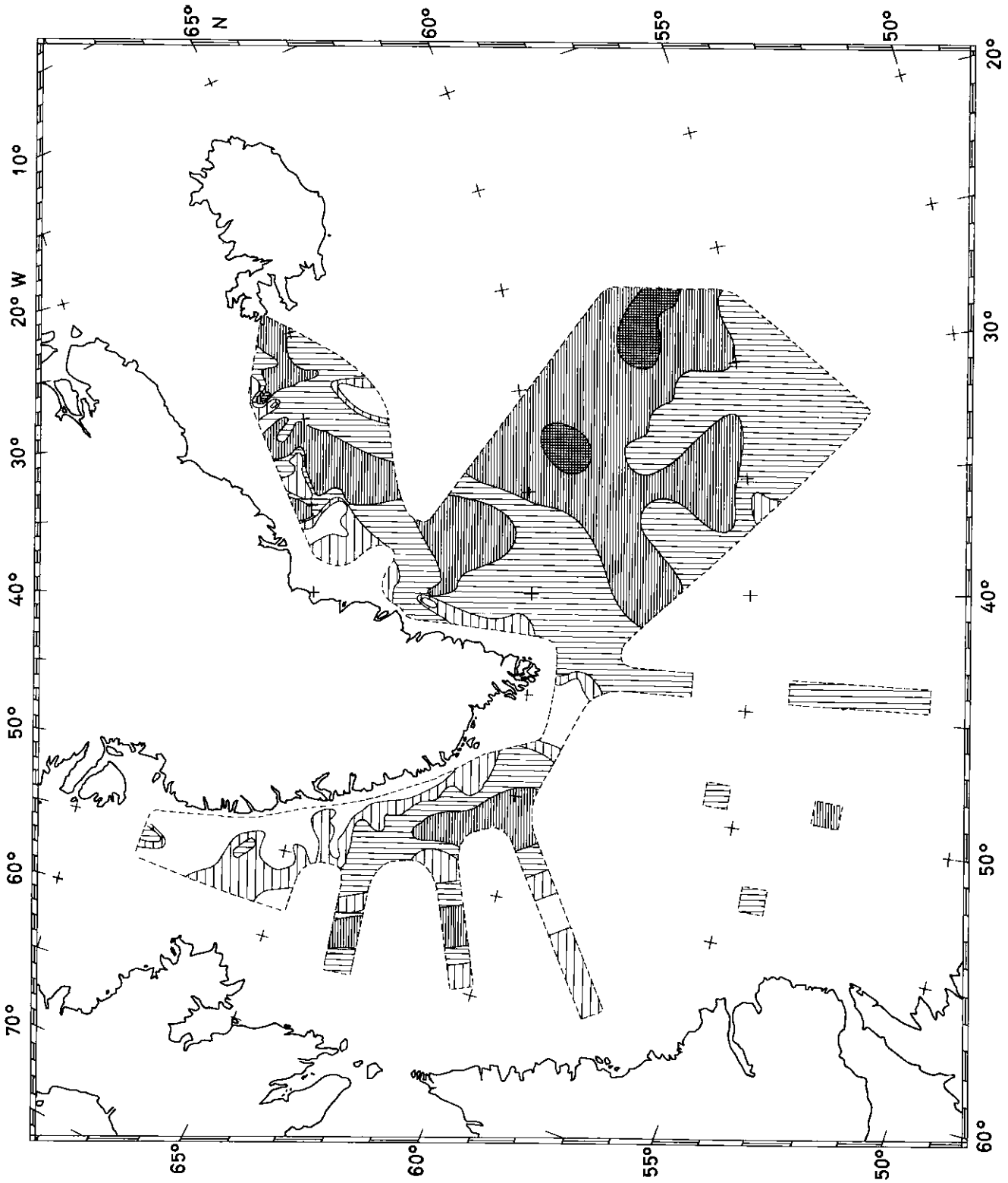


Chart 226. MIDWESTLANT 2: 19 May-24 June — Galaxius, stage V from vertical nets (key in Chart 192).

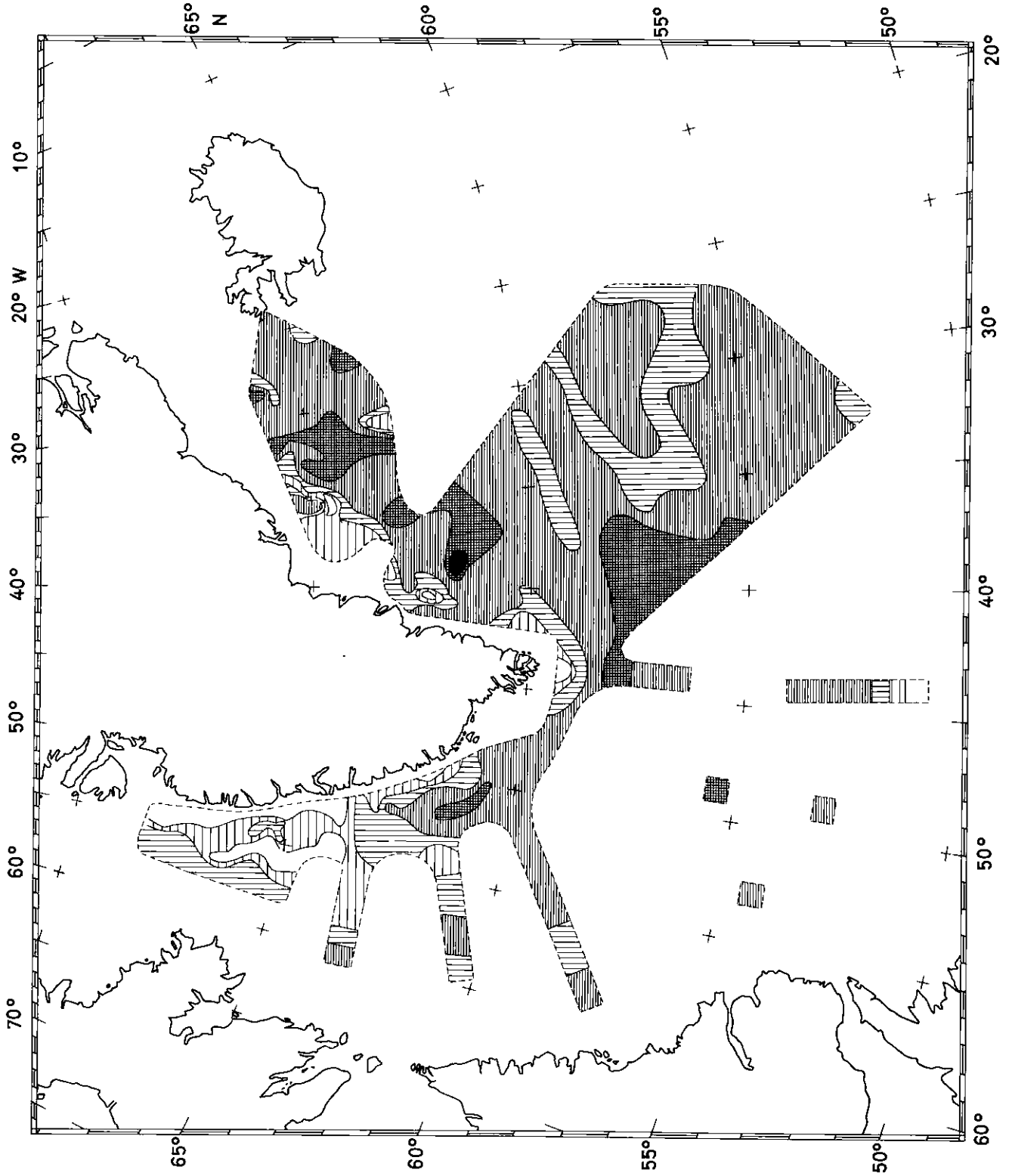


Chart 207. NORWESTLANT 2: 19 May-24 June — *Calanus*, stage VI from vertical nets (Key in Chart 192).

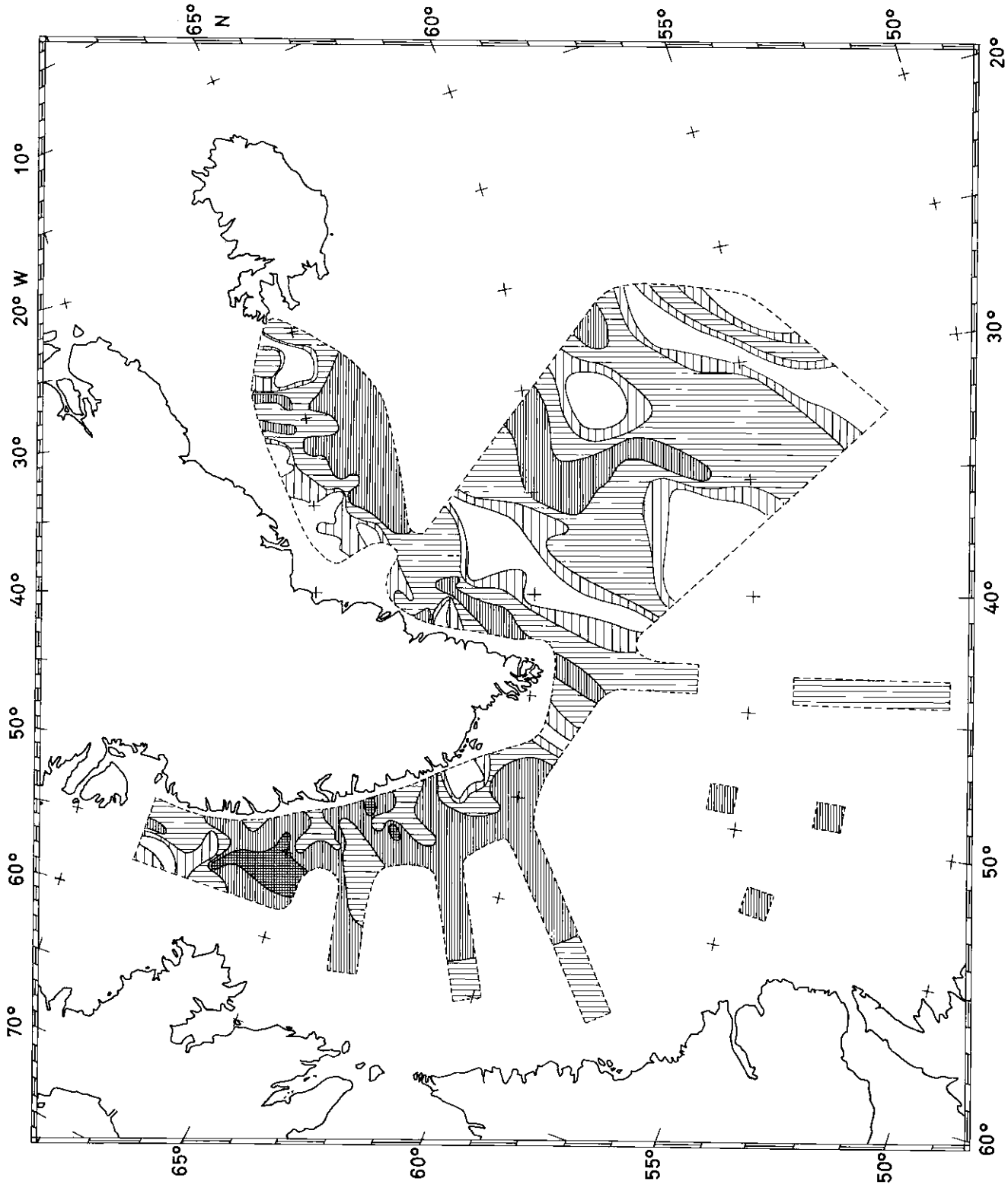


Chart 208. NORWESTLANT 2: 19 May-24 June — Euphausiid calyptopes from vertical nets (Key in Chart 192).

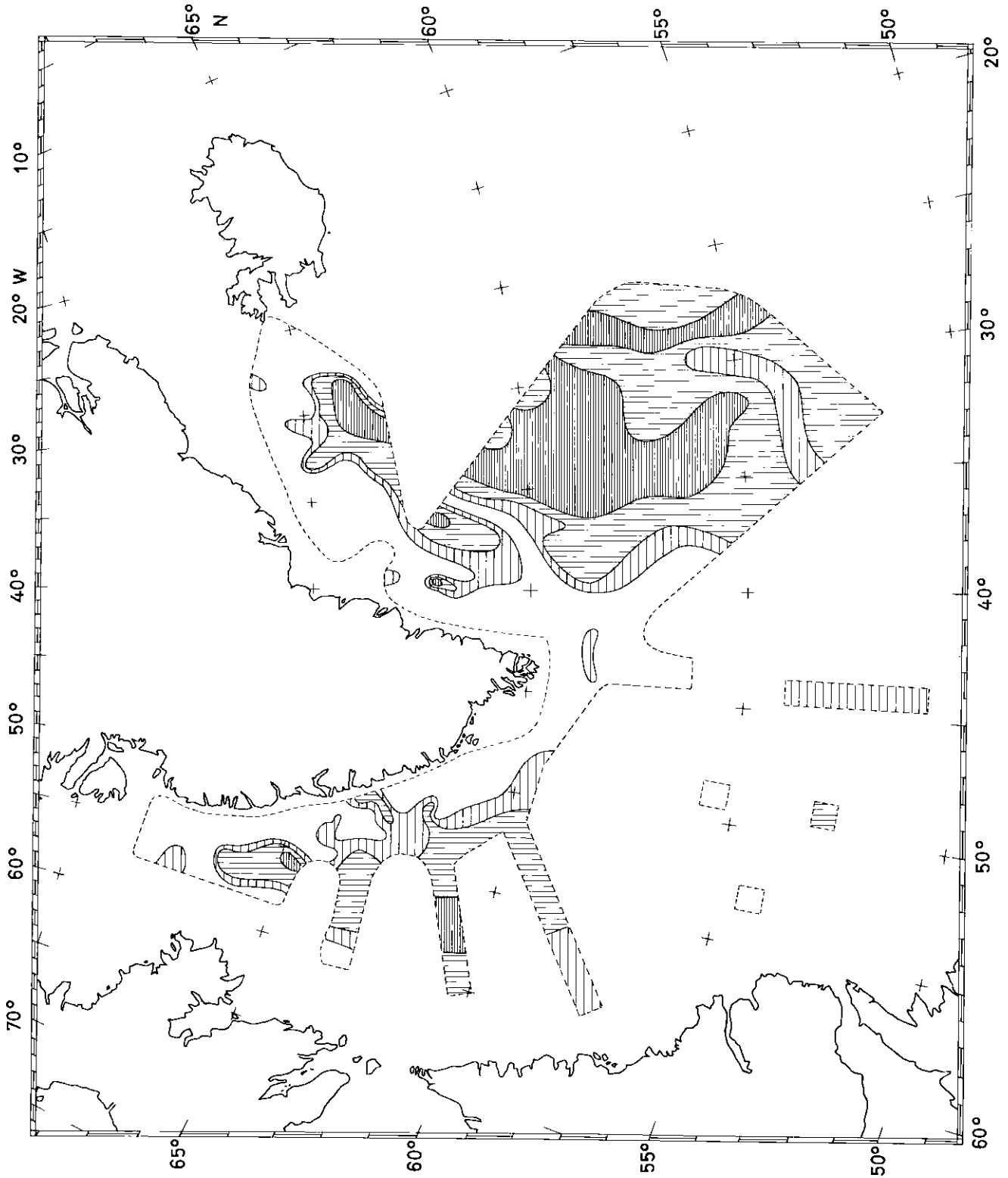


Chart 209. NORWESTLANT 2: 19 May-24 June — Euphausiid furcillias from vertical nets (Key in Chart 192).

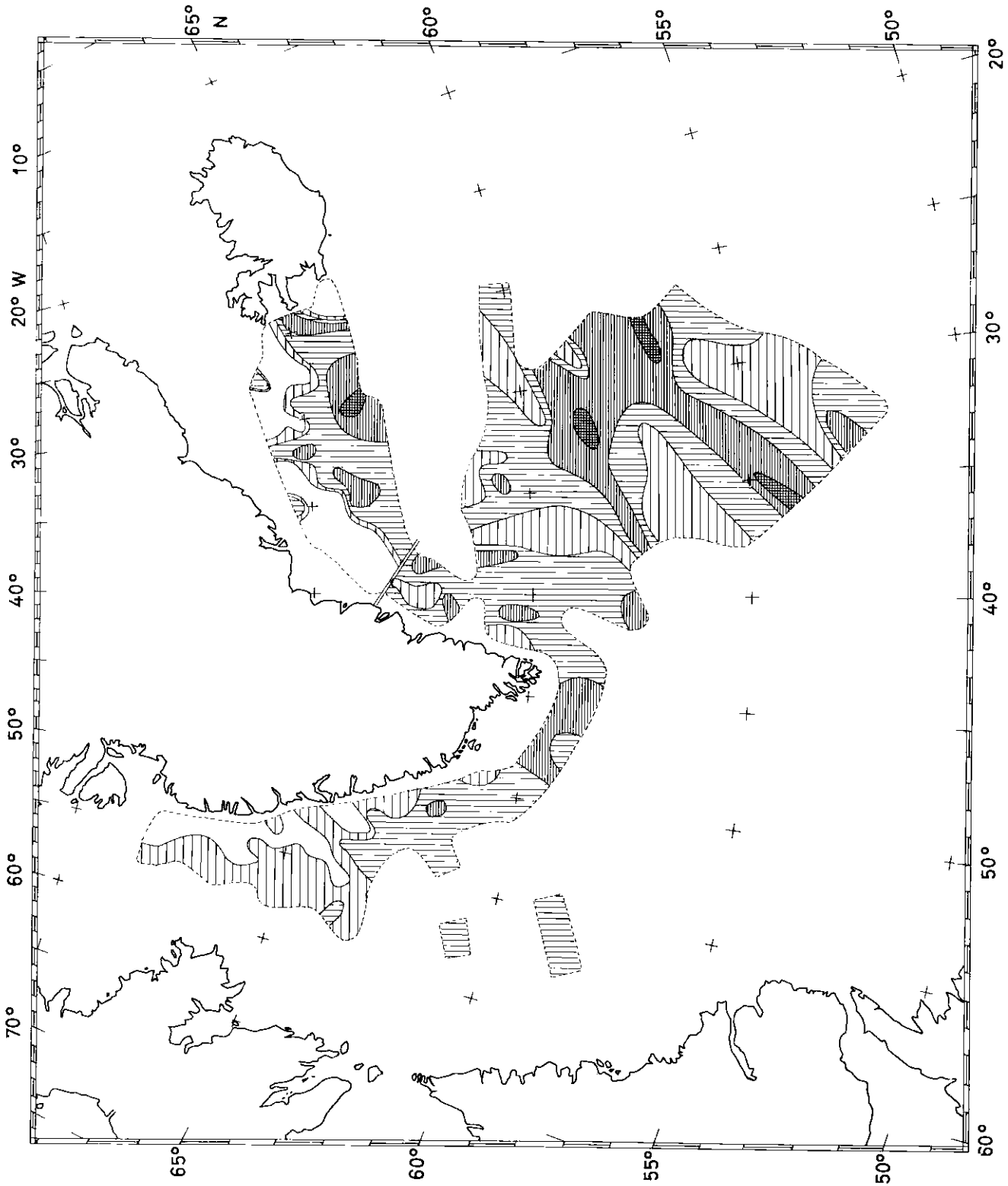


Chart 210. NORWESTLANT 2: 19 May-24 June — Total euphausiids (adults and furcillias) from towed nets: Icelandic High  
Speed Sampler in the northeast, 2-m stramin net in rest of area (Key in Chart 192).

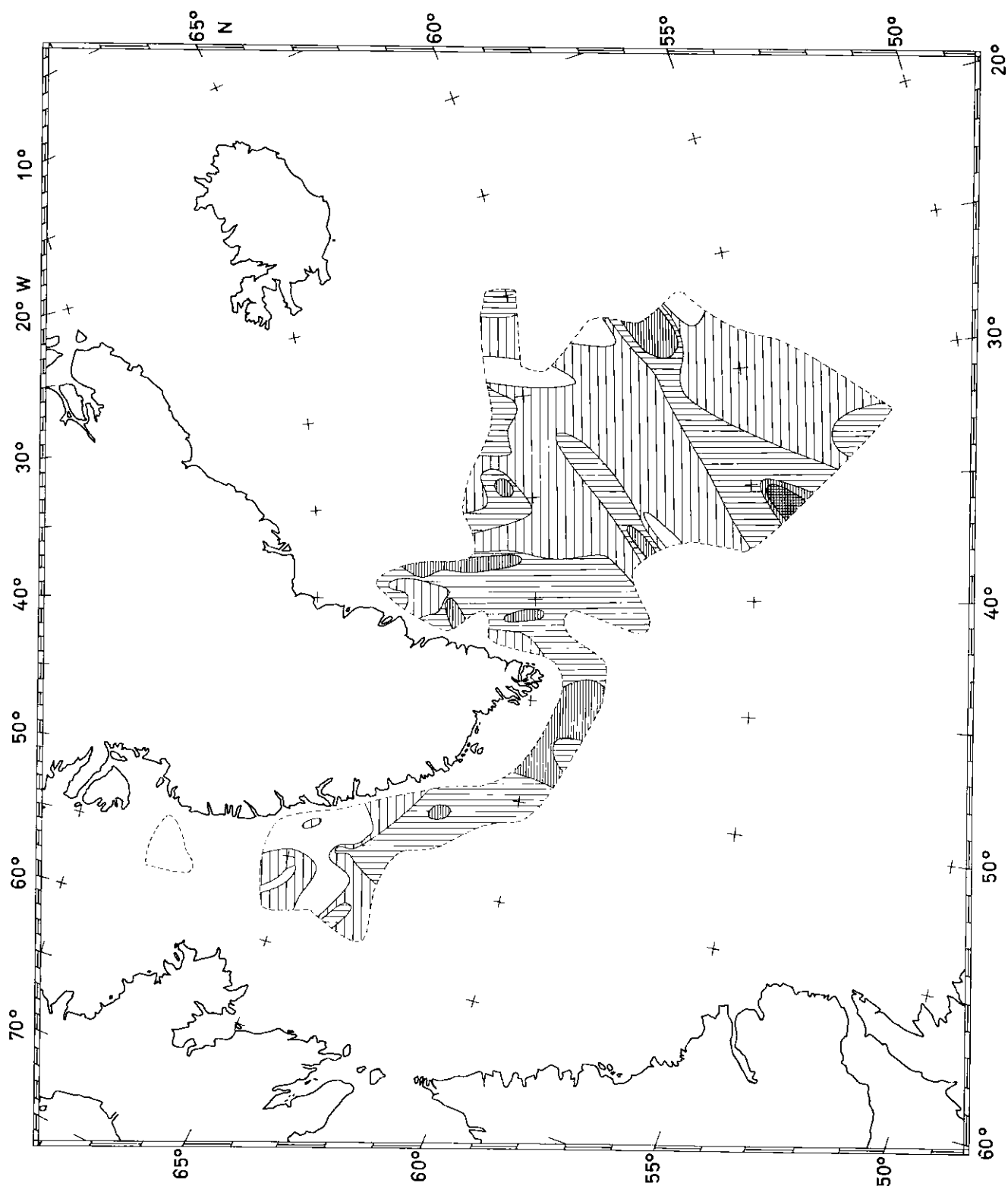


Chart 211. NORWESTLANT 2: 20 May-24 June — *Thysanoessa longicaudata* adults and furcillias from 2-m stramin net (Key in Chart 192).

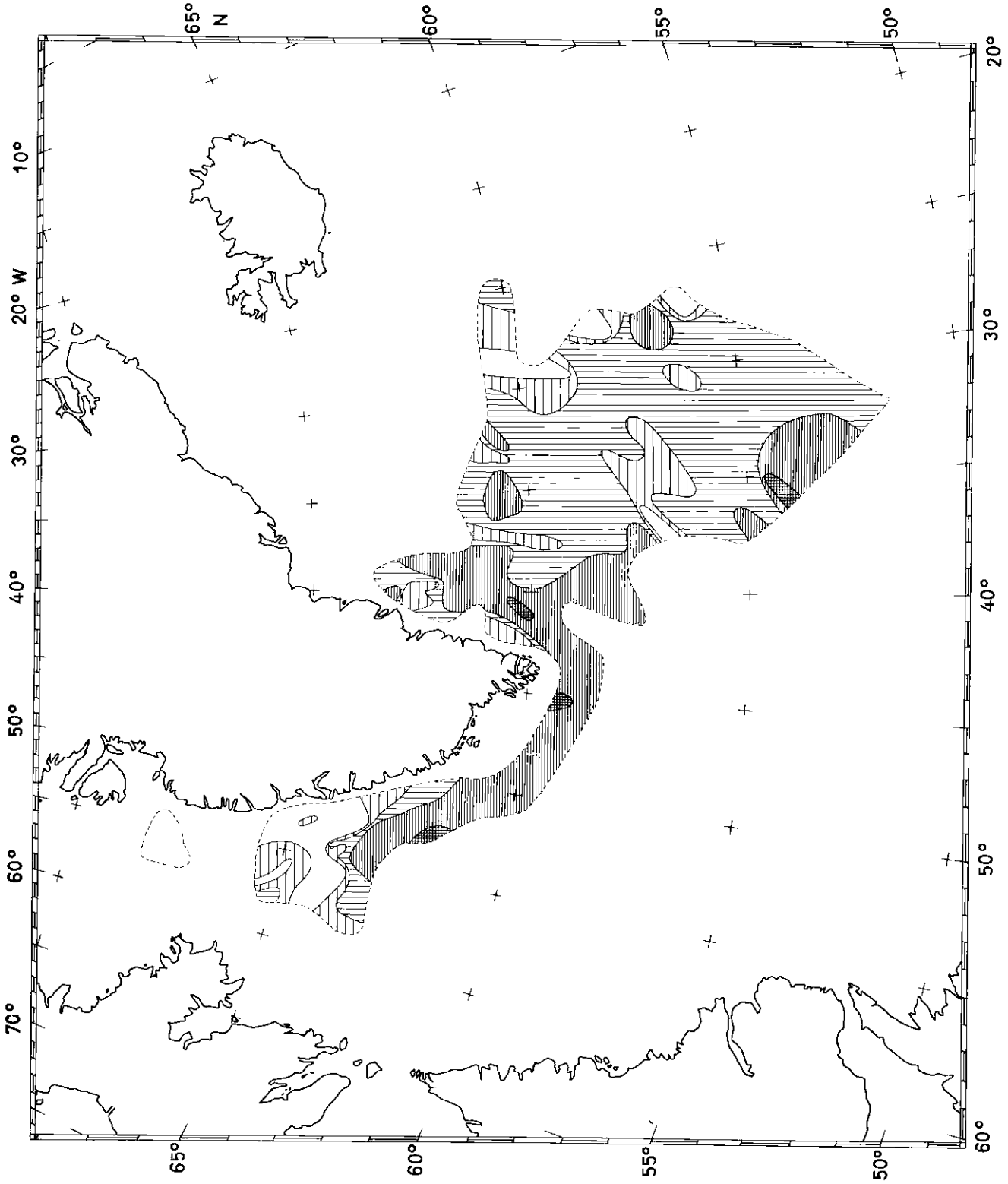


Chart 212. NORWESTLANT 2: 20 May-24 June — *Thysanoessa longicaudata* adults and furcillias from 2-m stramin net, corrected for day/night variations as described in text (Key in Chart 192).



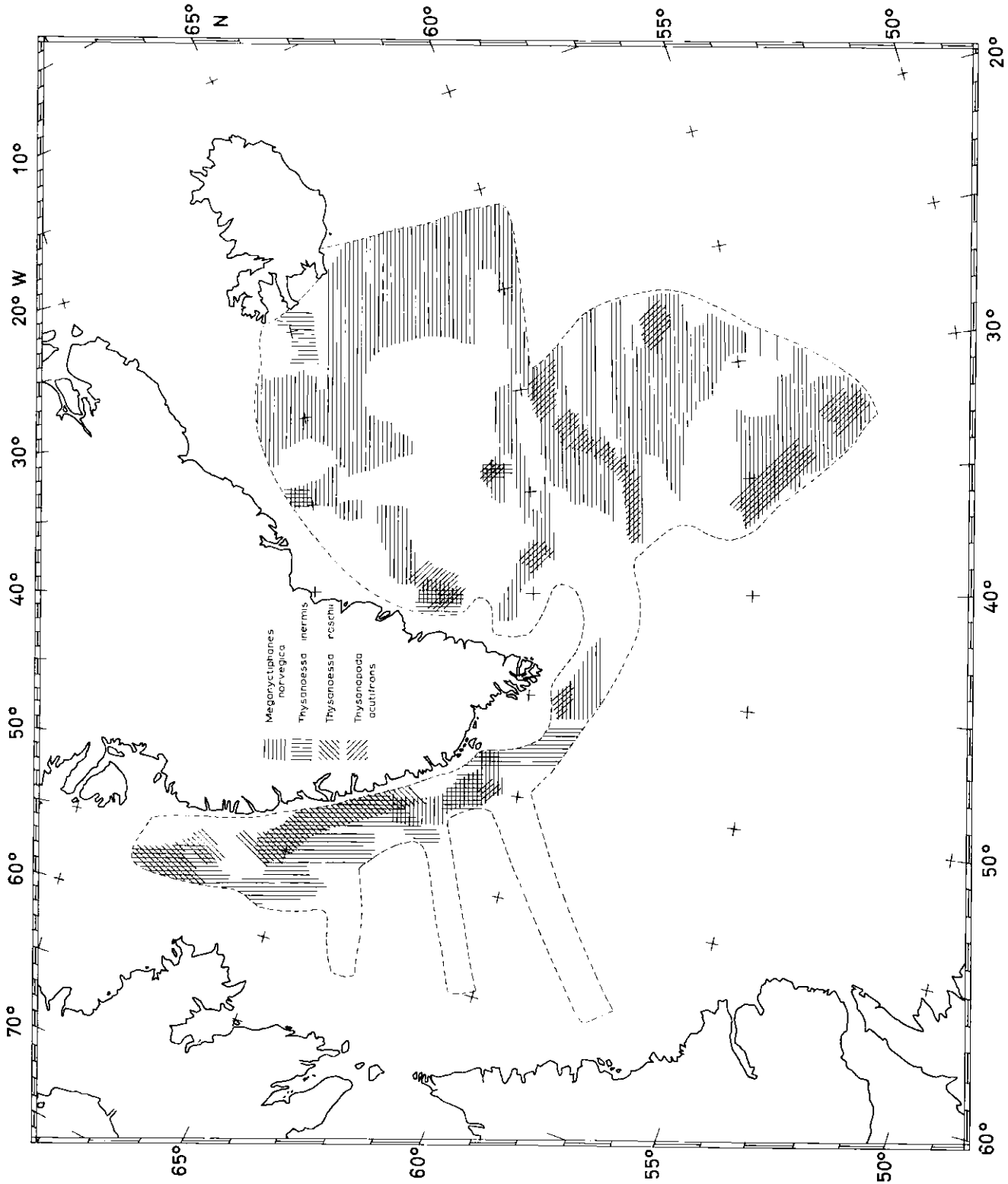


Chart 213. NORWESTLANT 2: 1 May-24 June — Distribution of euphausiid species from all nets (*Meganyctiphanes norvegica*, *Thyasnoessa inermis*, and *T. rosechi*).

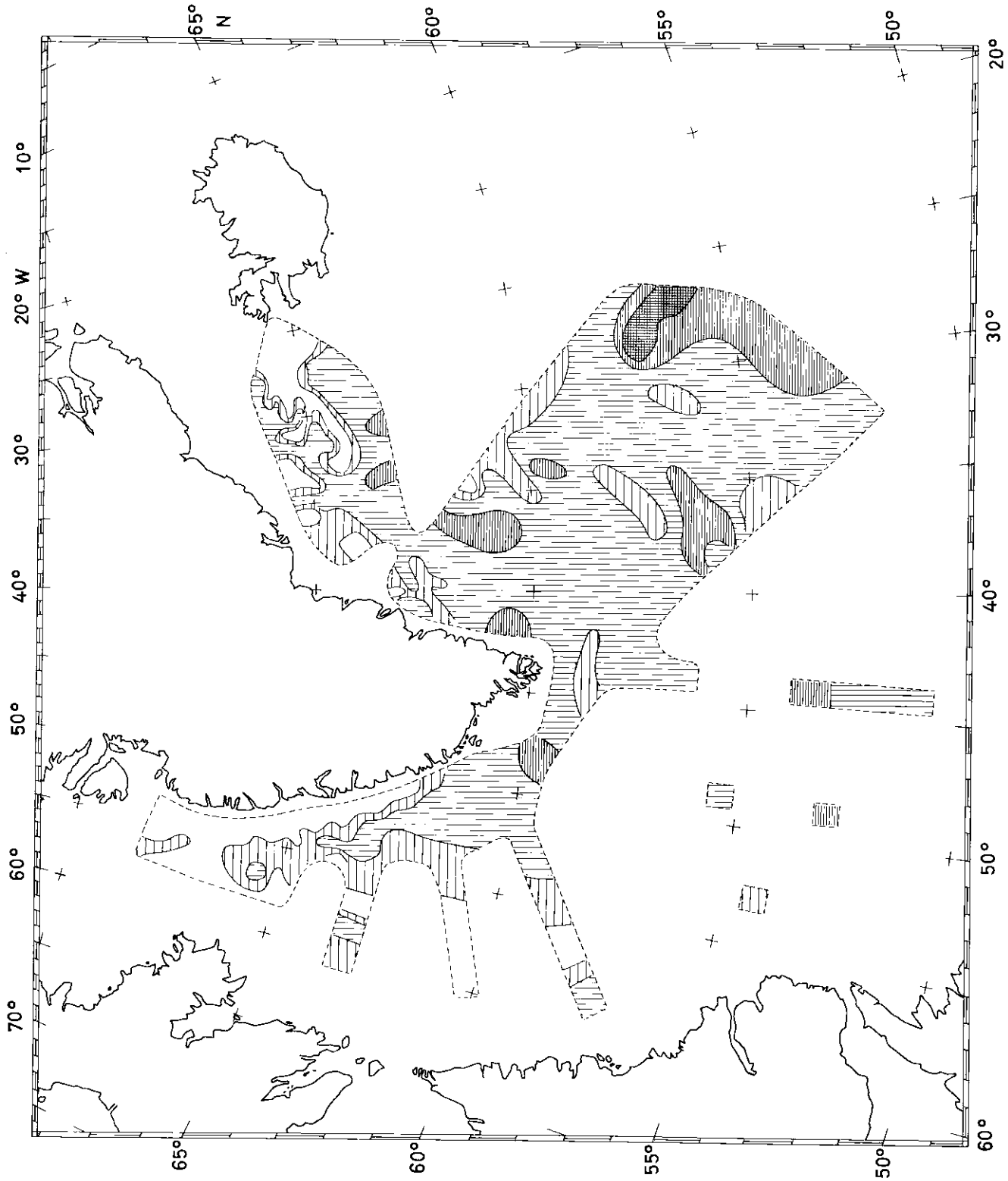


Chart 214. NORWESTLANT 2: 19 May-24 June — *Spiratella retroversa* from vertical nets (Key in Chart 192).

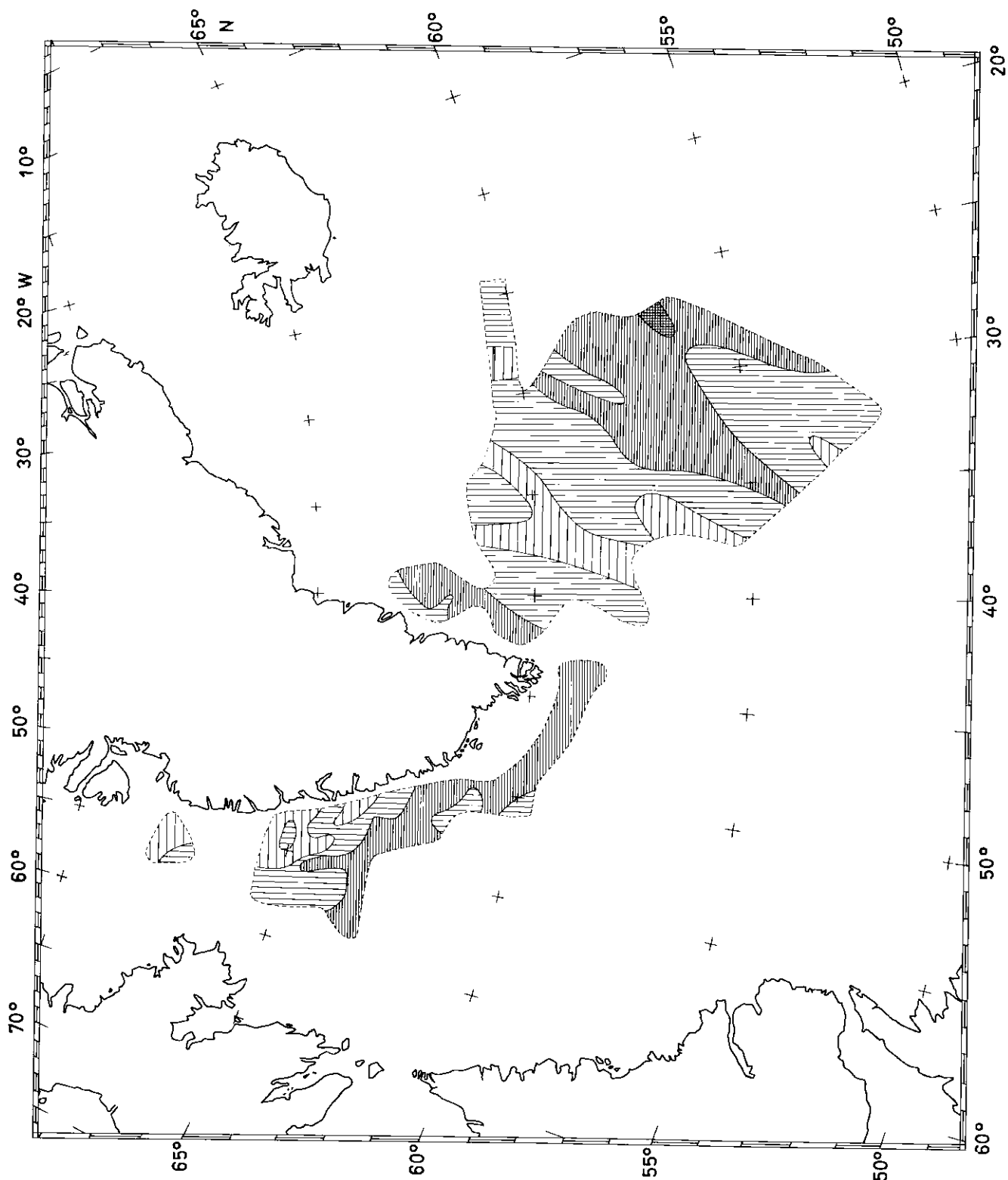


Chart 215. NORWESTLANT 2: 20 May-24 June — *Agalmithia digitata* from 2-m stramin net (Key in Chart 192).

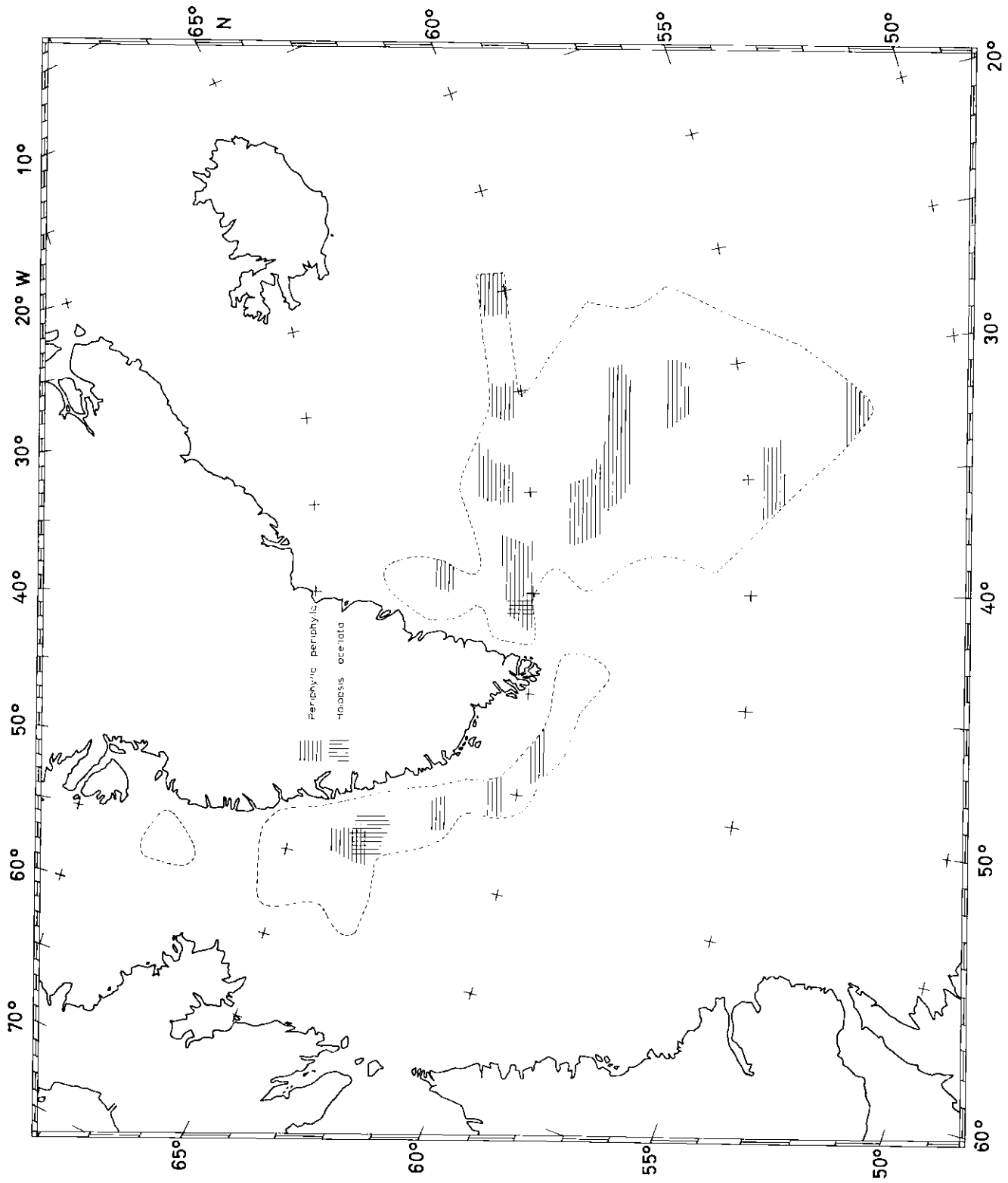


Chart 216. NORWESTLANT 2: 20 May-24 June — Distribution of medusae in 2-m stramin net (*Periphylla periphylla* and *Hallopsis ocellata*).

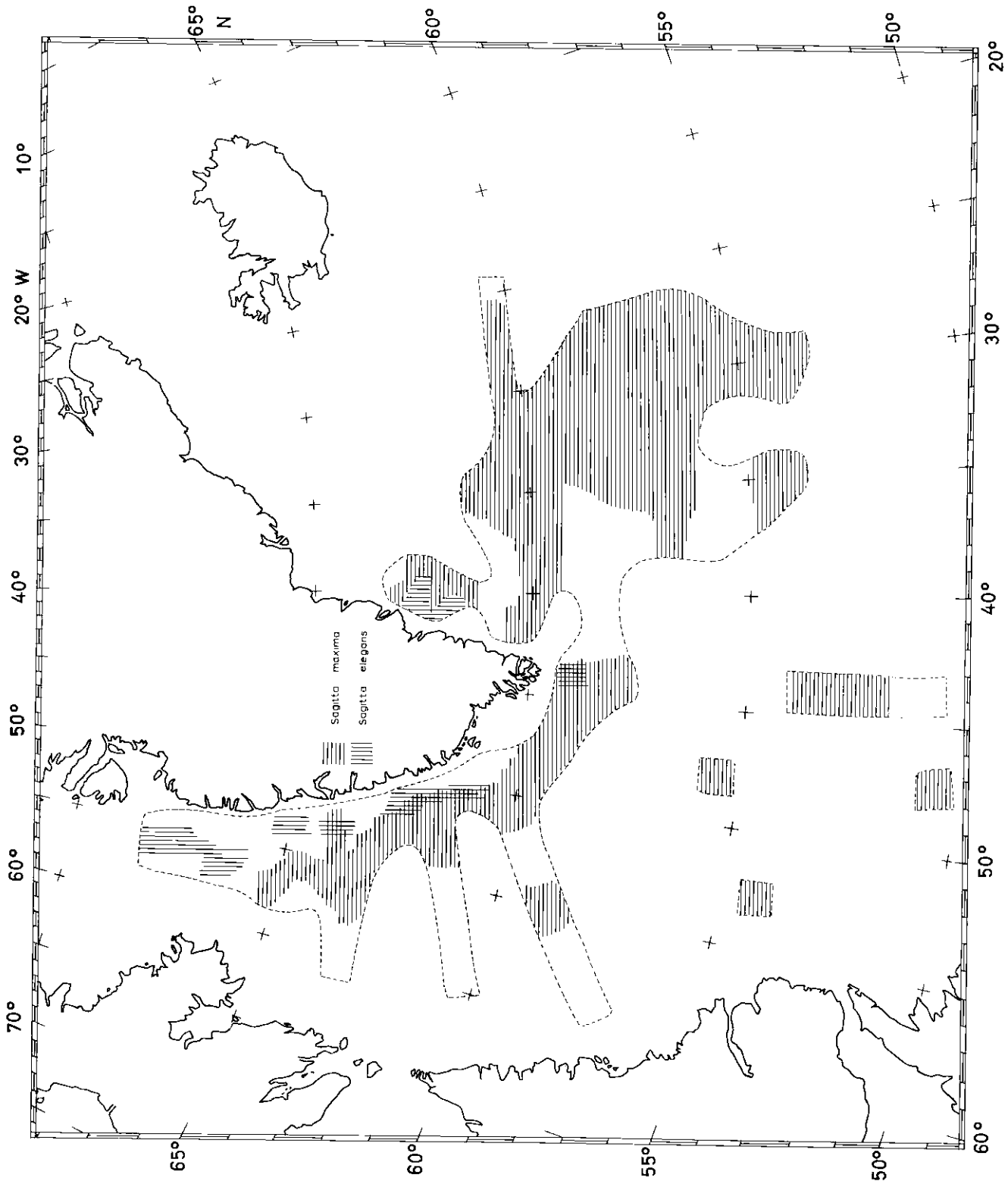


Chart 217. NORWESTLANT 2: 20 May-24 June — Distribution of chaetognath species from all nets (*Sagitta elegans* and *S. maxima*).

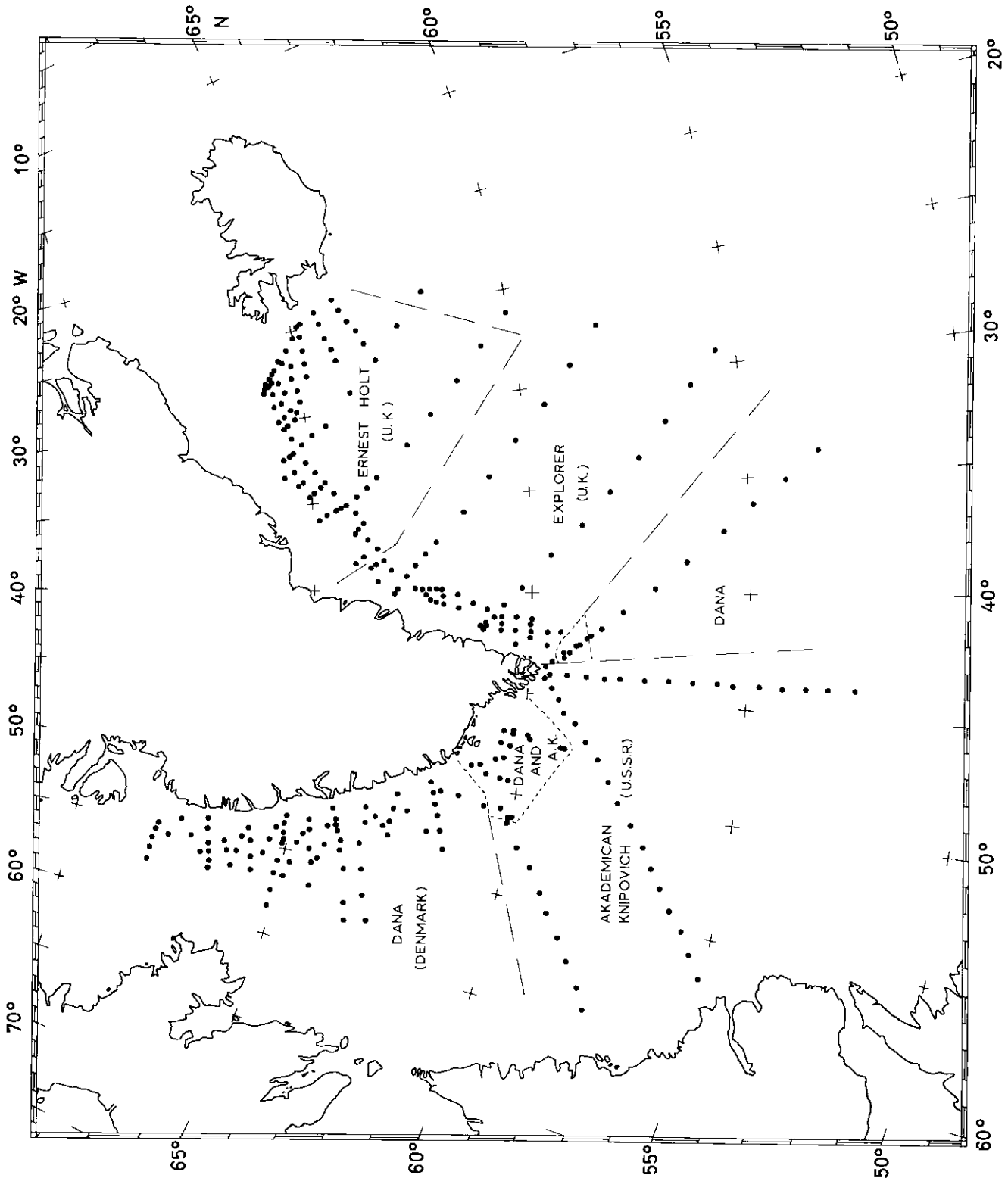


Chart 218. NORWESTLANT 3: 30 June-4 August — Positions of plankton stations.

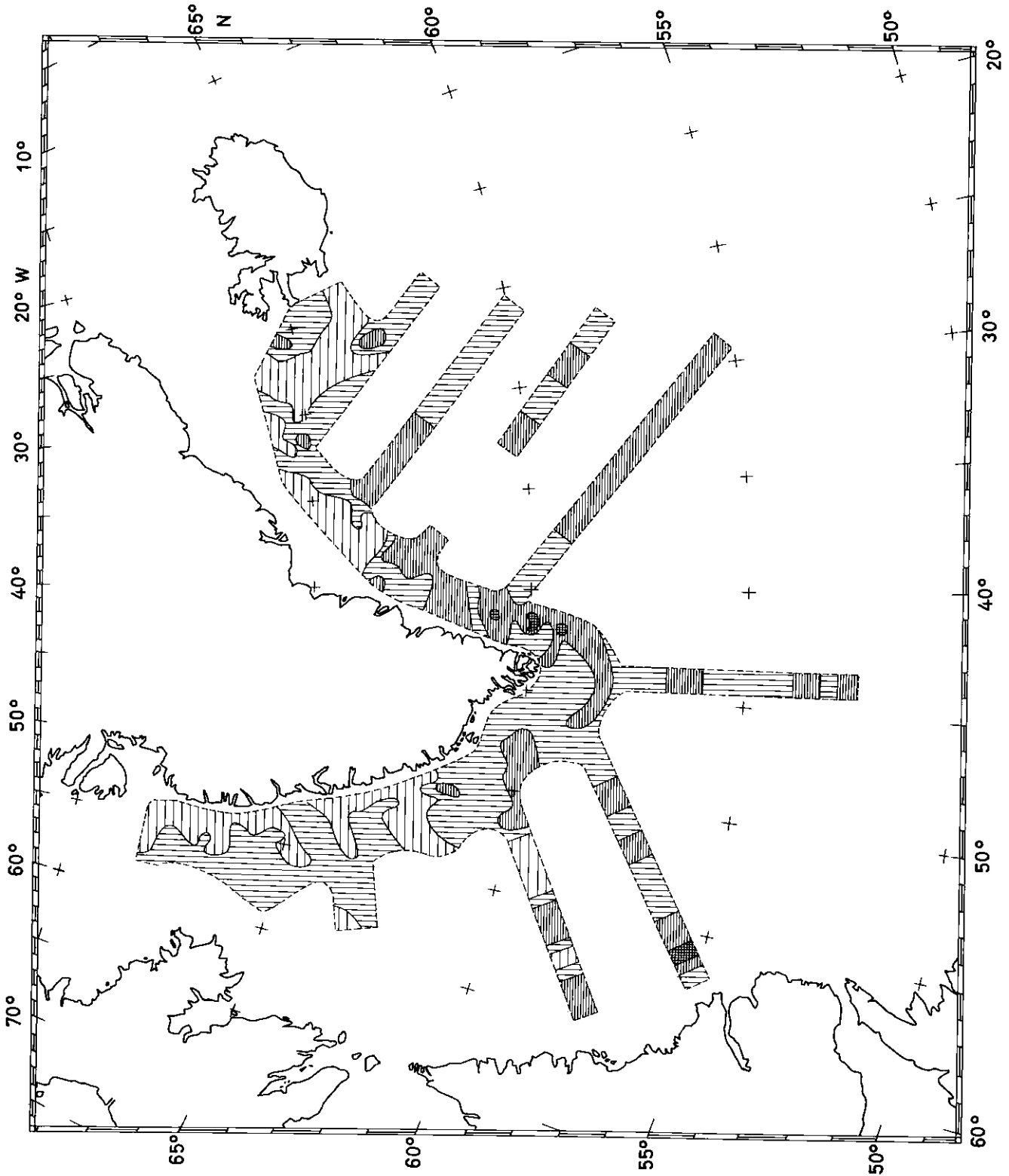


Chart 219. NORWESTLANT 3: 30 June-19 July — Plankton volumes from Hensen net as ml/m<sup>2</sup> of sea surface (Key in Chart 194).

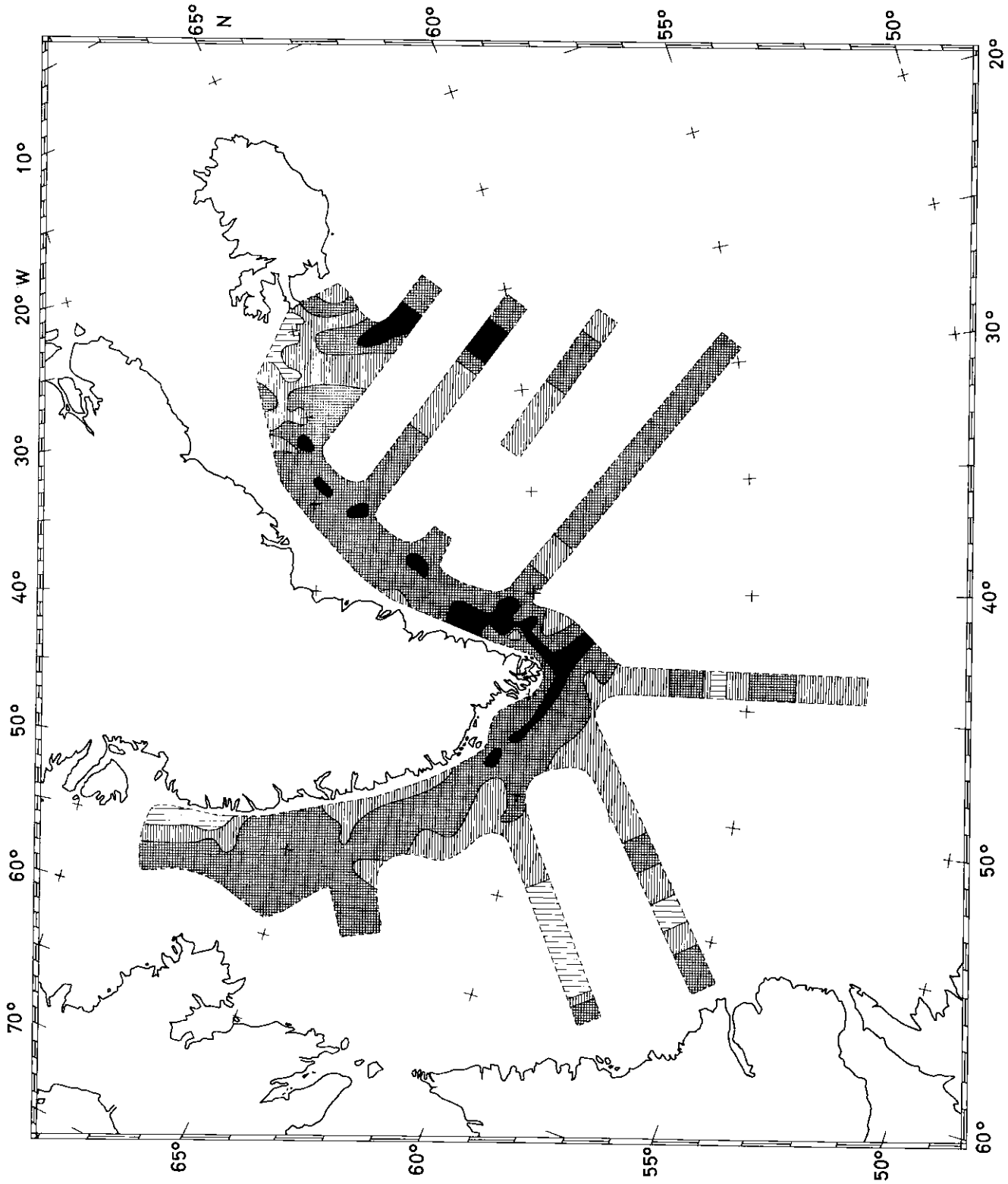


Chart 220. NORWESTLANT 3: 30 June-19 July — *Calanus*, stages I-IV from Hensen net (Key in Chart 192).



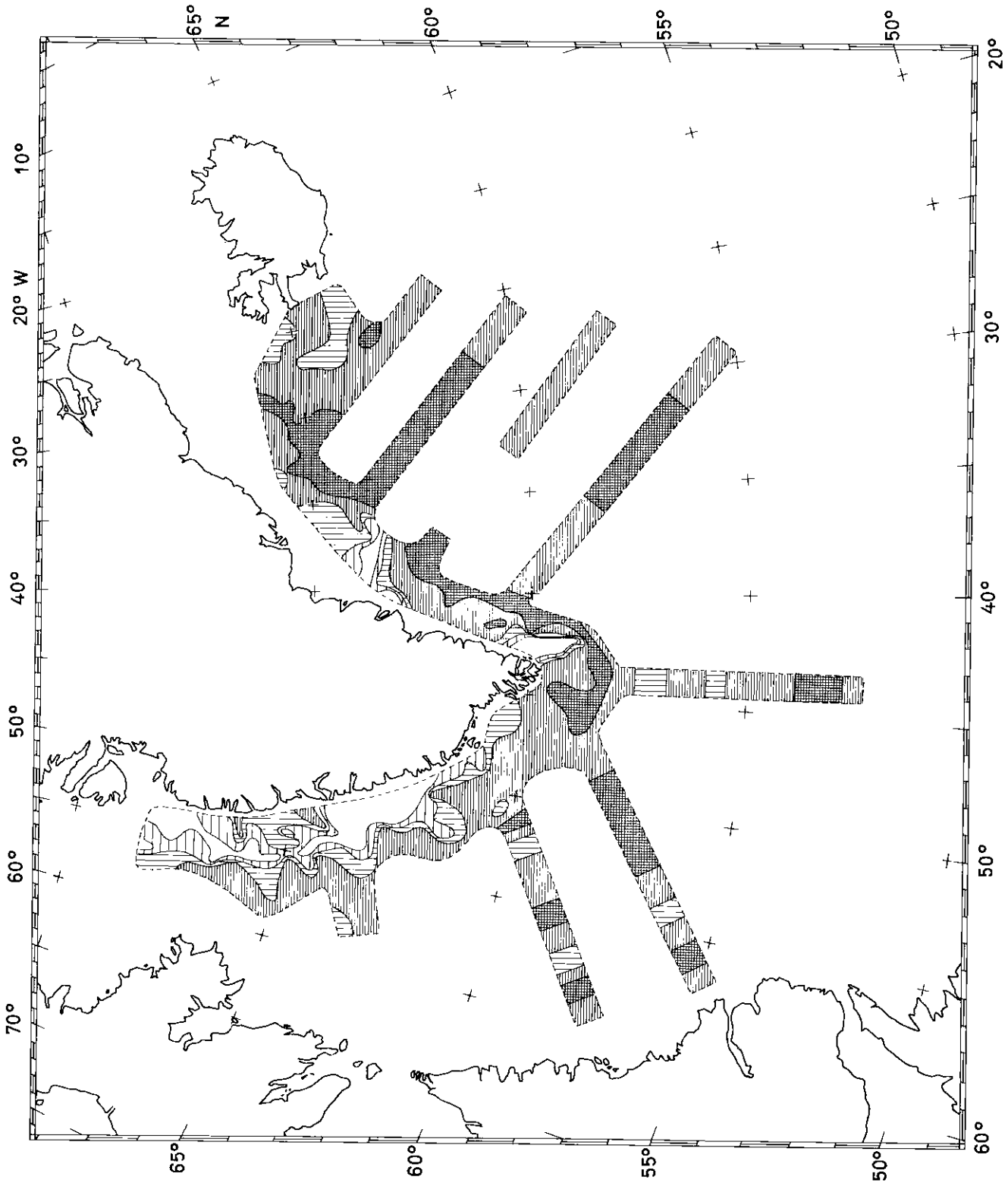


Chart 221. NORWESTLANT 3: 30 June-19 July — *Calanus*, stage V from Hensen net (Key in Chart 192).

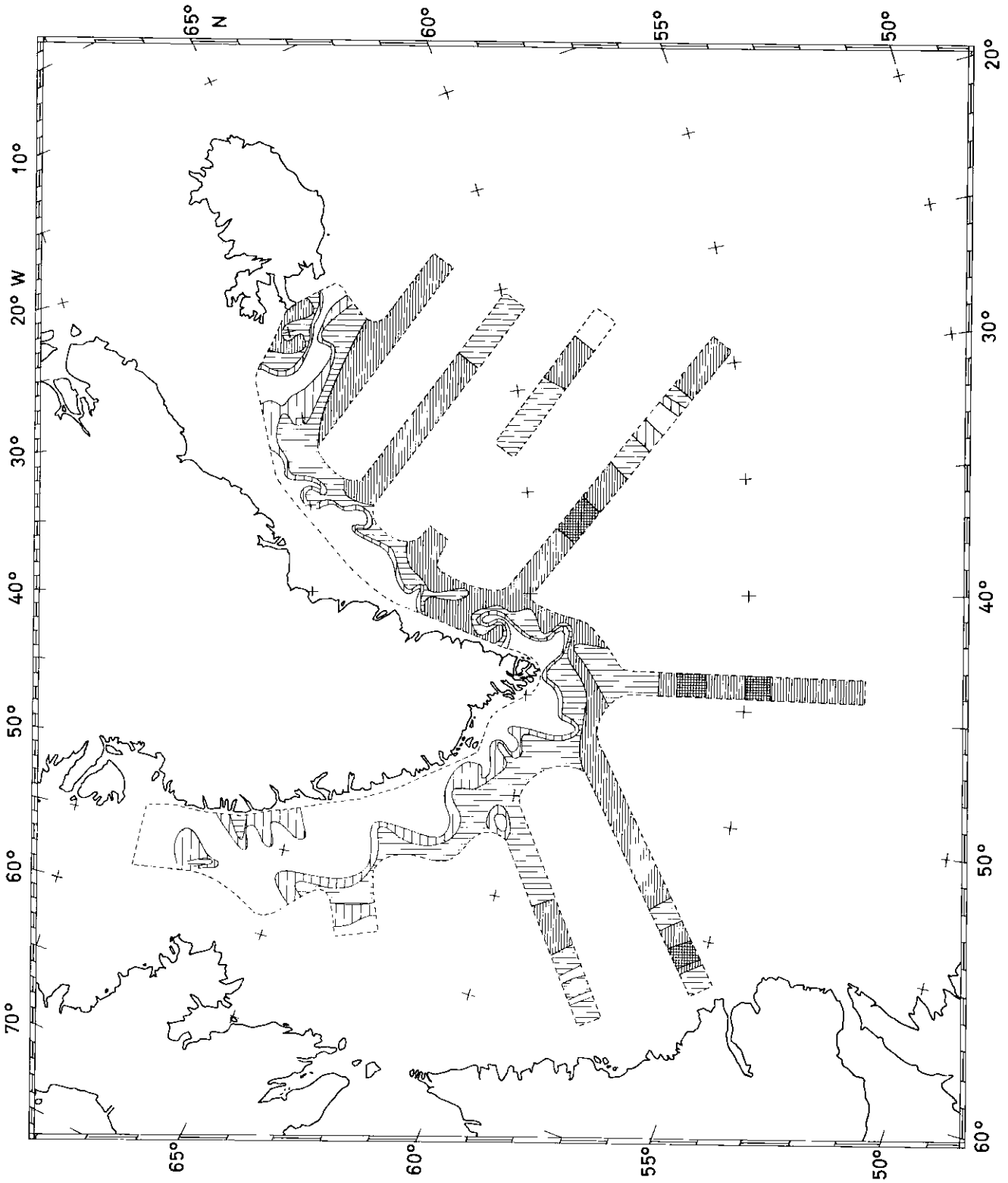


Chart 222. NORWESTLANT 3: 30 June-19 July — *Calanus*, stage VI from Hensen net (Key in Chart 192).

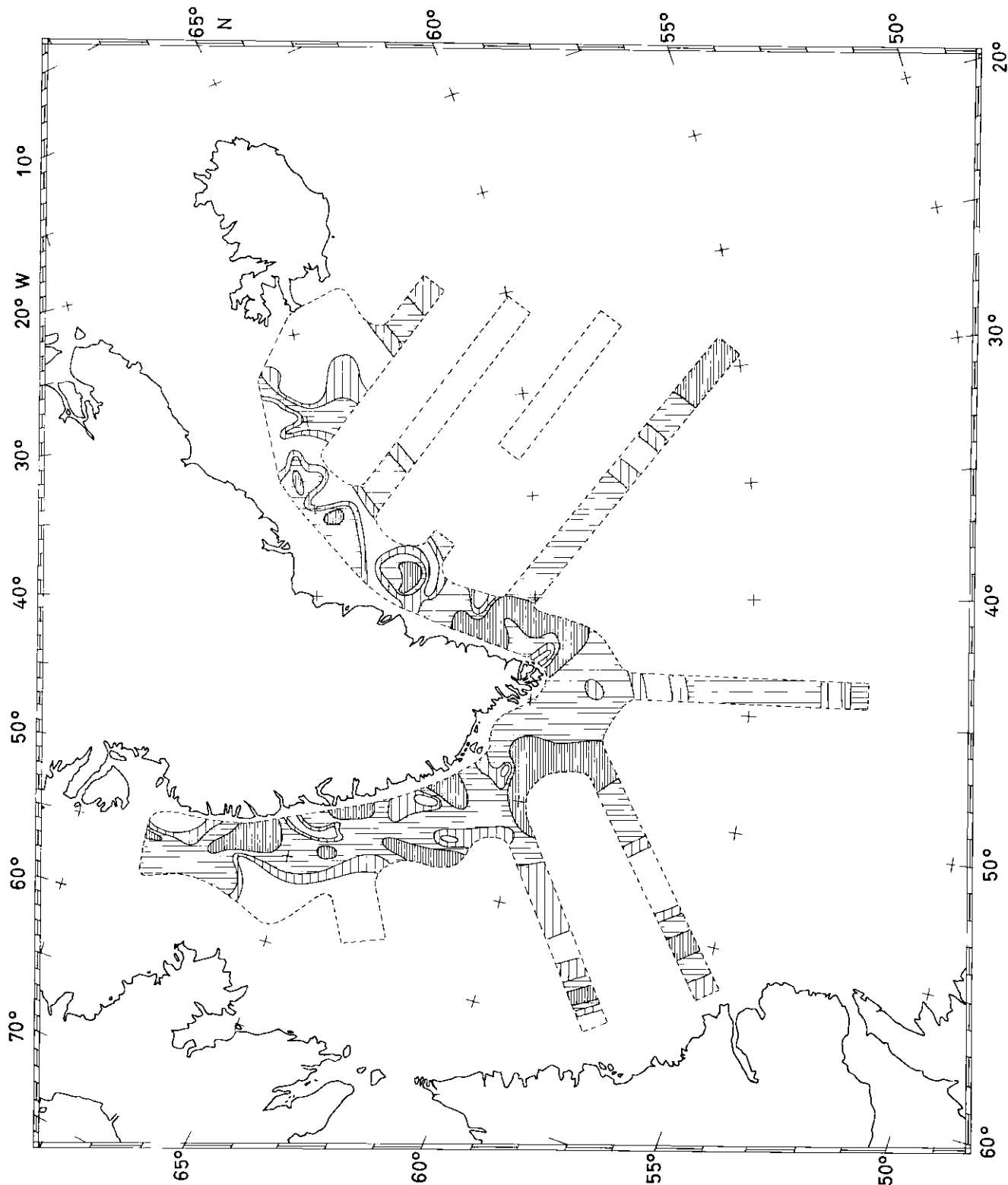


Chart 223. NORWESTLANT 3: 30 June-19 July — Euphausiid calyptopes from Hensen net (Key in Chart 192).

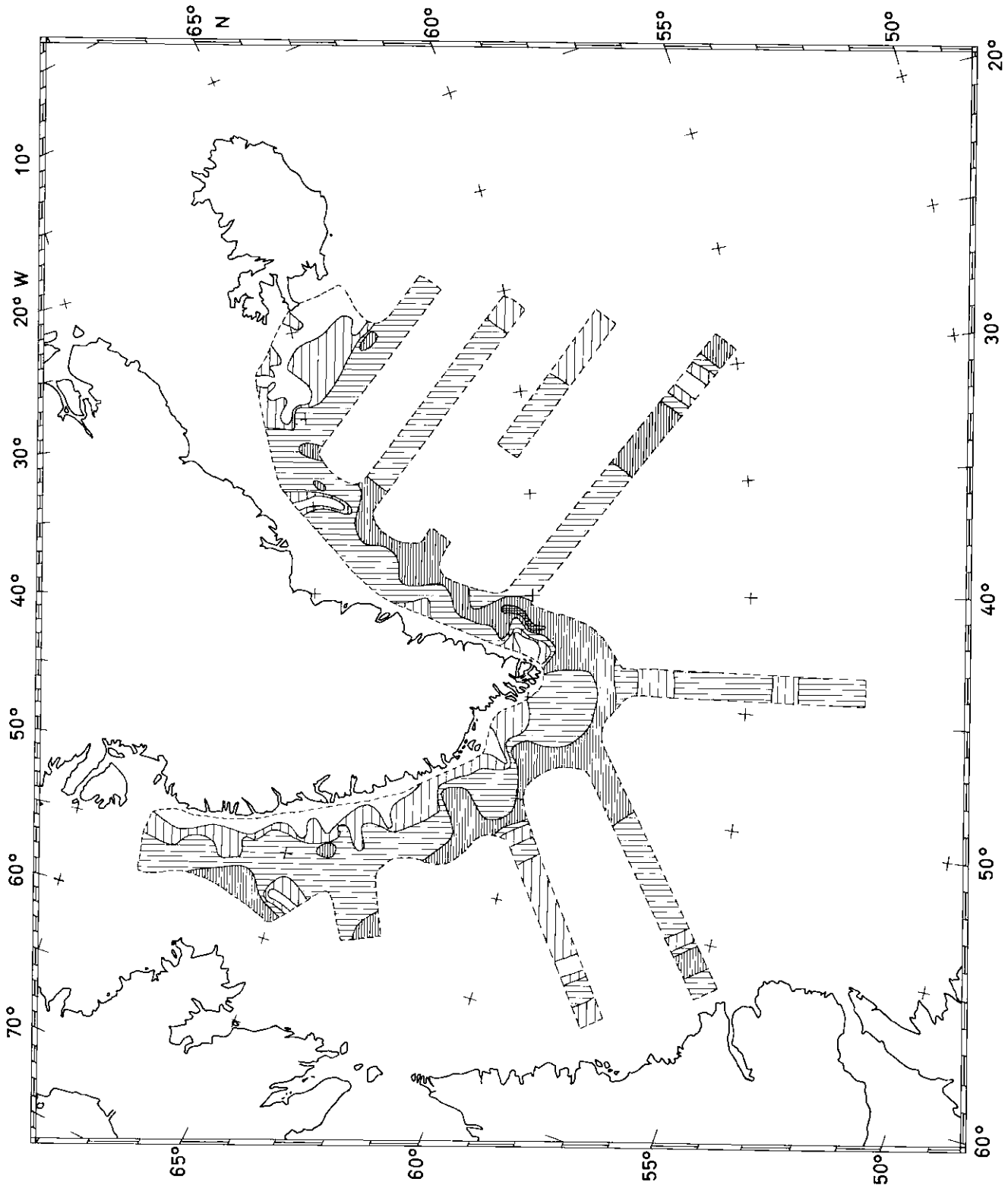


Chart 224. NORTH ATLANTIC 3: 30 June-19 July — Euchaetiid furciliids from Hensen net (Key in Chart 192).

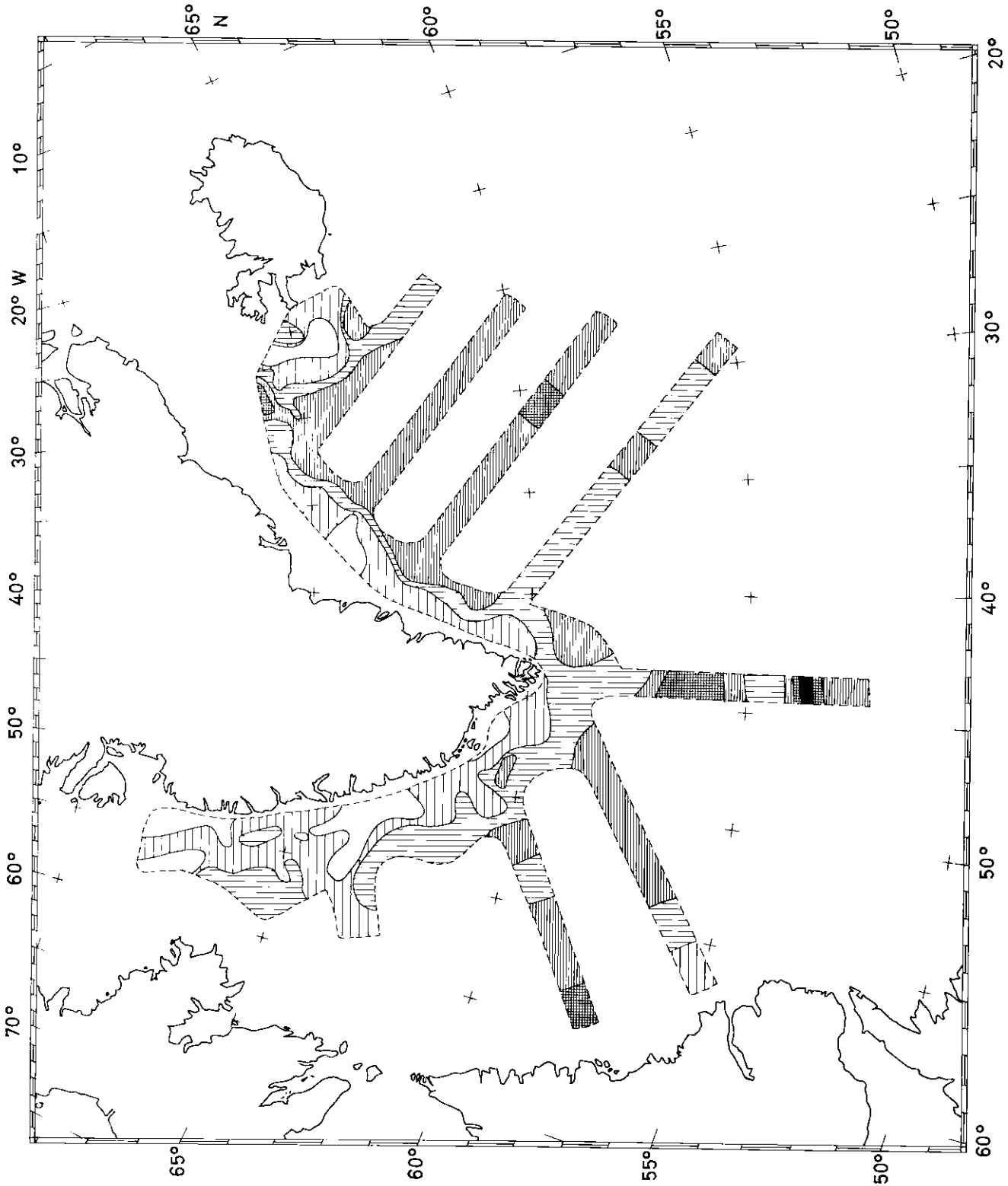


Chart 225. NORWESTLANT 3: 30 June-19 July — Total euphausiids (adults and furcillias) from towed nets: mostly from 2-m stramin net with some from 1-m silk net southeast of Greenland and Icelandic High Speed Sampler in Labrador Sea (Key in Chart 192).

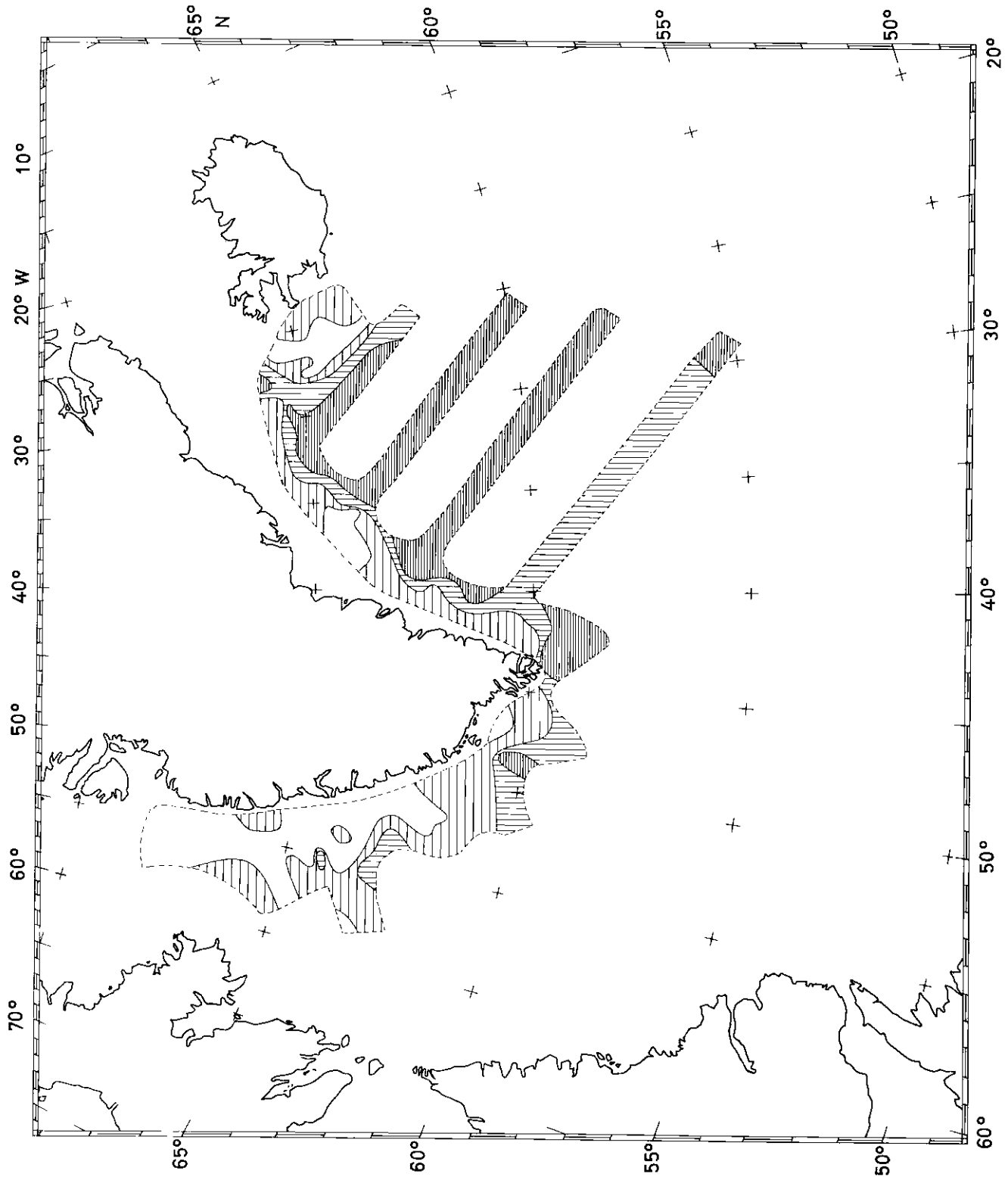


Chart 226. NORWESTLANT 3: 30 June-19 July — *Thysanoessa longicaudata* adults and furcillias from towed nets: mostly from 2-m stramin net with some 1-m silk net southeast of Greenland (Key in Chart 192).

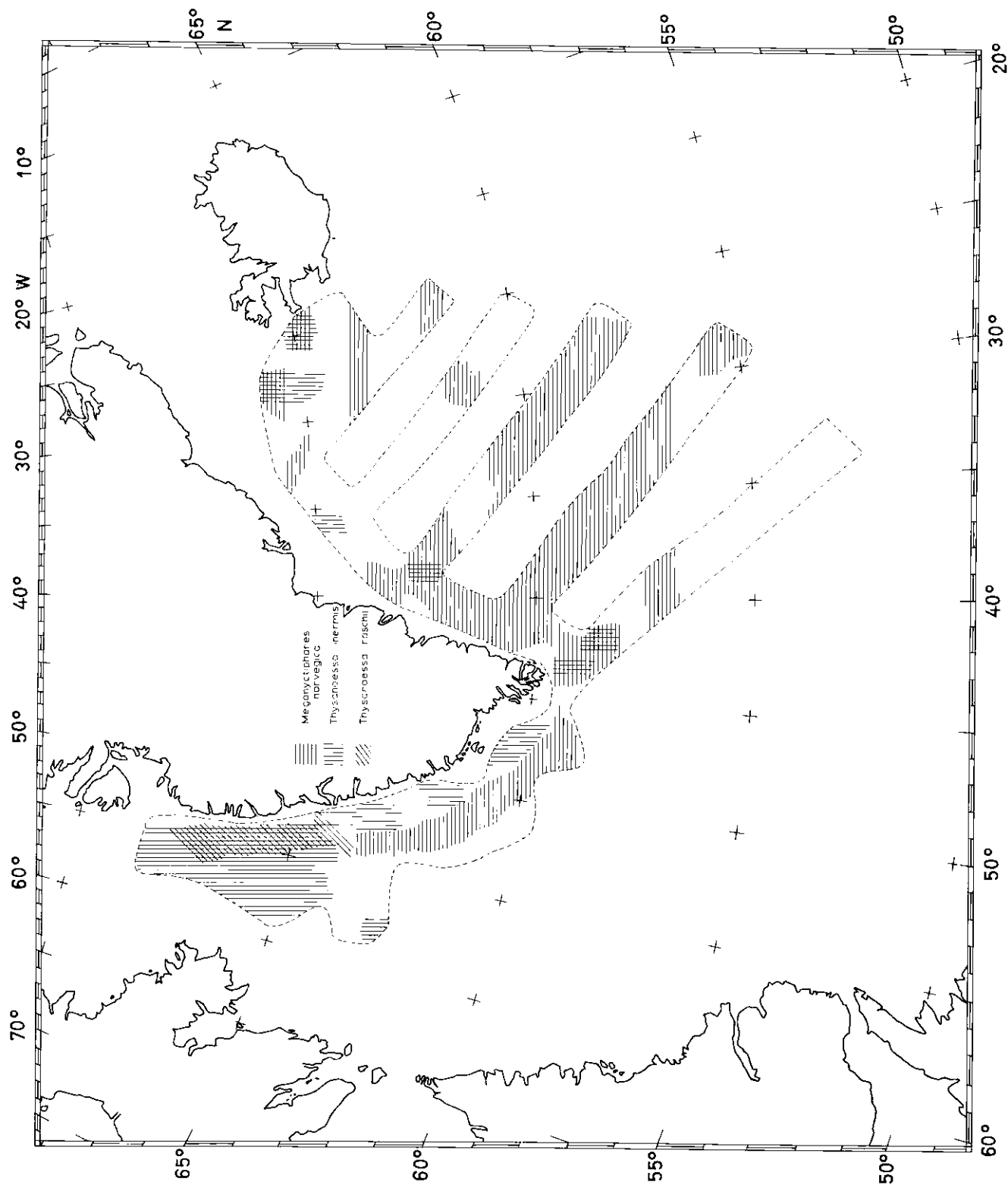


Chart 227. NORTH ATLANTIC 3: 30 June-4 August — Distribution of euphausiid species from all nets (*Meganyctiphanes norvegica*, *Thysanoessa inermis*, and *T. raschii*).

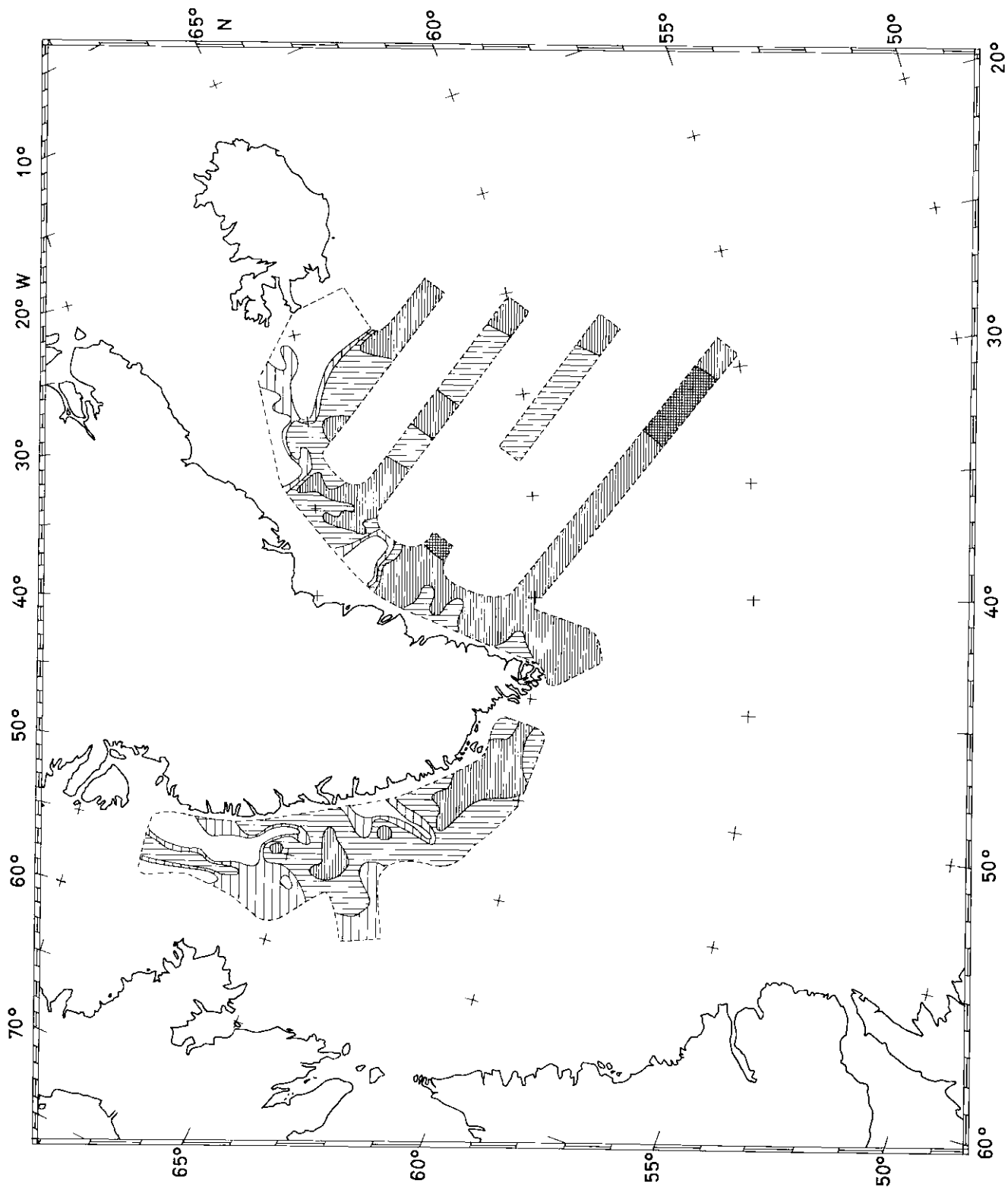


Chart 228. NORWESTLANT 3: 30 June-19 July — *Spiratella retroversa* from Hensen net (Key in Chart 197).



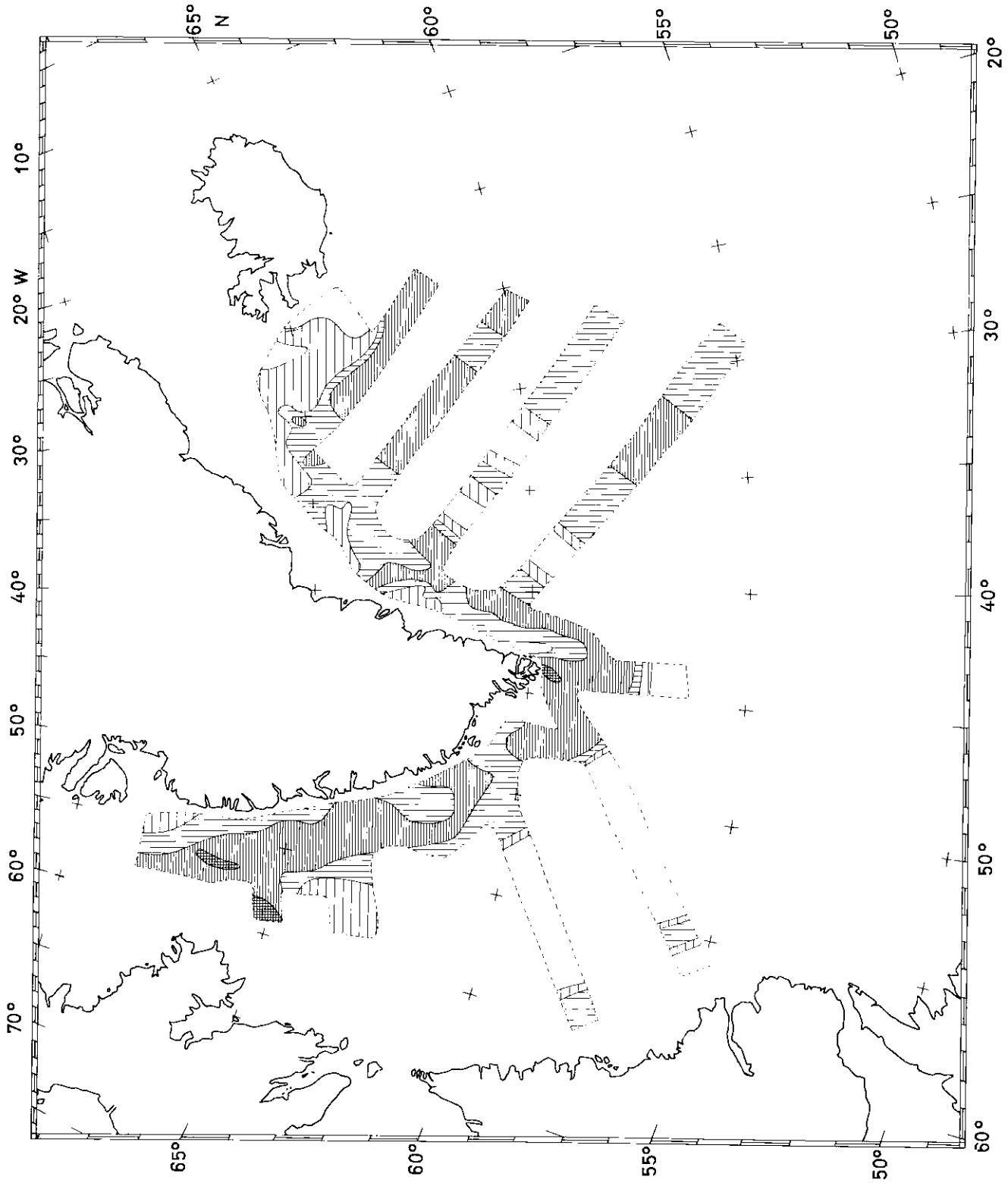


Chart 229. NORWESTLANT 3: 30 June-19 July — *Aglantha digitale* from towed nets; mostly 2-m stramin net with some 1-m silk net southeast of Greenland (Key in Chart 192).

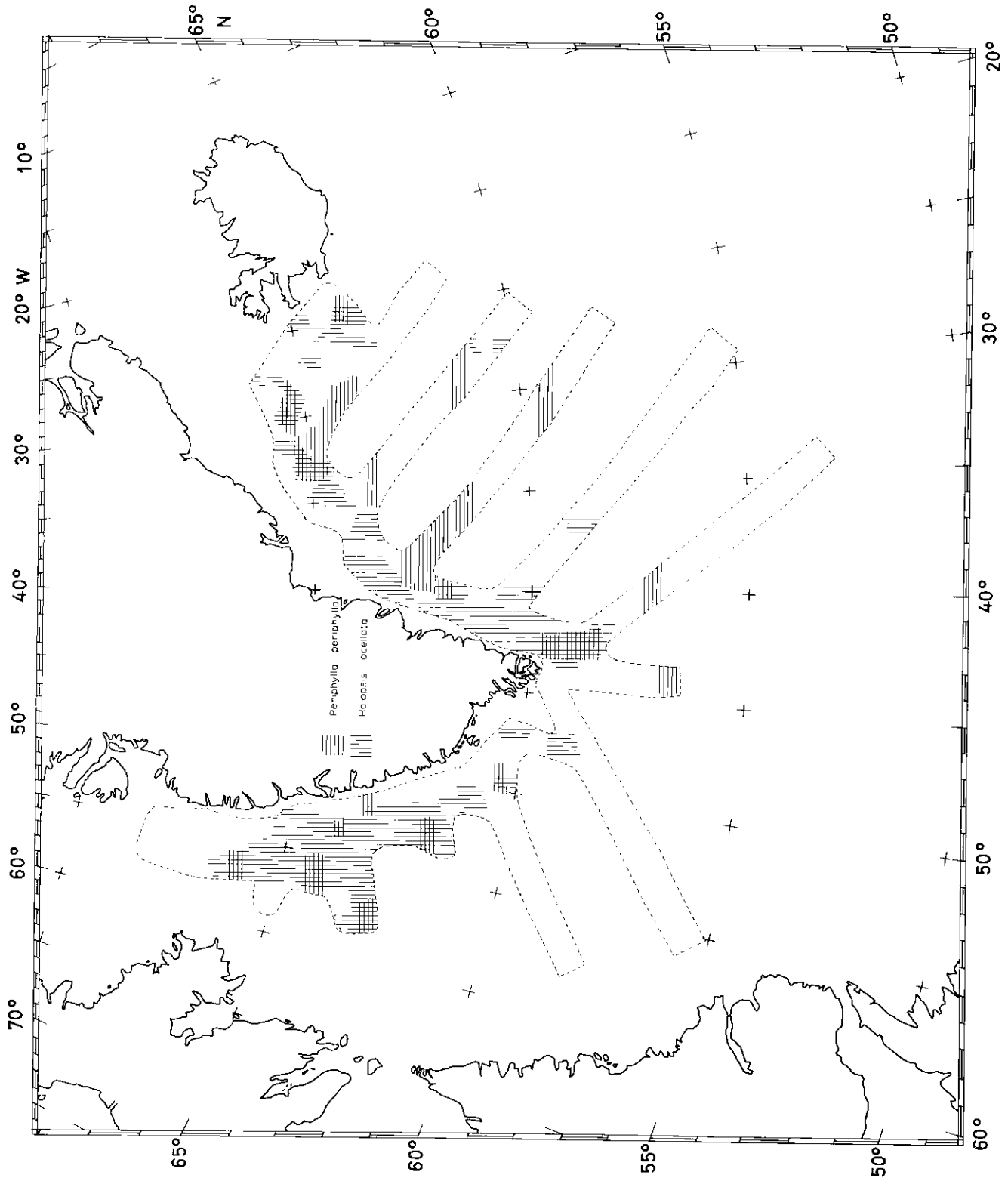


Chart 230. NORTH ATLANTIC 3: 30 June-4 August — Distribution of medusae in towed nets (*Periphylla periphylla* and *Halopsis ocellata*).

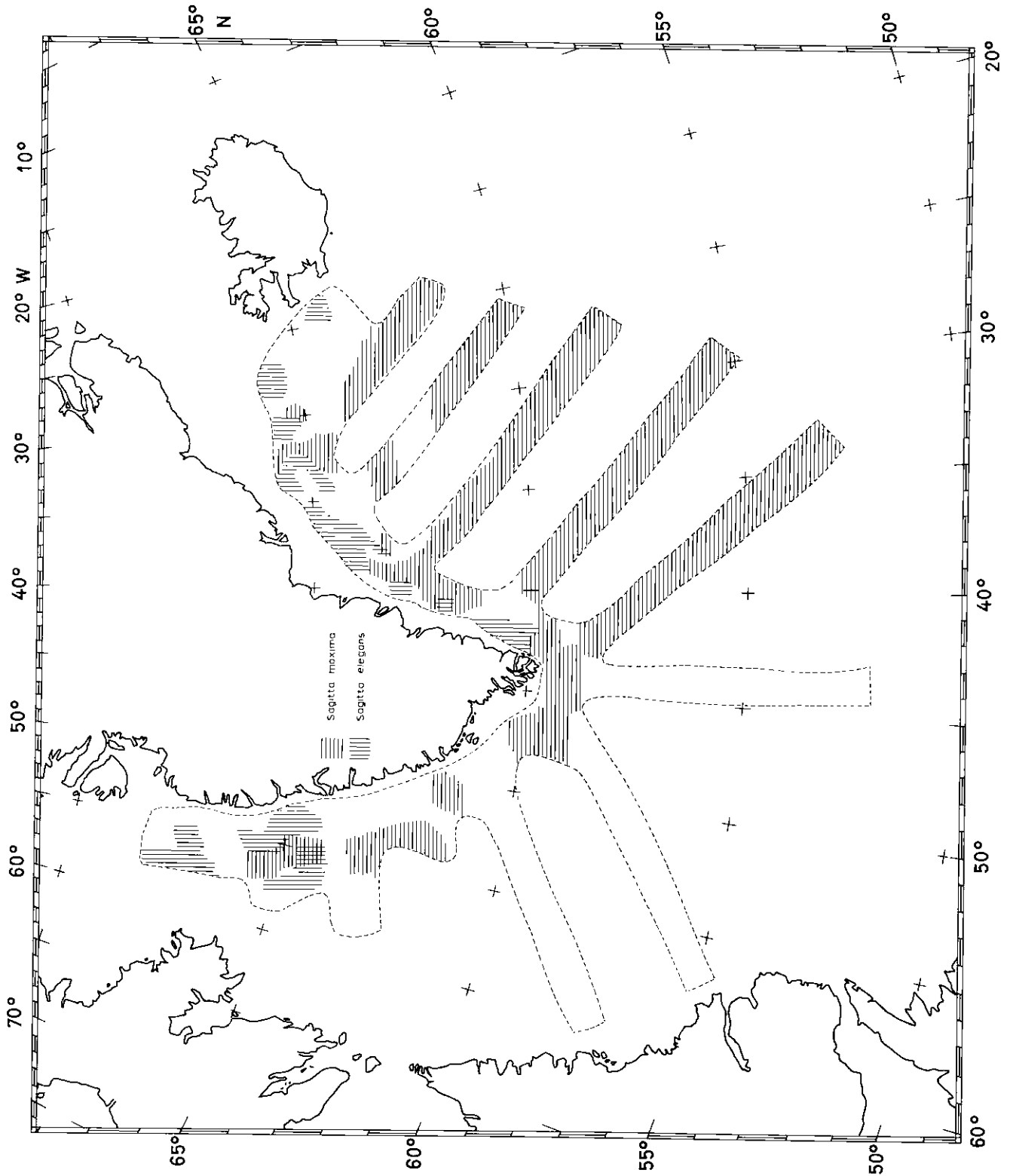


Chart 231. NORWESTLANT 3: 30 June-4 August — Distribution of chaetognath species from all nets (*Sagitta elegans* and *S. maxima*).

## SOB EGGS AND LARVAE

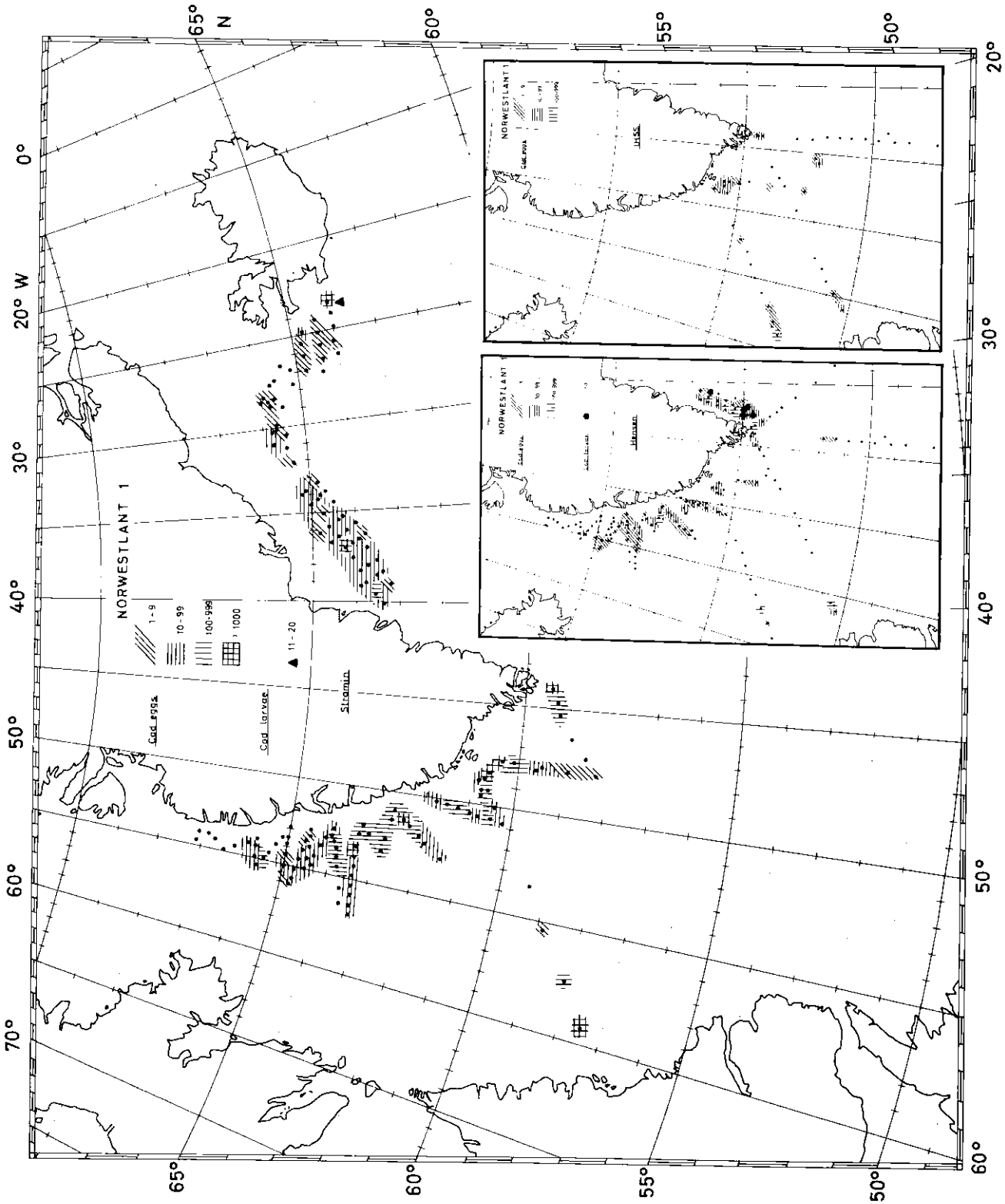


Chart 232. NORWESTLANT 1. Distribution of cod eggs and larvae: 2-m stramin net — numbers per 30-min haul; Hensen net — numbers per m<sup>2</sup>; IHSS — numbers per m<sup>3</sup>.

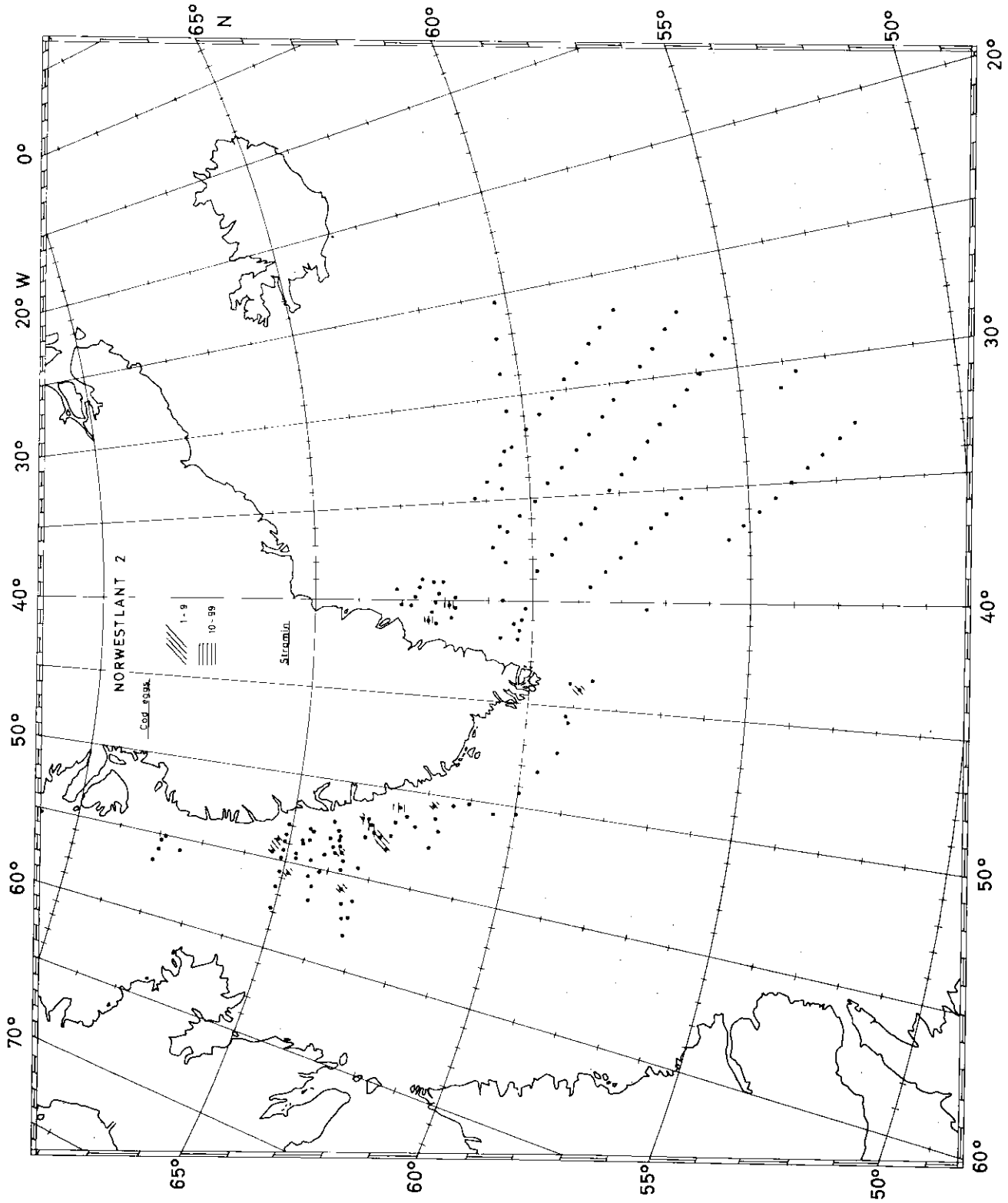


Chart 233. NORWESTLANT 2. Distribution of cod eggs as given by 2-m stramin net (numbers as for Chart 232).

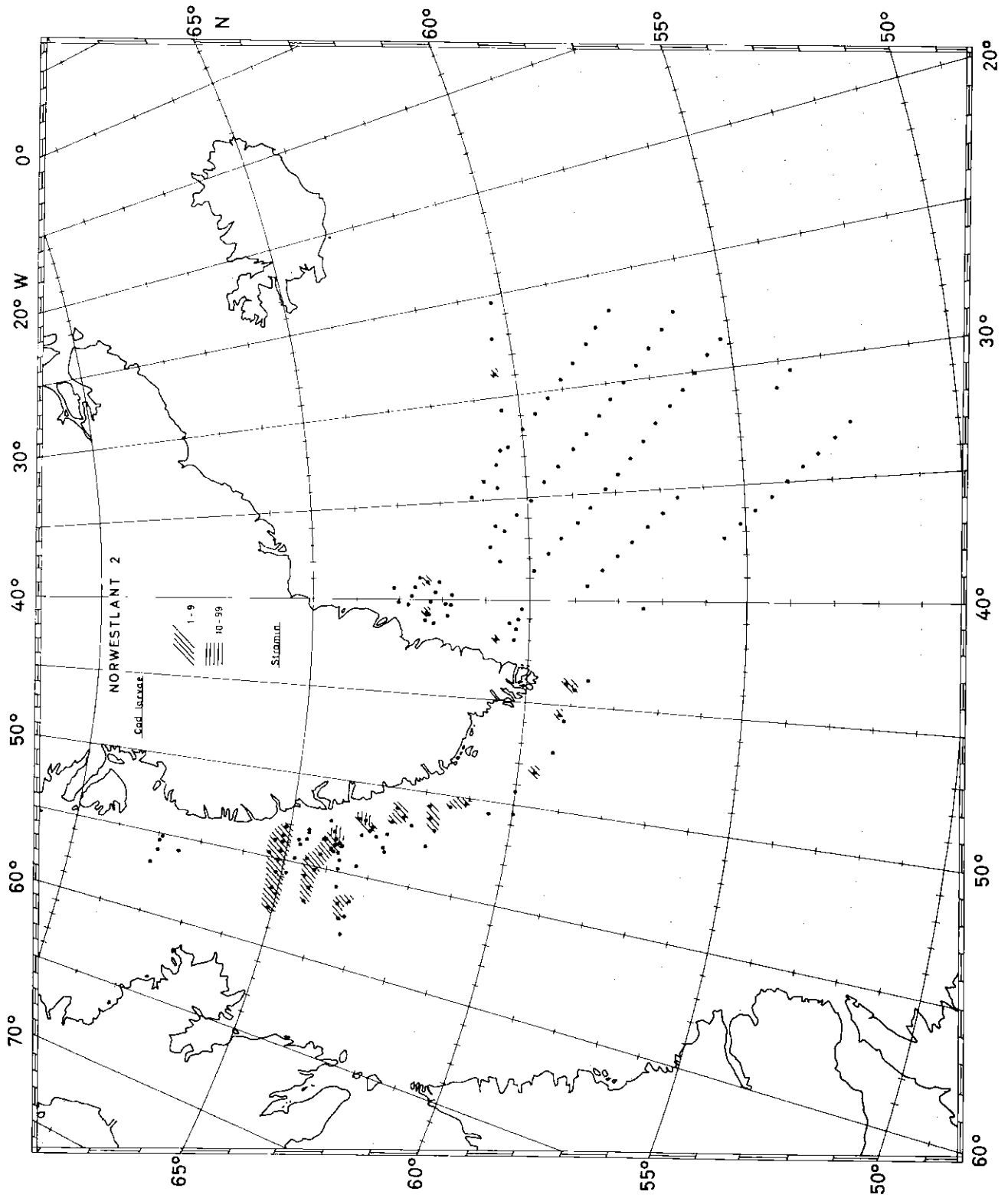


Chart 232. NORWESTLANT 2. Distribution of cod larvae as given by 2-m stramin net (numbers as for Chart 232).

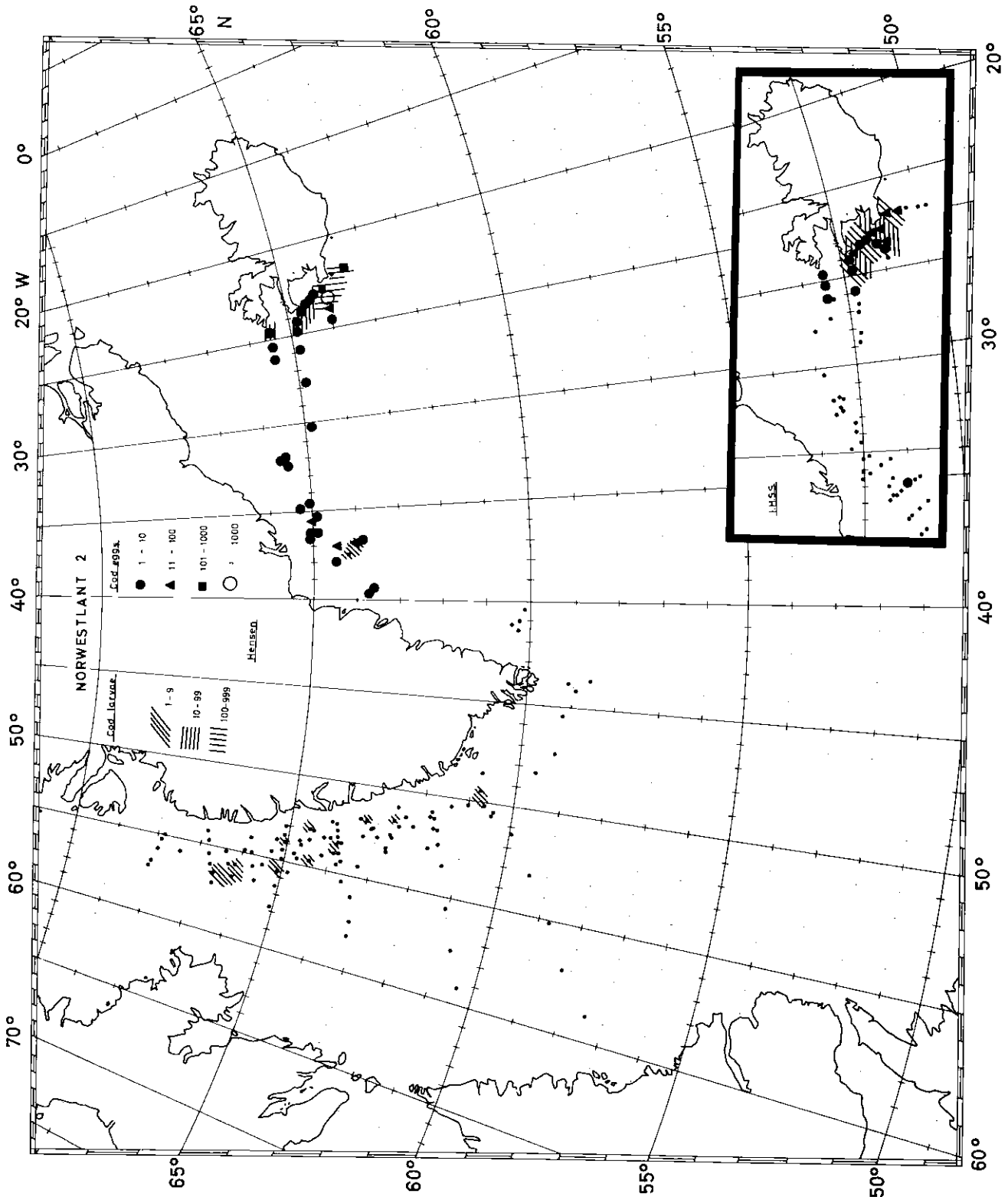


Chart 255. NORWESTLANT 2. Distribution of cod eggs and larvae as given by Hensen net and IJSS (numbers as for Chart 237).



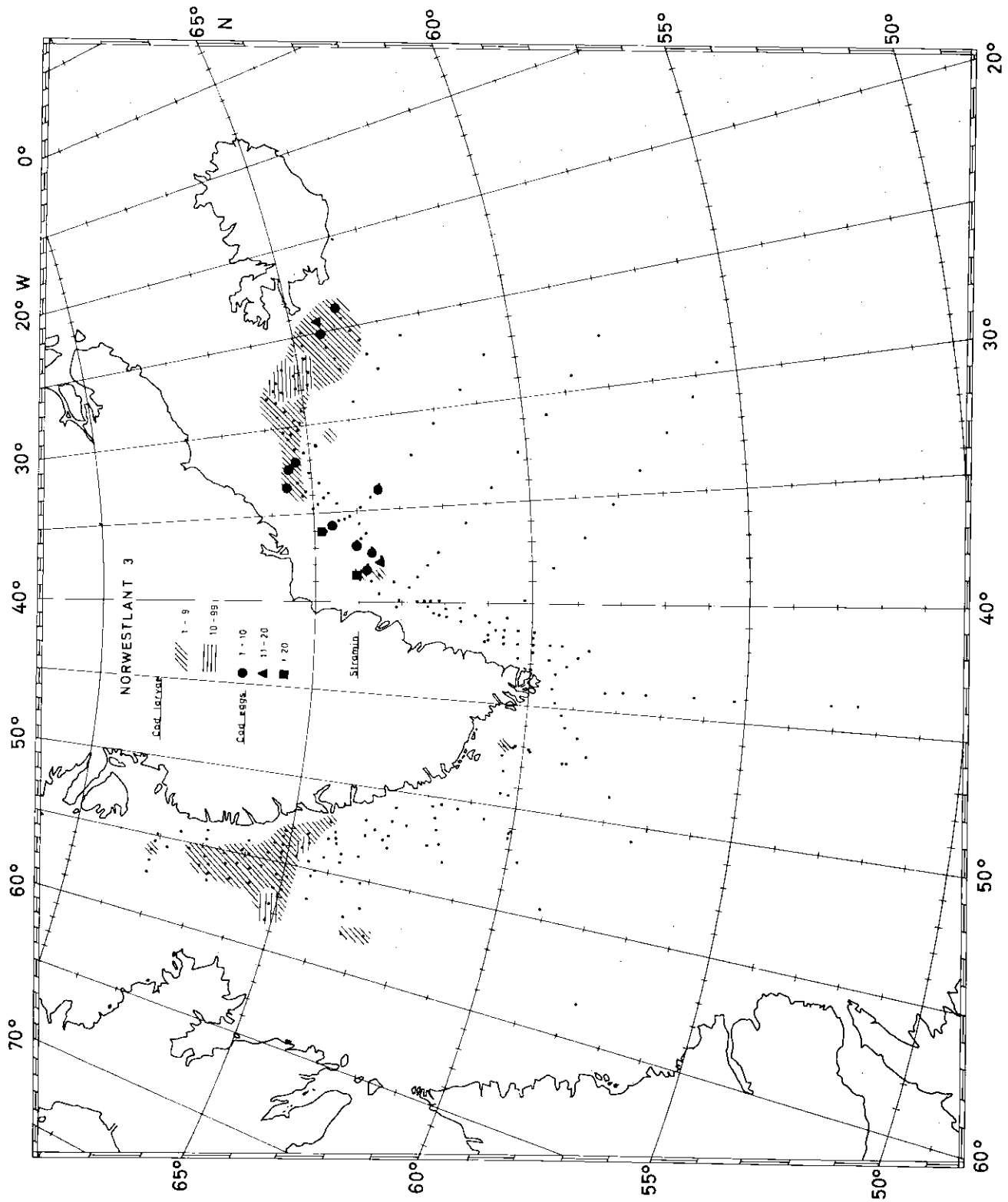


Chart 236. NORWESTLANT 3. Distribution of cod eggs and larvae (numbers as for Chart 232).

RESTRICTION

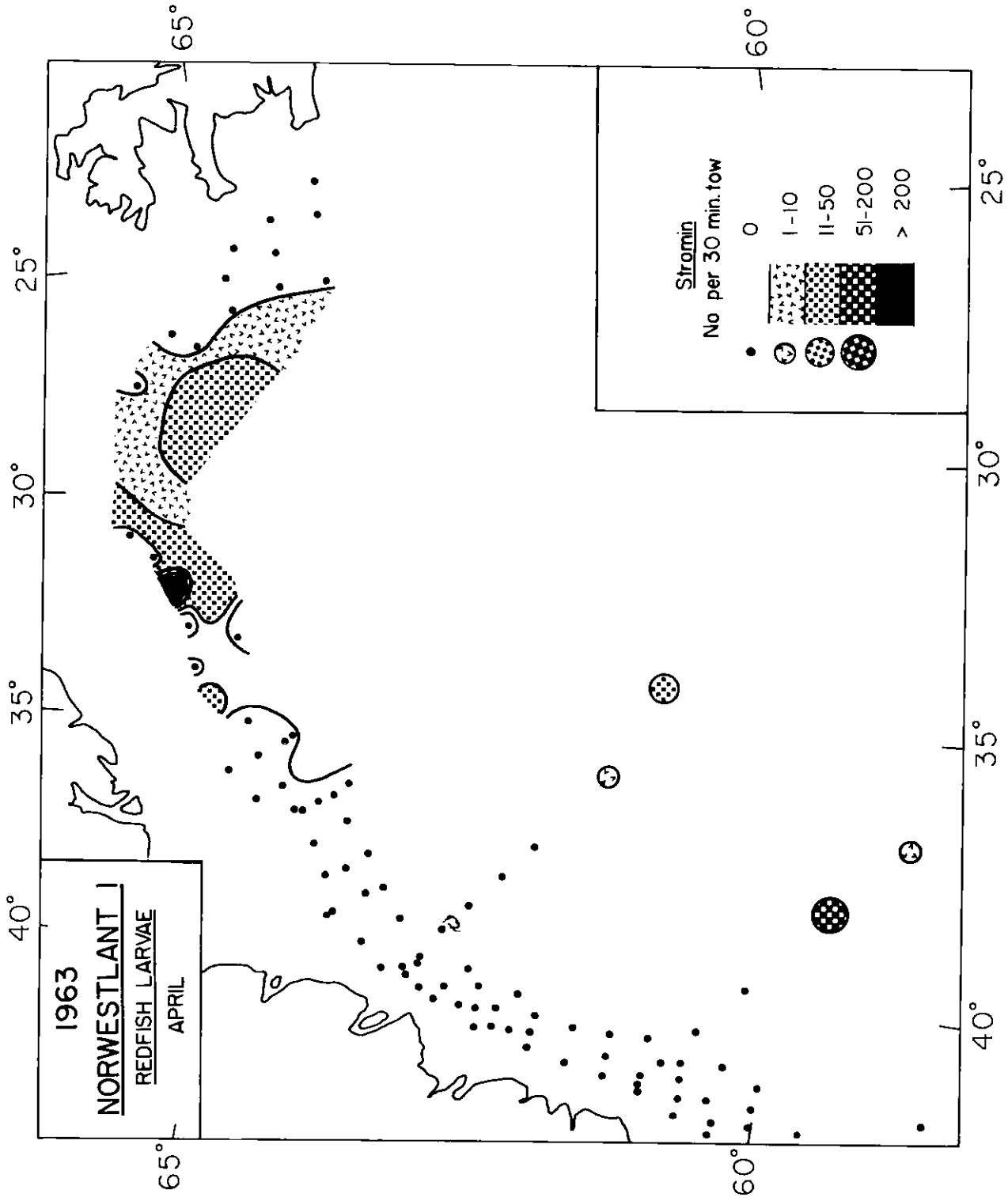


Chart 237. Distribution and abundance of redfish larvae during NORWESTLANT I in April 1963.

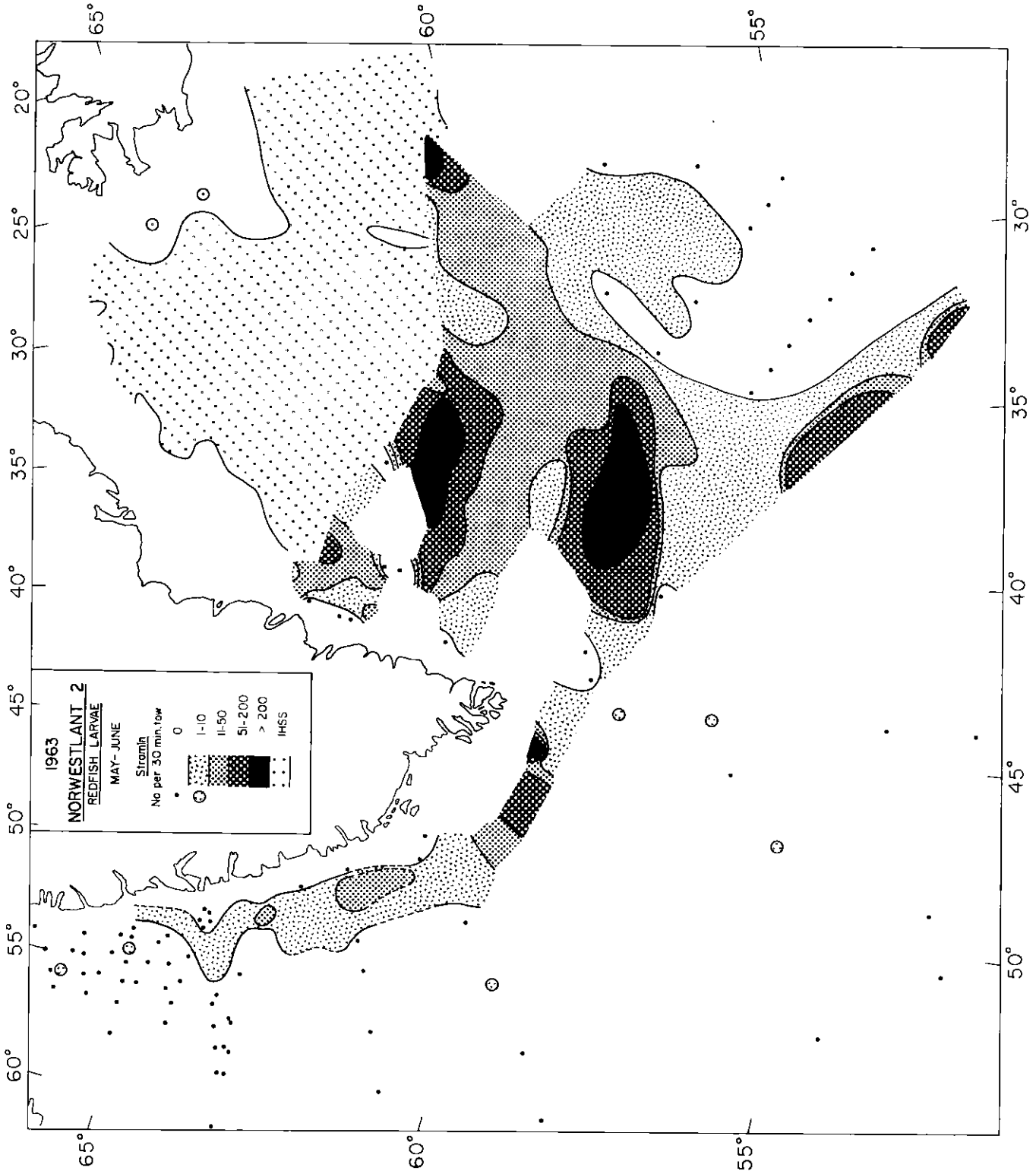


Chart 238. Distribution and abundance of redfish larvae during NORWESTLANT 2 in May and June 1963 based on the stramin-net catches. This figure demonstrates also the area of distribution of redfish larvae caught with the IHSS.

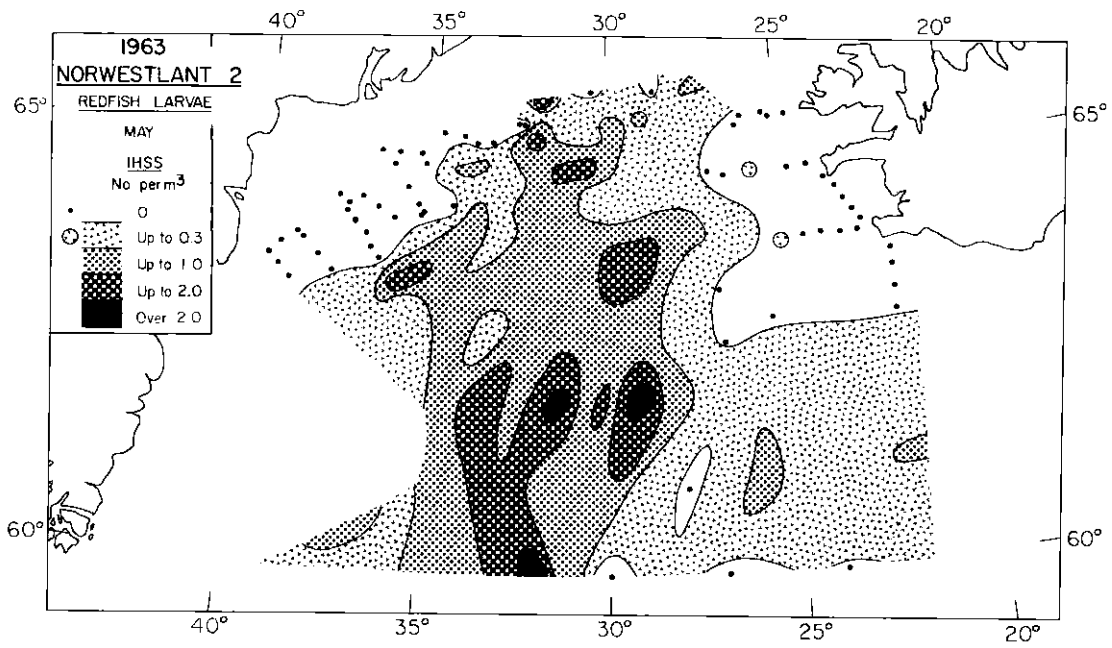


Chart 239. Distribution and abundance of redfish larvae during NORWESTLANT 2 in May 1963 based on the IHSS catches.

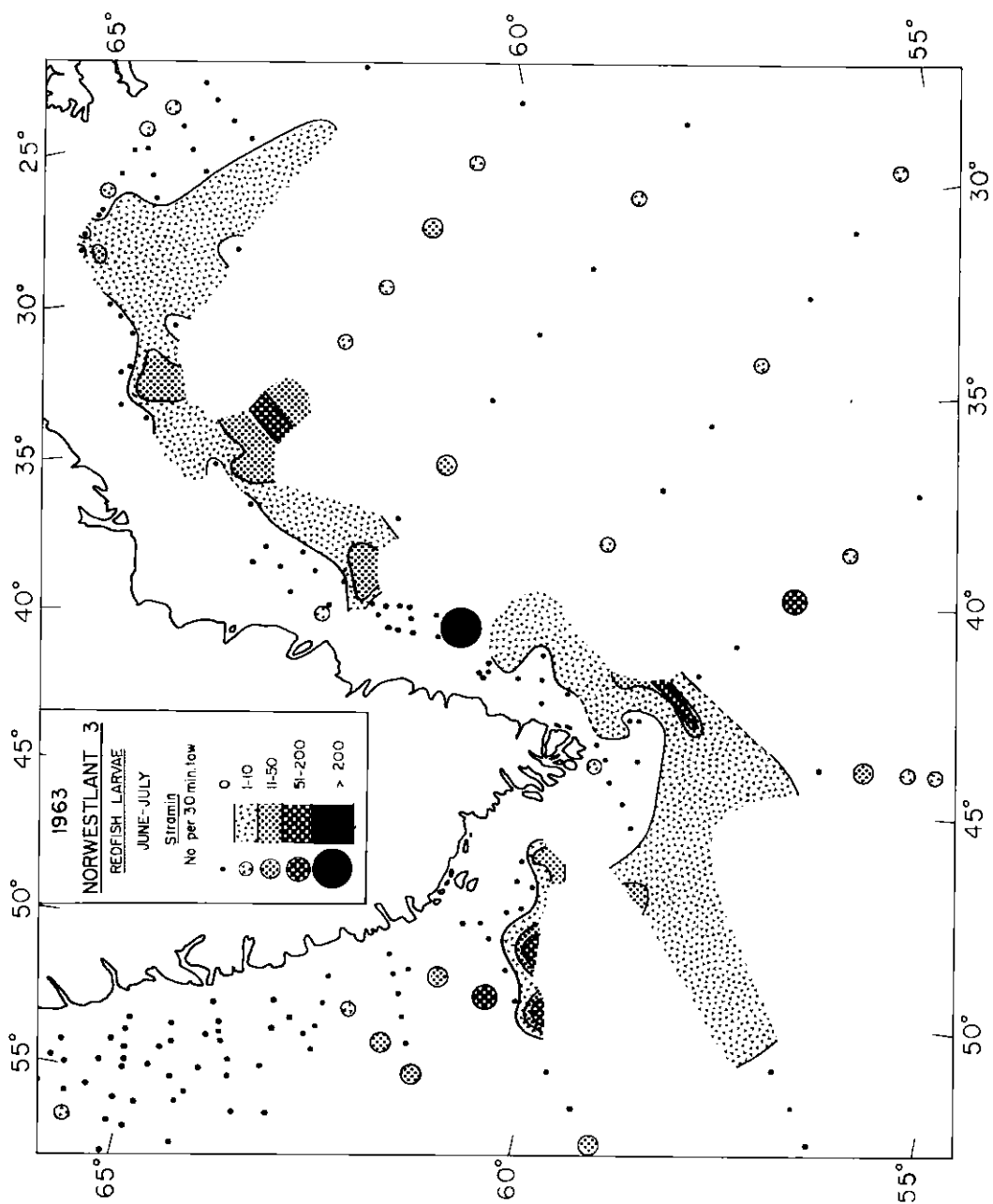


Chart 240. Distribution and abundance of redfish larvae during NORWESTLANT 3 in June and July 1963. Some observations in August are included.

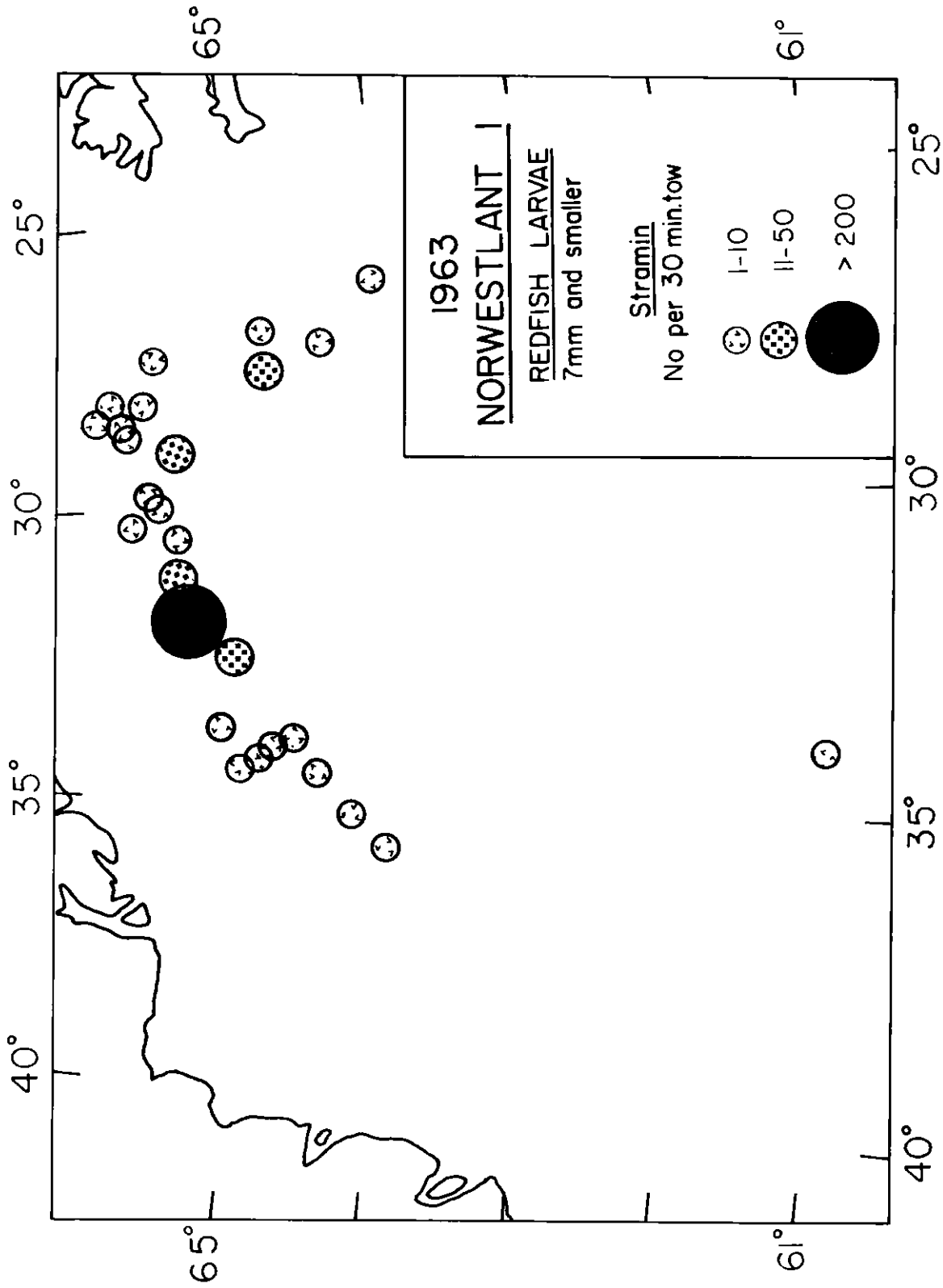


Chart 241. Distribution and abundance of redfish larvae, 7 mm and smaller, during NORWESTLANT 1.

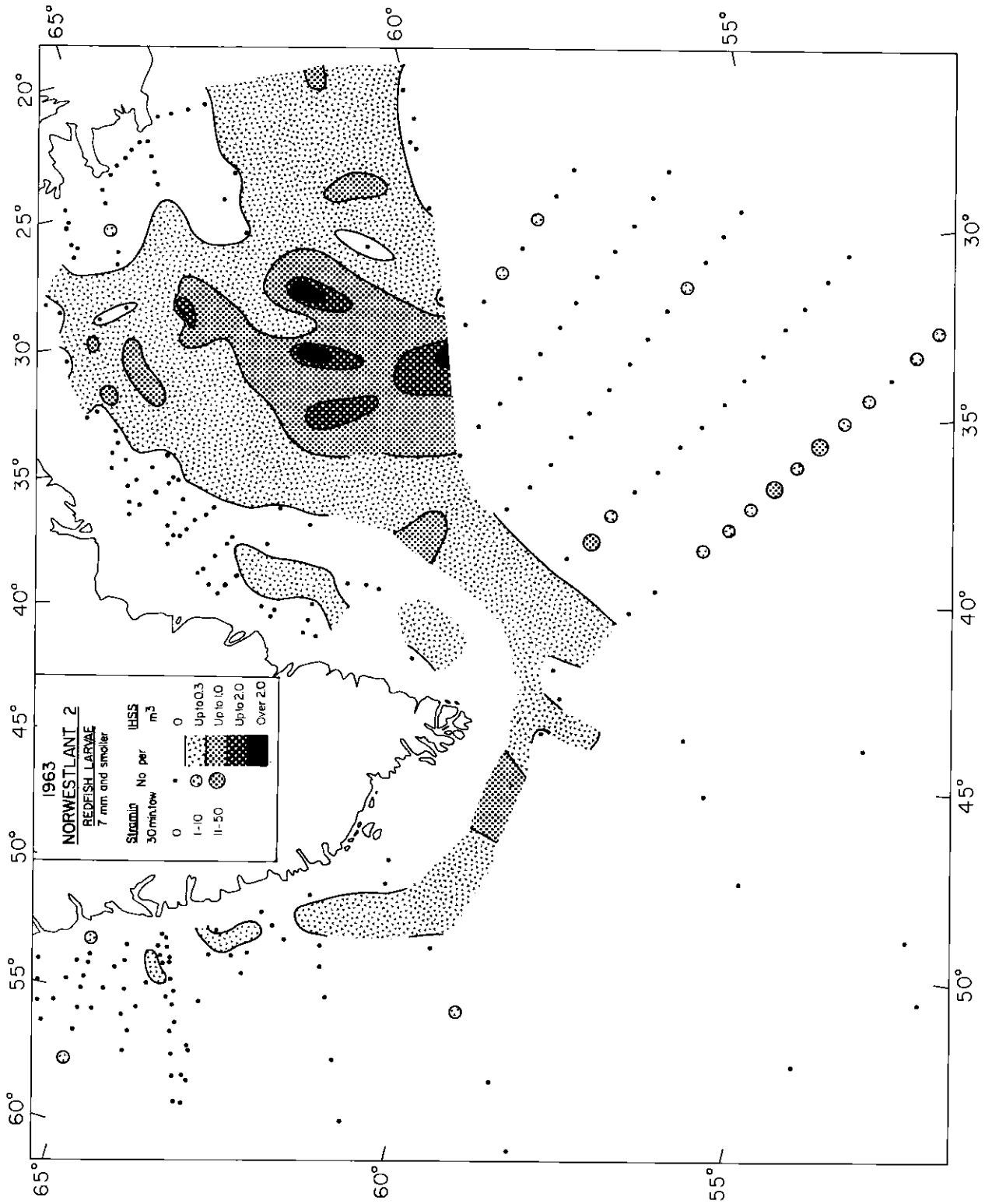


Chart 242. Distribution and abundance of redfish larvae, 7 mm and smaller, during NORWESTLANT 2.



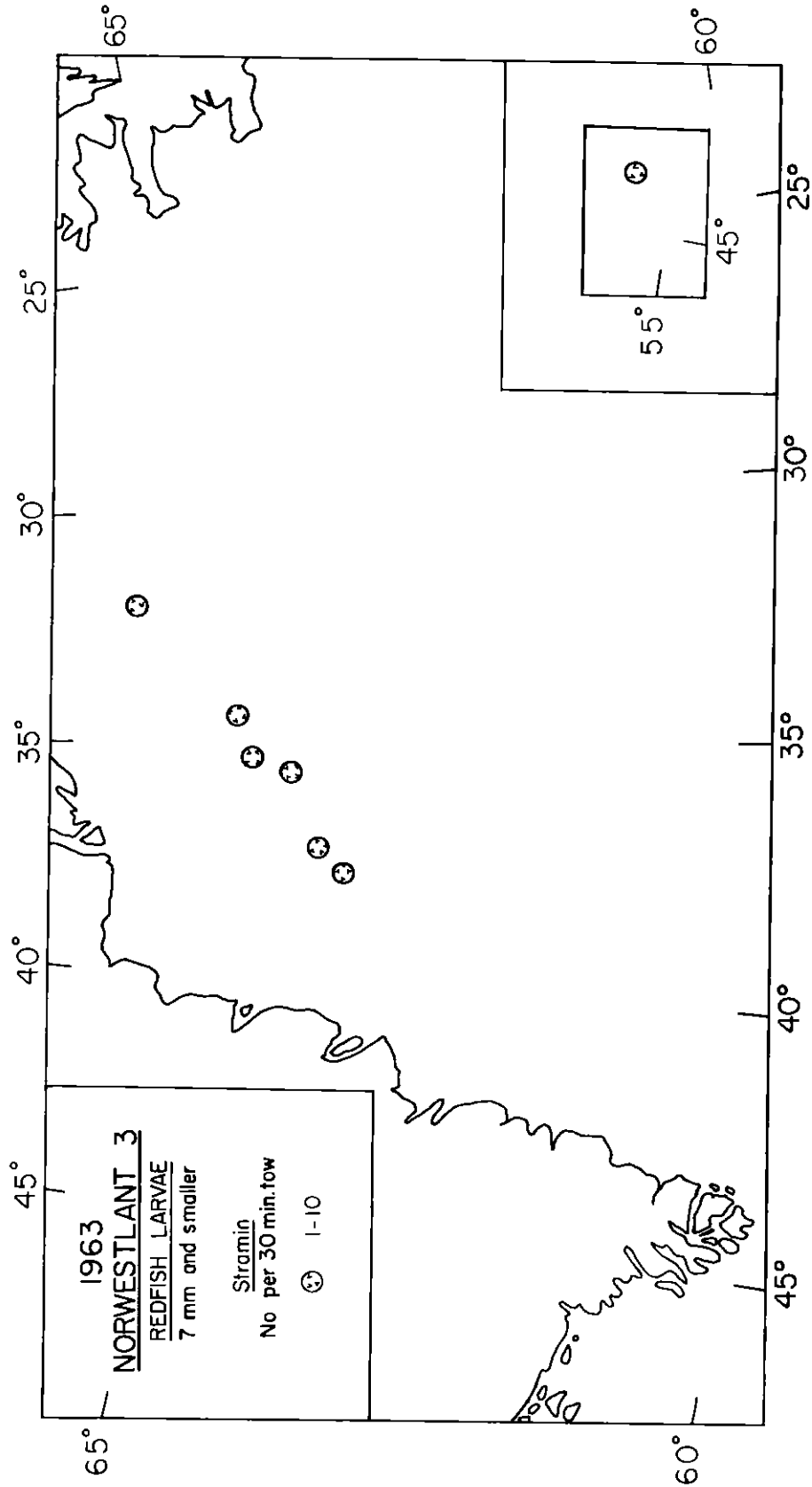


Chart 243. Distribution and abundance of redfish larvae, 7 mm and smaller, during NORWESTLANT 3.

DEED AND WARRANT OF CONVEYANCE

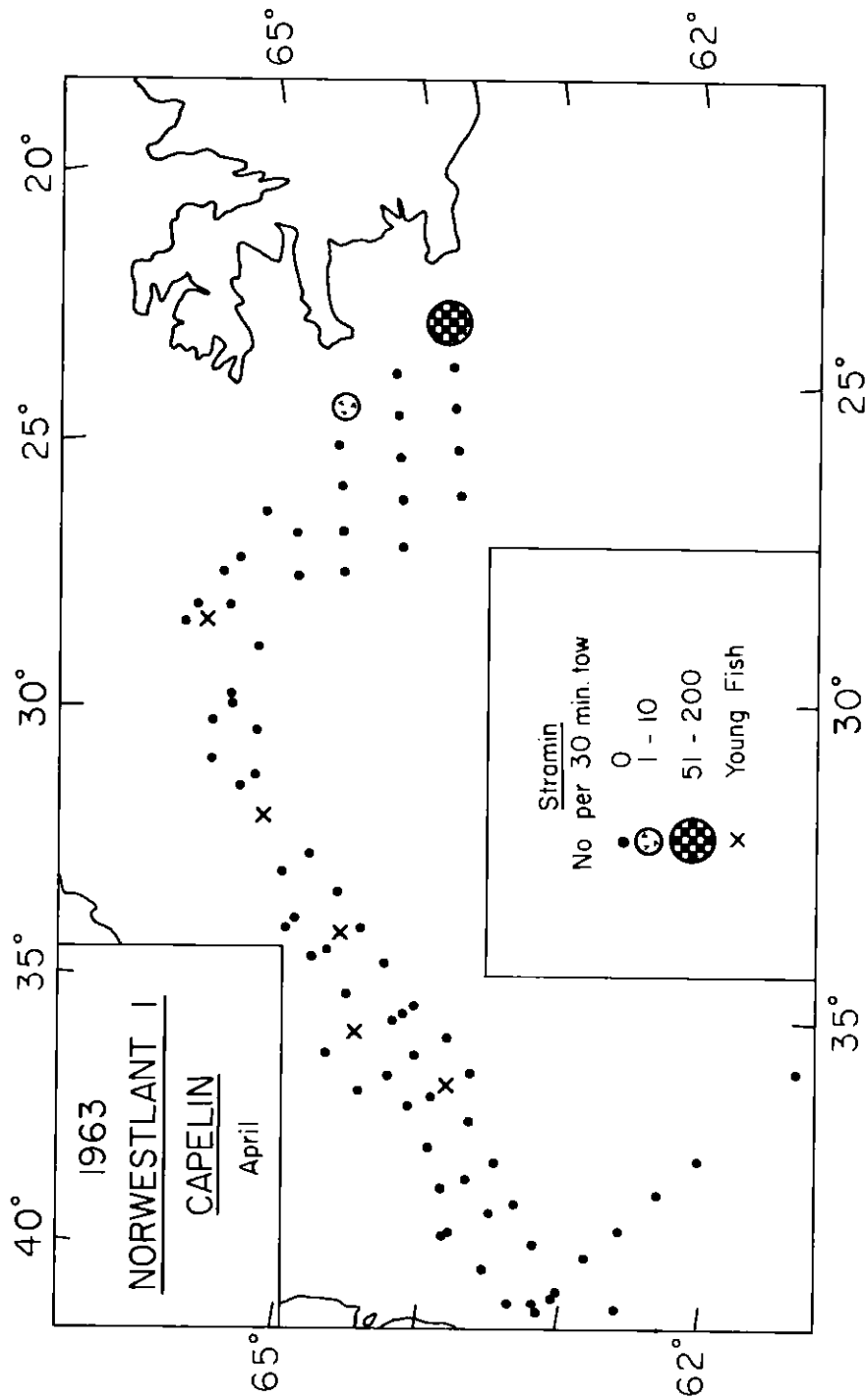


Chart 244. Distribution and abundance of capelin larvae during NORWESTLANT I in April 1963. The occurrence of young capelin is also indicated.

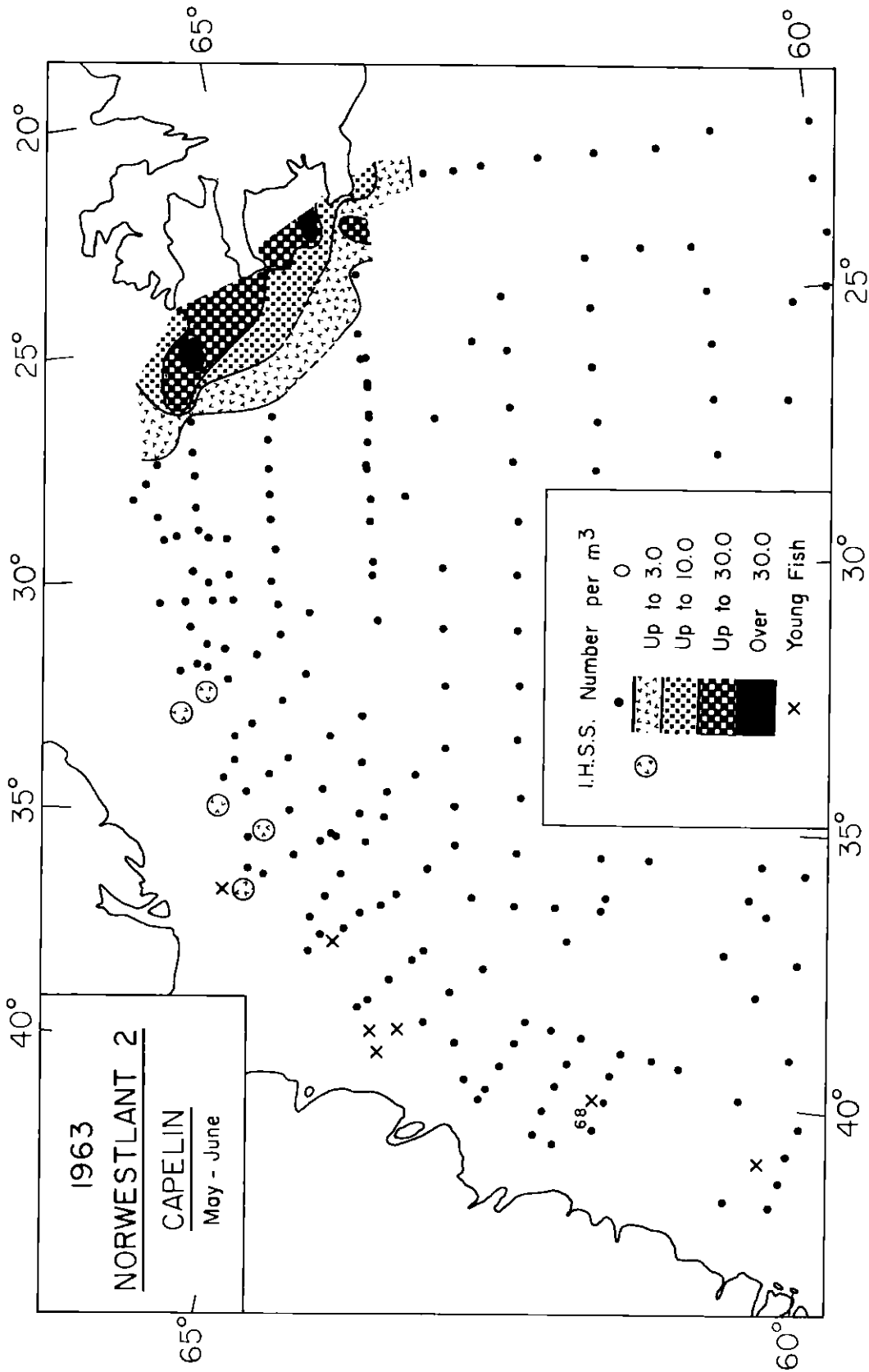


Chart 245. Distribution and abundance of capelin larvae during NORWESTLANT 2 in May and June 1963. The occurrence of young capelin is also indicated.

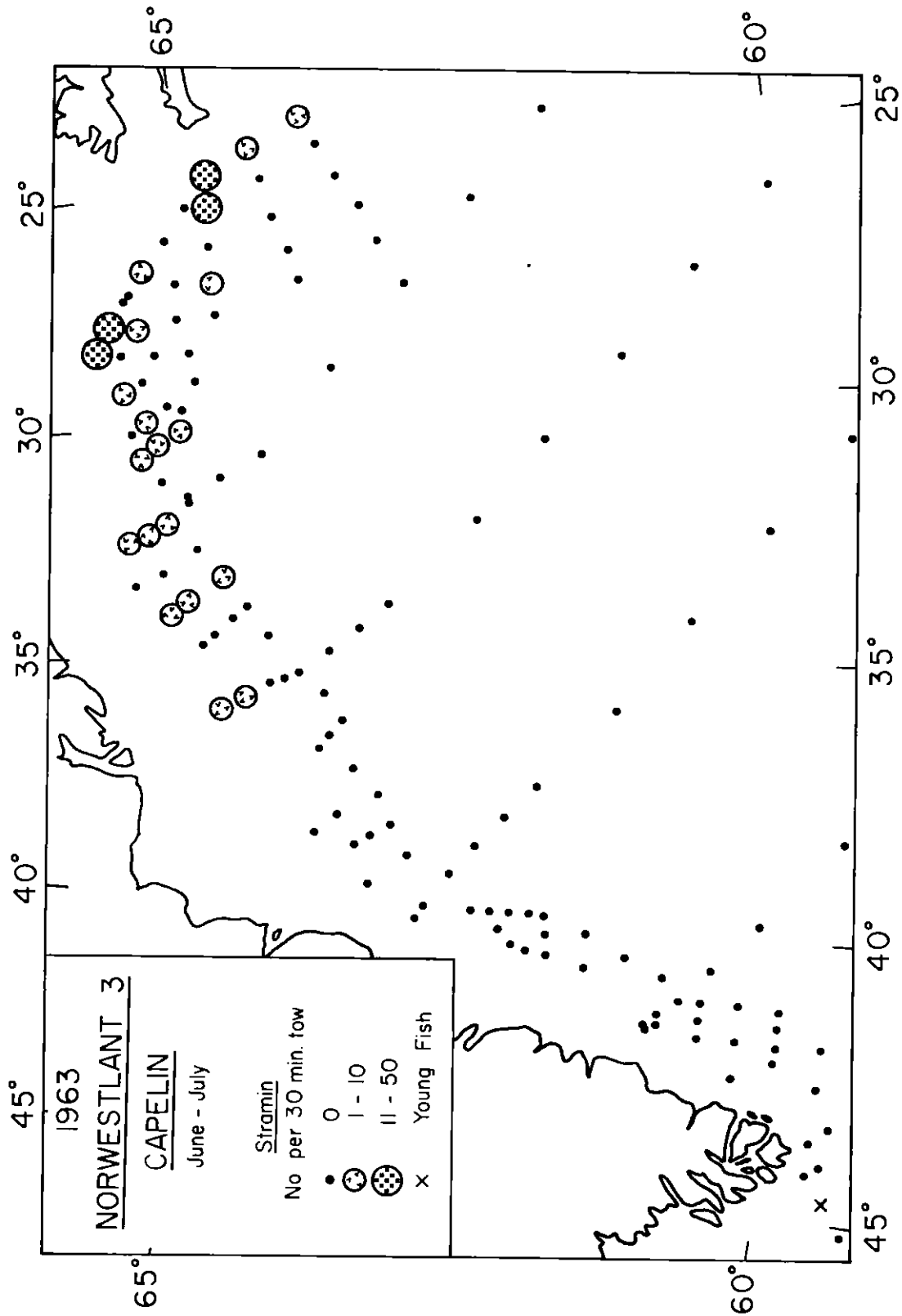


Chart 246. Distribution and abundance of capelin larvae during NORWESTLANT 3 in June and July 1963. One station (x) shows the occurrence of young capelin.

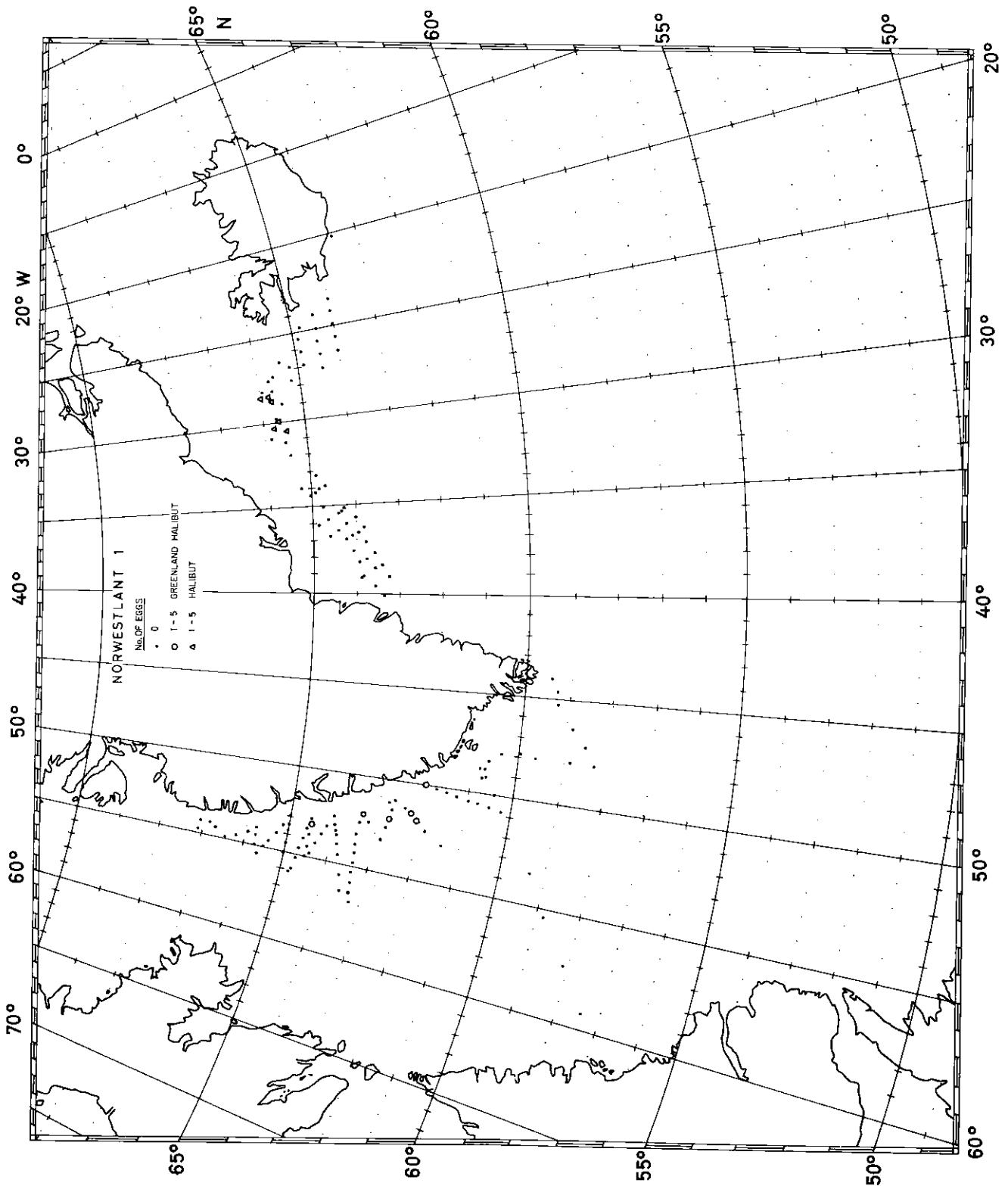


Chart 247. NORWESTLANT 1. Number of eggs of Greenland halibut and halibut per 30-min stramin-net haul.

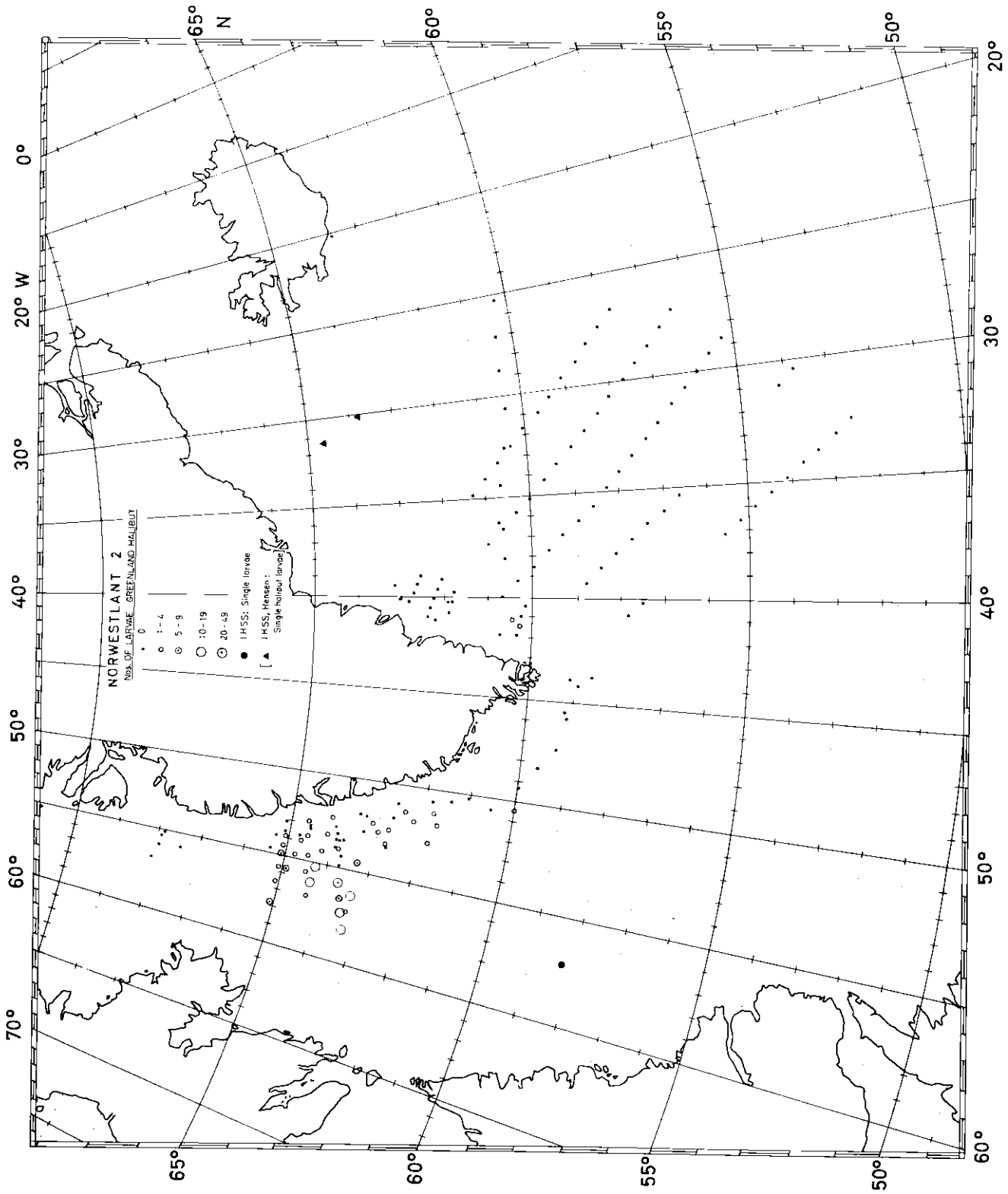


Chart 248, NORWESTLANT 2. Number of larvae of Greenland halibut and halibut per 30-min stramin-net haul.

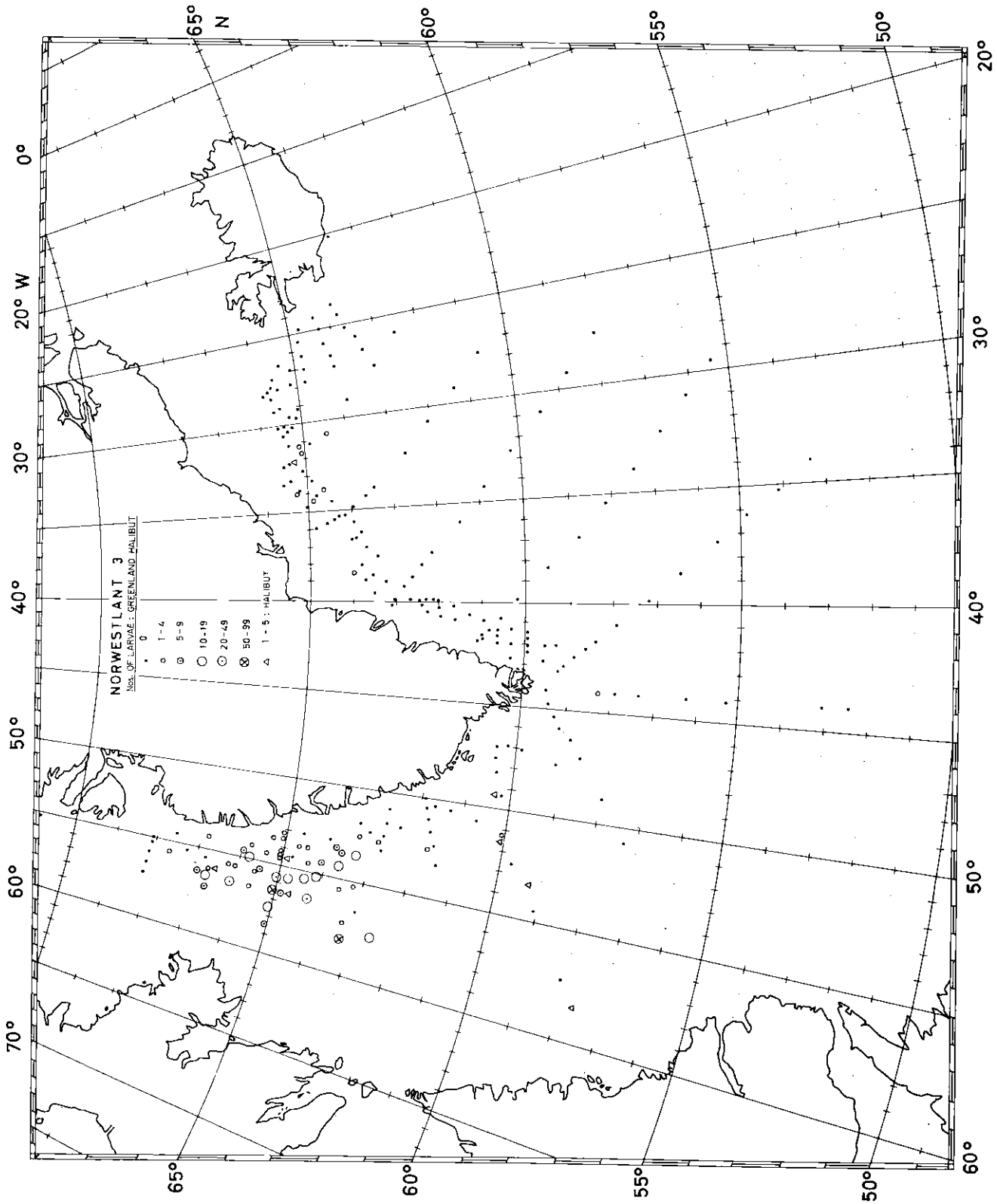


Chart 249. NORWESTLANT 3. Number of larvae of Greenland halibut and halibut per 30-min stramin-net haul.



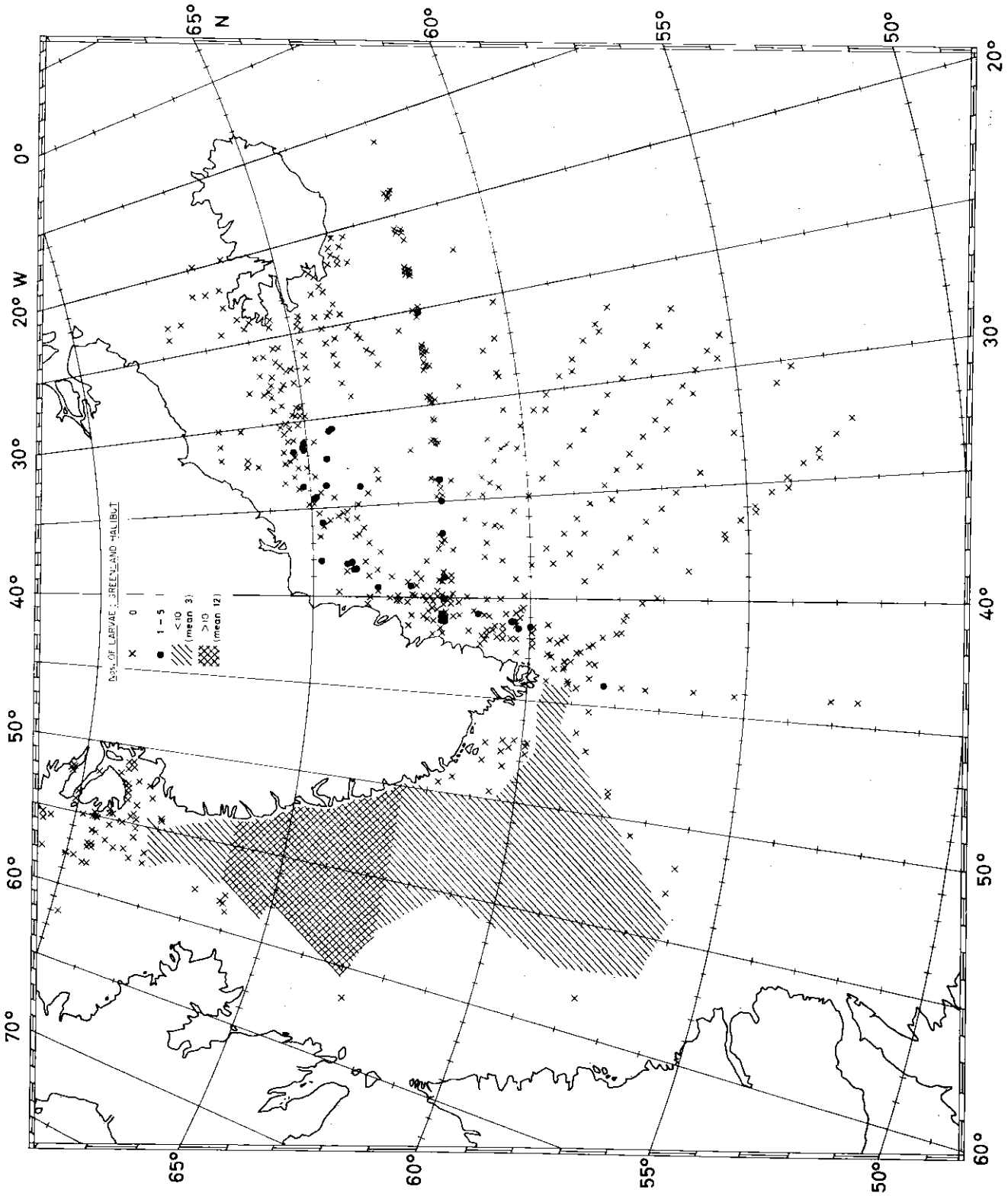


Chart 250. Distribution of Greenland halibut larvae based on data from the following expeditions — West Greenland: *Trafalge* (1908, 1909); *Dana* (1925, 1950, 1952-59, 1961, 1963-64); NORWESTLANT (1963). East Greenland-Iceland: *Dana* (1925, 1931, 1932, 1950, 1952-58, 1961, 1963-64); NORWESTLANT (1963).

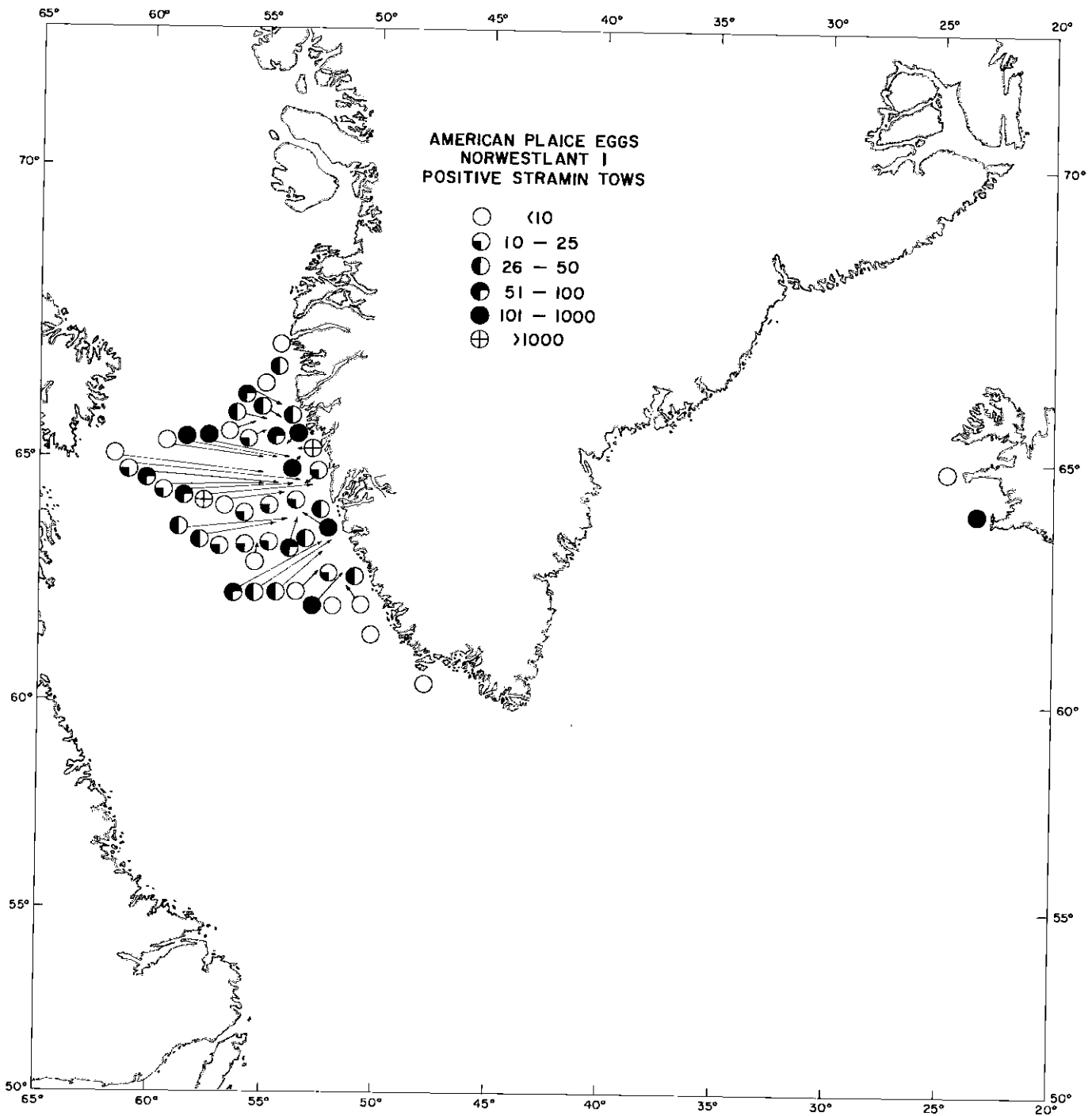


Chart 251. Catch per 30-min tow of American plaice eggs by stramin net in 1963 during NORWESTLANT I. Positive tows only are shown.

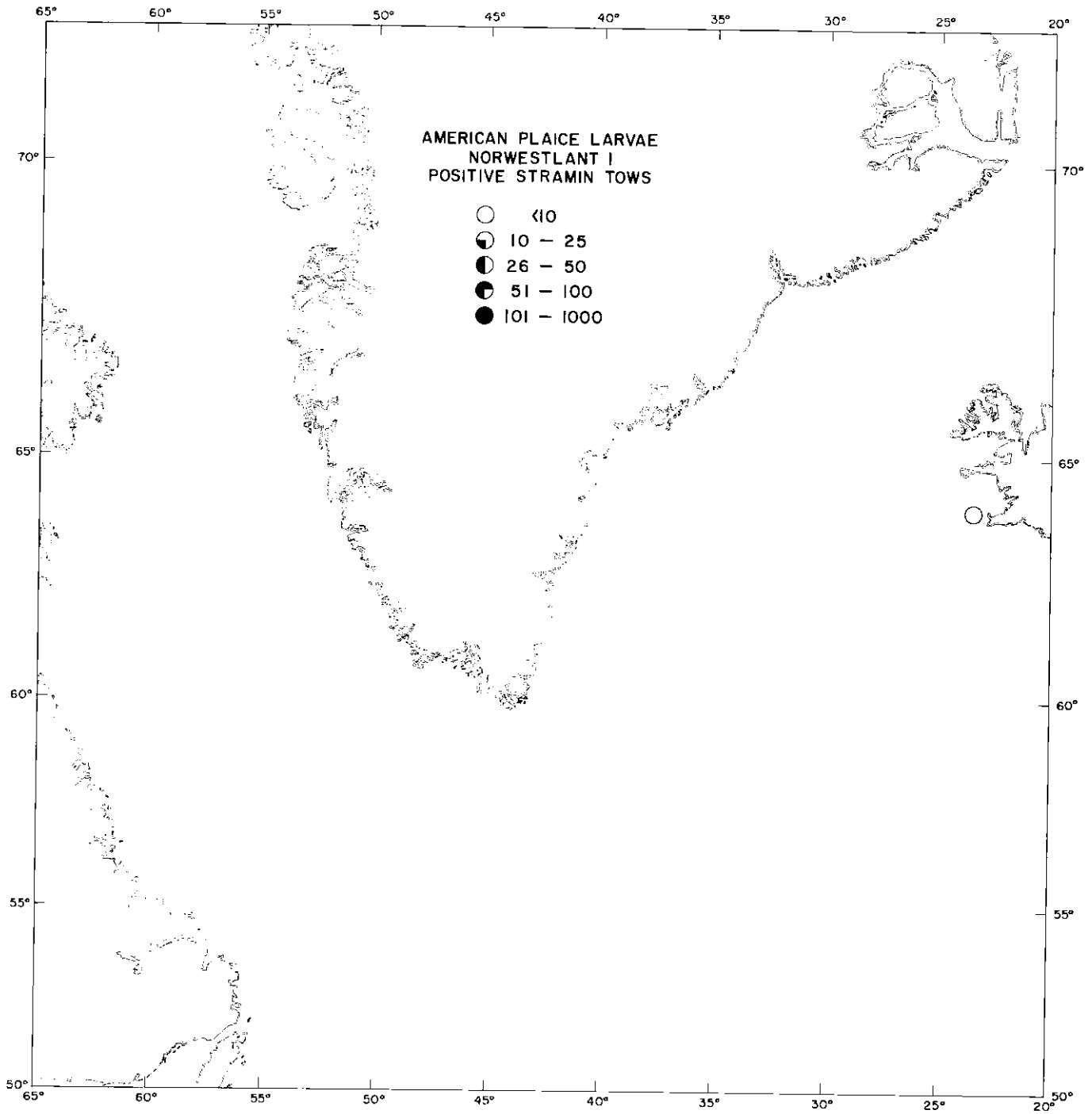


Chart 252. Catch per 30-min tow of American plaice larvae by stramin net in 1963 during NORWESTLANT 1. Positive tows only are shown.

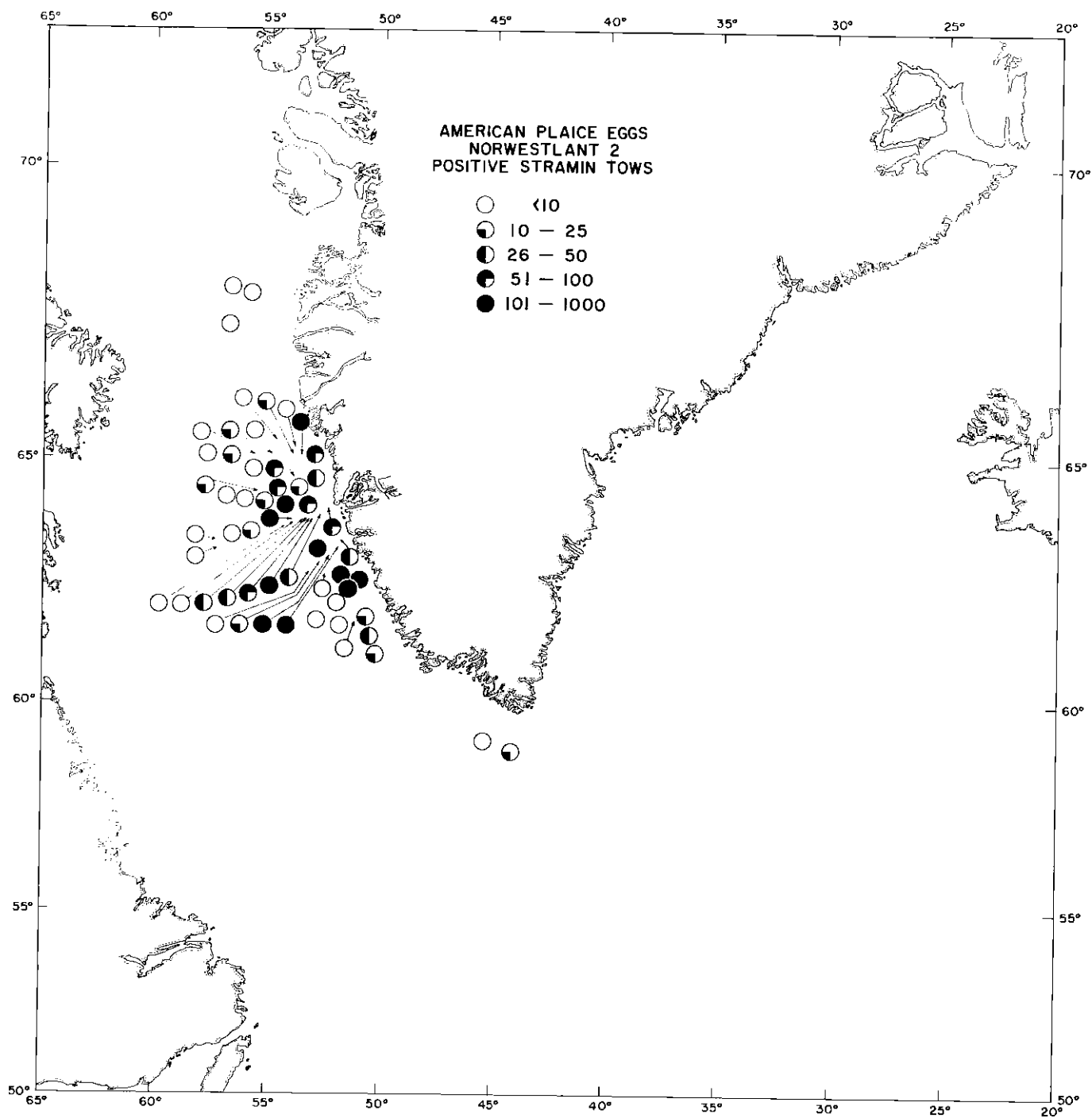


Chart 253. Catch per 30-min tow of American plaice eggs by stramin net in 1963 during NORWESTLANT 2. Positive tows only are shown.

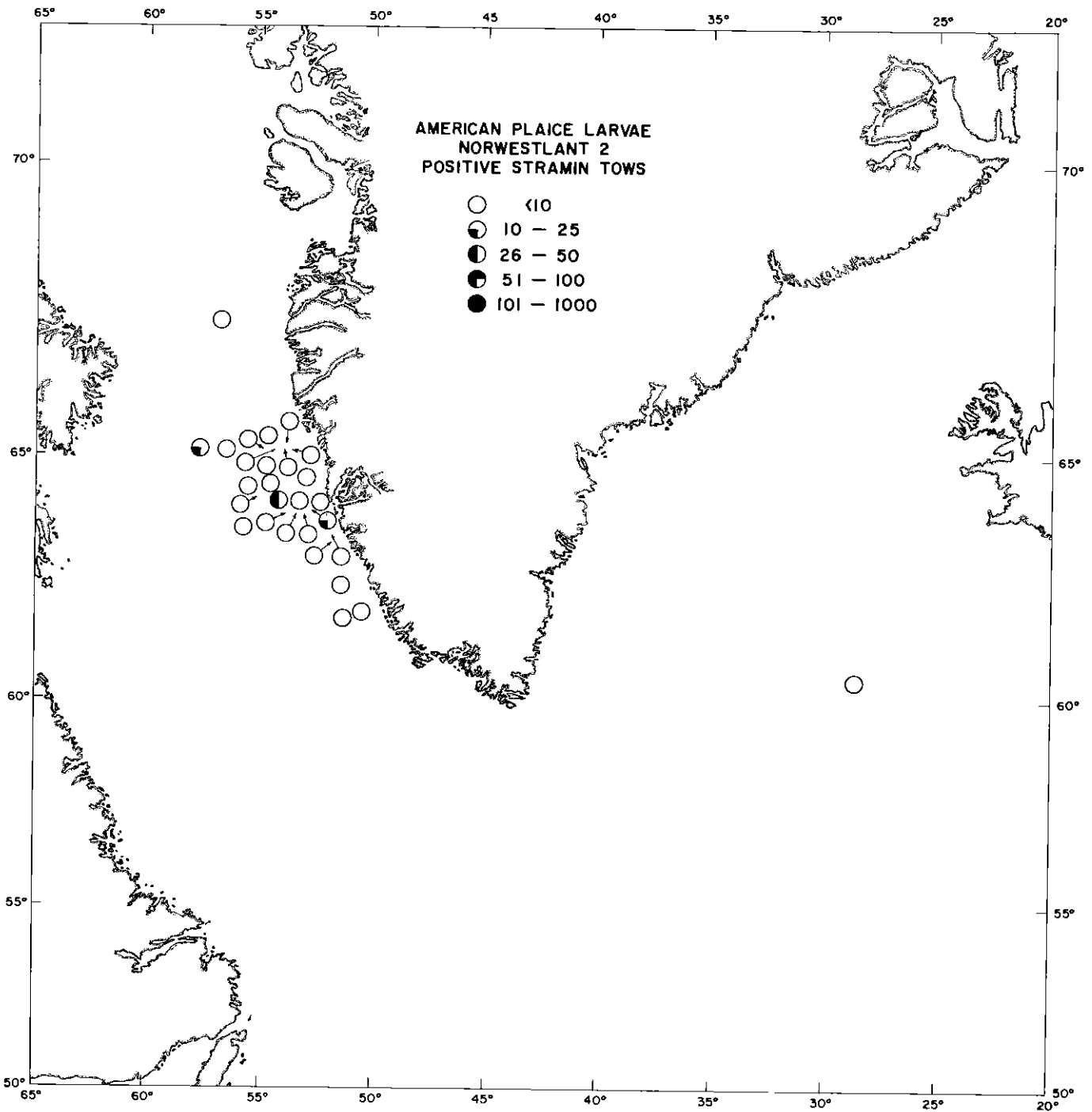


Chart 254. Catch per 30-min tow of American plaice larvae by stramin net in 1963 during NORWESTLANT 2. Positive tows only are shown.

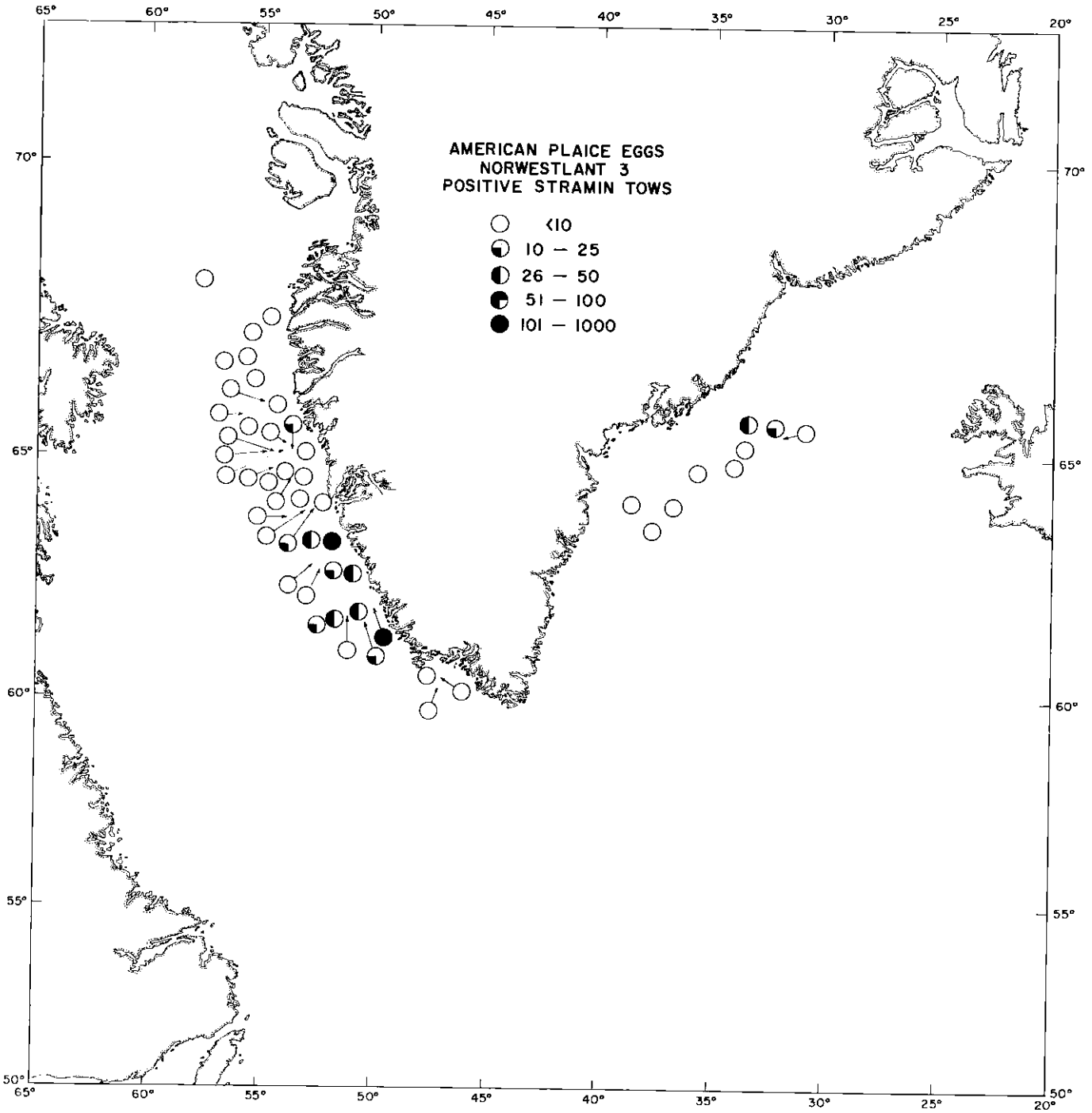


Chart 255. Catch per 30-min tow of American plaice eggs by stramin net in 1963 during NORWESTLANT 3. Positive tows only are shown.

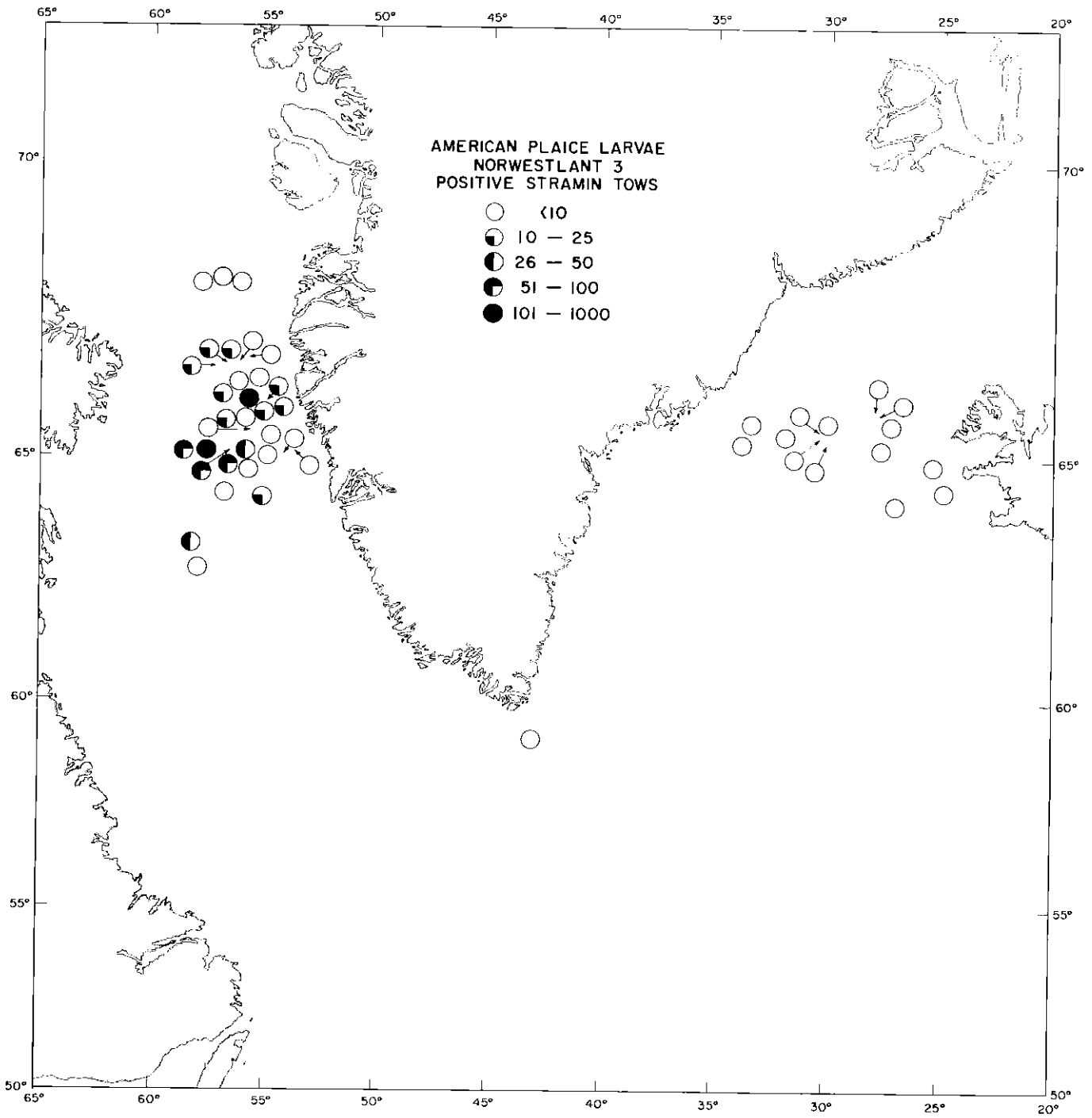


Chart 256. Catch per 30-min tow of American plaice larvae by stramin net in 1963 during NORWESTLANT 3. Positive tows only are shown.

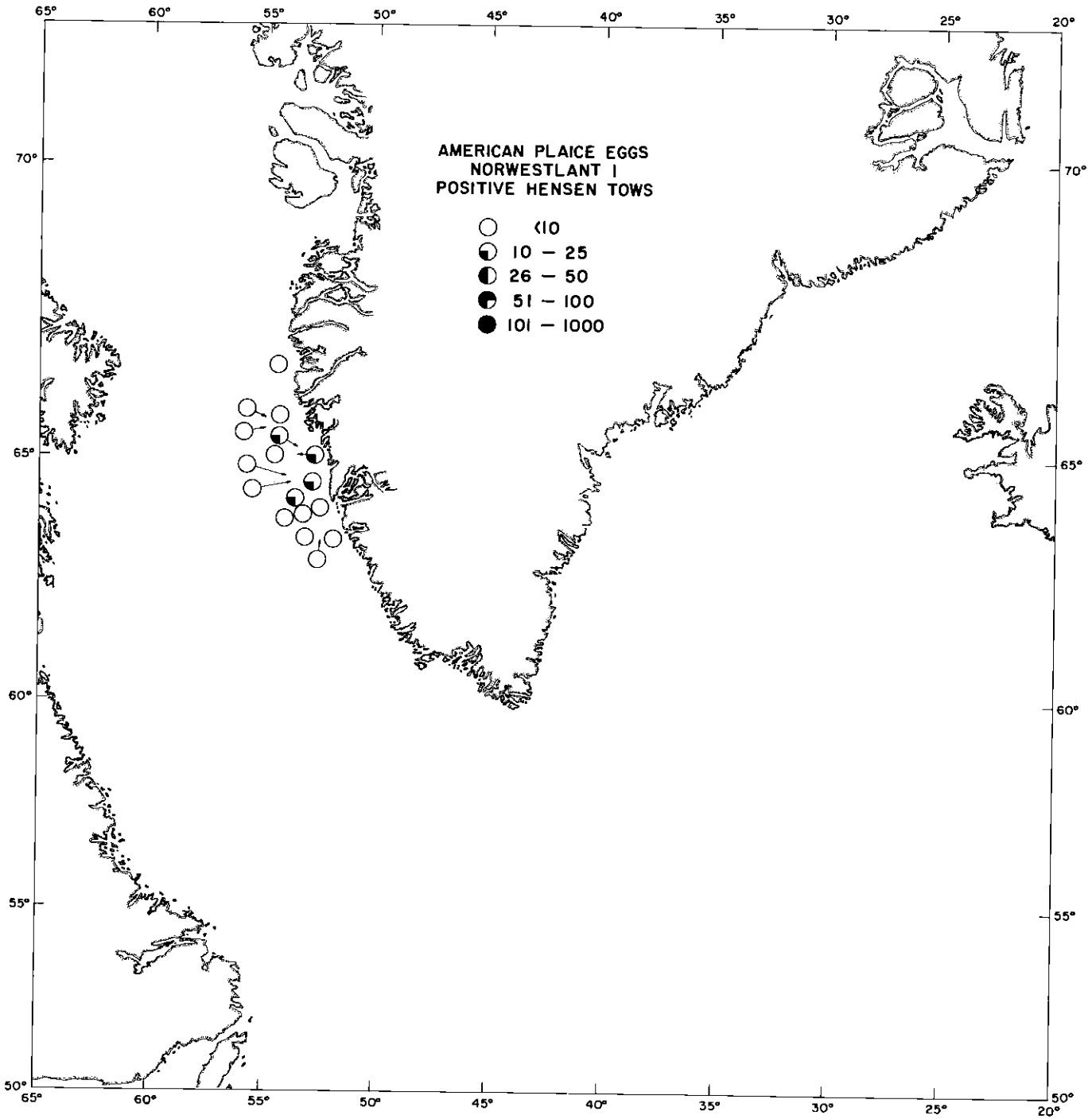


Chart 257. Catch per  $m^2$  of American plaice eggs by Hensen net in 1963 during NORWESTLANT I. Positive tows only are shown.



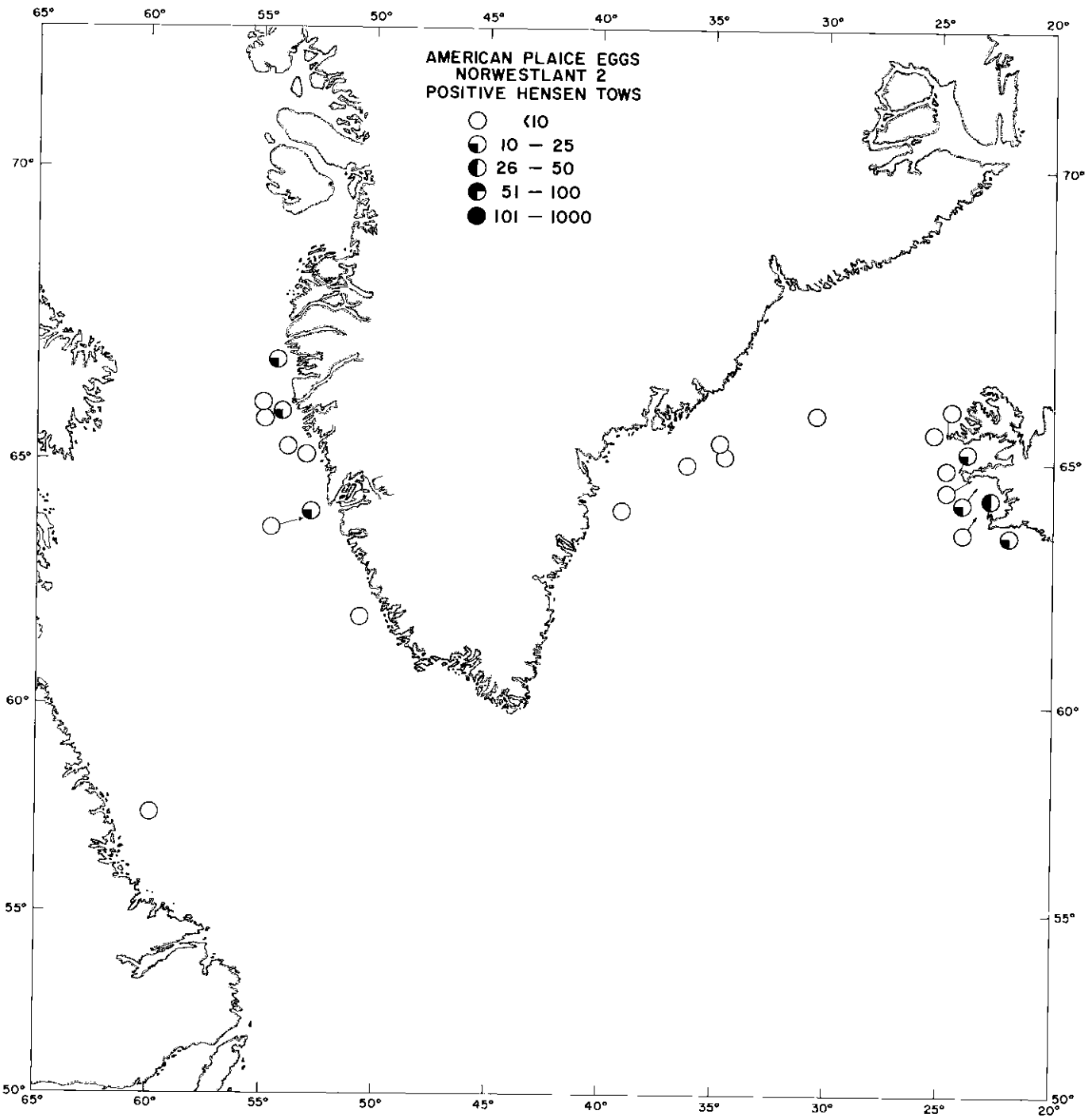


Chart 258. Catch per  $m^2$  of American plaice eggs by Hensen net in 1963 during NORWESTLANT 2. Positive tows only are shown.

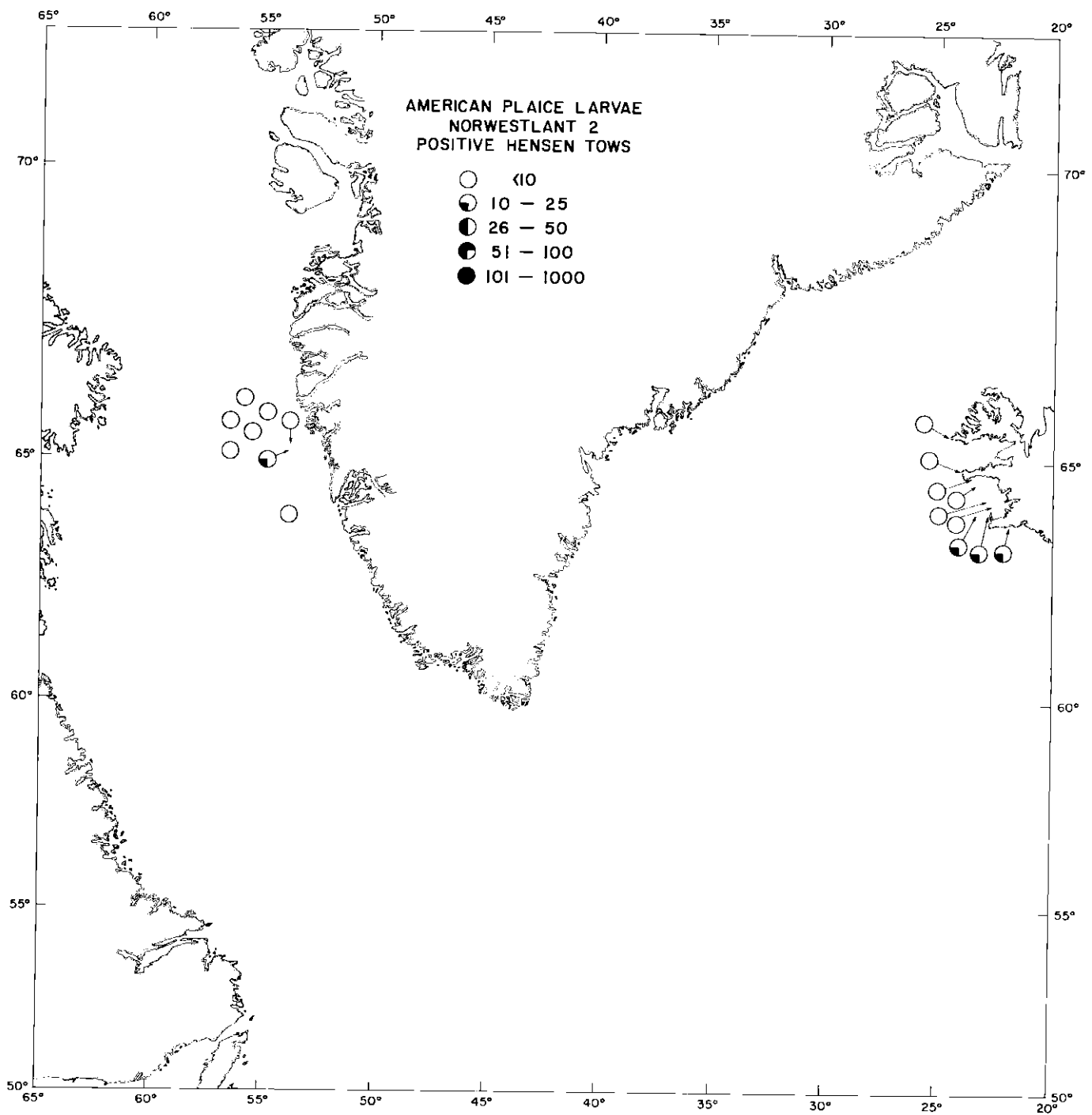


Chart 259. Catch per  $m^2$  of American plaice larvae by Hensen net in 1963 during NORWESTLANT 2. Positive tows only are shown.

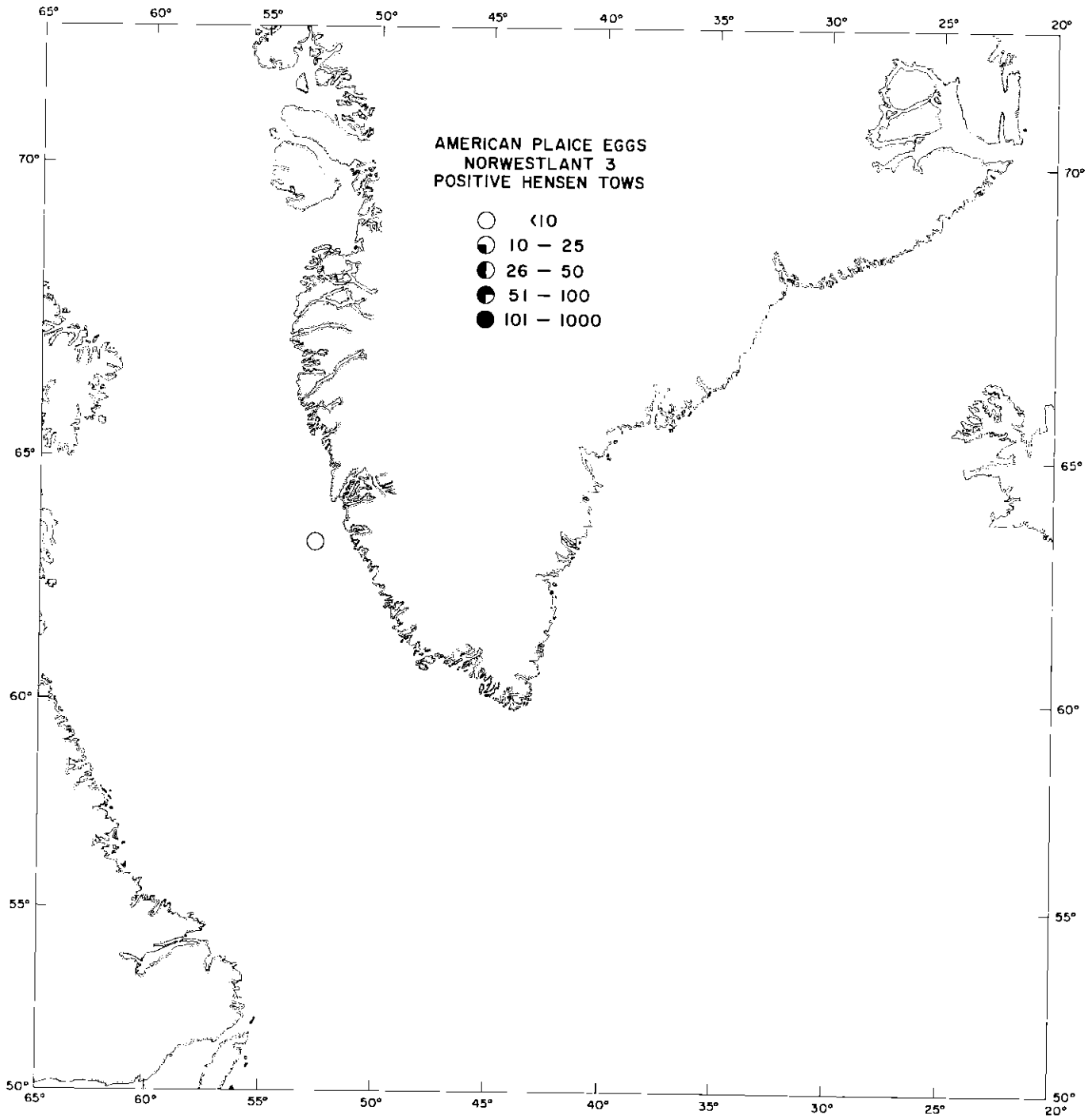


Chart 260. Catch per m<sup>2</sup> of American plaice eggs by Hensen net in 1963 during NORWESTLANT 3. Positive tows only are shown.

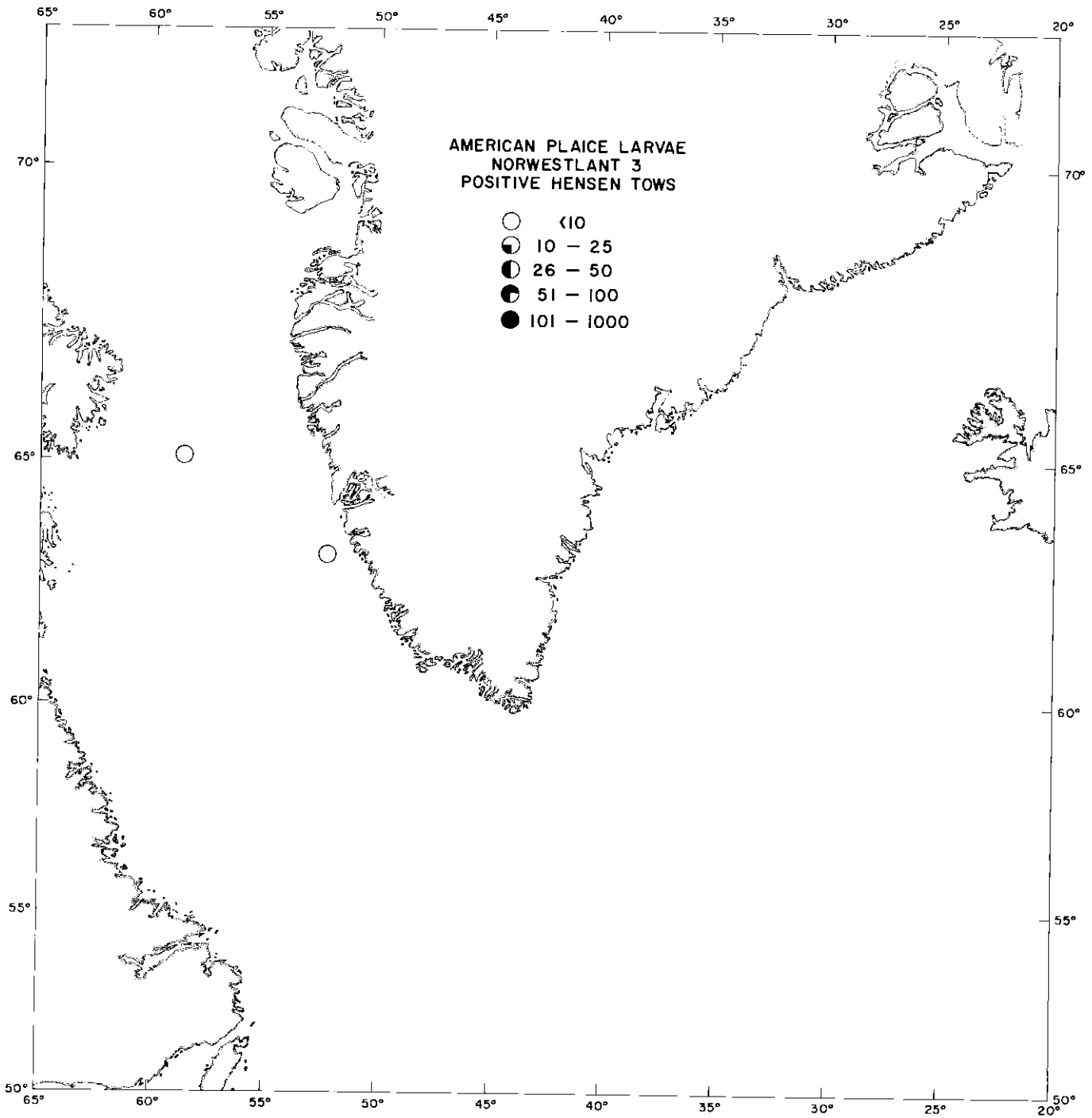


Chart 261. Catch per m<sup>2</sup> of American plaice larvae by Hensen net in 1963 during NORWESTLANT 3. Positive tows only are shown.

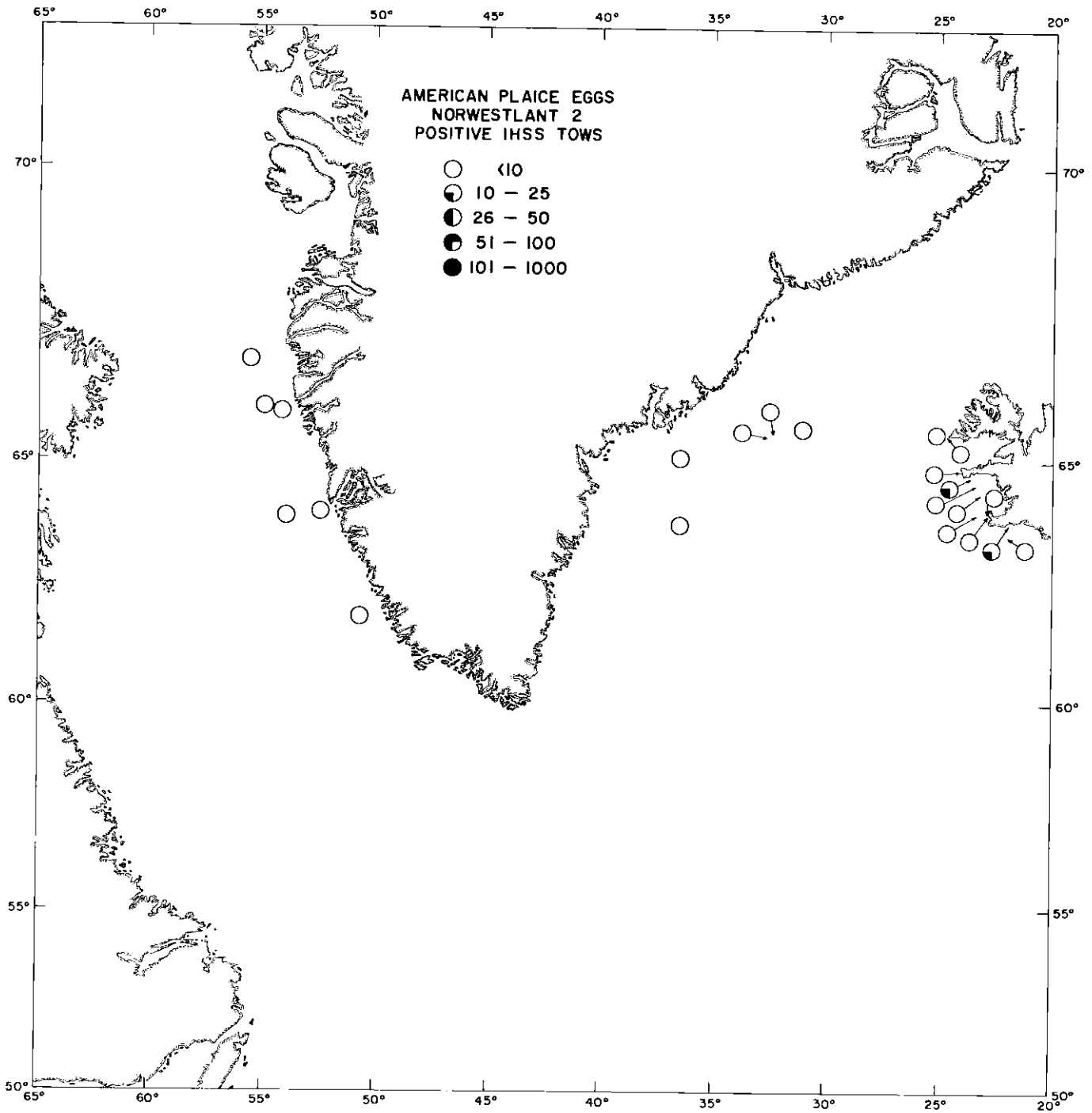


Chart 262. Catch per 30-min tow of American plaice eggs by Icelandic High Speed Sampler in 1963 during NORWESTLANT 2. Positive tows only are shown.

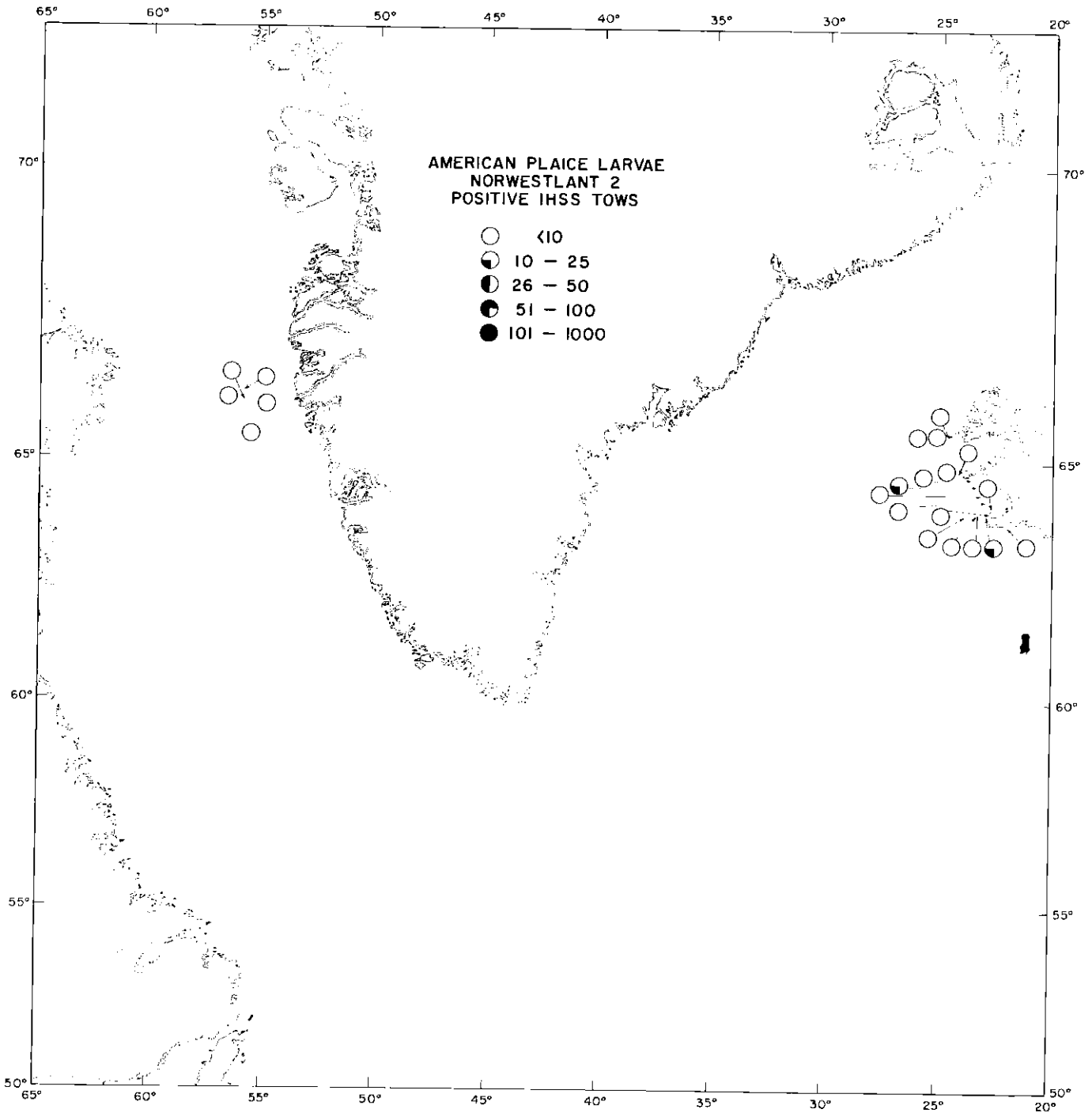


Chart 263. Catch per 30-min tow of American plaice larvae by Icelandic High Speed Sampler in 1963 during NORWESTLANT 2. Positive tows only are shown.

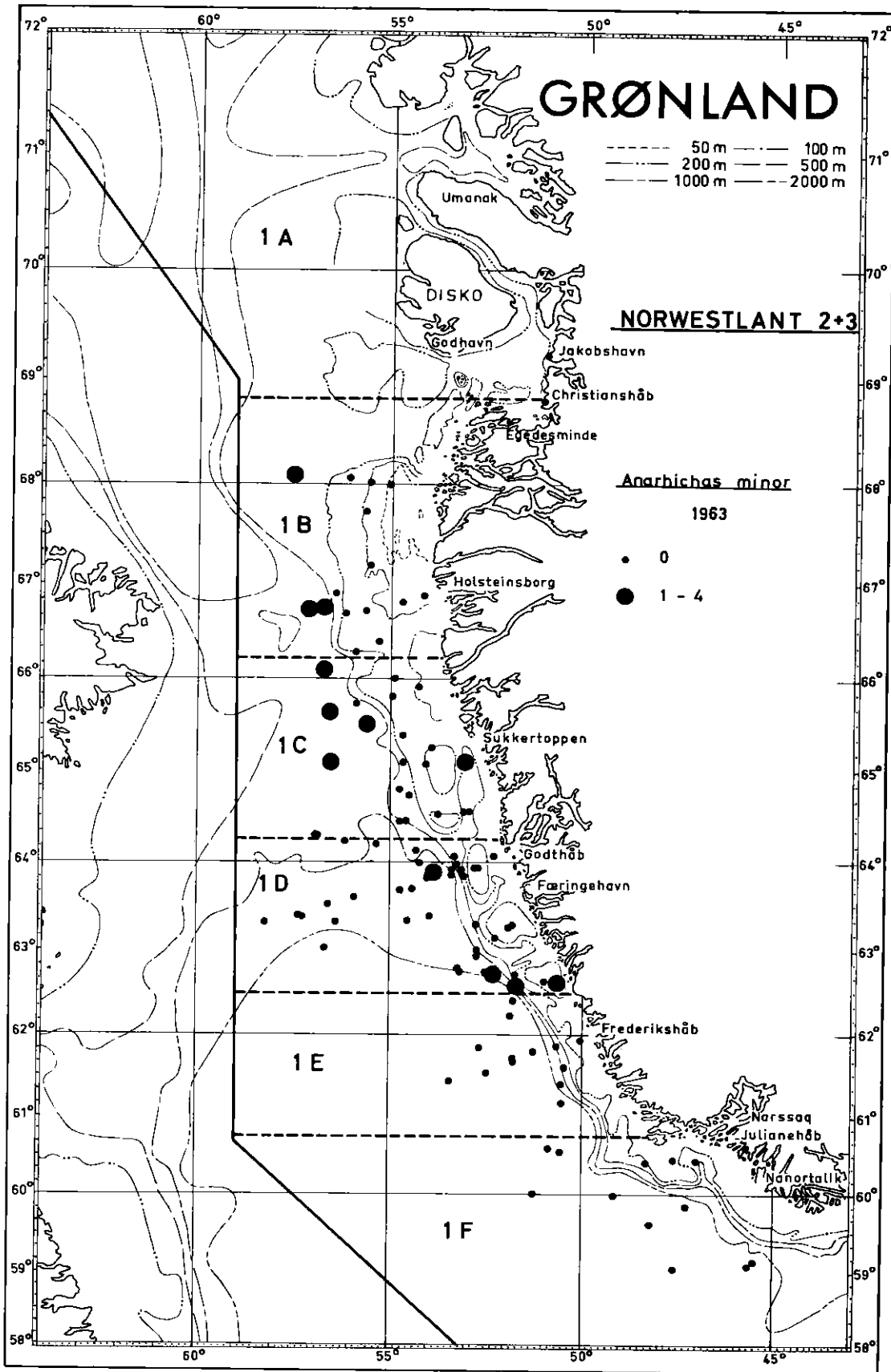


Chart 264. NORWESTLANT 2 and 3. Distribution of *Anarhichas minor* larvae off West Greenland.

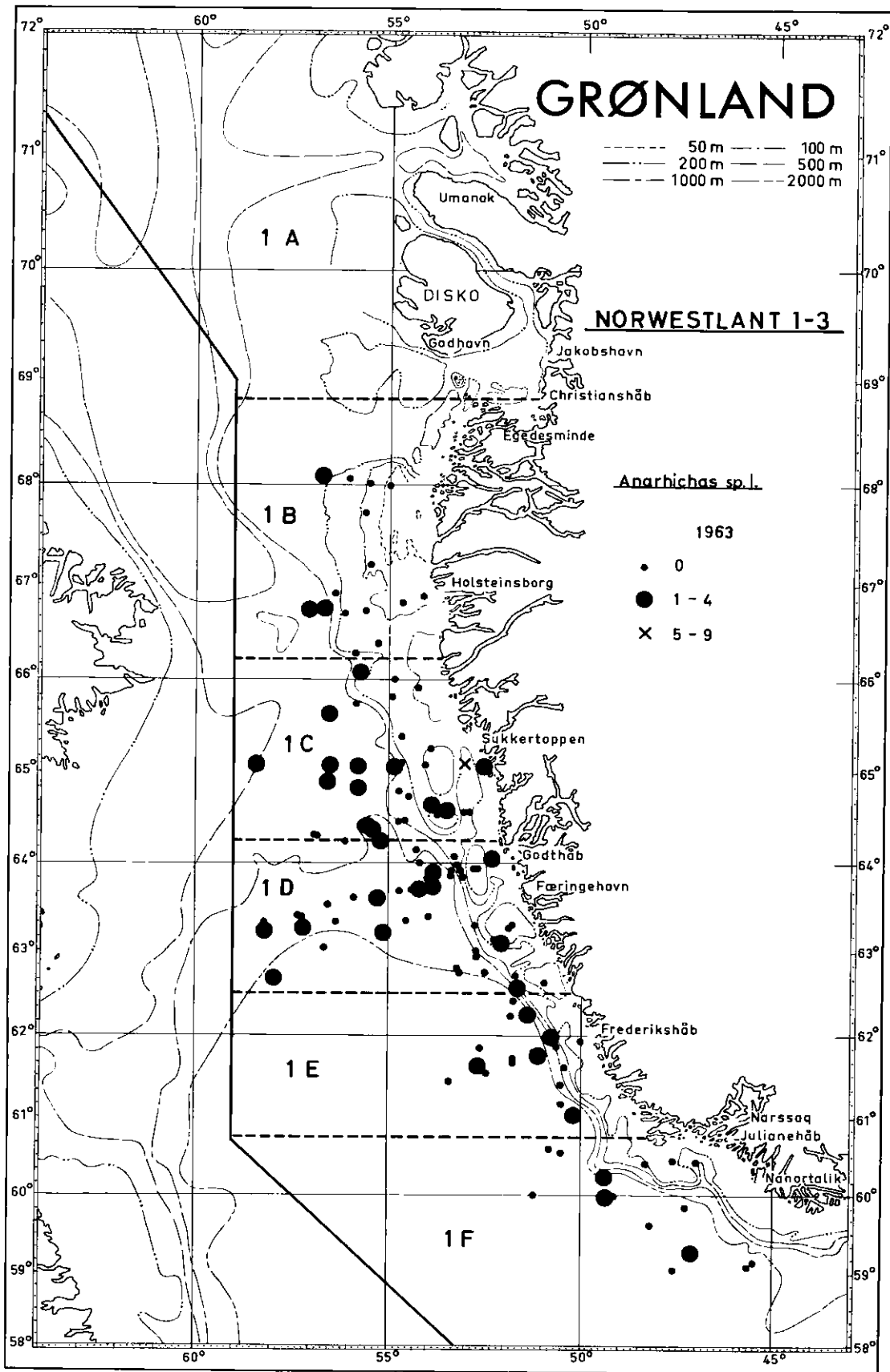


Chart 265. NORWESTLANT 1-3. Distribution of *Anarhichas sp. l.* larvae off West Greenland.



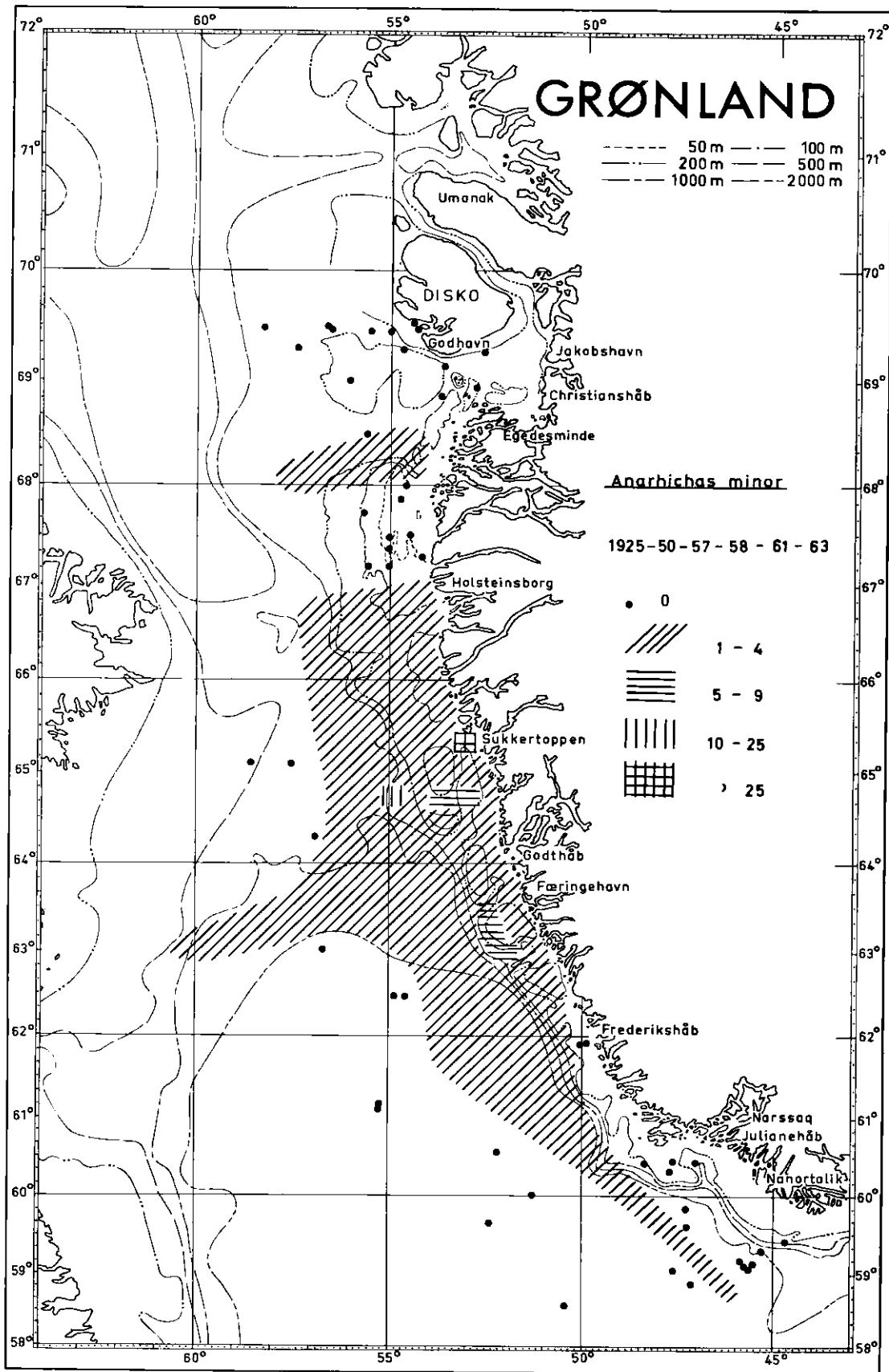


Chart 266. Distribution of *Anarhichas minor* larvae in 1925, 1950, 1957, 1958, 1961, and 1963 surveys.

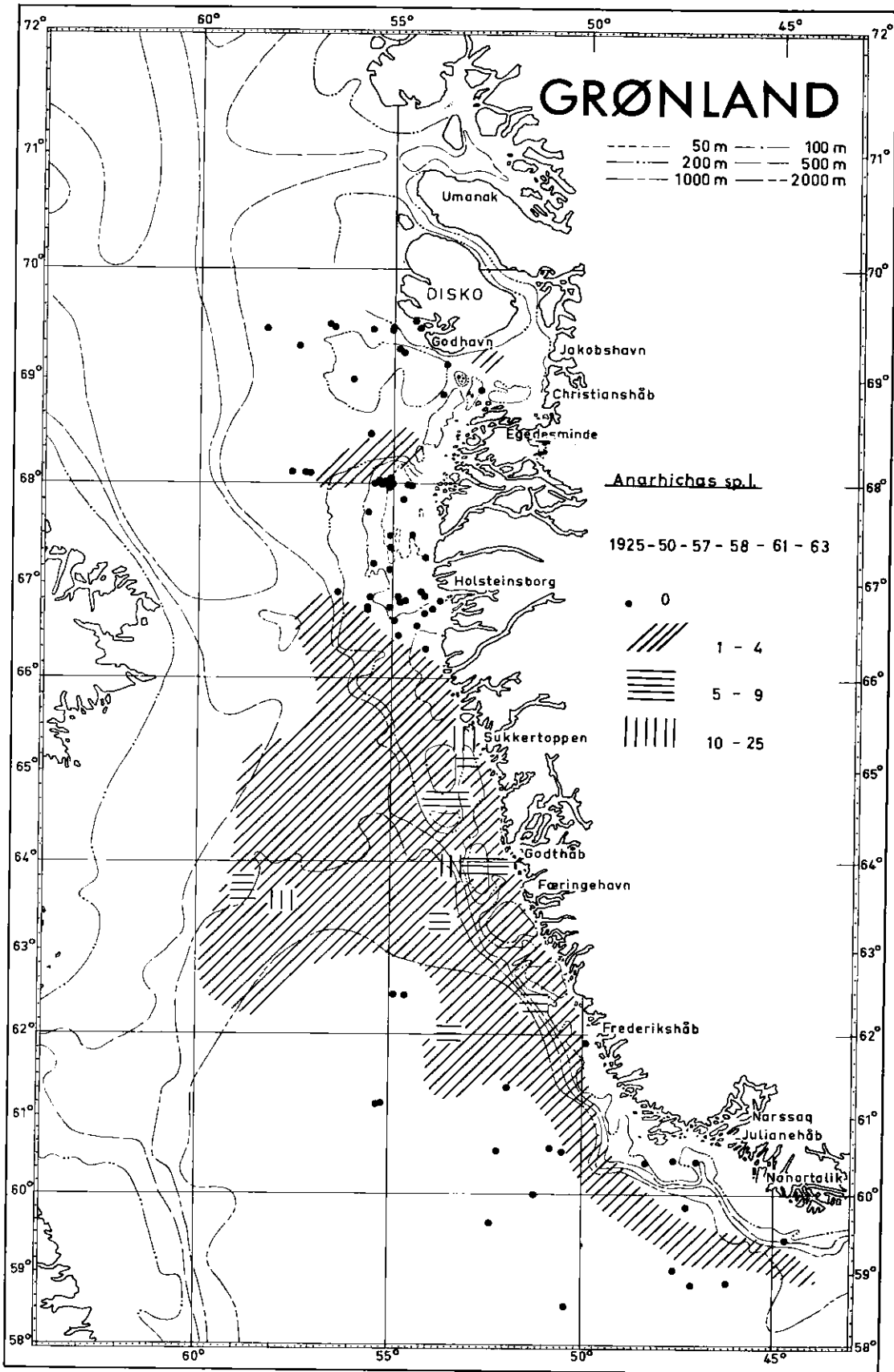


Chart 267. Distribution of *Anarhichas sp. L.* larvae in 1925, 1950, 1957, 1958, 1961, and 1963 surveys.

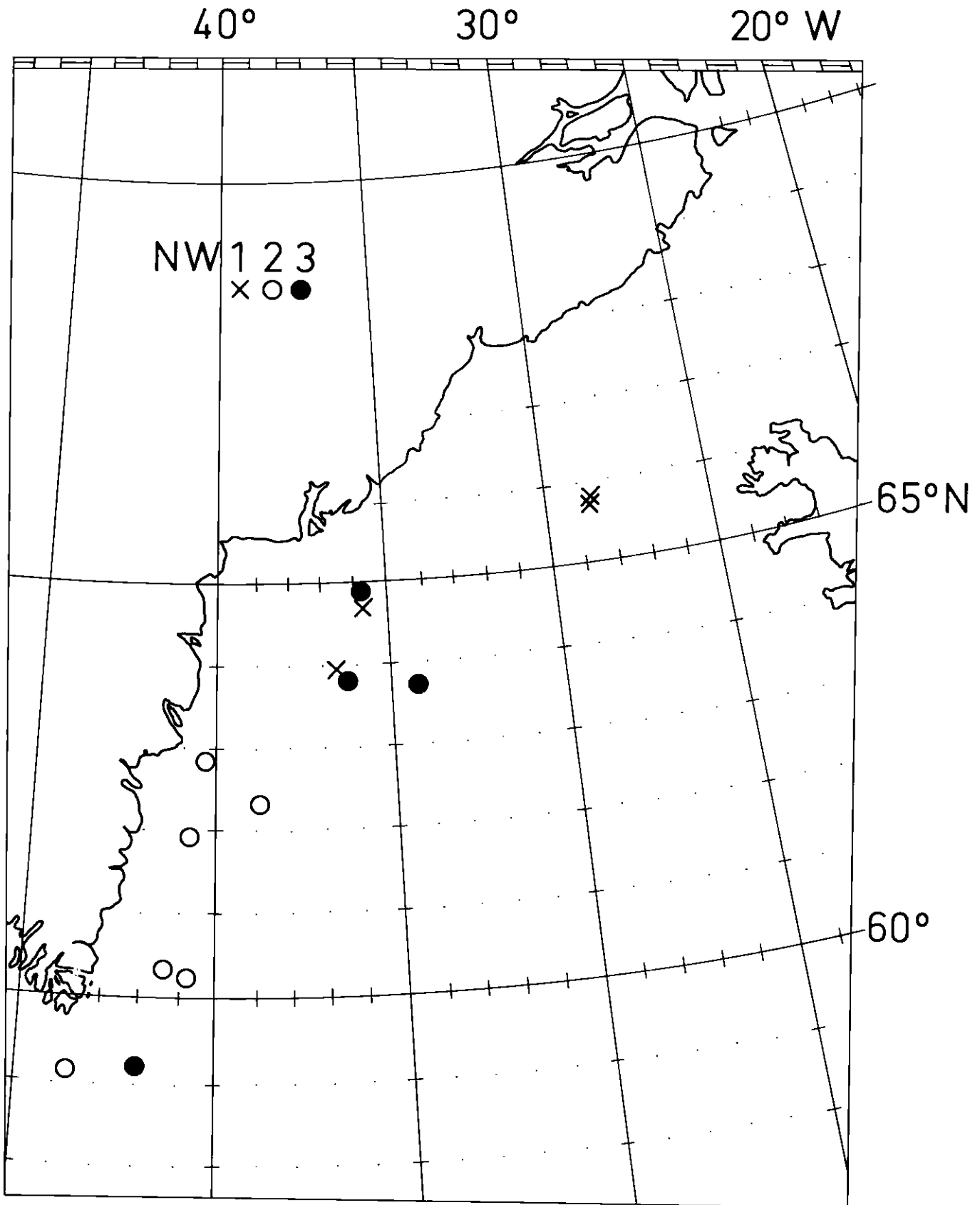


Chart 268. NORWESTLANT 1-3. Distribution of *Anarhichas* larvae (all three species) off East Greenland.

1950

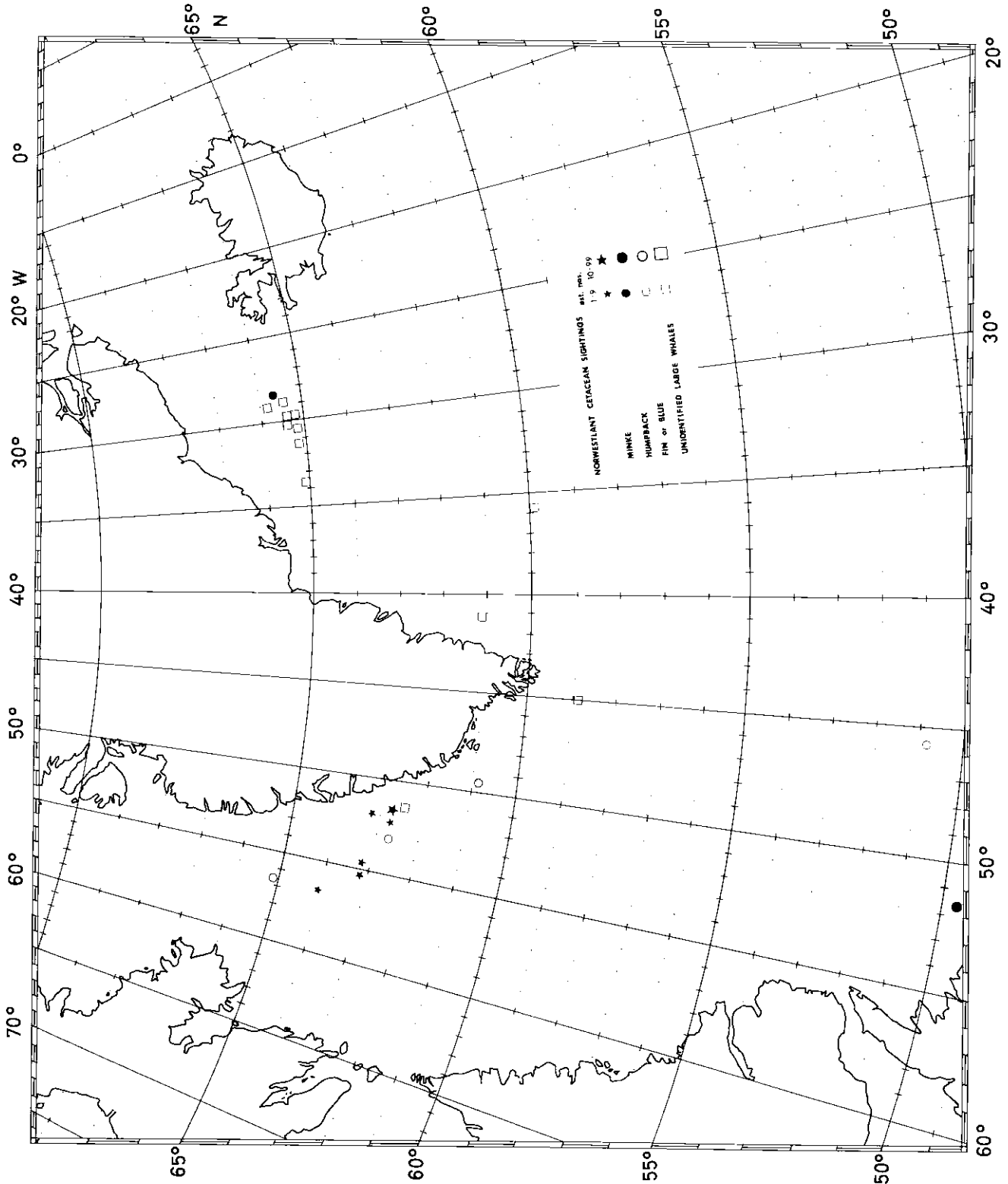


Chart 269. NORWESTLANT 1. Cetacean sightings.

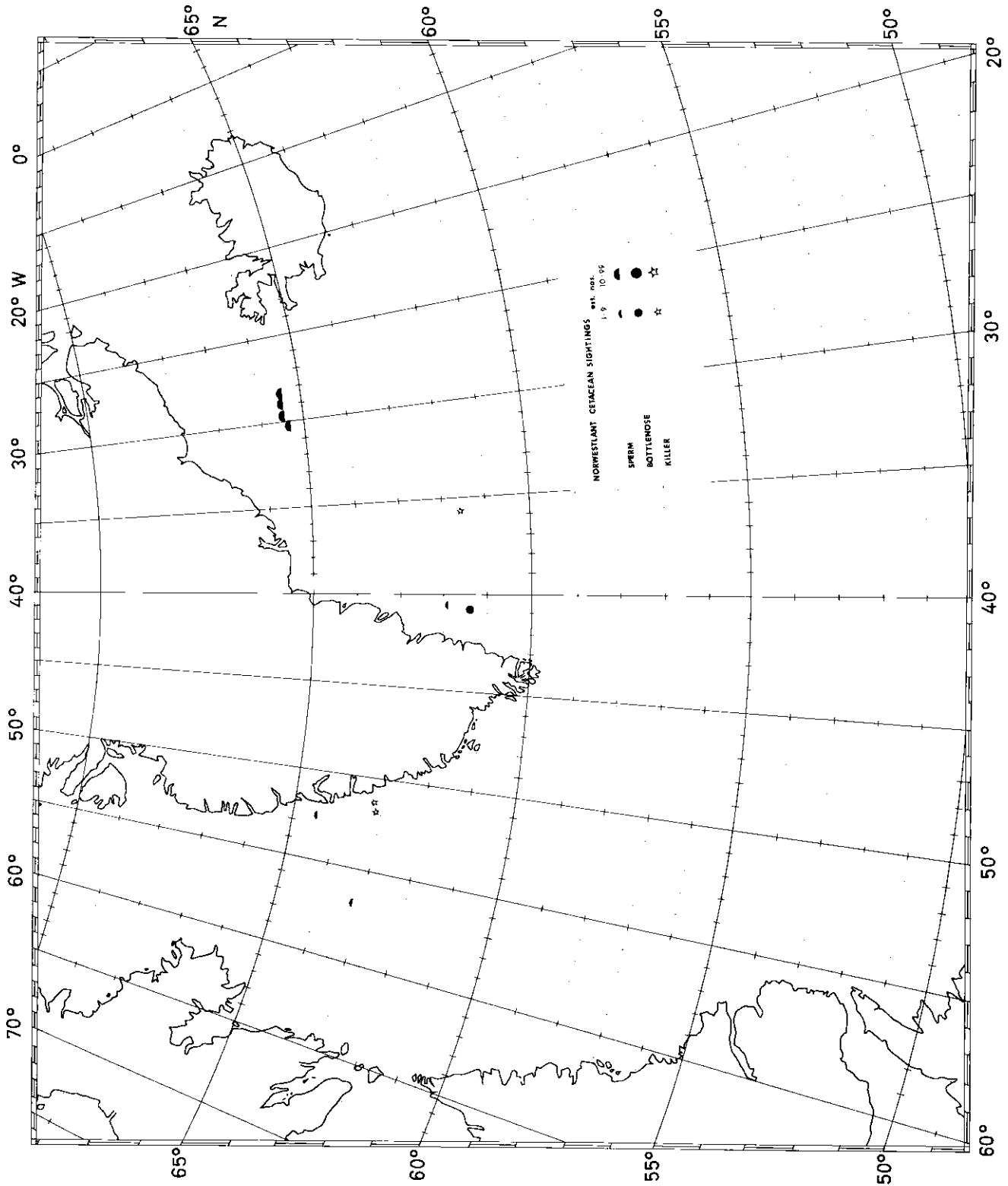


Chart 270. NORWESTLANT 2. Cetacean sightings.

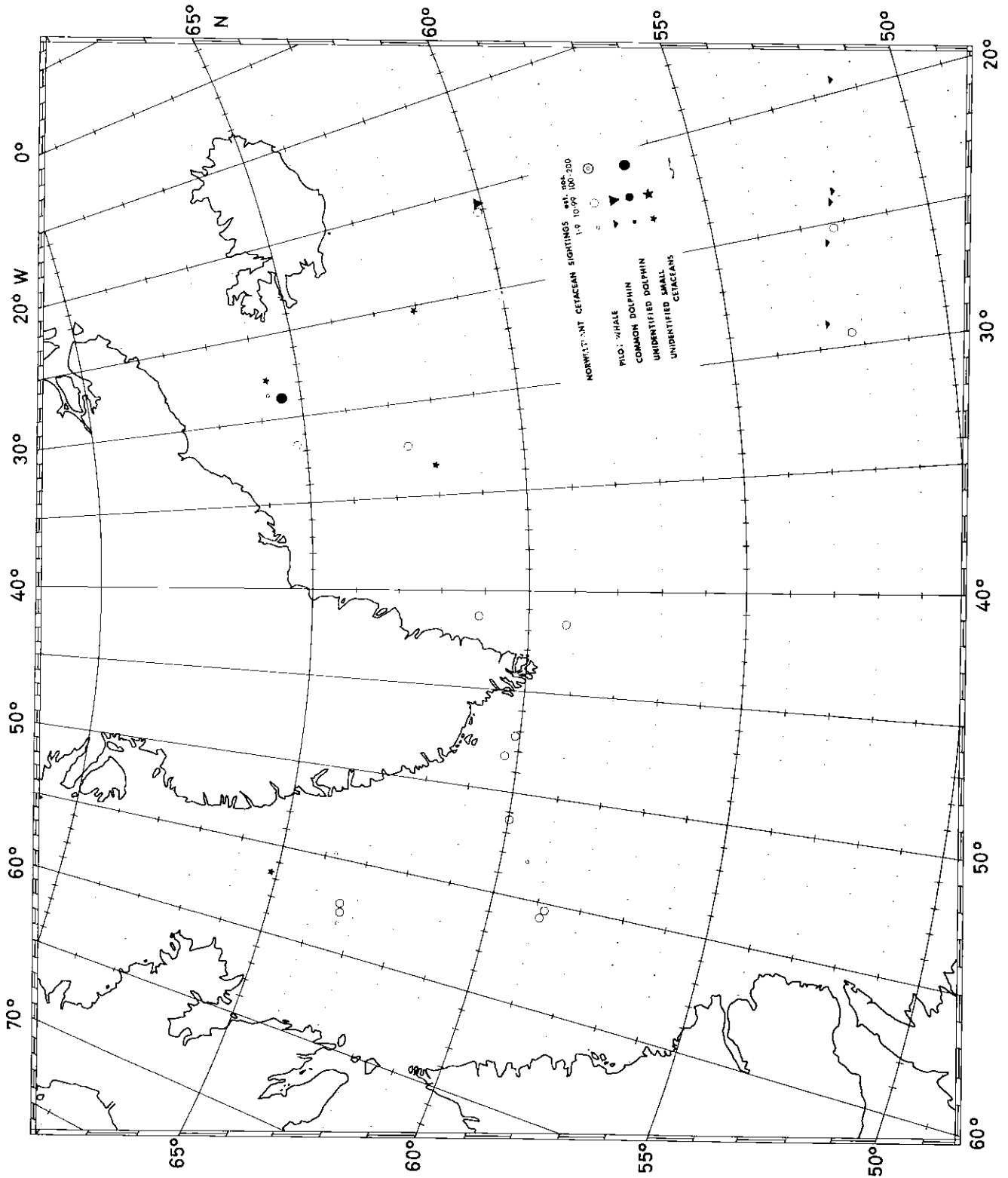


Chart 271. NORWESTLANT 3. Cetacean sightings.