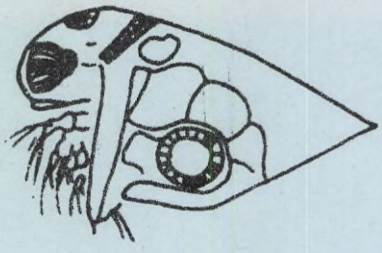
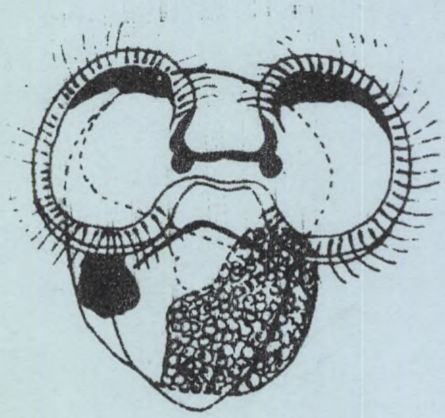
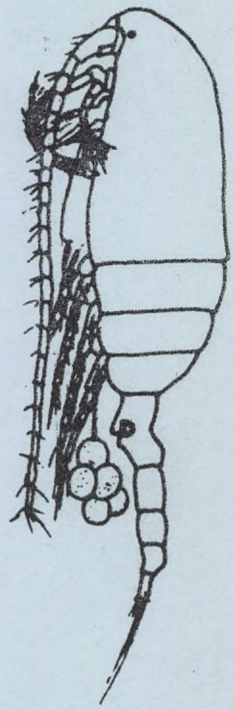






MEDDELANDE från
HAVSFISKELABORATORIET · LYSEKIL

nr 76

# Seasonal and vertical distribution of zooplankton off the coast in the Baltic proper in 1968

by

Hans Ackefors & Lars Hernroth

February, 1970

Seasonal and vertical distribution of zooplankton off the coast in the Baltic proper in 1968

By

Hans Ackefors & Lars Hernroth

CONTENTS

# INTRODUCTION

In 1963 plankton investigations were started near the coast in the Askö area in the northern Baltic proper in order to study the ecology of zooplankton during all seasons (ACKEFORS,1965, 1969a,b). The great differences in the appearance of zooplankton near the coast and off the coast are evident from ACKEFORS (1969a). 70 stations off the coast were investigated in August 1963 and compared with the conditions at Askö. Problems concerning the relation between zooplankton and hydrographical factors such as temperature, salinity and oxygen, time of propagation for plankton etc. encouraged ACKEFORS to start plankton investigations in 1967 at plankton stations off the coast. These investigations have continued since that year in connection with hydrographical and biological expeditions in the Baltic proper.
The aim with those investigations is to follow the seasonal and vertical distribution of the zooplankton and their development during a year off the coast as well as to study the differences between one year and another. The different developmental stages of copepods and a few other species are of special interest in order to understand the time of breeding in the Baltic proper in comparison with the conditions in other seas. The stable conditions of low salinity and low temperature as well as low oxygen concentration in deep waters in the Baltic proper are very different from the conditions in sea areas off the Swedish west-coast(cf. ACKEFORS,1969a). The fluctuations in the abundance and the associations of plankton are evident from ACKEFORS(op.cit.) and of great interest also in connection with the increasing pollution of the Baltic proper. These investigations can be used as references for future plankton studies in the Baltic area.
The aim with this paper is only to describe the conditions in 1968 and reproduce charts and diagrams as preliminary data. The investigations will later be discussed in connection with other investigations in the Baltic proper.
The authors are greatly indebted to Dr.Stig Fonselius and Dr. Gunnar Otterlind for possibilities to take plankton samples in

connections with the three hydrographical expeditions in 1968 and the two biological expeditions in April and in November the same year. We are especially thankful to Mr Sven Engström as well as the staff of the hydrographical department who have been on board the R/V "Skagerak" when most of the samples have been taken. We also want to express our thanks to Mrs Britt-Maj Karlsson for technical assistance and Miss Gun Bergman and Miss Birgitta Bengtsson for help with the illustrations.

## MATERIAL AND METHODS

According to WATTENBERG(1949) the Baltic proper can be devided into the Arkona Sea, the Bornholm Sea and the eastern and western Gotland Sea. This division that is based upon hydrographical conditions was slightly modified by ACKEFORS(1969a) for his plankton studies and the area was devided into seven subareas. In each of those areas one plankton station was chosen, which is evident from fig.1. The nautical positions appear from table 1. Those stations are visited by the hydrographical department of our institute. The stations usually represent the deepest parts in the subareas and we have a lot of earlier experience concerning the common hydrographical conditions. Because of this fact it is easier to state if the conditions in 1968 are normal or not during the investigations.

The hydrographical data have been analysed by the Hydrographical Department, Institute of Marine Research. The methods which were used appear partly from ACKEFORS(1969a). The phosphate analysis method is evident from FONSELIUS(1969).

The plankton samples were taken with Nansen nets at the following intervals: 25-0m, 50-25m, 100-50m, 200-100m, 300-200m, 400-300m and 460-400m. The mesh size of the nylon cloth was 0,16mm ("Nytal" cloth no. 8 1/2). (Exceptions from the above mentioned intervals for net hauls do occur; see figs.)

The plankton samples were subsampled with the modified whirling apparatus constructed by KOTT(1953:87). The same technique and statistical method, which is evident from ACKEFORS(1969a) was used. A method to colour the plankton samples before analyses was developed.

## A method to colour plankton samples

At a visit to Lowestoft laboratory in England, a method to colour plankton samples was described to us. This idea has led us to develop a method that proved to be both time and effort-saving in the work of analysing the samples. The reason for this is: Naturally transparent animals can easier be detected when coloured, the different segments of an animal show better when coloured and further different species differ in susceptibility to the dyer. All these matters are of great help when it comes to identifying the different species and their different stages of development.

The method of colouring can be described in the following way: A Petri-dish is filled to one third with water. Approx. ten drops of the dyer (Borax carmine) is added and the dish is shaken gently to stir. The amount of animals that is to be analysed (two times one hundredth, two times one tenth or whatever is used) is then separated from the sample. Each of the separated parts is then moved to a strainer constructed in the following way: A slice of plexiglass tube is made with approx. the following measurements: Height 3cm, diameter 8cm. On one end of the slice a nylon net is fastened. The mesh size is to be the same as that used in the plankton sampler.

When the plankton is placed in the strainer, this is lowered into the Petri-dish. The whole set of devices is covered in order to keep the daylight out. This has a bleaching effect on the dyer. The animals have to stay like this for twelve to eighteen hours. This time can be reduced by using a higher concentration of the dyer. We usually let the dyer act during the night. That makes the sample ready to be analysed the following morning.

The same dyer can be used for a week or more by only adding a few drops of Borax carmine when the clouring effect seems to be fading.

Finally we will present our findings on some of the species found in our samples and their reactions to the dyer.

The following species will remain colourless:

1. Eurytemora sp.: all stages
2. Temora longicornis: all stages (light colouring of stages 1-3)
3. Centropages hamatus: all stages (          "          )
4. Limnocalanus grimaldii: all stages
5. Cladocera
6. Mytilus edulis larvae

The following organisms will always become coloured:

1. All nauplius
2. Pseudocalanus m. elongatus: all stages
3. Acartia spp.: all stages
4. Oithona similis
5. Fritillaria borealis acuta
6. Oikopleura dioica
7. Polychaeta larvae
8. Gastropoda larvae
9. Medusae

# RESULTS

## Z O O P L A N K T O N

### Cnidaria

#### Sarsia tubulosa (M. SARS)

One specimen (3mm size) was found in April in a net haul 70-20m at station 8A. The salinity fluctuated between 8.0 and 7.4 $^{o}/oo$ at this interval.

#### Aurelia aurita (L.)

The ephyra larvae were caught in June and in September. In June, three specimens of 5mm and one of 6mm size appeared in a net haul 100-60m at station F81. At stations F72 and 8A three specimens (size 7-12mm) were found in September in net hauls 100-65m resp. 110-60m.

#### Cyanea capillata (L.)

One specimen was caught in February at station S41 in a net haul 25-0m. The size was 22mm in diameter.

### Ctenophora

#### Pleurobrachia pileus (O.F. MÜLLER)

In February 75 larvae occurred at station S41 in one net haul (50-25m) and a few larvae in the net haul 25-0m. No finds were then made until November. At stations S12 and S24 single larvae appeared in net hauls 50-25m resp. 25-0m.

### Rotatoria

#### Keratella quadrata quadrata (MUELLER)

In September we caught 325 specimen in a net haul 20-0m at station

S12 in the Arkona Sea. At station S24 single specimens occurred on this occasion as well as two months later in November.

Keratella cochlearis recurvispina (JÄGERSKIÖLD)

Single specimens appeared in September at station 8A in a net haul 60-25m.

Synchaeta spp.

We have not distinguished between the six different species in the Baltic proper: S. baltica, S. curvata, S. fennica, S. gyrina, S. monopus and S. triophthalma (BERZINS, 1960).
The species were extremely abundant in June. They appeared in all other investigated months either as single individuals or in a low abundance.

## Polychaeta

Pygospio elegans CLAPARÈDE

Larvae occurred at two stations, S12 and S24, in the southern Baltic from June to November (figs. 9-11).

Harmothoe sarsi KINBERG

Larvae were caught from February to September. The main part of the larvae were found in net hauls below 50m level (figs. 7-10).

## Cladocera

Bosmina coregoni maritima (P.E. MÜLLER)

In April the first specimens were found (fig. 13). Two months later when the surface water was about 10$^{0}$C, Bosmina appeared at three stations but it was not frequent (fig. 14). In September when the water temperature had risen to about 17$^{0}$C the abundance was extremely high. On this occasion Bosmina was more frequent than any other species in this investigation (fig. 15). Two months later, (November), the population density was low again (fig. 16).

Podon intermedius LILLJEBORG

The species appeared very sparsely (figs. 17-21). Not until June single specimens were found in the southern Baltic. The highest density was found in September when the distribution was very similar over the whole Baltic proper (fig. 20). At station S41 it still had about the same frequency in November (fig. 21) but on the other two stations in the southern Baltic only single specimens appeared.

### Podon polyphemoides LEUCKART

This species, which usually appears very frequently in coastal waters in summer, was not frequent off the coast (figs. 22-26). It was most frequent in June in the southern Baltic when surface water had a temperature of 10°C (fig. 24).and in November when it was about the same temperature. In September, except for a few specimens in the southern Baltic, it only occurred at station F72 in the northern Baltic proper (fig.25). The reason may be that on this occasion the layer of warm surface water was thinner on that station than on the others (cf. ACKEFORS,1969a,b). The water temperatures in September are evident from table 5.

### Podon leuckarti G.O. SARS

The species only appeared in June (figs. 27-31). It appeared as far to the north as 57°N but it was more frequent at the two stations in the Arkona Sea and in the Bornholm Sea (fig. 29).

### Evadne nordmanni LOVÉN

This species is an eurytherm cladoceran. It occurred from April to November (figs. 32-36) when the surface water temperature fluctuated from about 4°C to 19°C. It was found at all stations visited during the months of April, June, September and November.

## Copepoda

### Limnocalanus grimaldii (DE GUERNE)

"From Lindquist's exposition (1961a and 1961b) it is quite evident that all transitions exist between the "freshwater species" L. macrurus and the form found in the Baltic. There is therefore no reason to treat L. grimaldii (de Guerne) and L. macrurus as different species. According to the law of priority they ought to be joined under the name L. macrurus (not L. grimaldii as I erroneously wrote in a previous paper, Pejler 1962 e,p.456). Thus, the conditions are analogous to those of some other glacial relicts that occur in brackish as well as

in fresh water, e.g. Mesidotea entomon (L.) and Pontoporeia affinis Lindström." (PEJLER, 1965).
By tradition the species is called L. grimaldii. Laboratory experiments in different salinities may give an ecological answer to the problem if it is one or two species.
The most southern find was at station S24, in April. It was found between 86-60m where the salinity fluctuated from 15‰ to 10‰. At station S41 single specimens appeared in the net hauls in February, June, September and November. At stations F81 and F78 Limnocalanus appeared twice and at station F72 once in the net hauls.

### Acartia bifilosa GIESBRECHT and A. longiremis LILLJEBORG

The nauplii and the copepodite stages except stage VI were put together for the two species A. bifilosa and A. longiremis.
The horisontal distribution of the two species above and below 50m level is evident from figs. 37-41 and the vertical distribution of different stages appears from figs. 93-103.
Acartia spp. occurred all months at all stations but they were most frequent in November. The highest density was always found in the net hauls 25-0m.

### Eurytemora sp.

The horisontal distribution above and below 50m level is evident from figs. 42-46 and the vertical distribution from figs. 82-92. Eurytemora was most abundant in November. The species had the highest density above the 25m level. Except Limnocalanus and Oithona, this species was less abundant than the other copepods.

### Centropages hamatus (LILLJEBORG)

The horisontal distribution of C. hamatus above and below 50m level is evident from figs. 47-51 and the vertical distribution from figs. 82-92. We found the highest population density in September and November. In February it was most common below 25m or 50m level. In September the highest density occurred above 25m level at the Bornholm Deep (S24) and at the Gotland Deep (F81) and below this level at the Landsort Deep. At station F72 where net hauls were taken from 15-0m and from 65-15m, about the same amount of specimens appeared in both net hauls. As the net hauls were taken at different times either in daytime or at night, this seems to indicate a diurnal migration.
The accumulation of copepods (fig. 91) at 300-400m level in the

Landsort Deep seem to be curious. The reason may be due to a failure in the closing device of the net.

### Pseudocalanus minutus elongatus (BOECK)

The horisontal distribution of this species above and below 50m level is evident from figs. 52-56 and the vertical distribution from figs. 82-92. The vertical distribution of different stages appears from figs. 104-114.

Pseudocalanus was most abundant in June but it is also frequent during the other months in 1968. In February it had about the same abundance in all net hauls above 100m, in June a little more abundant in net hauls 25-50m or 25-60m in the other net hauls. In September it occurred rather sparsely in net hauls 15-0m or 25-0m except at the Gotland Deep. Both in the Landsort Deep and the Bornholm Deep the species was also very frequent below 65m resp. 50m level.

### Temora longicornis P. MÜLLER

The horisontal distribution of the species above and below 50m level is evident from figs. 57-61 and the vertical distribution from figs. 82-92. The vertical distribution of different stages appears from figs. 115-125.

Temora was less frequent in February and April but in June, September and November the abundance was high or rather high.

The vertical distribution was rather even in the net hauls from about 100m to surface in February, in June the greatest accumulation was in the net hauls from 25m to surface and in September either in the same level or in the net hauls from 65-25m as in the Landsort Deep.

In February most of the individuals were adult or belonged to stages IV-V. In June nauplii, stages IV-V and I-III were most common. In September stages IV-V or adult individuals were most common.

### Oithona similis CLAUS

The horisontal distribution above and below 50m level is evident from figs. 62-66. Oithona was usually most frequent in the deep water of the Bornholm Deep (S 24) where the salinity is higher than in the surface water. In February it also occurred as far to the north as the Gotland Deep (F 81). This occurrence as well as the occurrence at station 8 A indicate the inflow of salt water, which passes through the deepest area in the southern and south-eastern part of the Baltic proper (cf. Ackefors, 1969a).

## Mysidaceae

### Mysis relicta LOVÉN

Two specimens were found in February at station F 81 in a net haul 100-50m.

## Amphipoda

### Hyperia galba MONTAGY

Two specimens were found in a net haul 200-150m at station F 81 in February.

## Acari

Single specimens of not identified mites were found in three net hauls from 400 to 250m level in the Landsort Deep (F 78) in June.

## Gastropoda

The Gastropod larvae were found at 5 stations in September from the most southern station S 12 to the most northern one F 72. Only single specimens occurred except at S 12 and S 41 where 100 specimens were taken in net hauls 20-0m resp. 25-0m. Single larvae appeared also at station S 12 in November.

## Lamellibranchiata

### Mytilus edulis (L.)

The horisontal distribution of larvae above and below 50m level is evident from figs. 67-71. They were most abundant in September.

### Macoma baltica (L.) Cardium lamarcki REEVE Mya arenaria (L.)

The three species were put together when the samples were analysed. They were not frequent. Only single specimens appeared in February and April. In June, September and November the abundance was higher (figs. 72-76).

## Chaetognatha

### *Sagitta elegans baltica* RITTER-ZAHONY

At station S 24, 24-150 specimens were found in February, April and June and single specimens in September and November in net hauls 87-60m. In the Arkona Sea ( station S 12 ) 300 specimens occurred in a net haul 50-25m in November.

### *Sagitta setosa* MÜLLER

Single specimens were taken in a net haul 50-25m at station S 12 in November.

## Copelata

### *Oikopleura dioica* FOL

This species occurred frequently (1170 specimens) at station S 12 in November in a net haul 50-25m. Single specimens occurred at station S 41 in a net haul 100-60m. In September only single specimens were found at S 12.

### *Fritillaria borealis acuta* LOHM

According to BÜCKMANN (1945, 1969) the name of the *Fritillaria* species, which occurs in the Baltic proper, should be *Fritillaria borealis acuta* and not *Fritillaria borealis* which ACKEFORS (1965, 1969a,b) has called the species.

The horisontal distribution both above and below the 50m level is evident from figs. 77-81. The species was most frequent in February, April and June.

## REFERENCES

ACKEFORS, H., 1965: On the zooplankton fauna at Askö. (The Baltic-Sweden).- Ophelia, 2(2): 269-280.

- " - , 1969a: Ecological zooplankton investigations in the Baltic proper 1963-1965.- Inst. Mar. Res., Lysekil, Ser.Biol. Rep. No. 18: 1-139.

- " - , 1969b: Seasonal and vertical distribution of the zooplankton in the Askö area (Northern Baltic proper) in relation to hydrographical conditions.- Oikos, 20: 480-492.

BERZINS, B., 1960: Rotatoria I. - Cons. Int. L'Explor. Mer. Zooplankton. Sheet 84.

BÜCKMANN, A., 1945: Appendicularia I-III. - Cons. Int. L'Explor. Mer. Zooplankton. Sheet 7.

- " - , 1969: Appendicularia. - Ibid., Zooplankton, No. 7.

FONSELIUS, S., 1969: Hydrography of the Baltic Deep Basins III.- Fishery Board of Sweden, series Hydrography, No. 23:1-97.

KOTT, P., 1953: Modified whirling apparatus for the subsampling apparatus of plankton. - Austr. J. Mar. Freshw. Res., 4:387-393.

LINDQUIST, A., 1961a: Untersuchungen an Limnocalanus (Copepoda, Calanoida).- Inst. Mar. Res., Lysekil, Ser. Biol. Rep. No. 13:1-124.

- " - , 1961b: Über die Morphologie und Biologie von Limnocalanus im Ostseebecken. - Thesis. Lund. 10 pp.

PEJLER, B., 1965: Regional-ecological studies of Swedish fresh-water zooplankton. -Zool. Bidr. Uppsala, 36(4): 407-515.

## ADDENDUM TO REFERENCES

ANON.,1969a:Hydrographical Data January-June 1968 R.V.Skagerak R.V.Thetis March 1969.-Medd.Havsfiskelab.,Lysekil nr 63 (mimeo.).

ANON.,1969b:Hydrographical Data July-December 1968 R.V.Skagerak R.V.Thetis September 1969.- Medd.Havsfiskelab.,Lysekil nr 70 (mimeo.).

WATTENBERG,H.,1949:Entwurf einer natürlicher Einteilung der Ostsee.- Kieler Meeresf.,6:10-15.

Legends

Fig.1. Chart of the Baltic proper.

Figs.2-81. In 1968 most of the plankton stations were visited 5 times. The most common species and their seasonal distribution are evident in figs.2-81. Winter (Dec.-Febr.) is reproduced as white charts, spring (March-May) as yellow charts, summer (June-August) as green charts and autumn (Sept.-Nov.) as blue charts. The abundance appears from the size of the circles. Open circles indicate the two hauls 25-0 m and 50-25 m together and black circles all the deep net hauls together.

| | Febr. | April | June | Sept. | Nov. |
|---|---|---|---|---|---|
| Synchaeta spp. | 2 | 3 | 4 | 5 | 6 |
| Harmothoe sarsi<br>Pygospio elegans | 7 | 8 | 9 | 10 | 11 |
| Bosmina coregoni maritima | 12 | 13 | 14 | 15 | 16 |
| Podon intermedius | 17 | 18 | 19 | 20 | 21 |
| Podon polyphemoides | 22 | 23 | 24 | 25 | 26 |
| Podon leuckarti | 27 | 28 | 29 | 30 | 31 |
| Evadne nordmanni | 32 | 33 | 34 | 35 | 36 |
| Acartia bifilosa<br>Acartia longiremis | 37 | 38 | 39 | 40 | 41 |
| Eurytemora sp. | 42 | 43 | 44 | 45 | 46 |
| Centropages hamatus | 47 | 48 | 49 | 50 | 51 |
| Pseudocalanus minutus elongatus | 52 | 53 | 54 | 55 | 56 |
| Temora longicornis | 57 | 58 | 59 | 60 | 61 |
| Oithona similis | 62 | 63 | 64 | 65 | 66 |
| Mytilus edulis | 67 | 68 | 69 | 70 | 71 |
| Macoma baltica<br>Cardium lamarcki<br>Mya arenaria | 72 | 73 | 74 | 75 | 76 |
| Fritillaria borealis acuta | 77 | 78 | 79 | 80 | 81 |

Fig.82-92. Vertical distribution of different copepods.

| | | | | |
|---|---|---|---|---|
| Fig.82. | Station | 5A | in | February |
| " 83. | " | 15A | " | " |
| " 84. | " | 31A | " | " |
| " 85. | " | F72 | " | " |
| " 86. | " | 5A | " | June |
| " 87. | " | 15A | " | " |
| " 88. | " | 31A | " | " |
| " 89. | " | 5A | " | September |
| " 90. | " | 15A | " | " |
| " 91. | " | 31A | " | " |
| " 92. | " | F72 | " | " |

Figs.93-103. Vertical distribution of different stages of Acartia bifilosa and A. longiremis.

| | | | | |
|---|---|---|---|---|
| Fig.93. | Station | 5A | in | February |
| " 94. | " | 15A | " | " |
| 95. | " | 31A | " | " |
| 96. | " | F72 | " | " |
| 97. | " | 5A | " | June |
| 98. | " | 15A | " | " |
| 99. | " | 31A | " | " |
| 100. | " | 5A | " | September |
| 101. | " | 15A | " | " |
| 102. | " | 31A | " | " |
| 103. | " | F72 | " | " |

Figs.104-114. Vertical distribution of different stages of Pseudocalanus m. elongatus.

| | | | | |
|---|---|---|---|---|
| Fig.104. | Station | 5A | in | February |
| " 105. | " | 15A | " | " |
| " 106. | " | 31A | " | " |
| " 107. | " | F72 | " | " |
| " 108. | " | 5A | " | June |
| " 109. | " | 15A | " | " |
| " 110. | " | 31A | " | " |
| " 111. | " | 5A | " | September |
| " 112. | " | 15A | " | " |
| " 113. | " | 31A | " | " |
| " 114. | " | F72 | " | " |

Figs.115-125. Vertical distribution of different stages of Temora longicornis.

| | | | | |
|---|---|---|---|---|
| Fig.115. | Station | 5A | in | February |
| " 116. | " | 15A | " | " |
| " 117. | " | 31A | " | " |
| " 118. | " | F72 | " | " |
| " 119. | " | 5A | " | June |
| " 120. | " | 15A | " | " |
| " 121. | " | 31A | " | " |
| " 122. | " | 5A | " | September |
| " 123. | " | 15A | " | " |
| " 124. | " | 31A | " | " |
| " 125. | " | F72 | " | " |

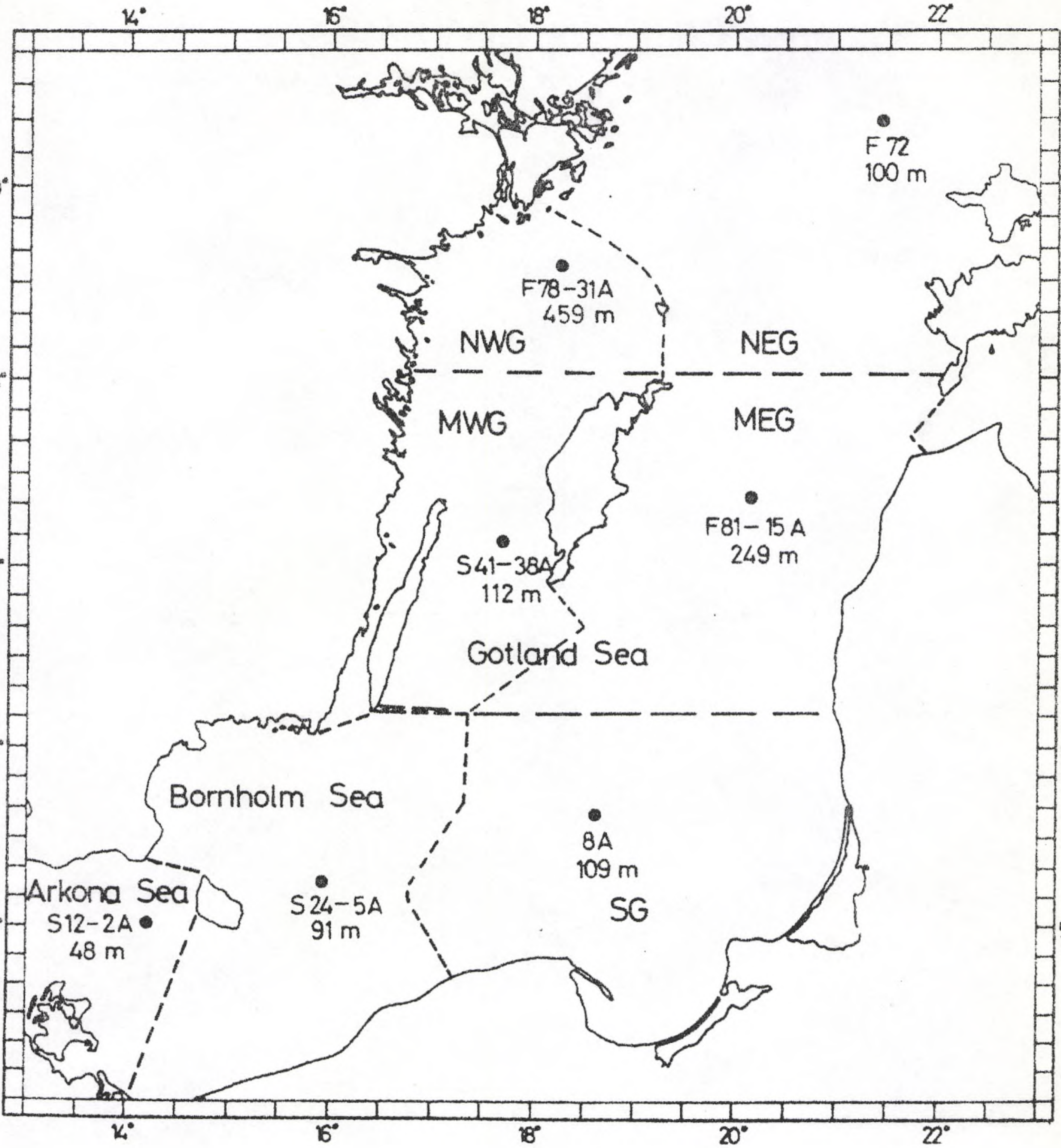



Fig 1.Chart of the Baltic proper and the three subareas,the Arkona Sea,the Bornholm Sea and the Gotland Sea according to WATTENBERG(1949).The Gotland Sea is divided into an eastern and western part by WATTENBERG. According to ACKEFORS(1969a) the Gotland Sea may be divided into five subareas; the southern(SG),the middle eastern and western(MEG and MWG) and the north-eastern and north-western(NEG and NWG).The seven plankton stations are evident from the chart,in some cases with both old and new symbols as well as the depths.

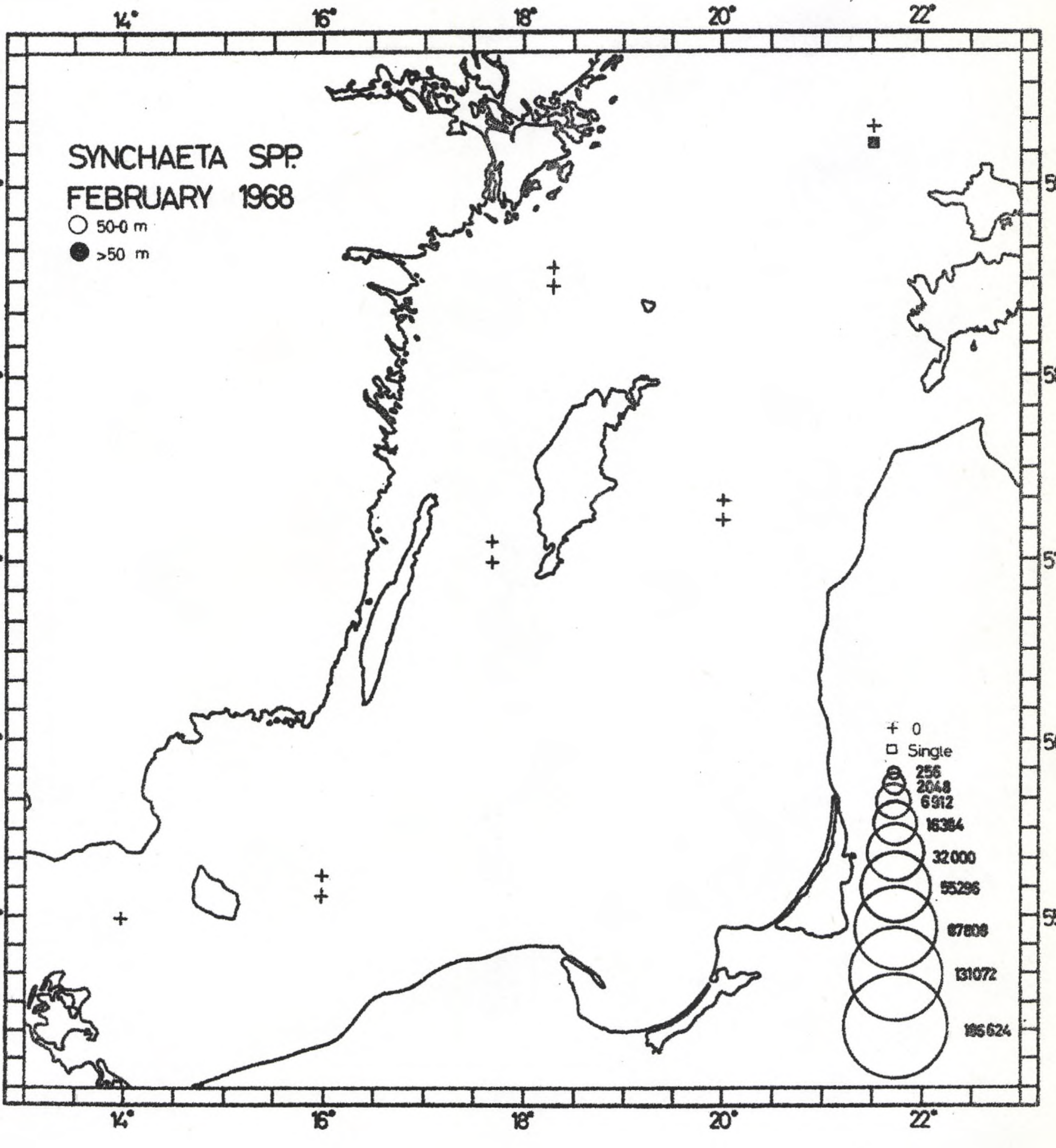

SYNCHAETA SPP.
FEBRUARY 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 3.

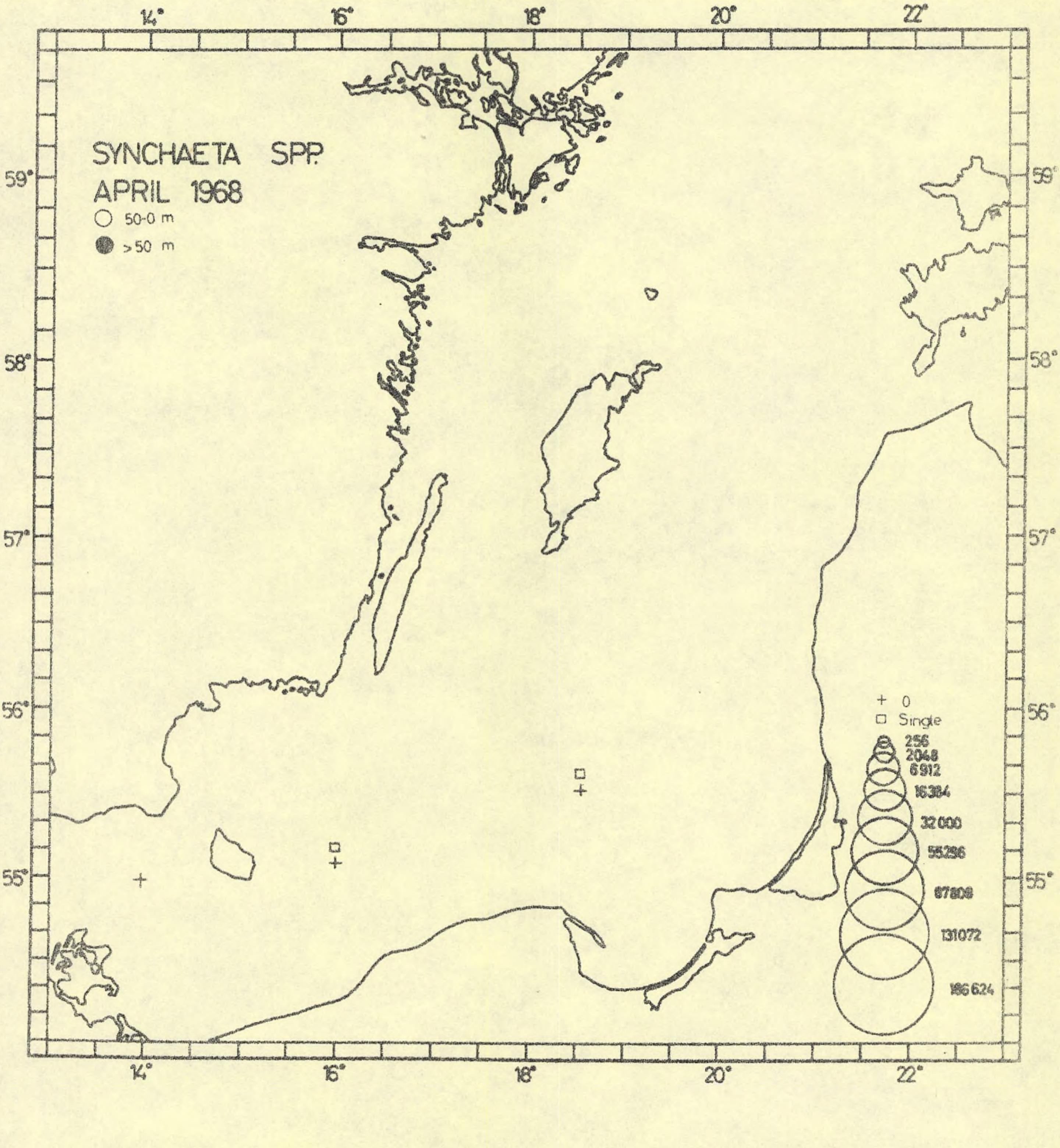
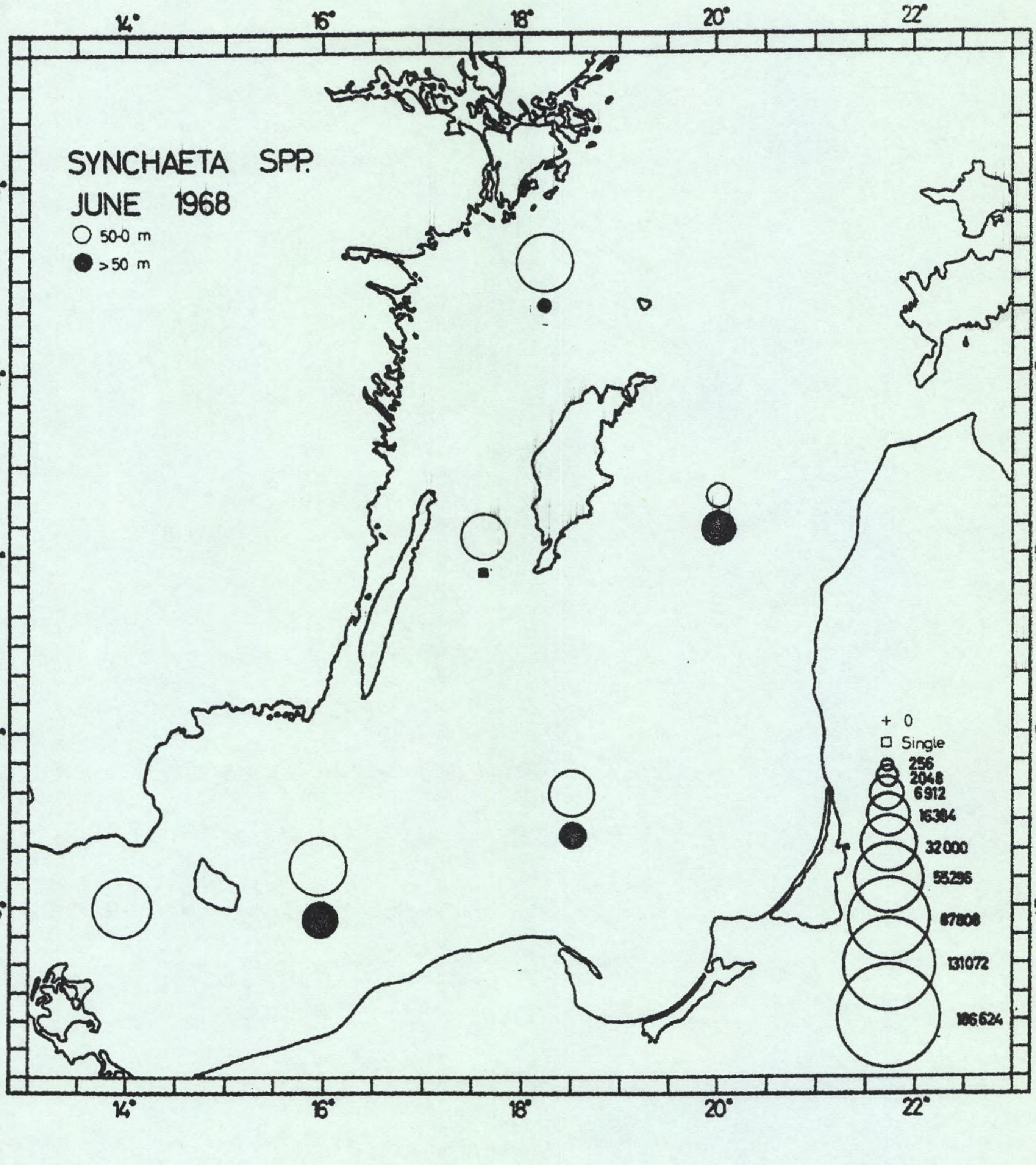

SYNCHAETA SPP.
APRIL 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 4.



SYNCHAETA SPP.
JUNE 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 5.

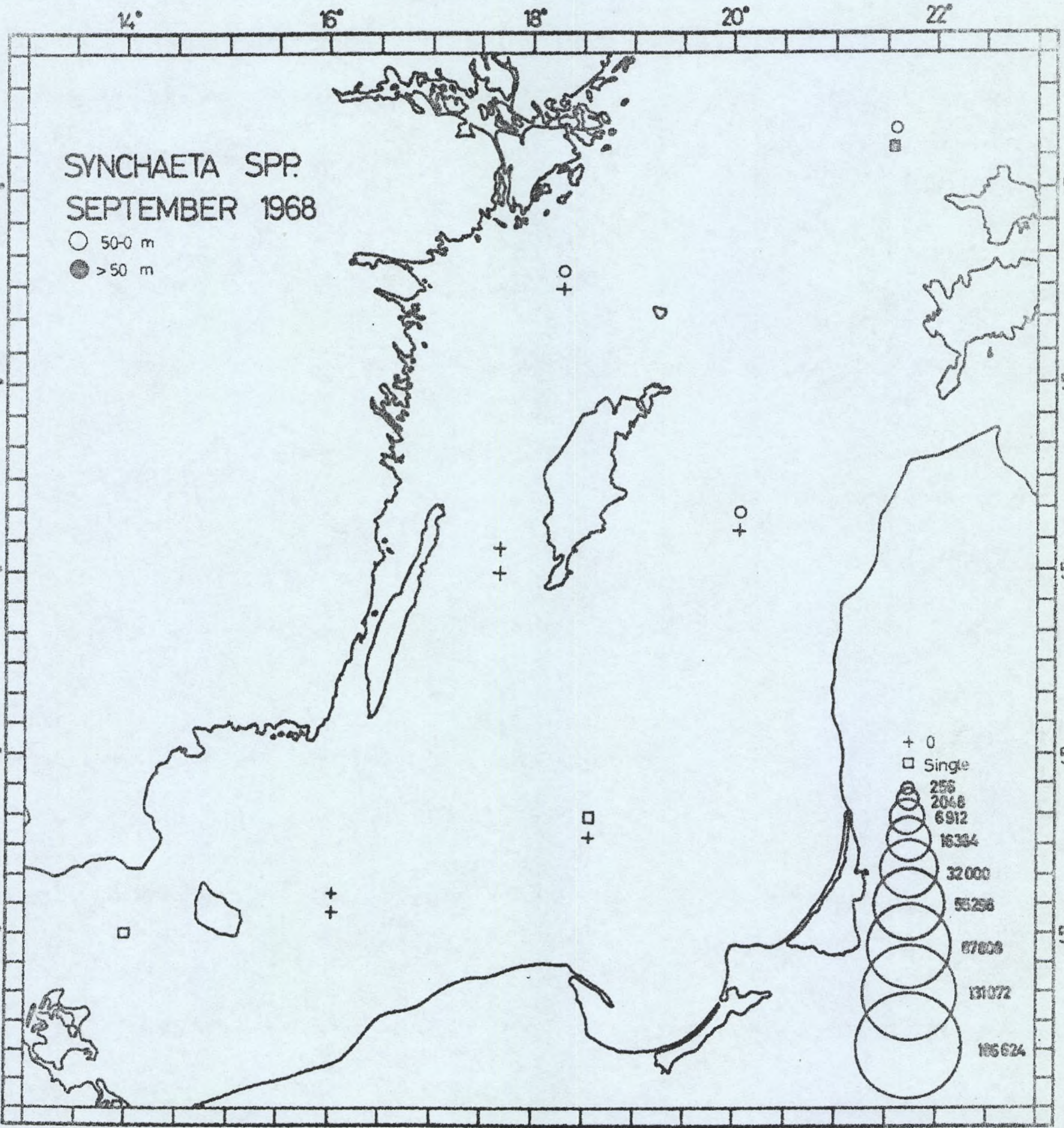
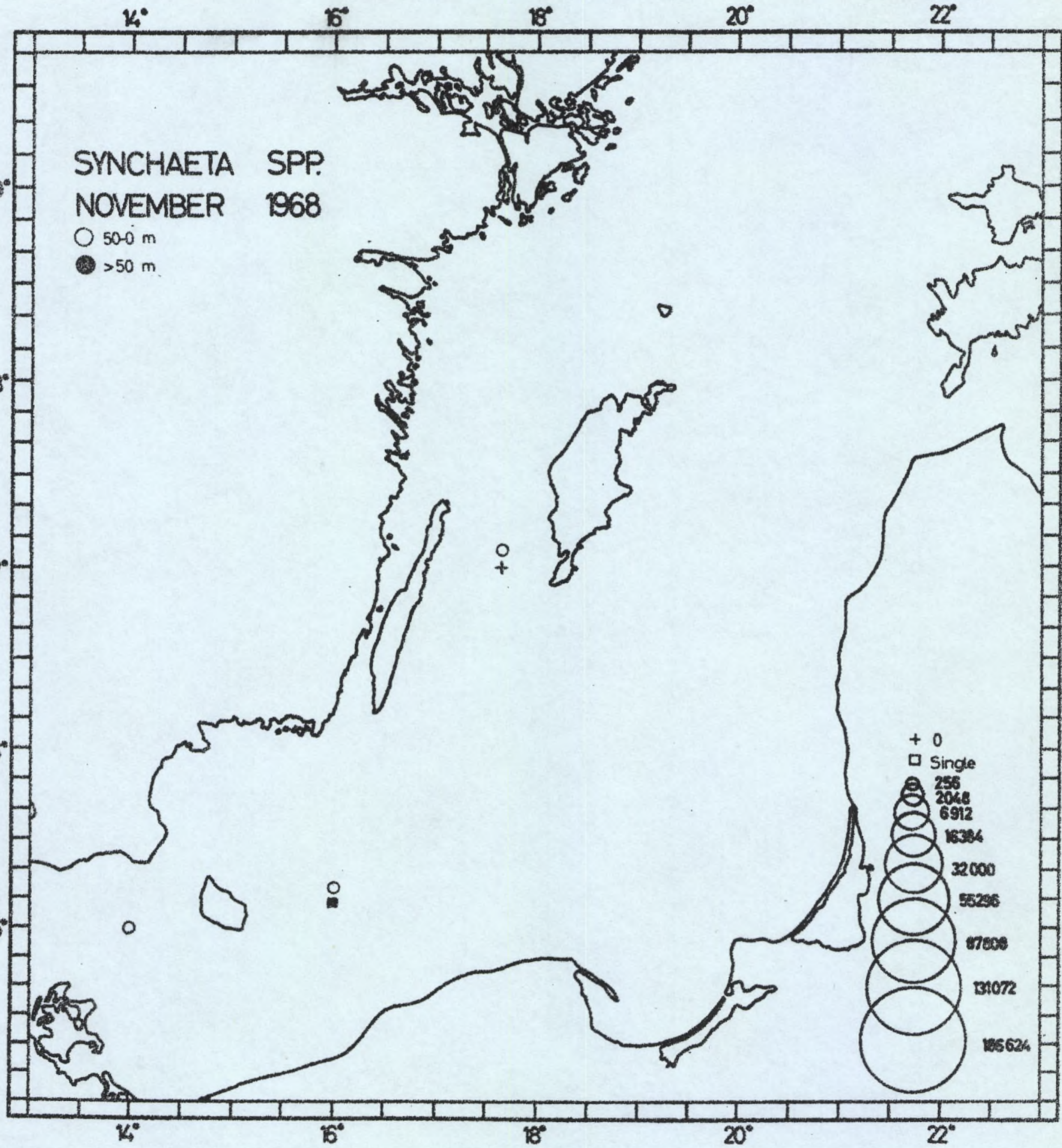
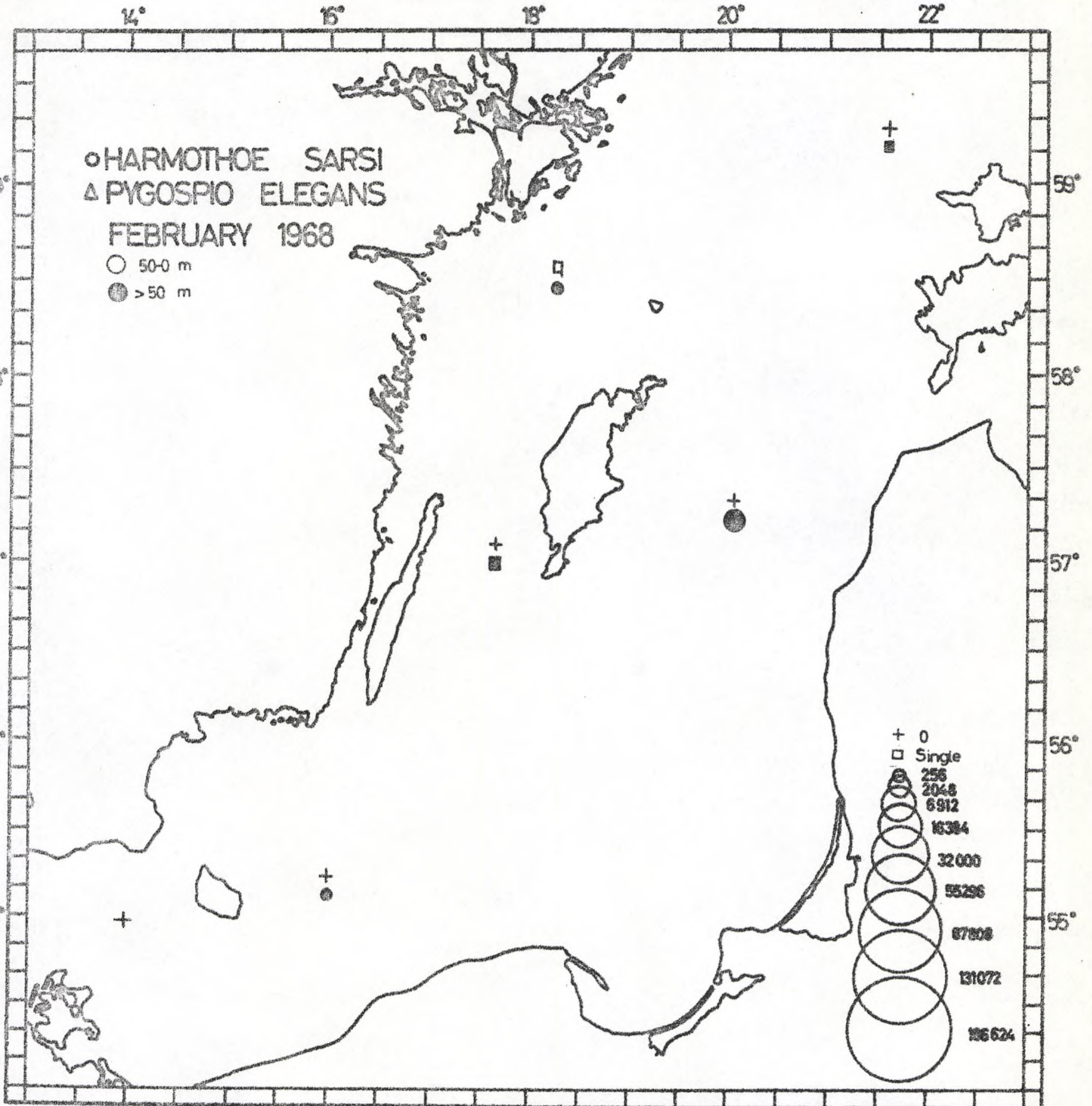

SYNCHAETA SPP.
SEPTEMBER 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6 912
16384
32 000
55296
87808
131072
186 624

Fig 6.



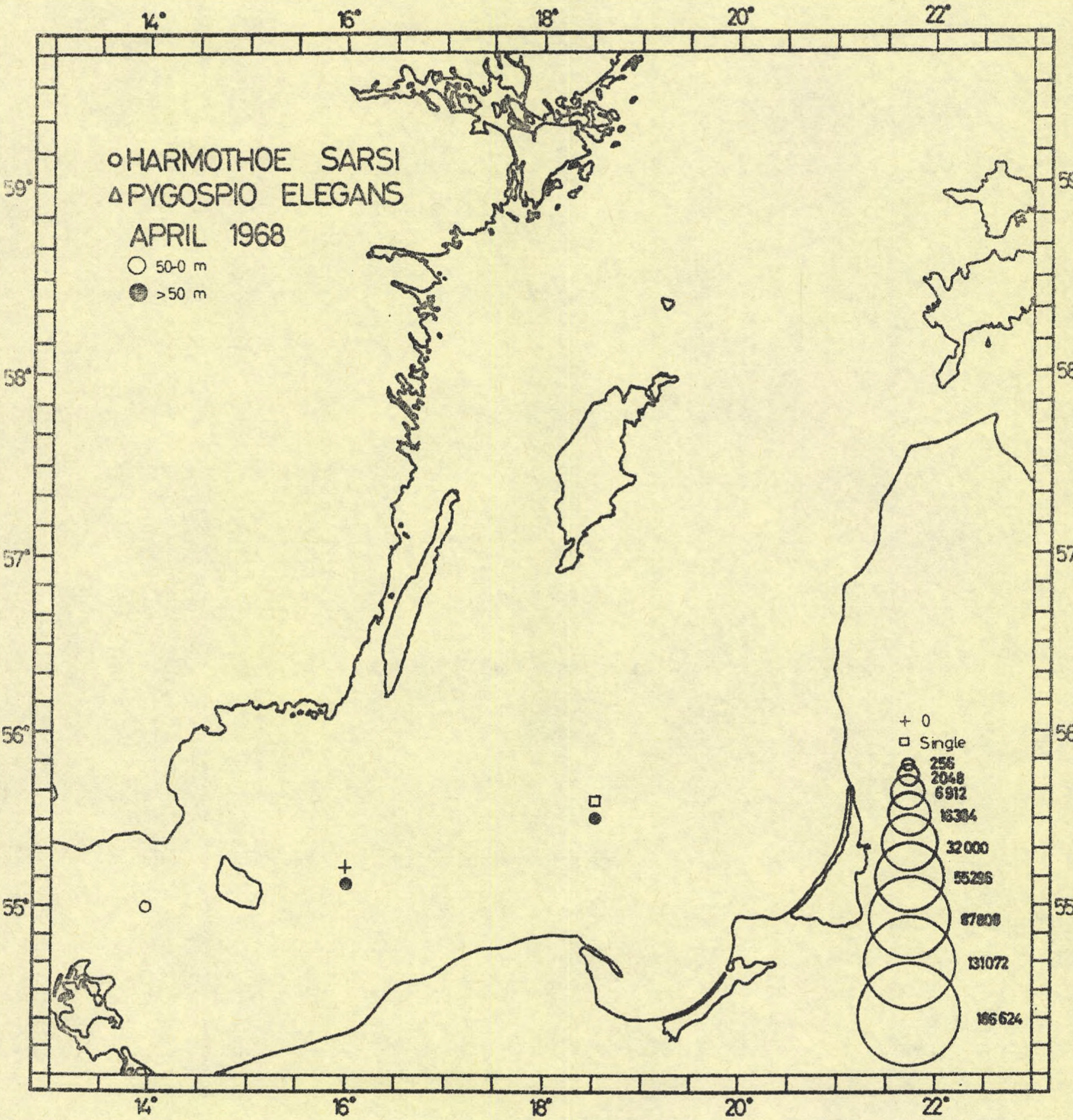
14°
16°
18°
20°
22°
SYNCHAETA SPP.
NOVEMBER 1968
50-0 m
>50 m
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 7.



14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
○HARMOTHOE SARSI
△PYGOSPIO ELEGANS
FEBRUARY 1968
50-0 m
>50 m
+ 0
□ Single
256
2048
6912
16384
32 000
55296
87808
131072
196 624

Fig 8.



14°
16°
18°
20°
22°
o HARMOTHOE SARSI
Δ PYGOSPIO ELEGANS
APRIL 1968
○ 50-0 m
● >50 m
59°
58°
57°
56°
55°
+ 0
□ Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 9.

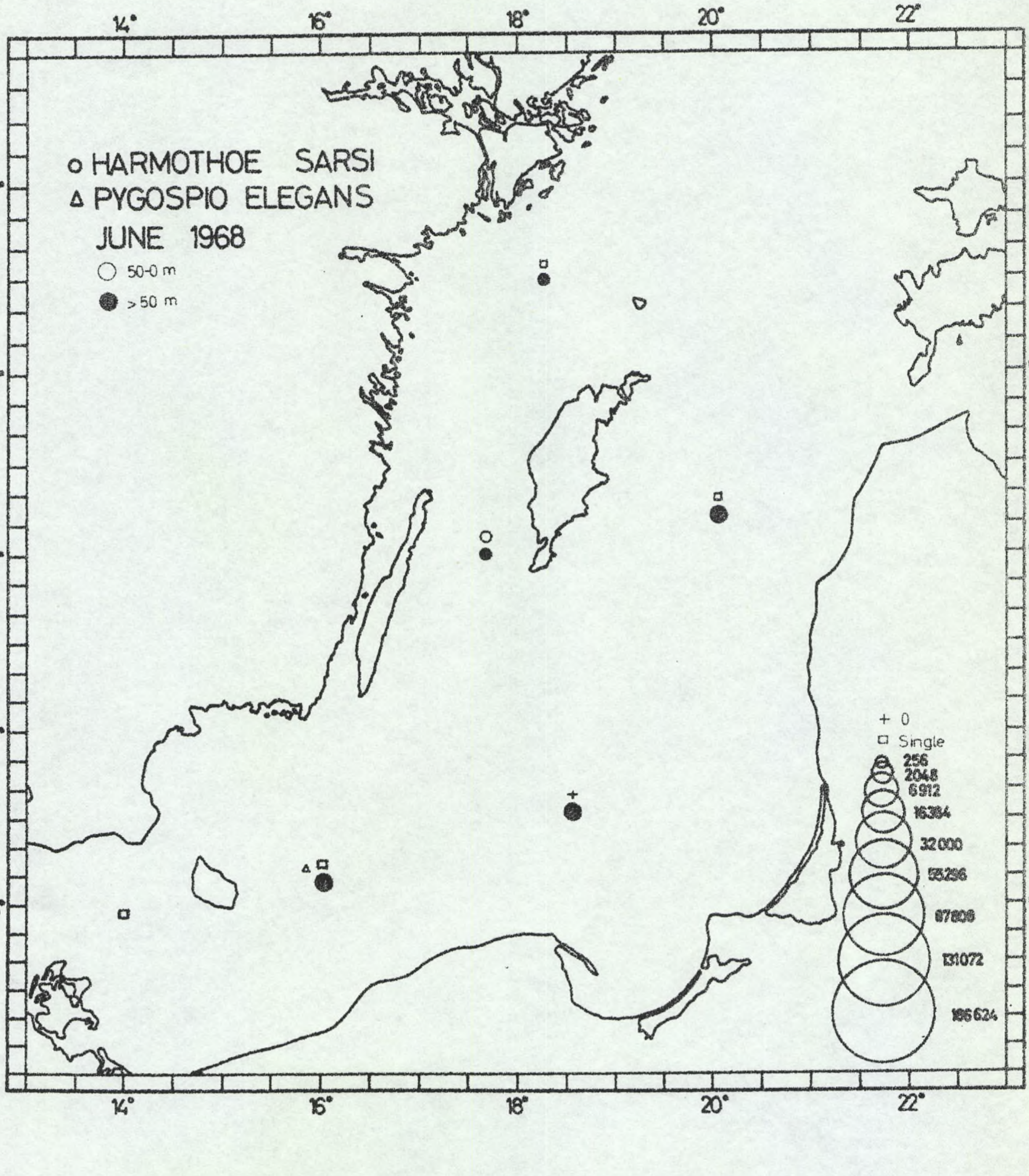
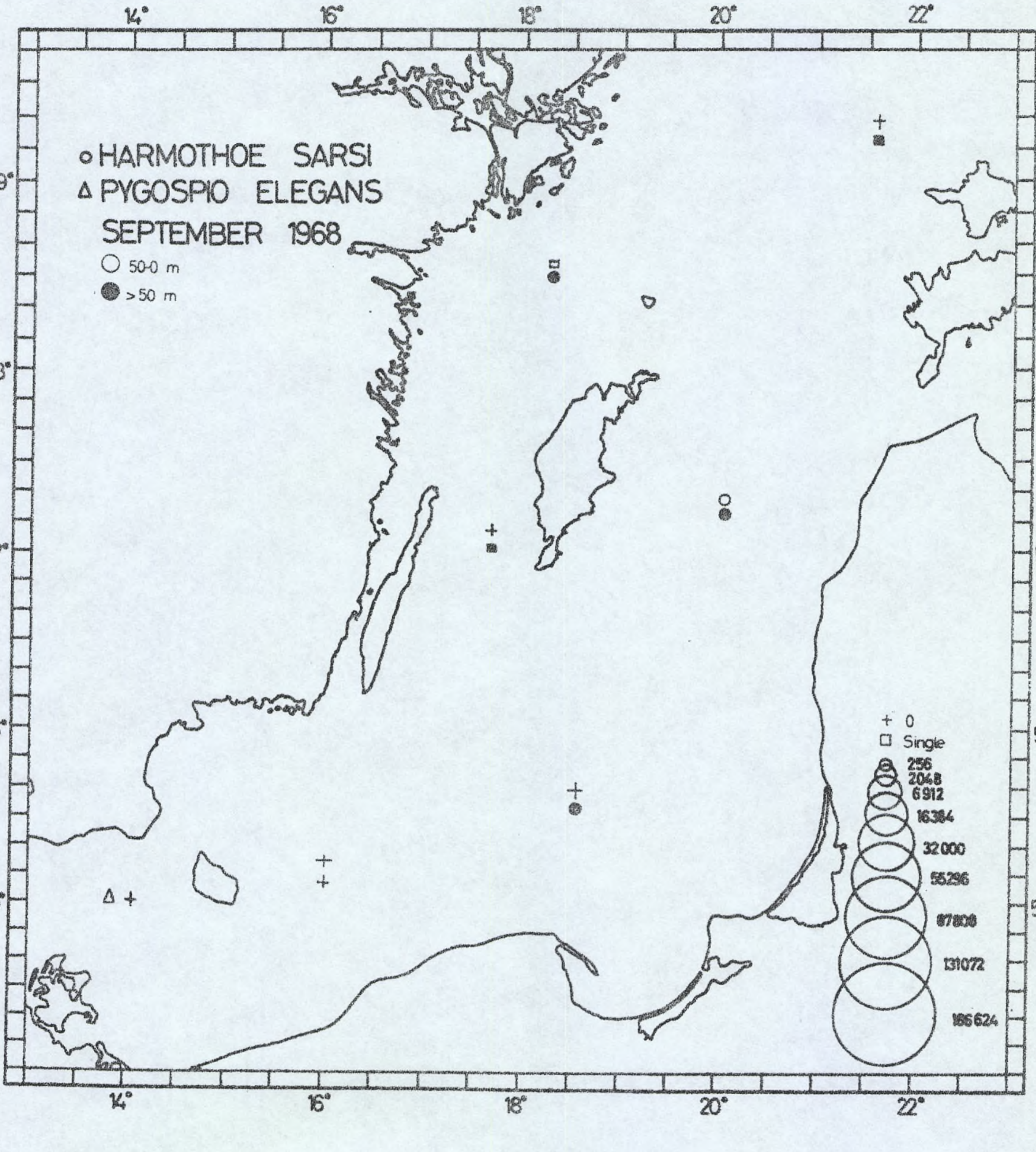
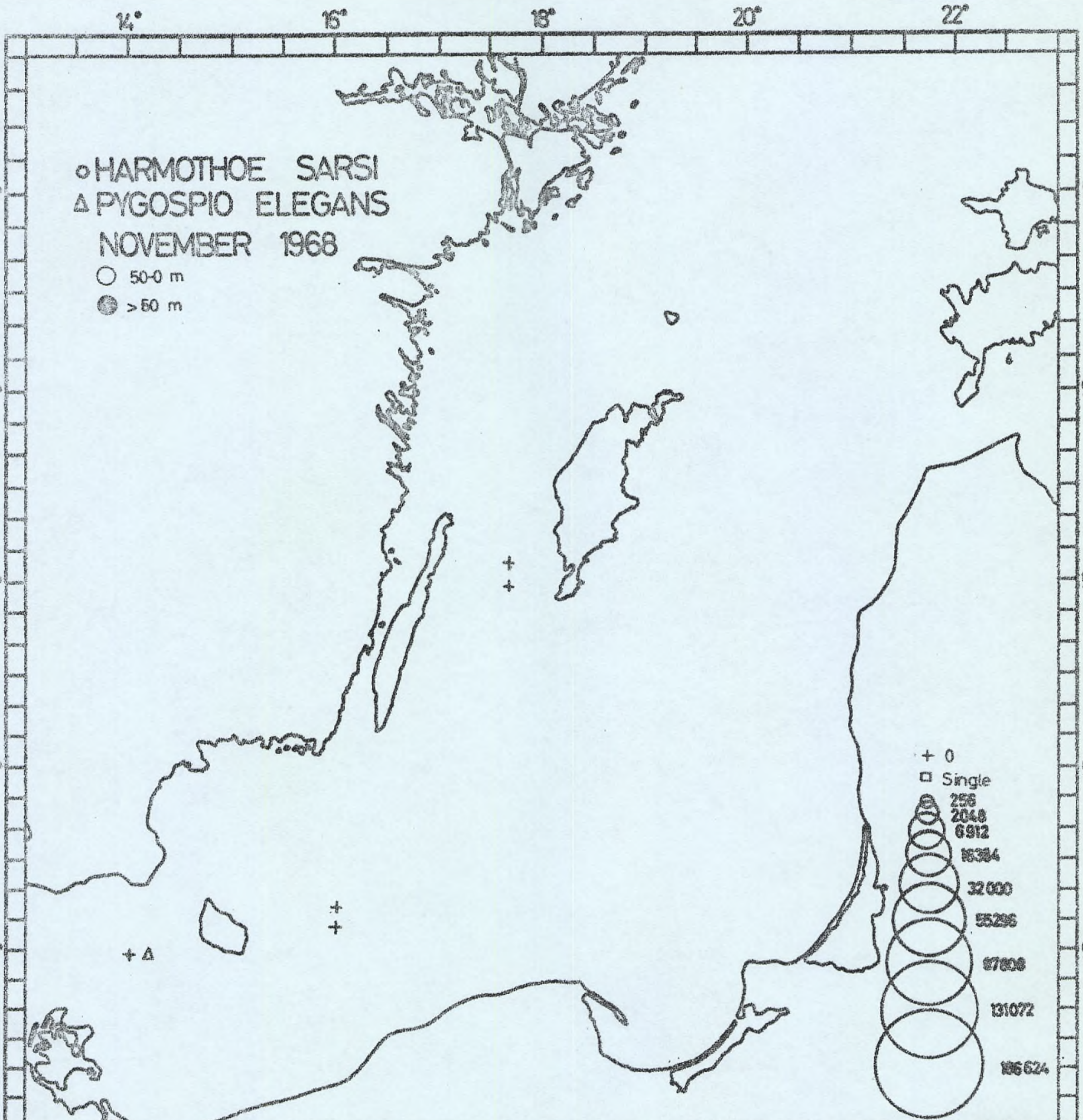

14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
o HARMOTHOE SARSI
Δ PYGOSPIO ELEGANS
JUNE 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 10.



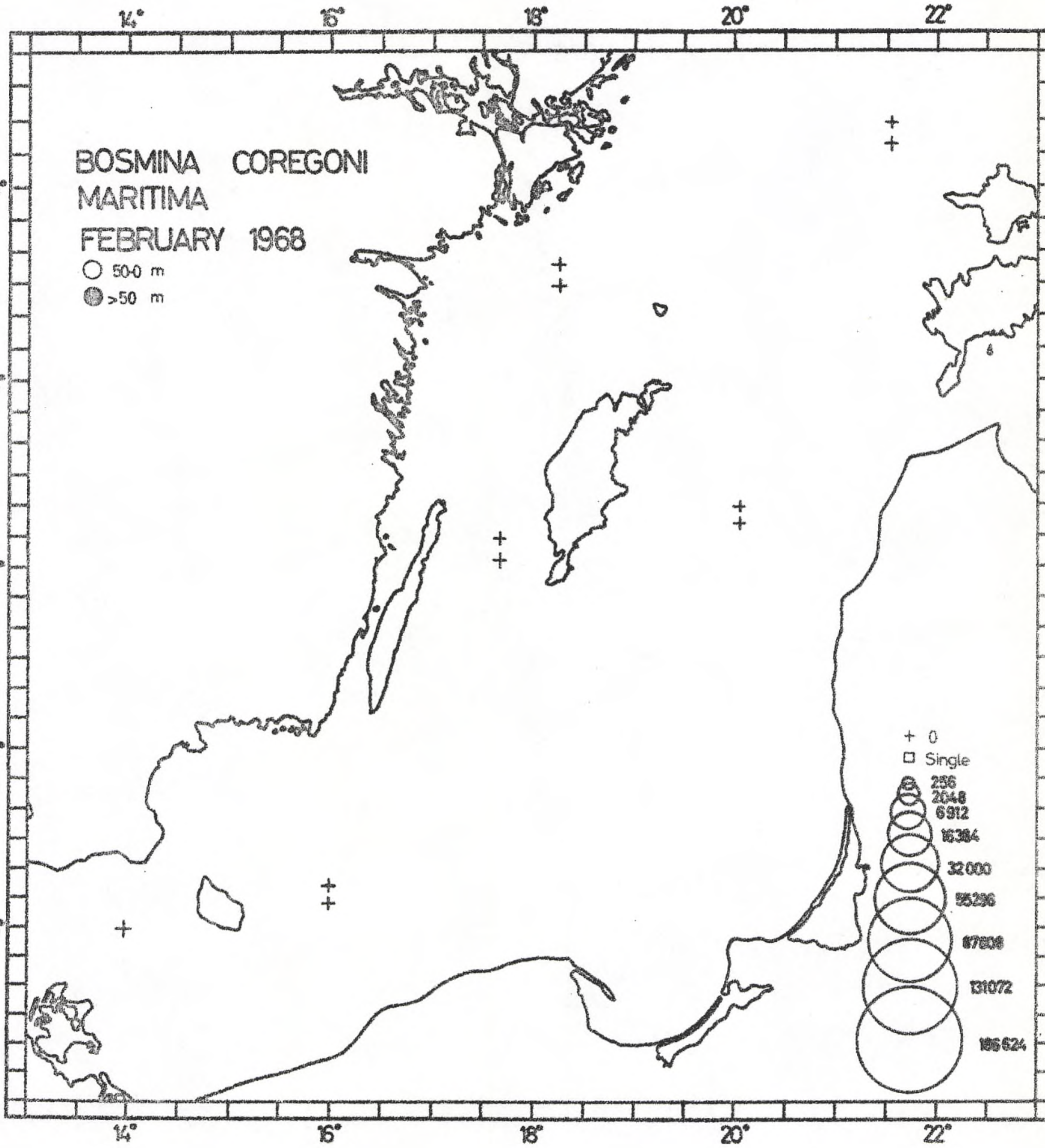
14°
16°
18°
20°
22°
o HARMOTHOE SARSI
Δ PYGOSPIO ELEGANS
SEPTEMBER 1968
○ 50-0 m
● >50 m
59°
58°
57°
56°
55°
+ 0
□ Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 11.



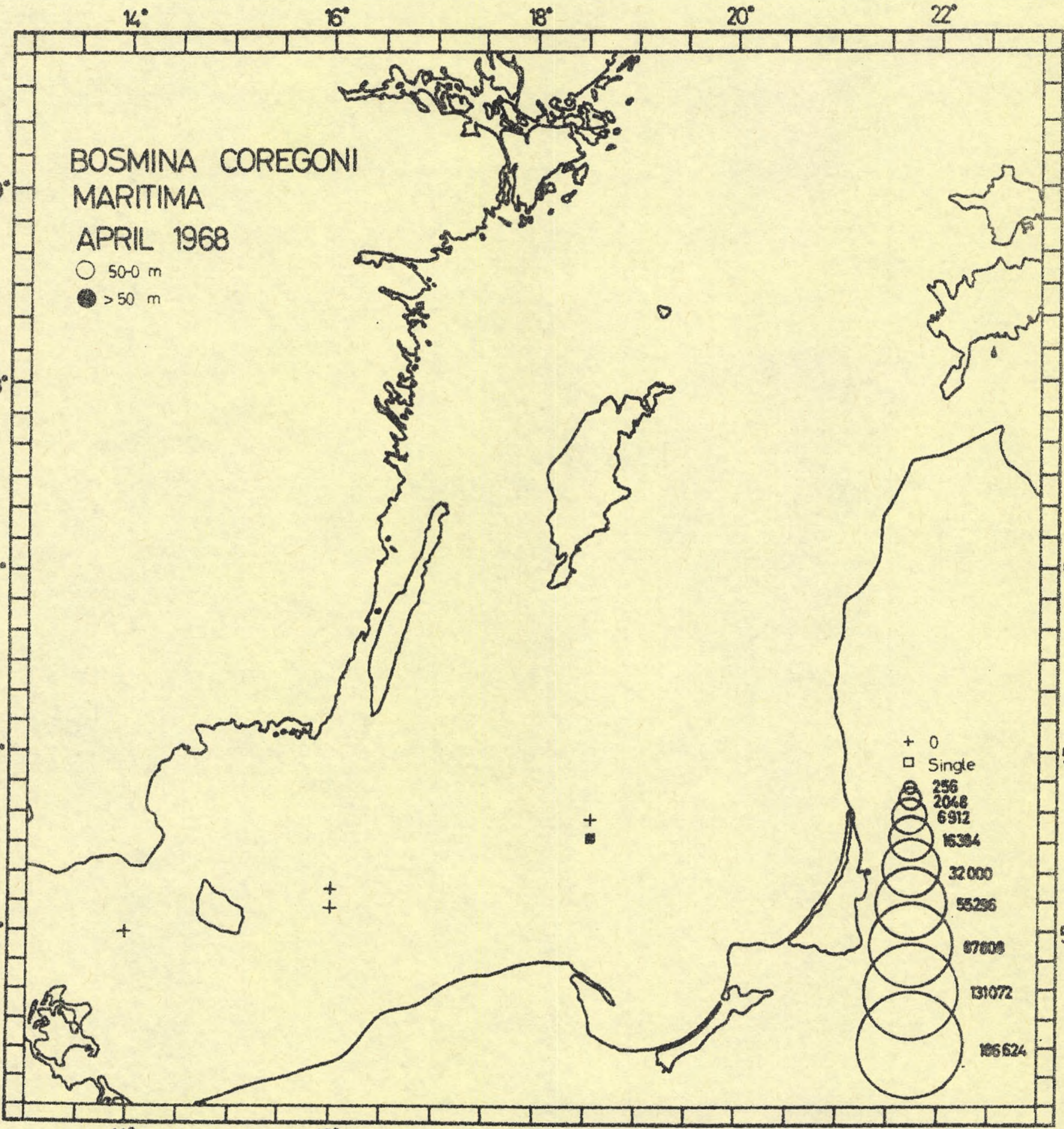
14°
16°
18°
20°
22°
o HARMOTHOE SARSI
Δ PYGOSPIO ELEGANS
NOVEMBER 1968
50-0 m
> 50 m
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 12.



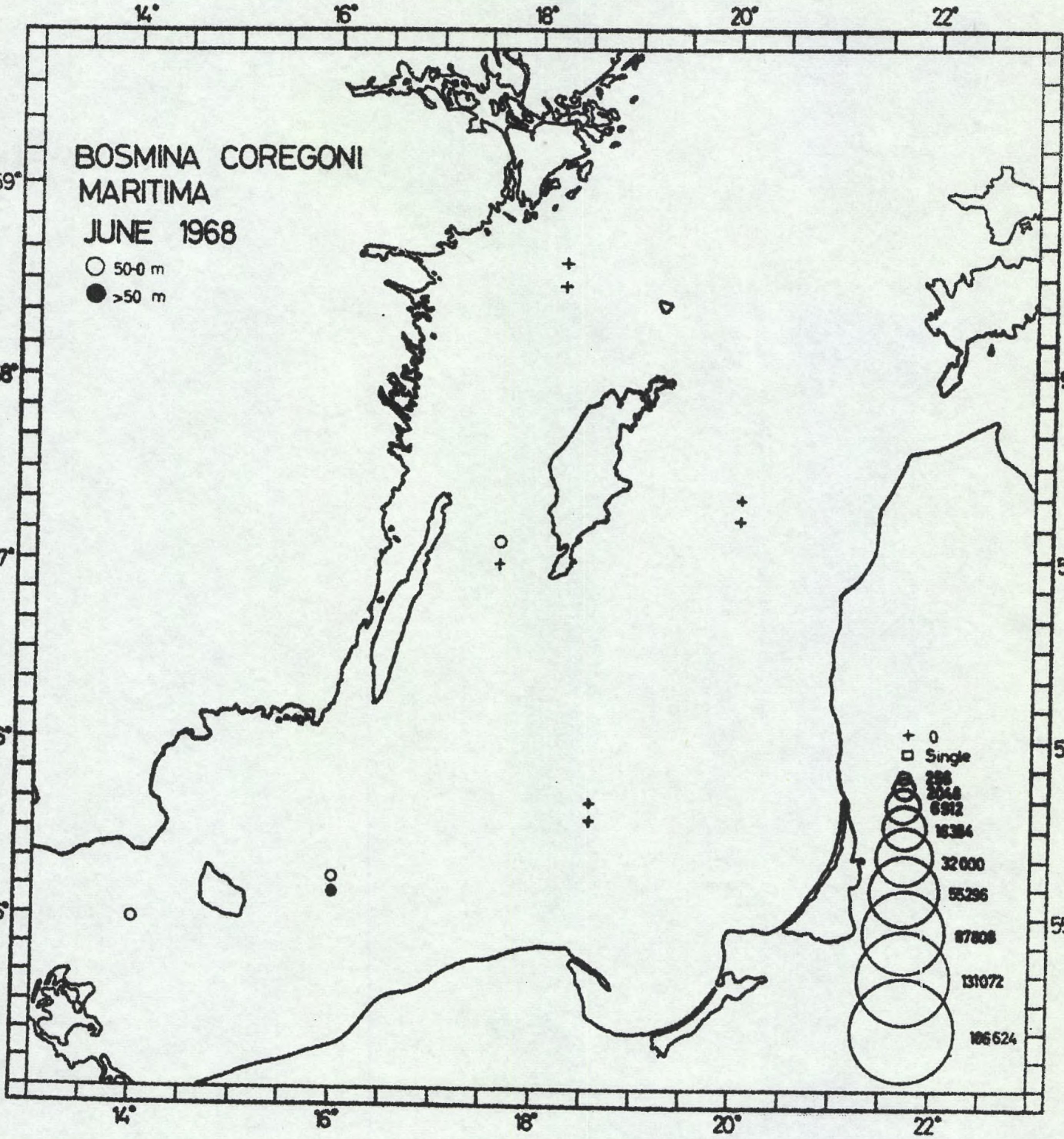
BOSMINA COREGONI
MARITIMA
FEBRUARY 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 13.



BOSMINA COREGONI
MARITIMA
APRIL 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 14.



BOSMINA COREGONI
MARITIMA
JUNE 1968
50-0 m
>50 m
+ 0
Single
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 15.

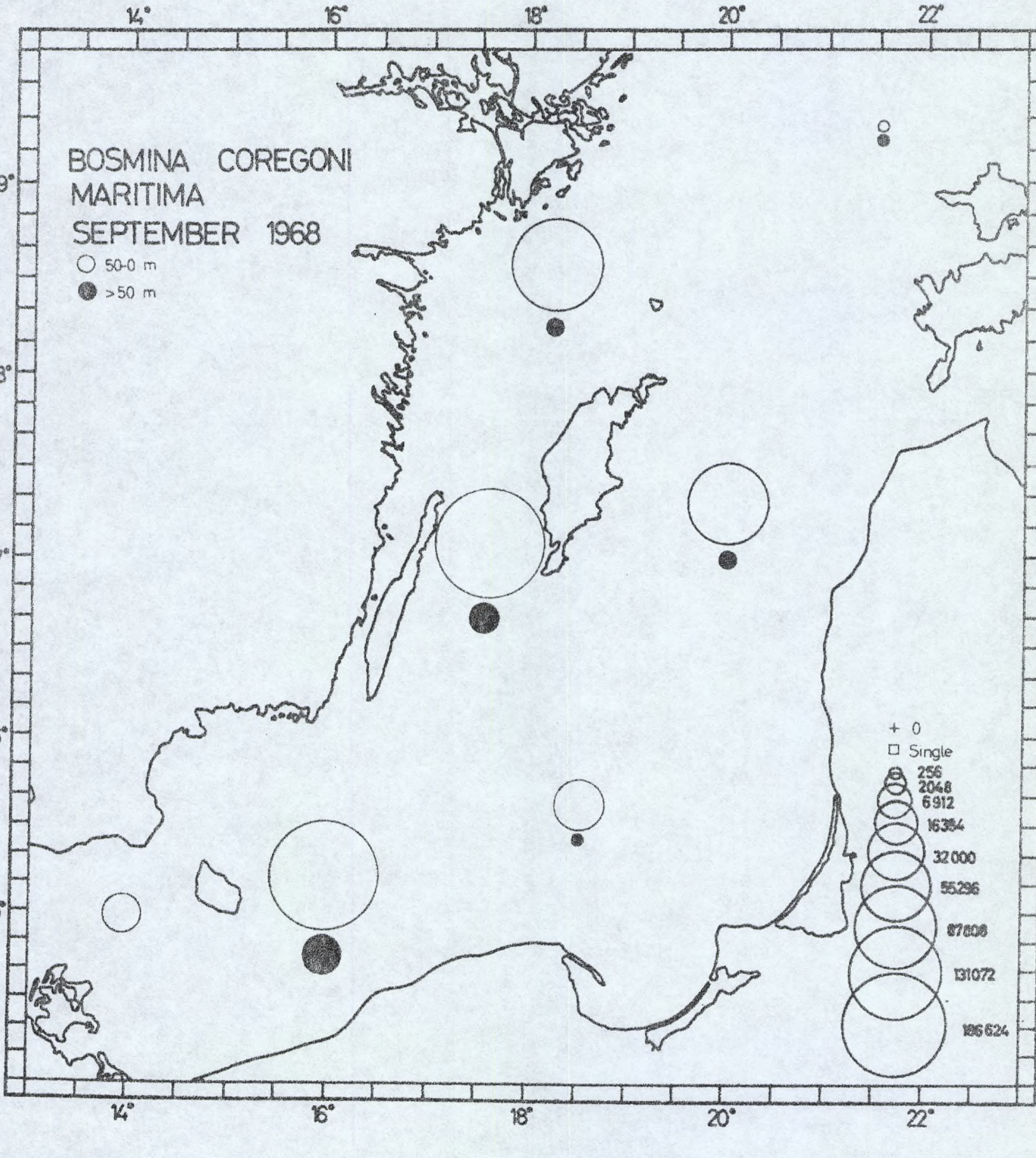
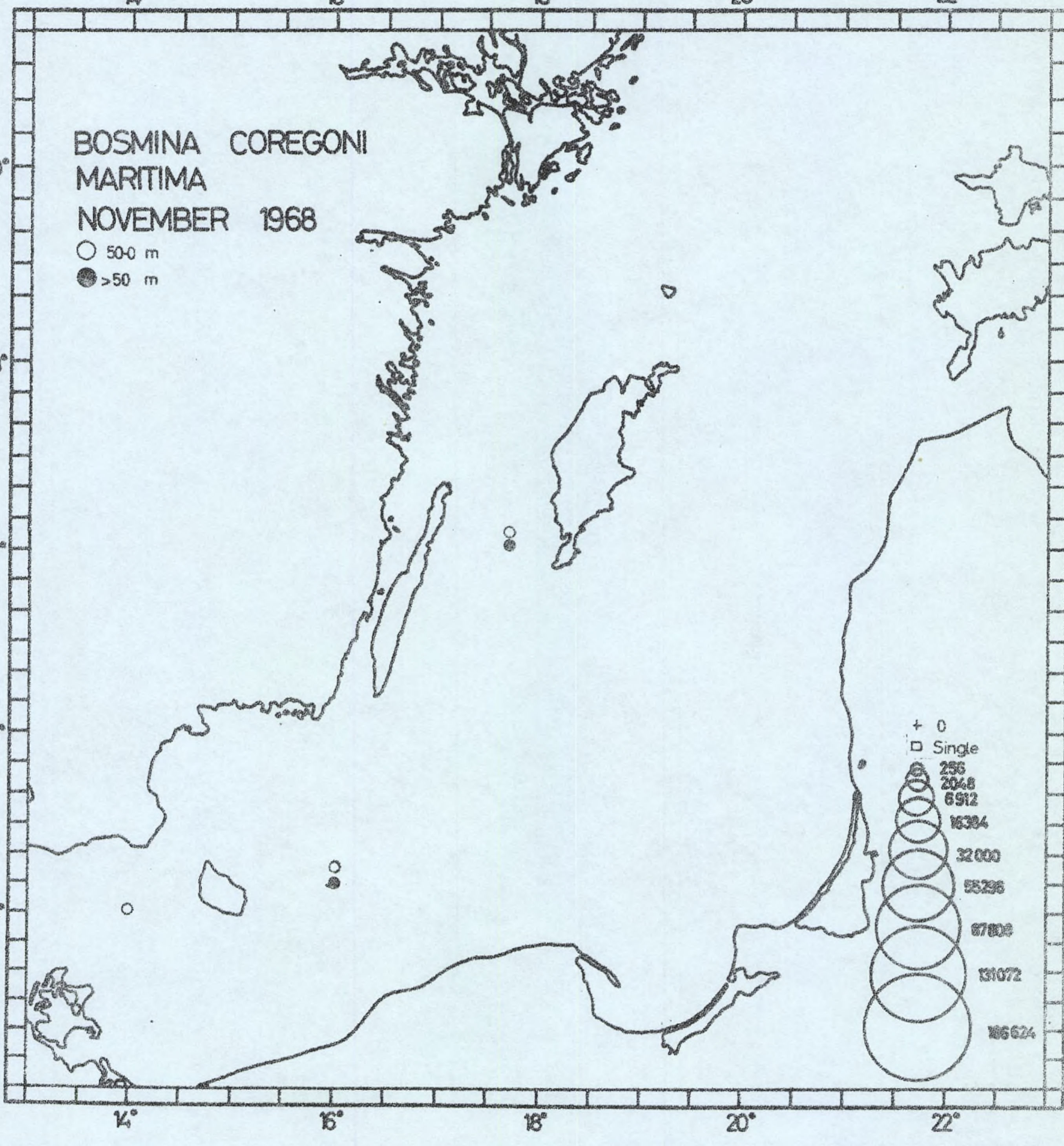
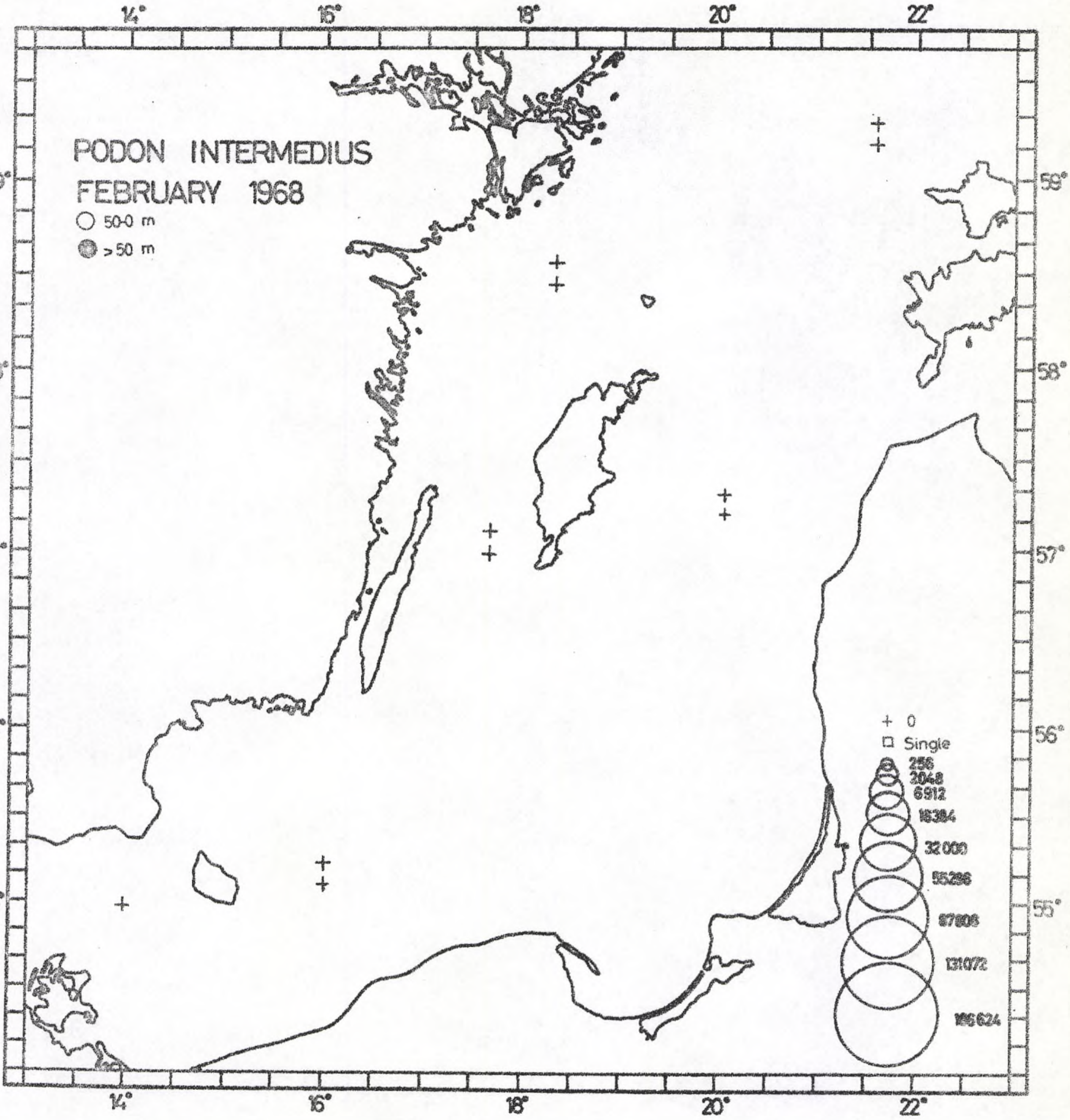

BOSMINA COREGONI
MARITIMA
SEPTEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 16.



BOSMINA COREGONI
MARITIMA
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 17.



PODON INTERMEDIUS
FEBRUARY 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 18.

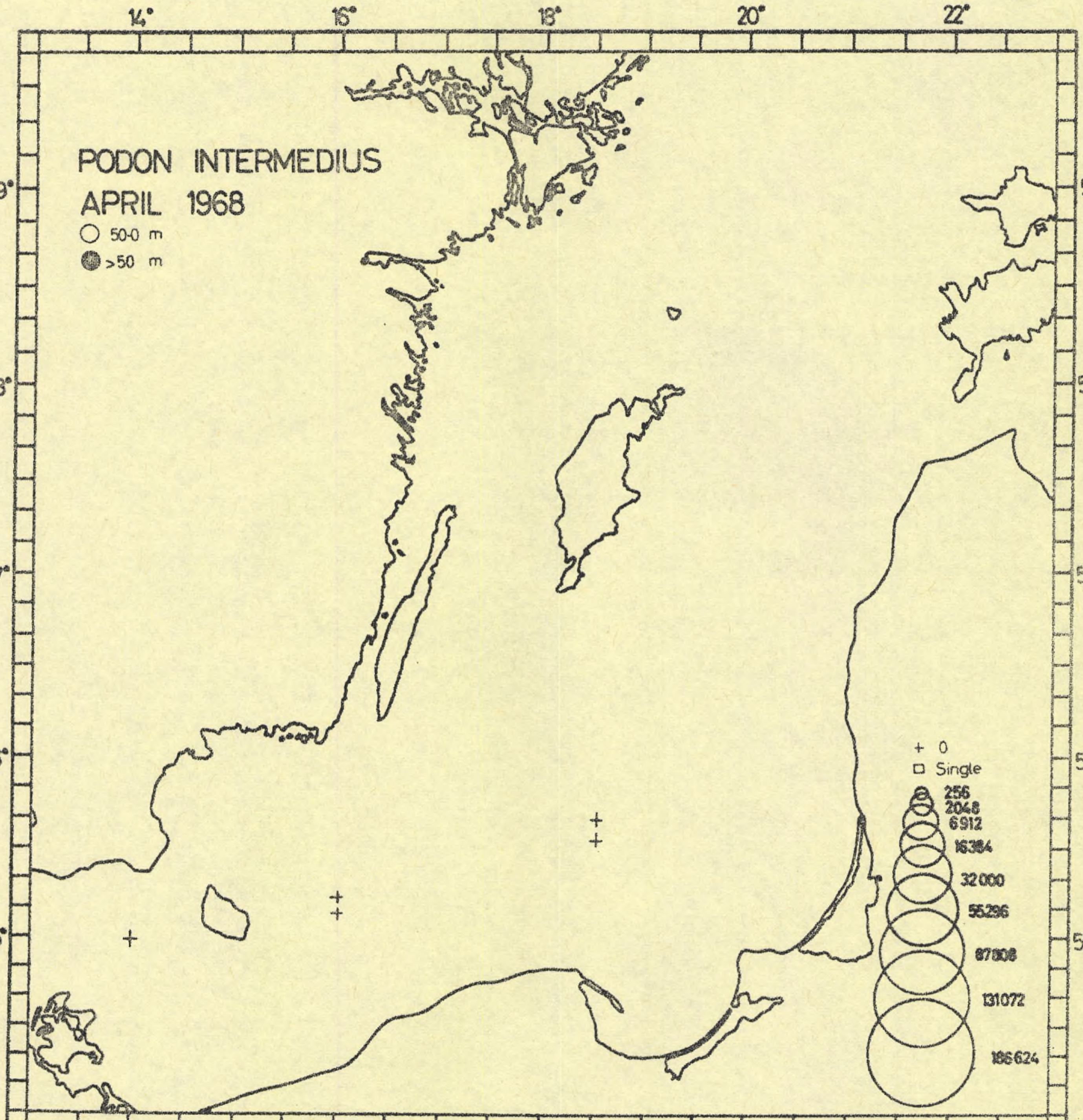

PODON INTERMEDIUS
APRIL 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 19.

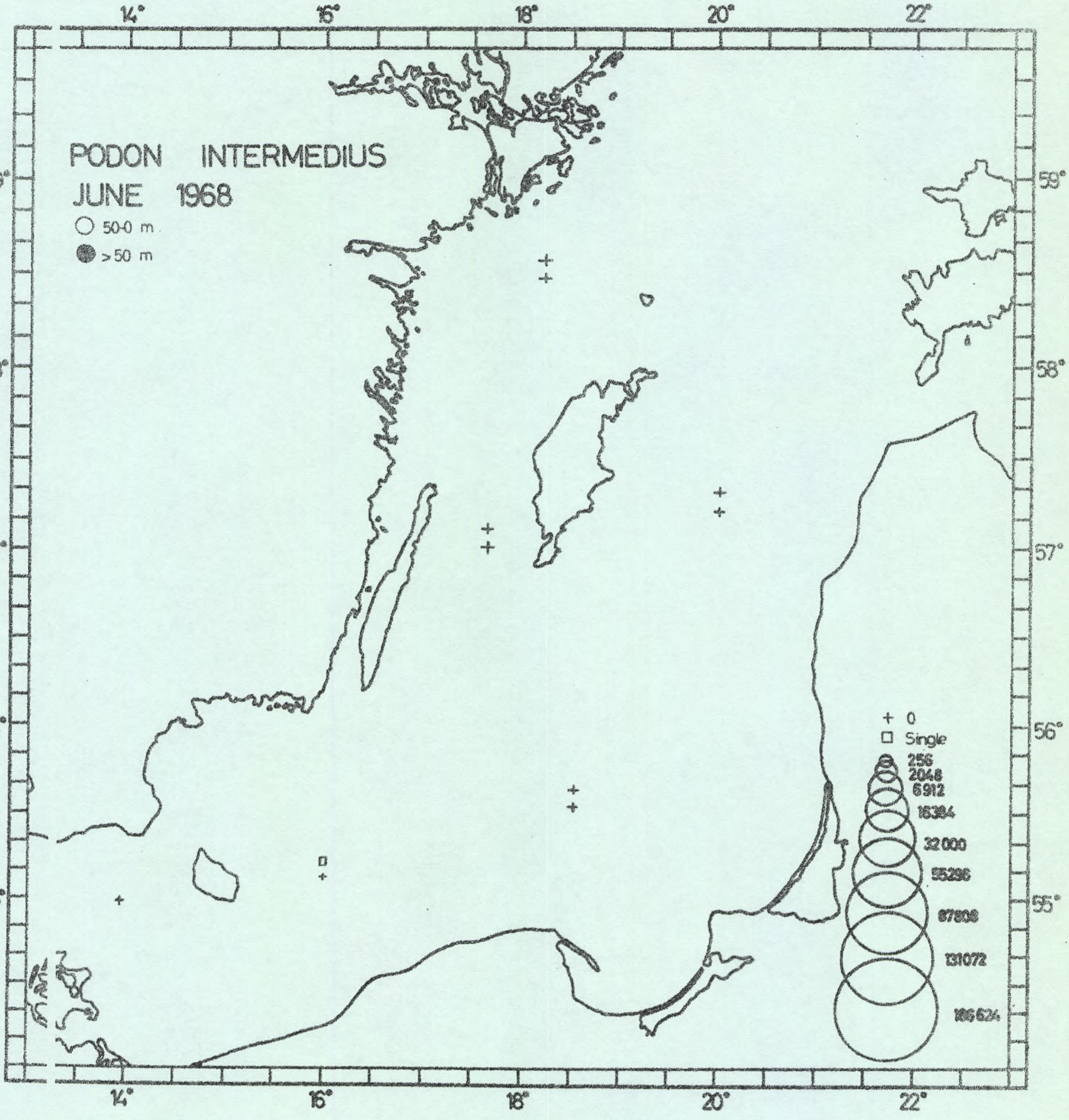

PODON INTERMEDIUS
JUNE 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 20.

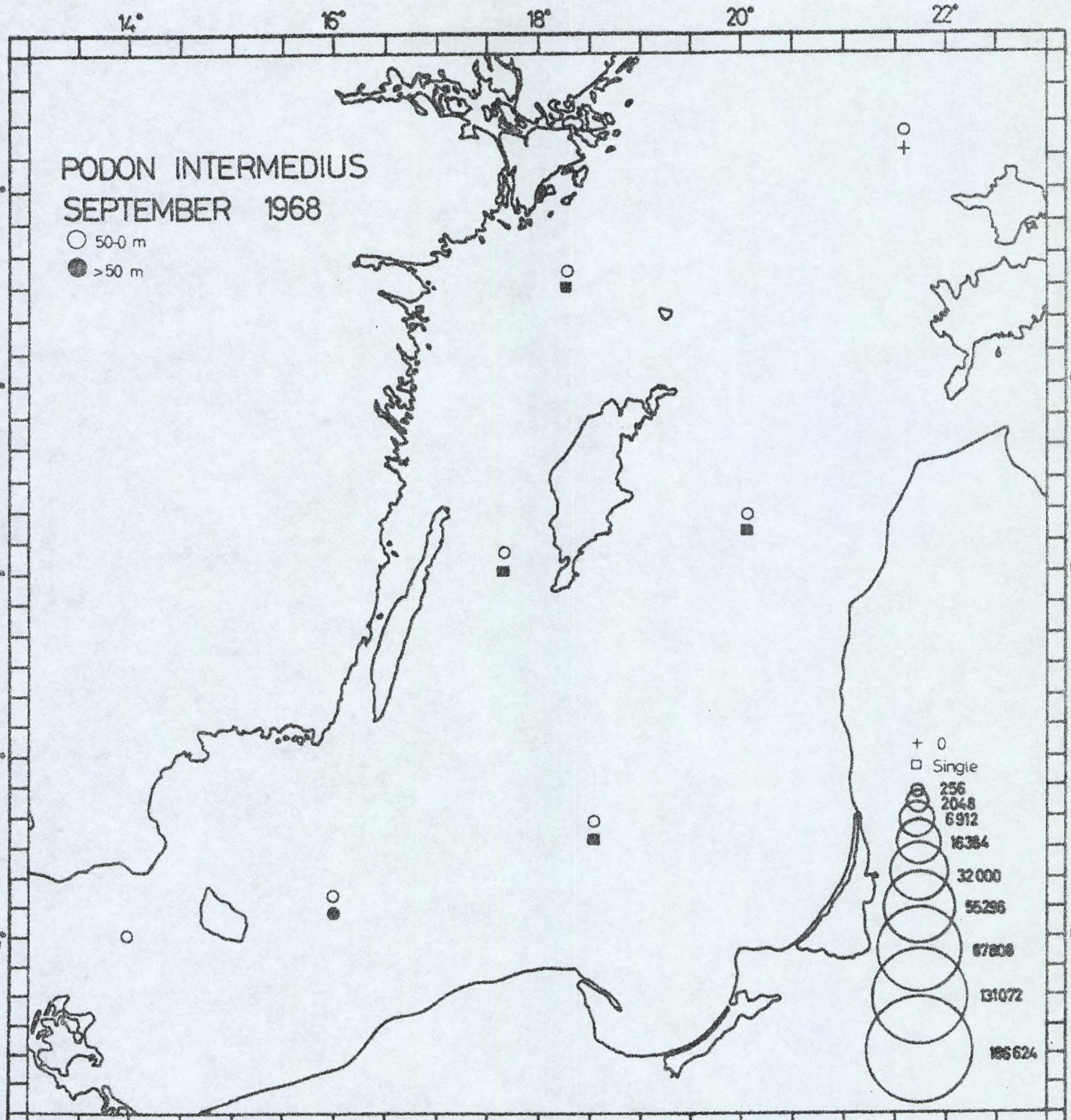
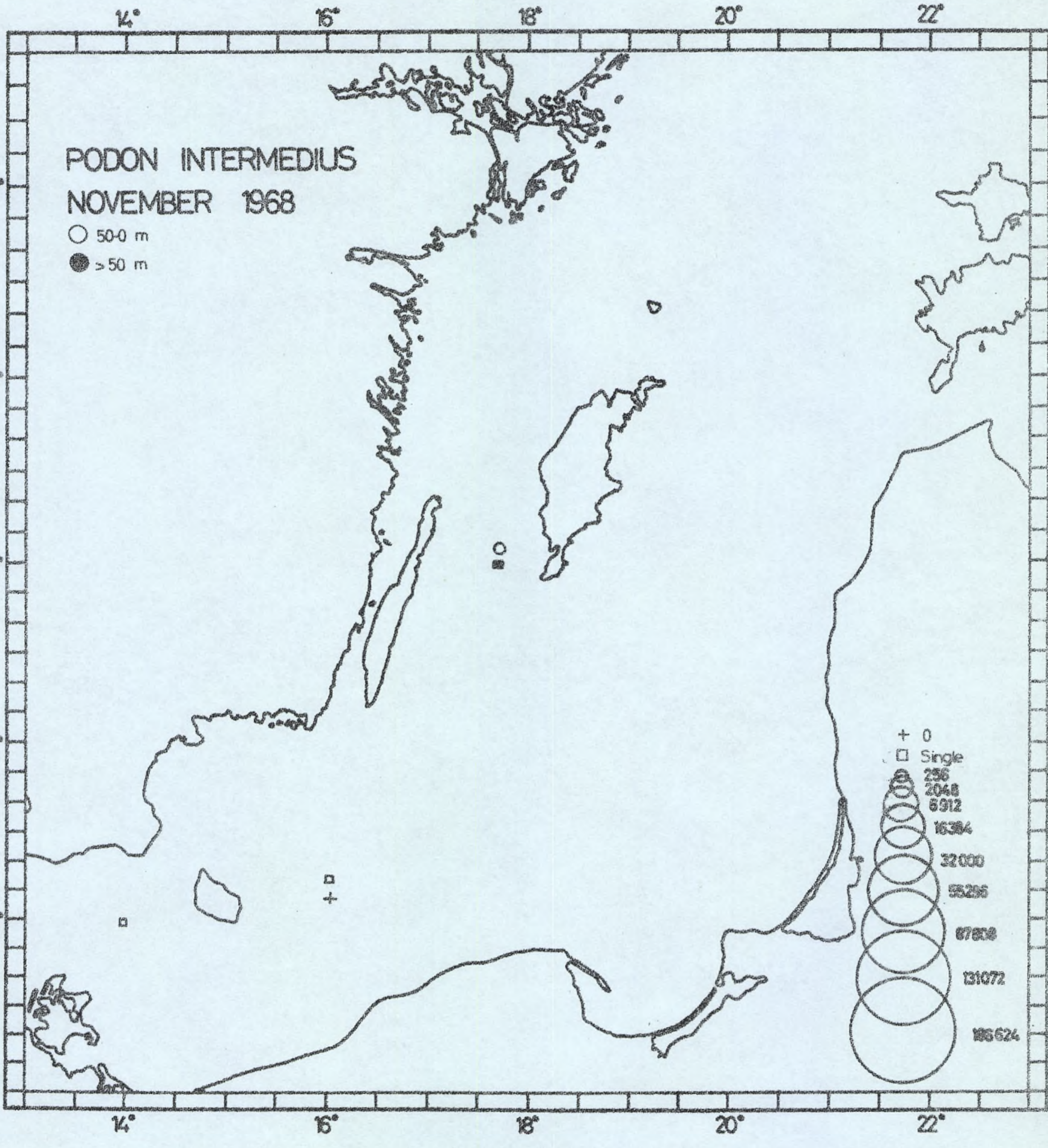

PODON INTERMEDIUS
SEPTEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 21.



PODON INTERMEDIUS
NOVEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

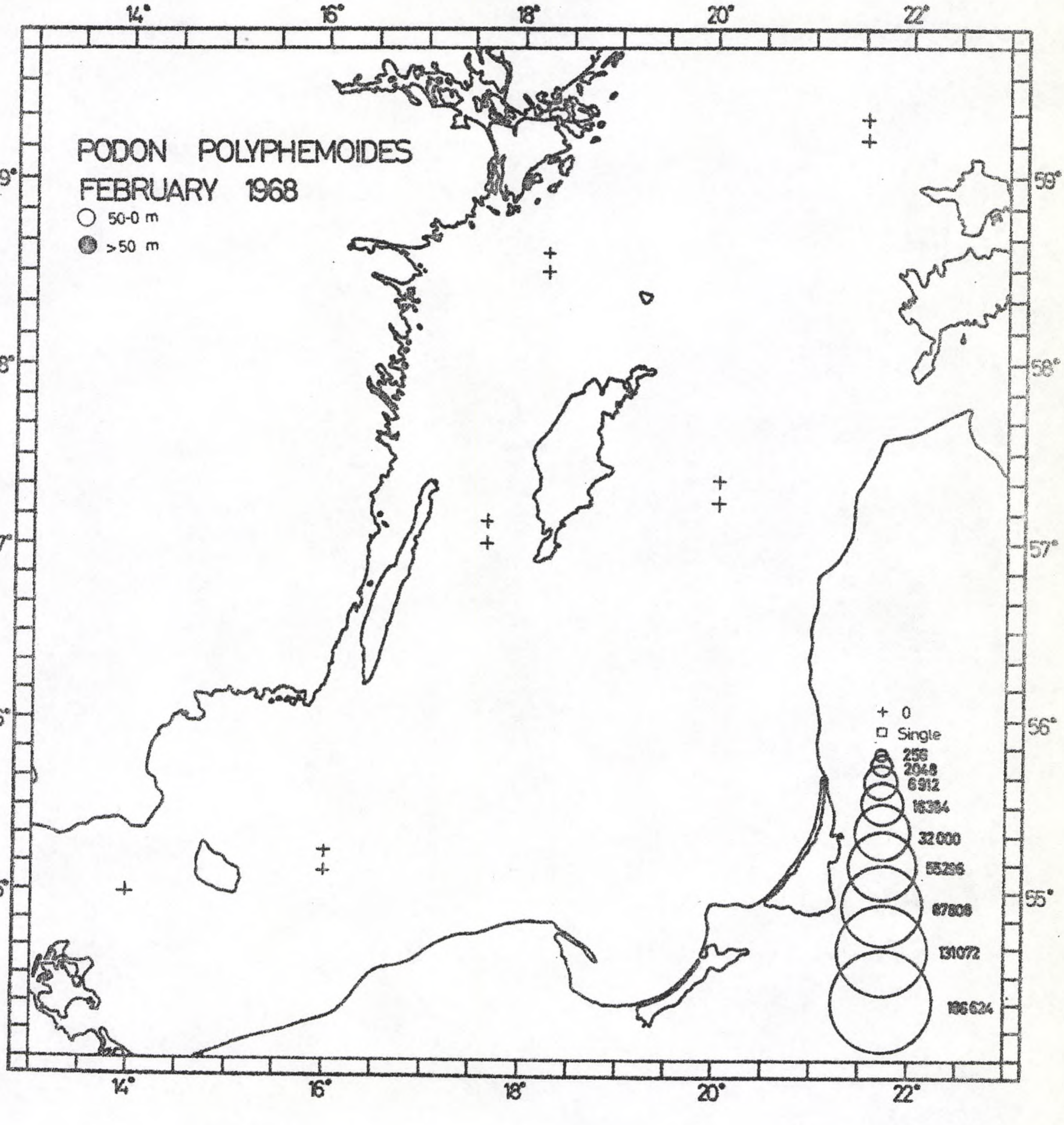
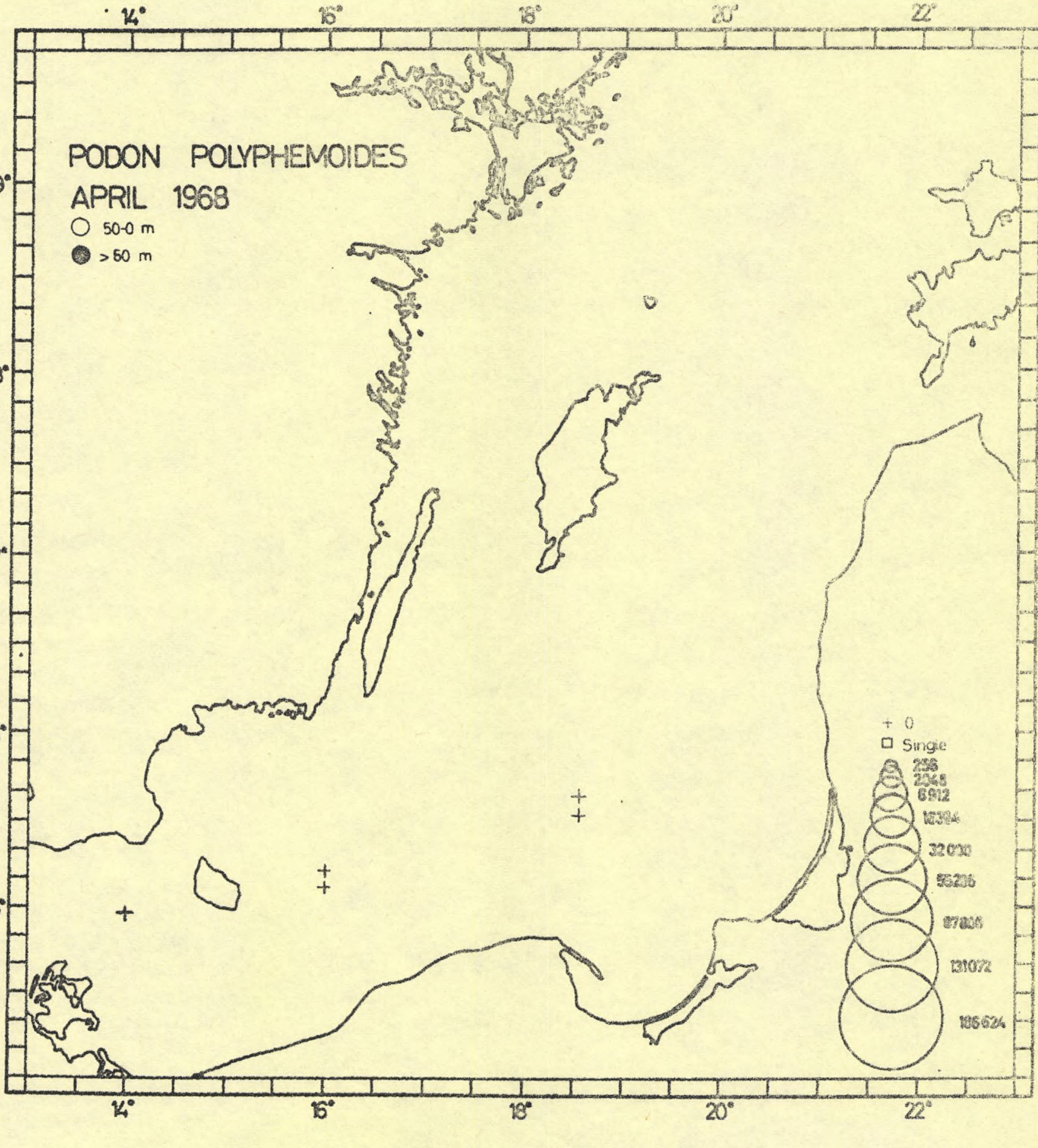
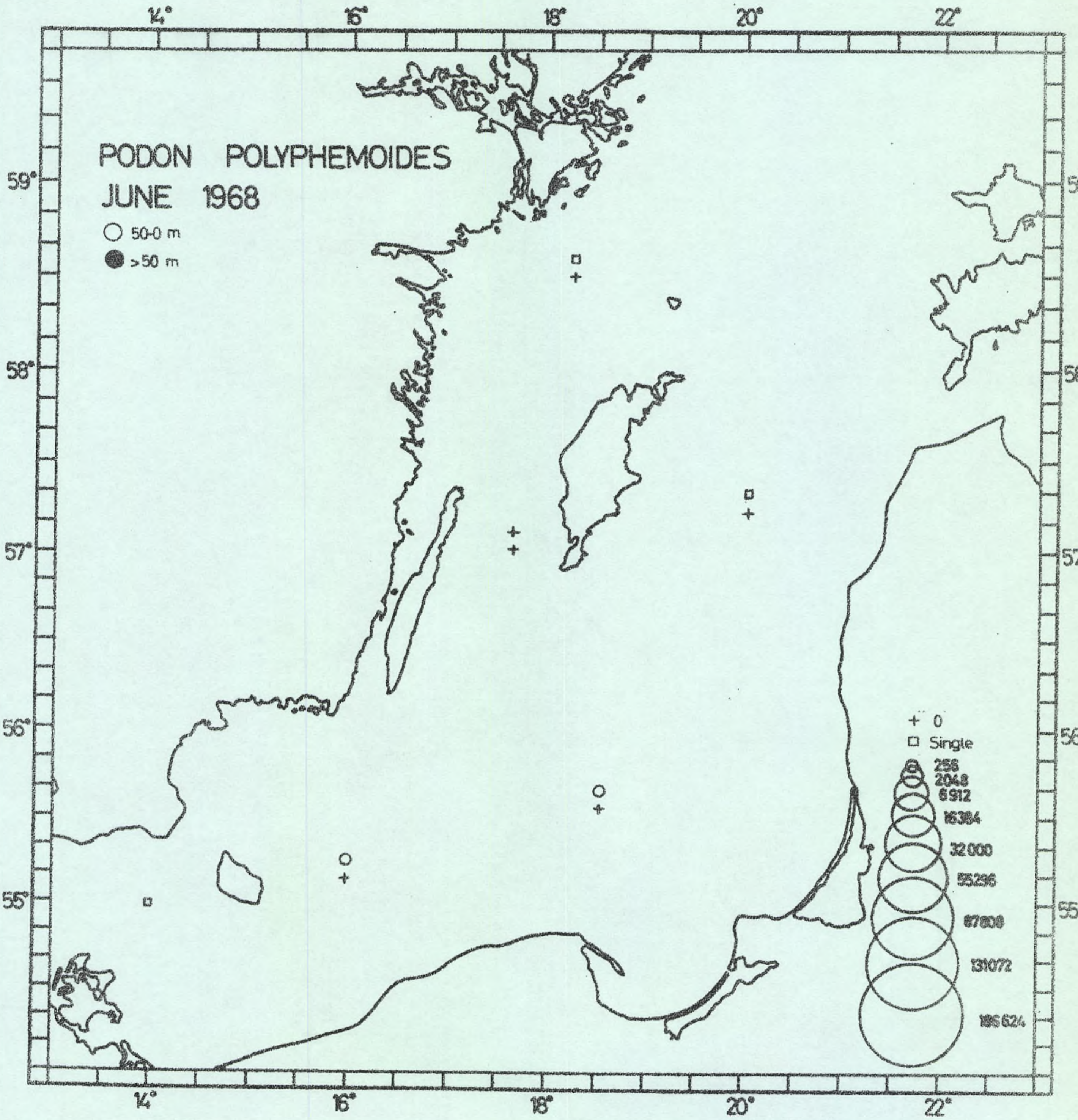

PODON POLYPHEMOIDES
FEBRUARY 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6 912
16384
32 000
55296
87808
131072
186 624

Fig 23.



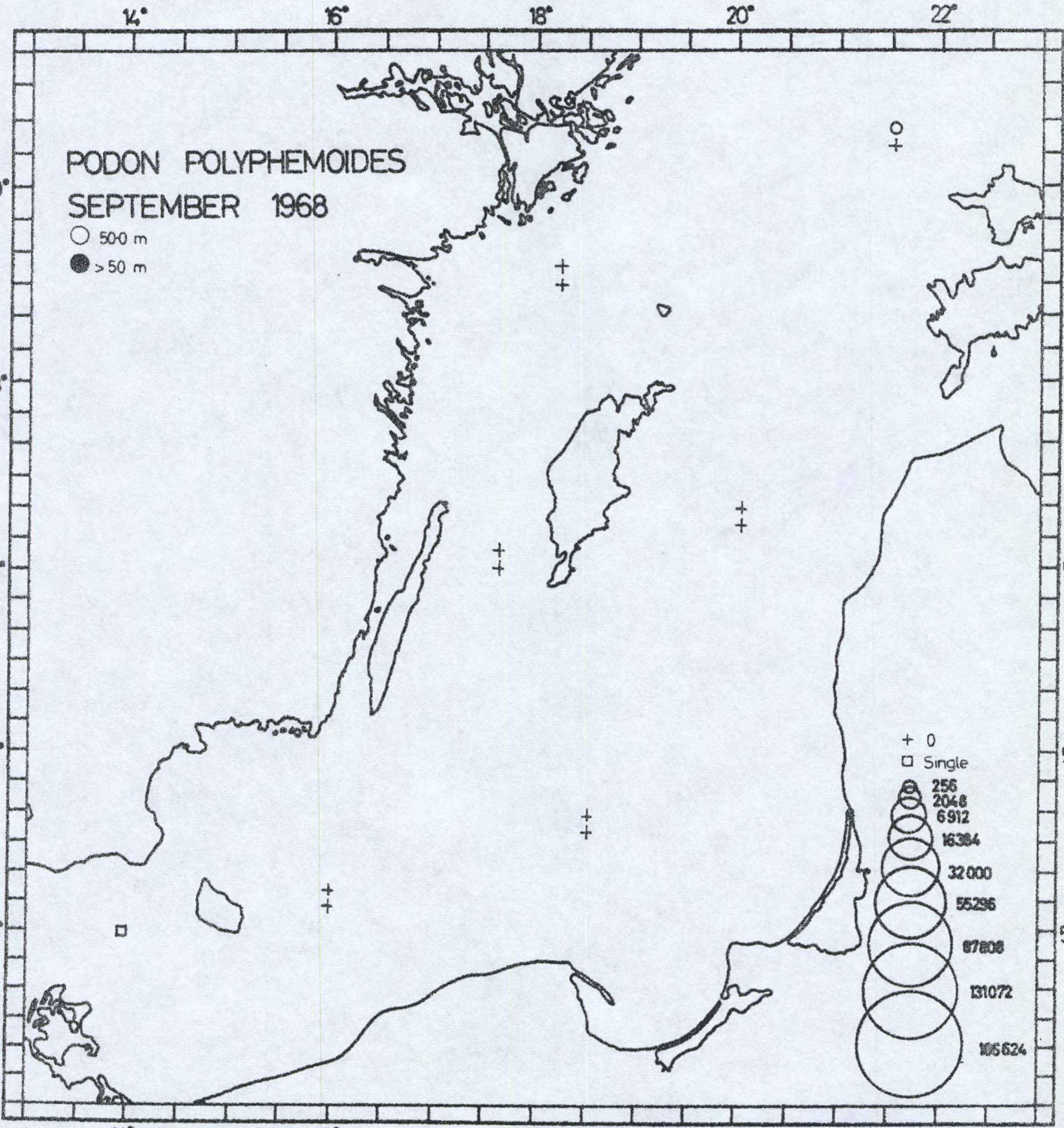
PODON POLYPHEMOIDES
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 24.



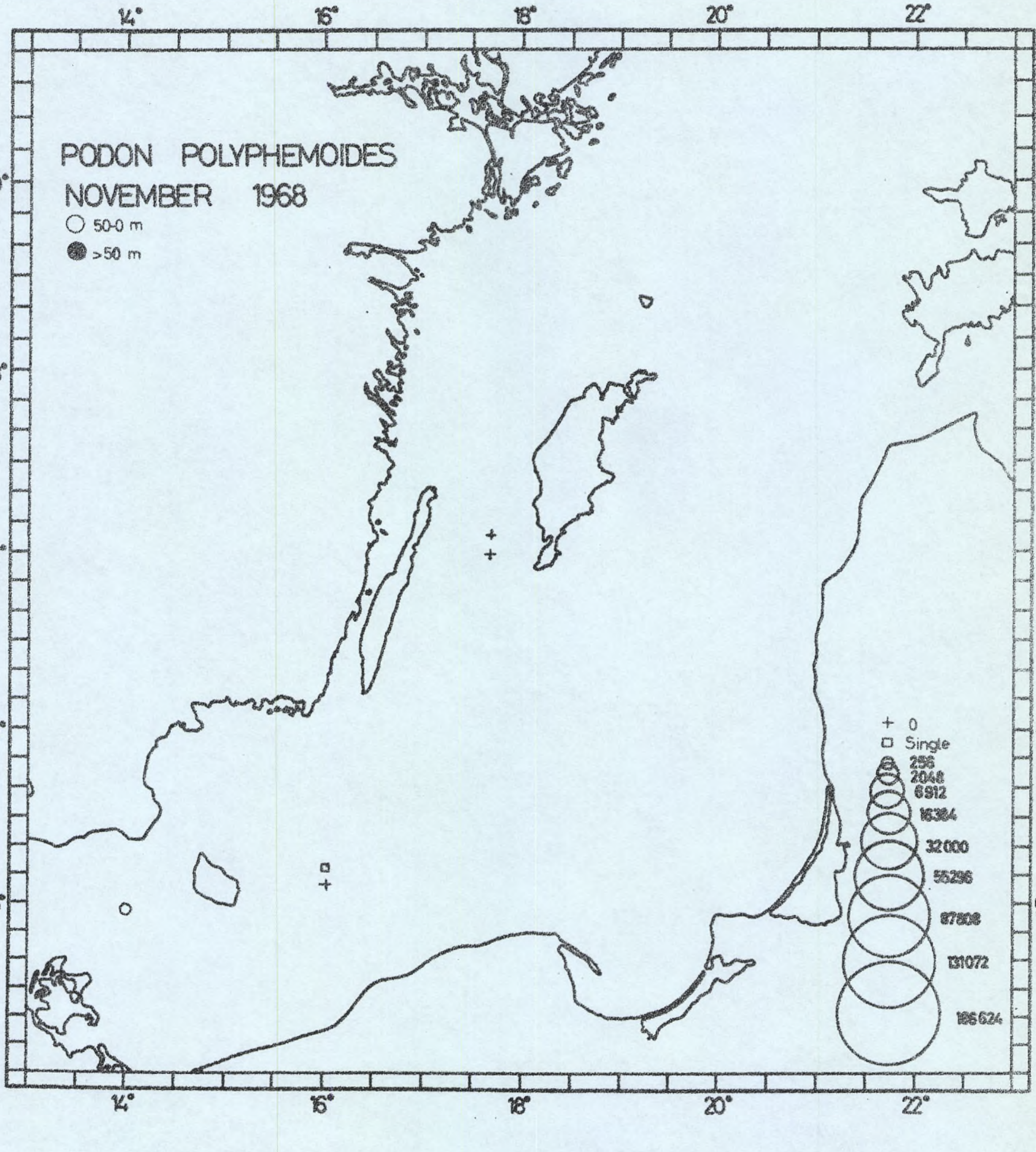
PODON POLYPHEMOIDES
JUNE 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 25.



PODON POLYPHEMOIDES
SEPTEMBER 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
195624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 26.



PODON POLYPHEMOIDES
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

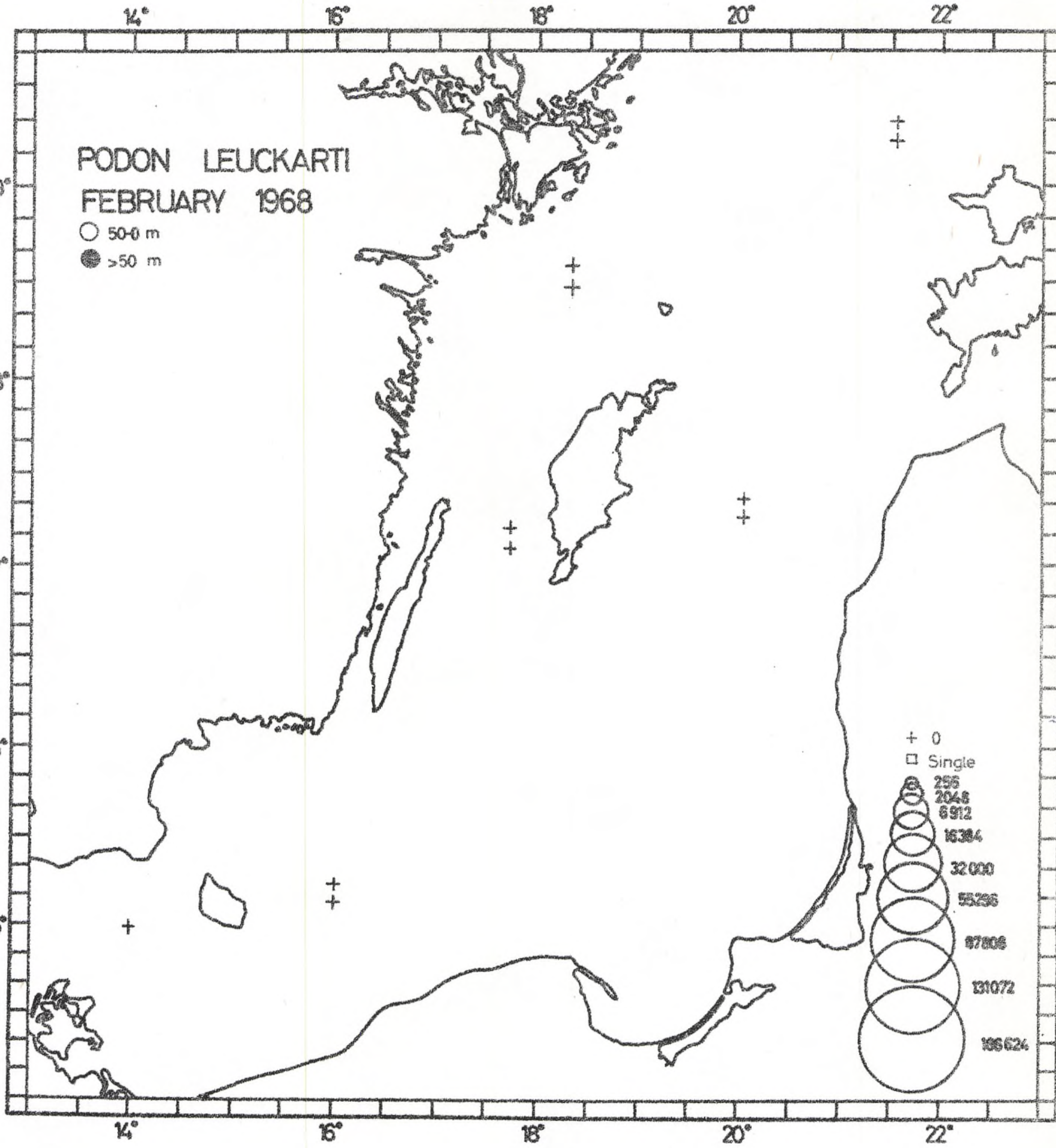
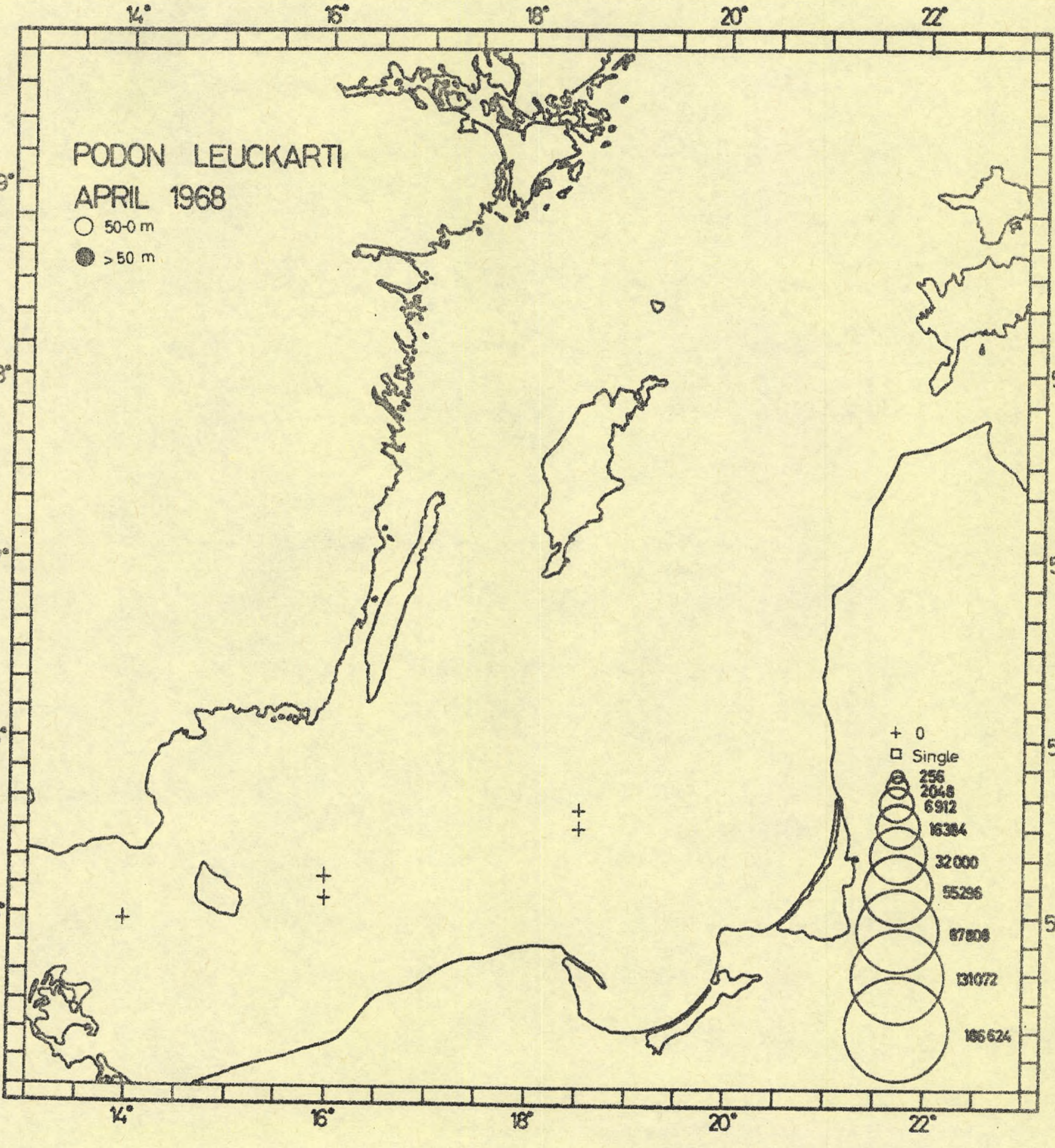

PODON LEUCKARTI
FEBRUARY 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 28.



PODON LEUCKARTI
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 29.

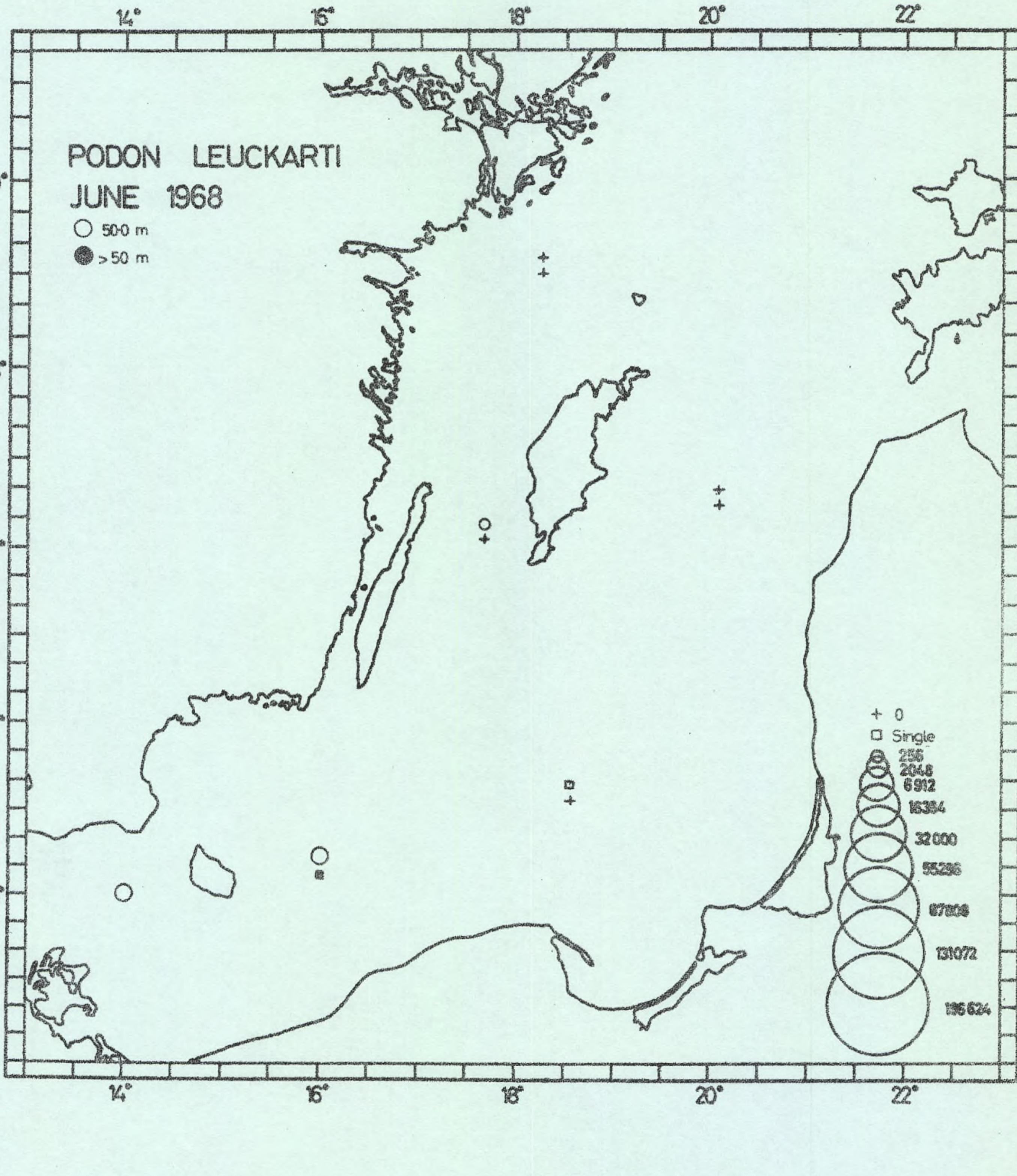

PODON LEUCKARTI
JUNE 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196624

Fig 30.

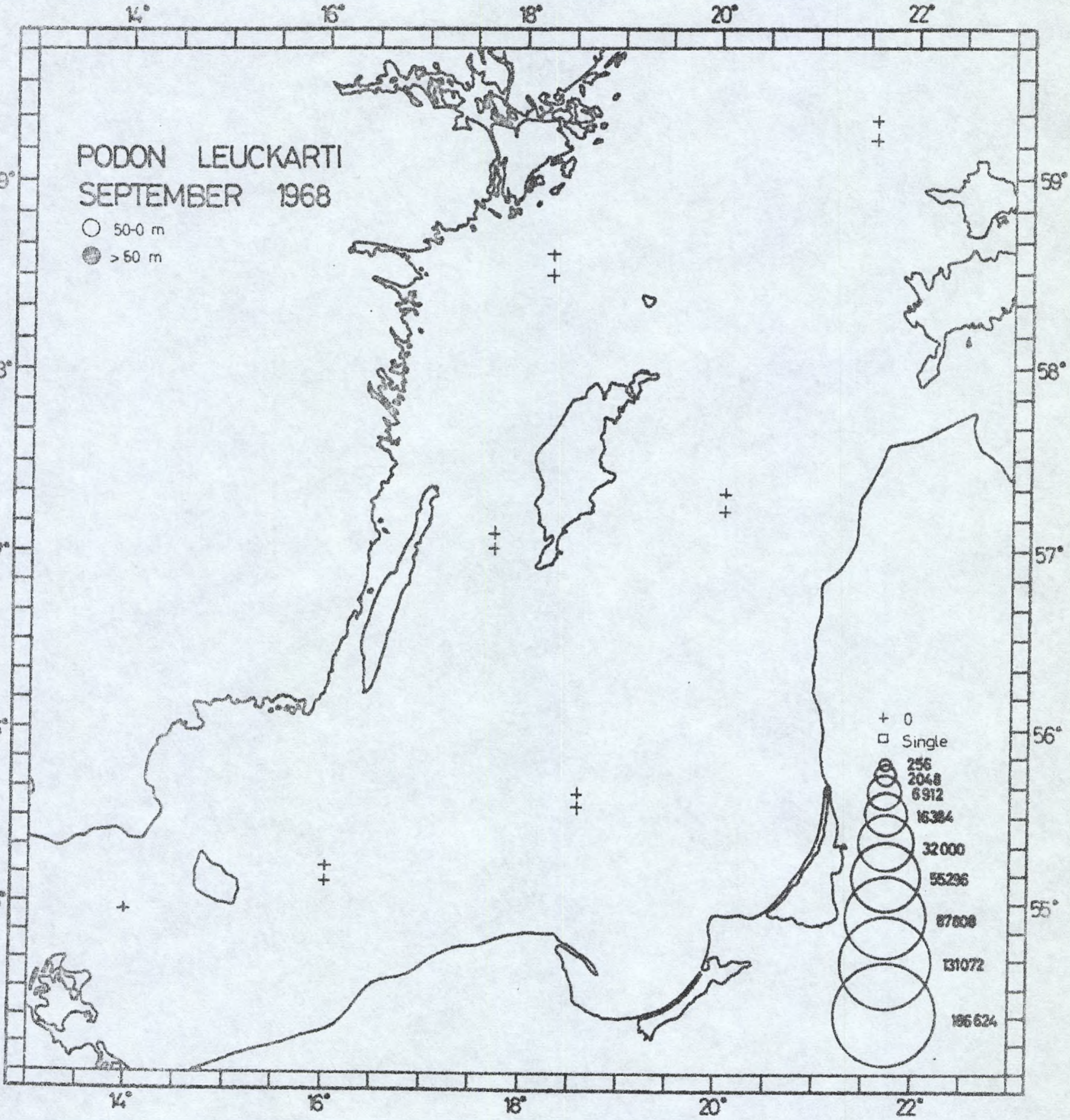
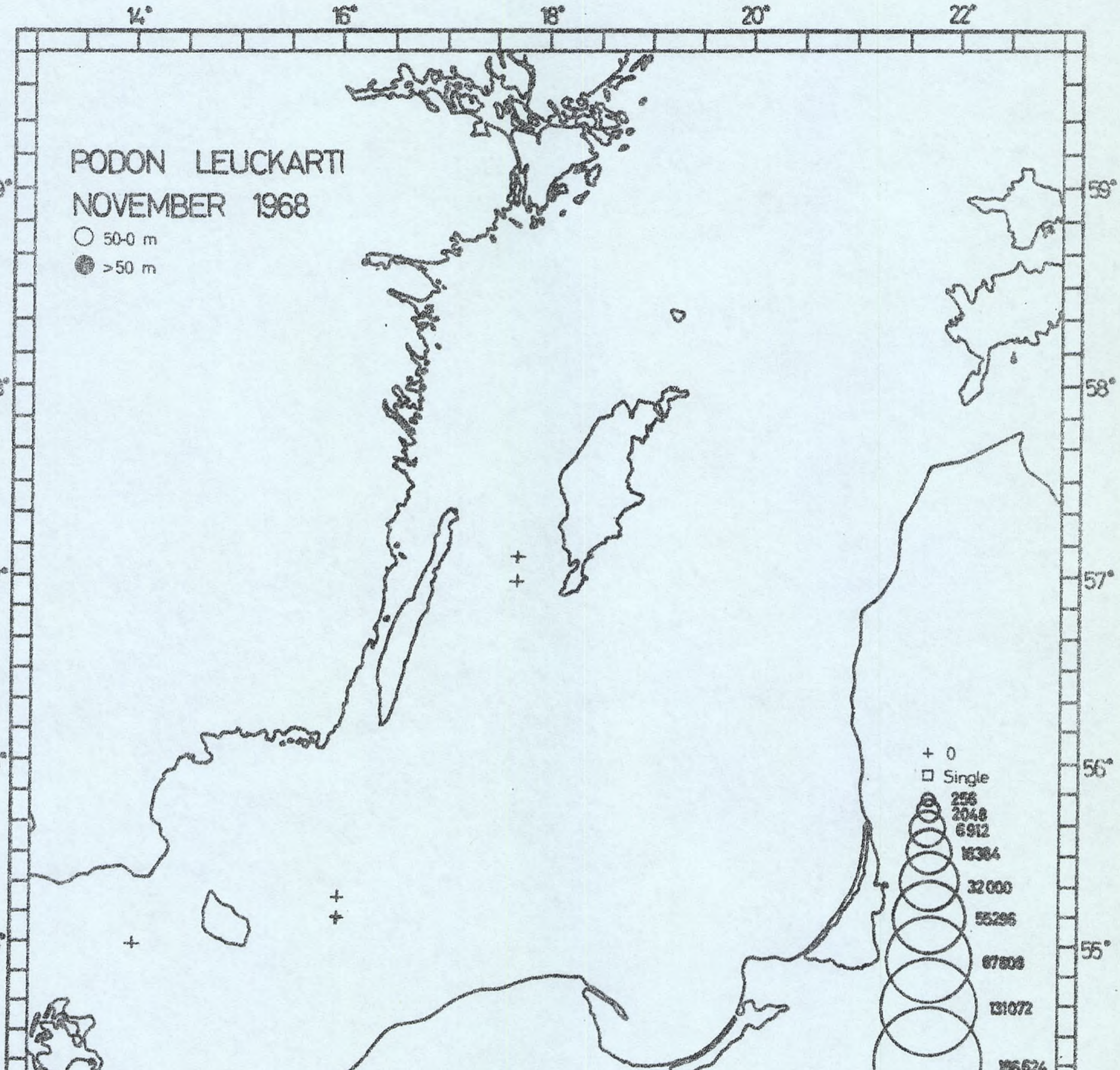
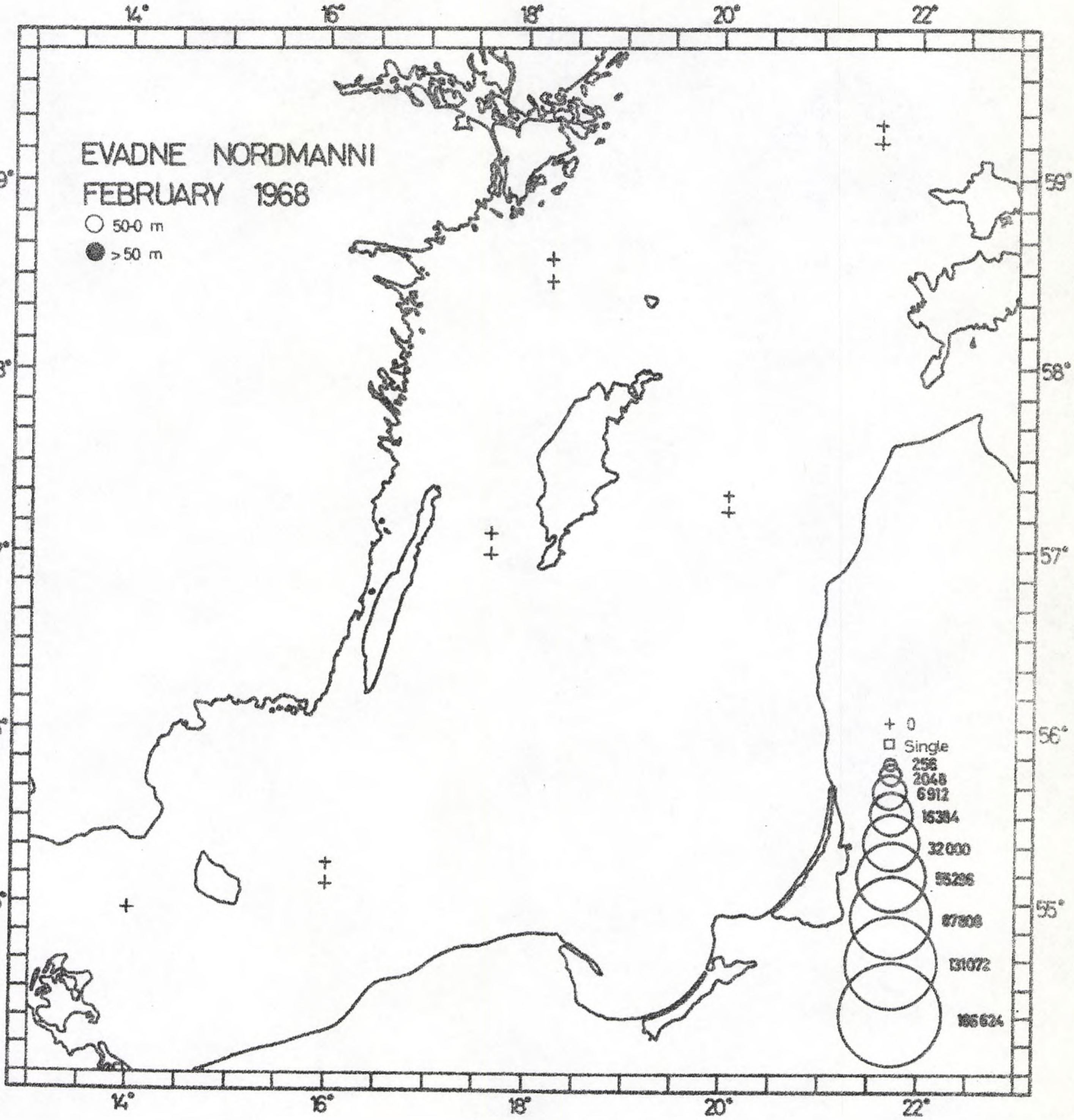

PODON LEUCKARTI
SEPTEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 31.



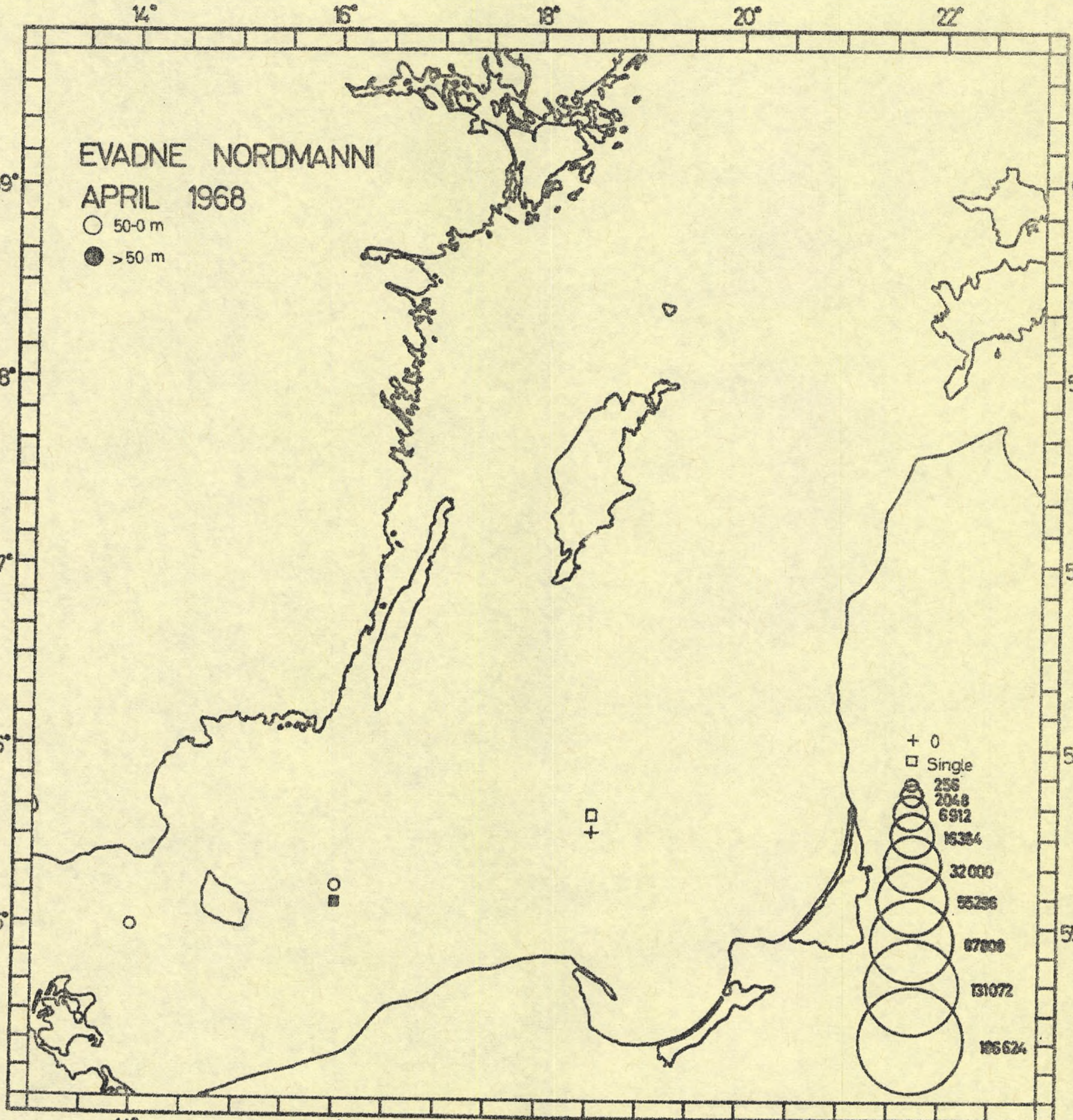
PODON LEUCKARTI
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 32.



EVADNE NORDMANNI
FEBRUARY 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 33.


EVADNE NORDMANNI
APRIL 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

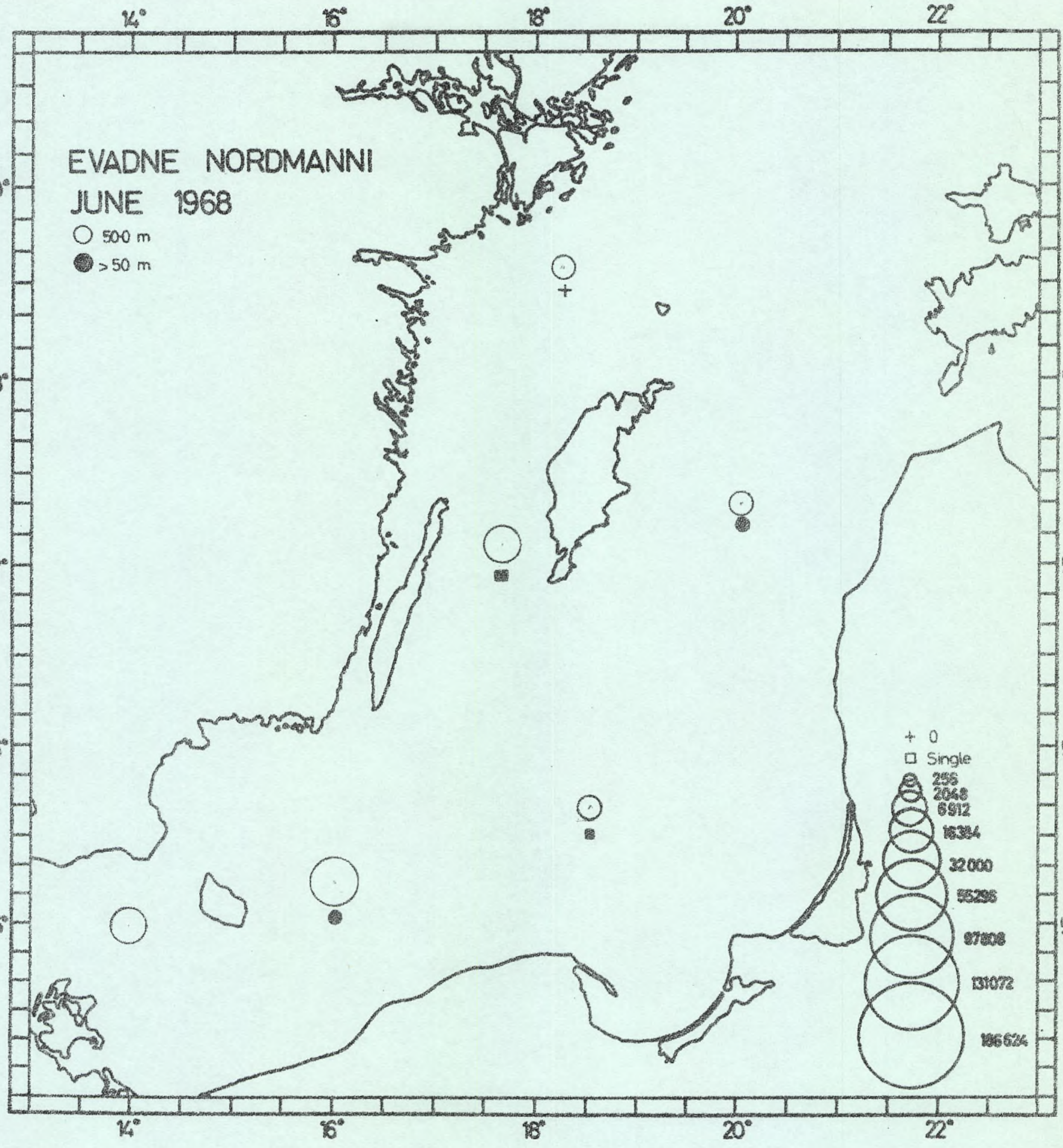

EVADNE NORDMANNI
JUNE 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 35.

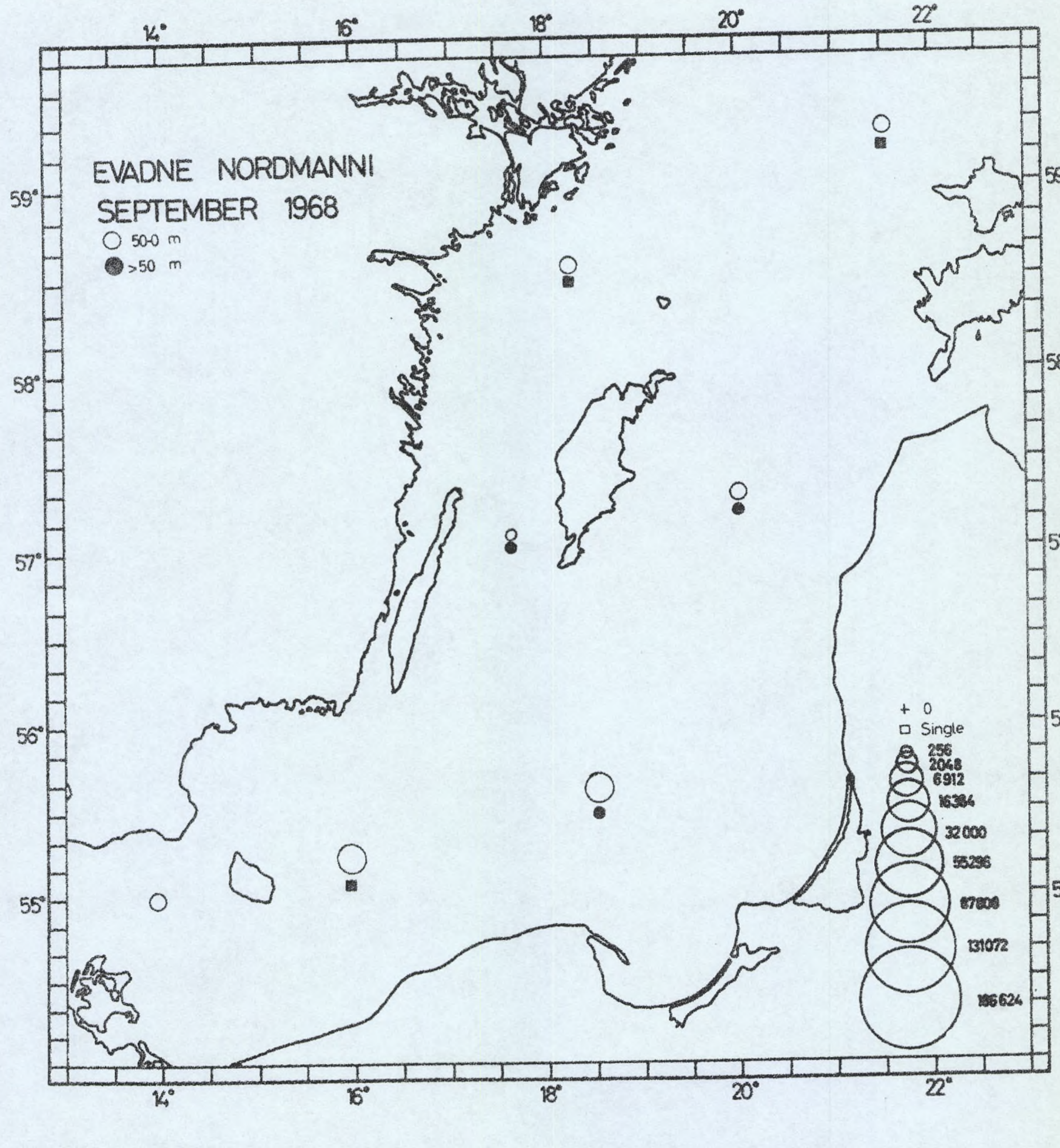
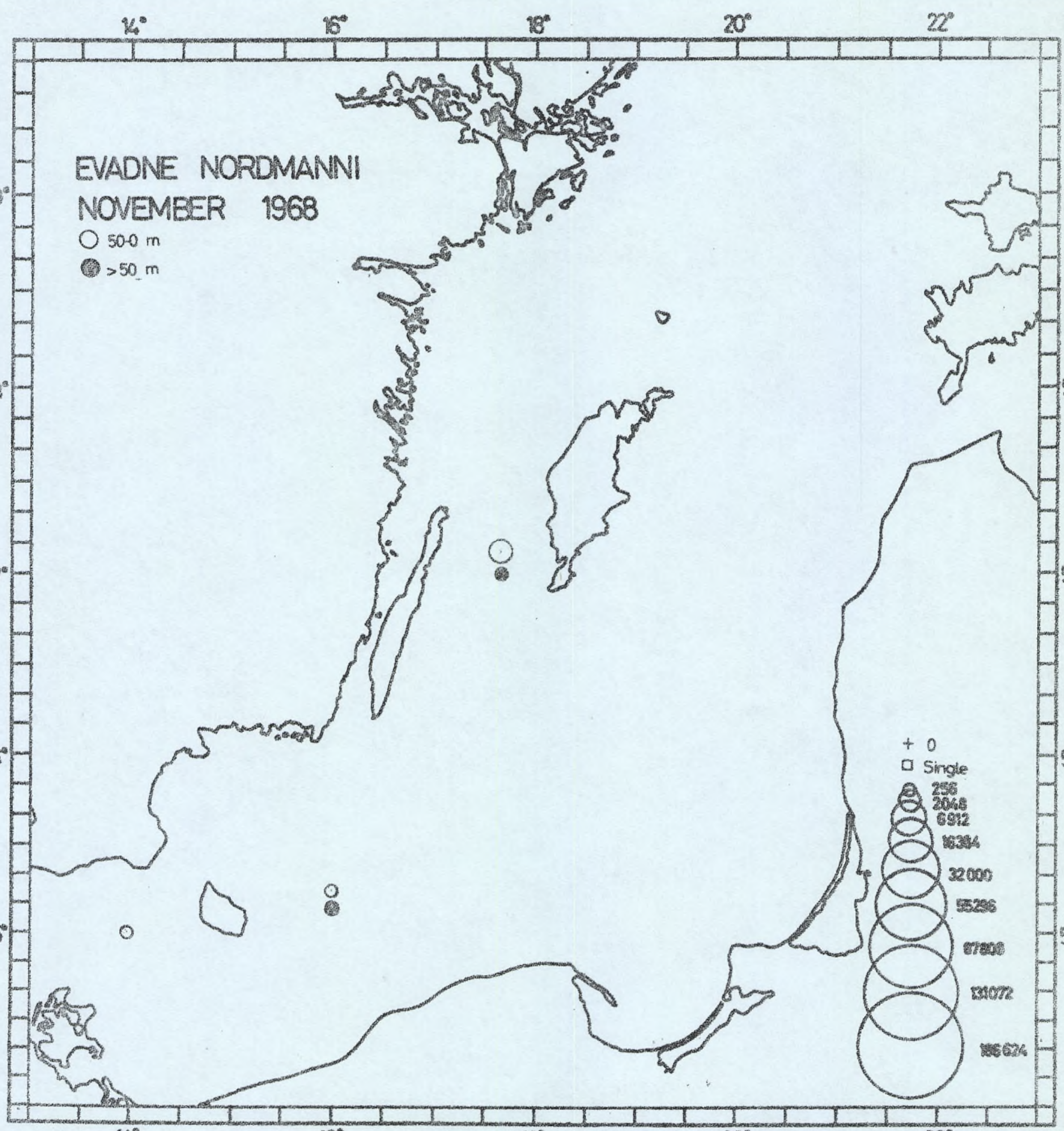
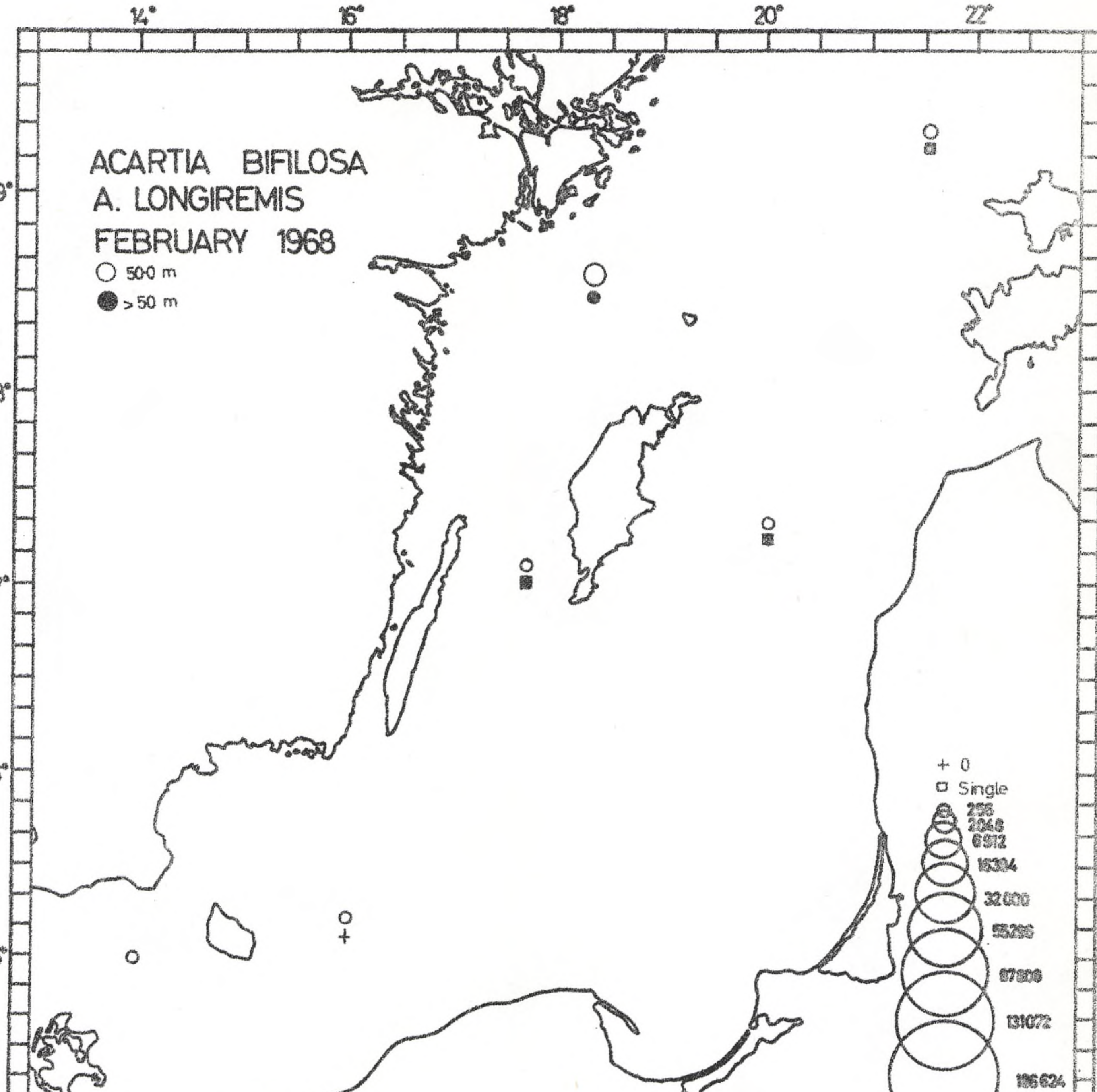

EVADNE NORDMANNI
SEPTEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 36.



EVADNE NORDMANNI
NOVEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
□ Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 37.



ACARTIA BIFILOSA
A. LONGIREMIS
FEBRUARY 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 38.

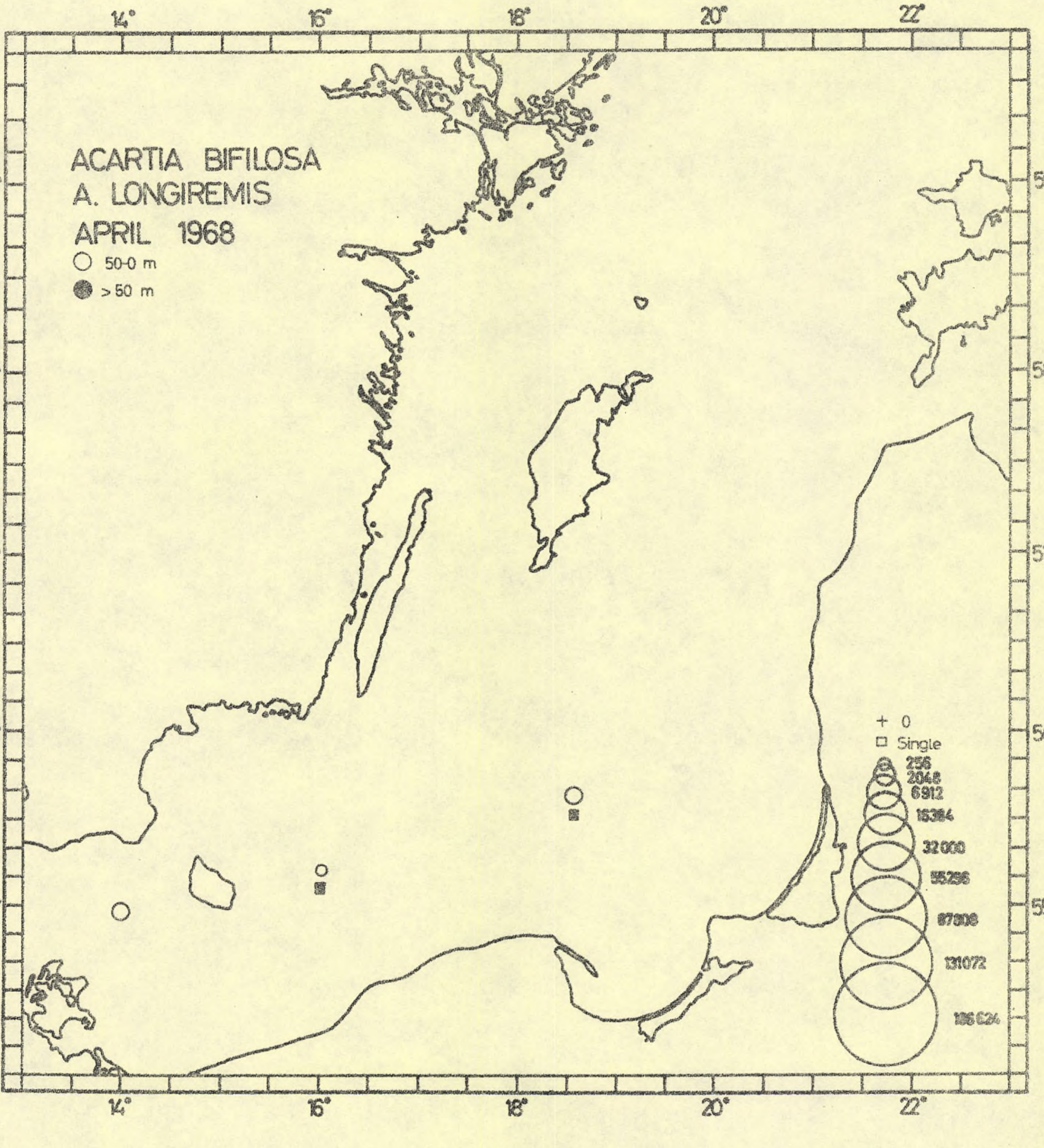
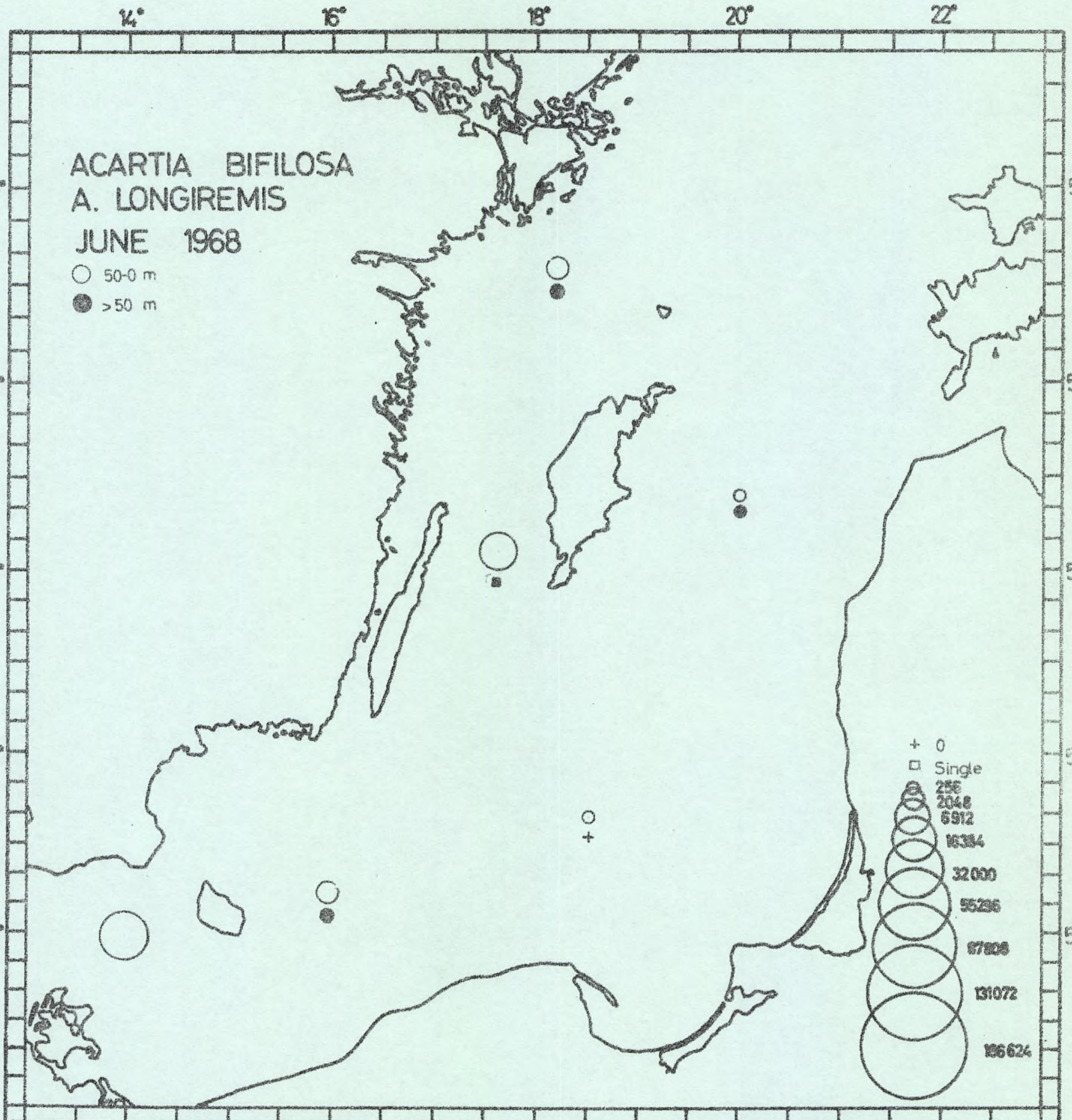
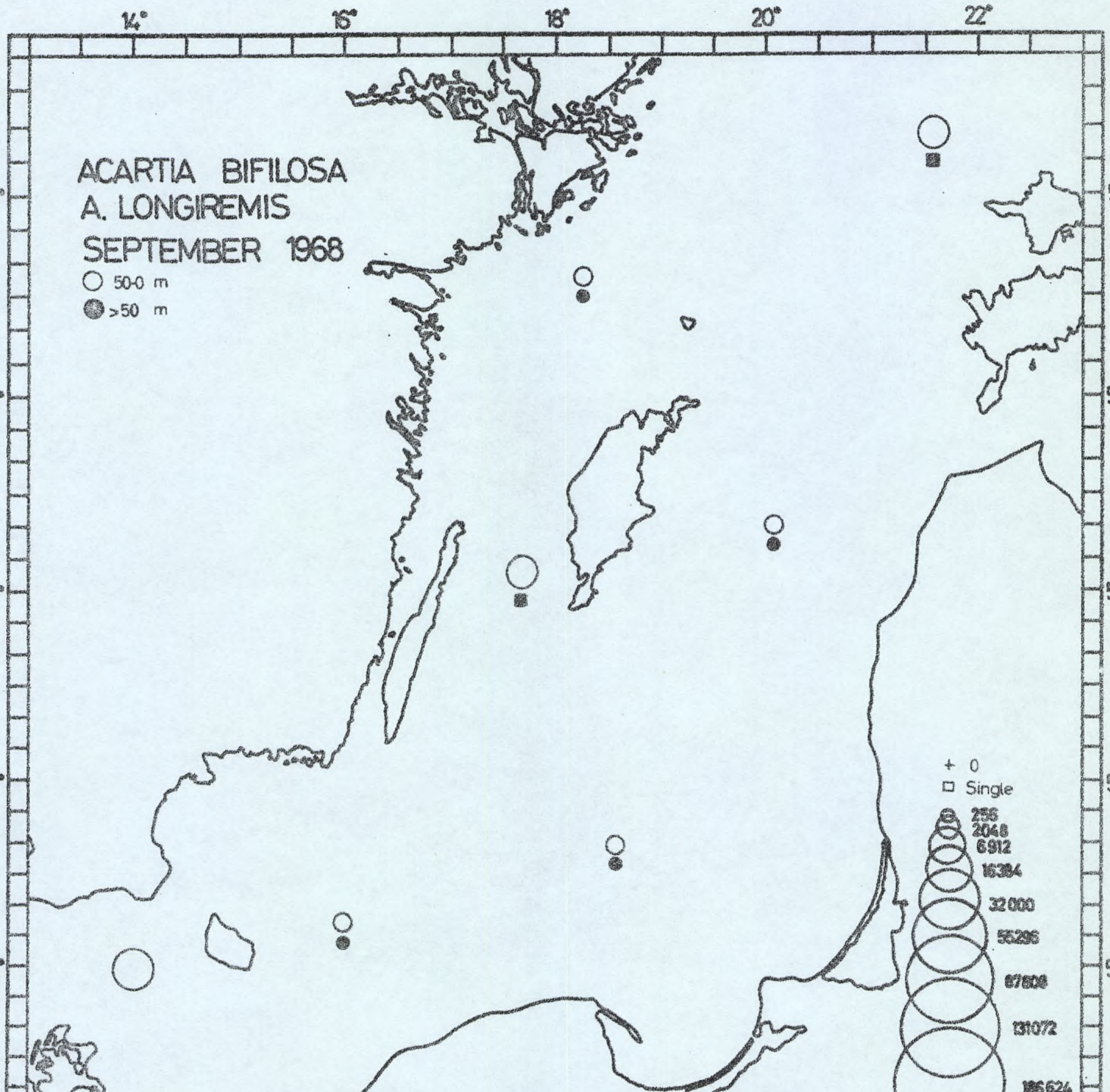

ACARTIA BIFILOSA
A. LONGIREMIS
APRIL 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 39.



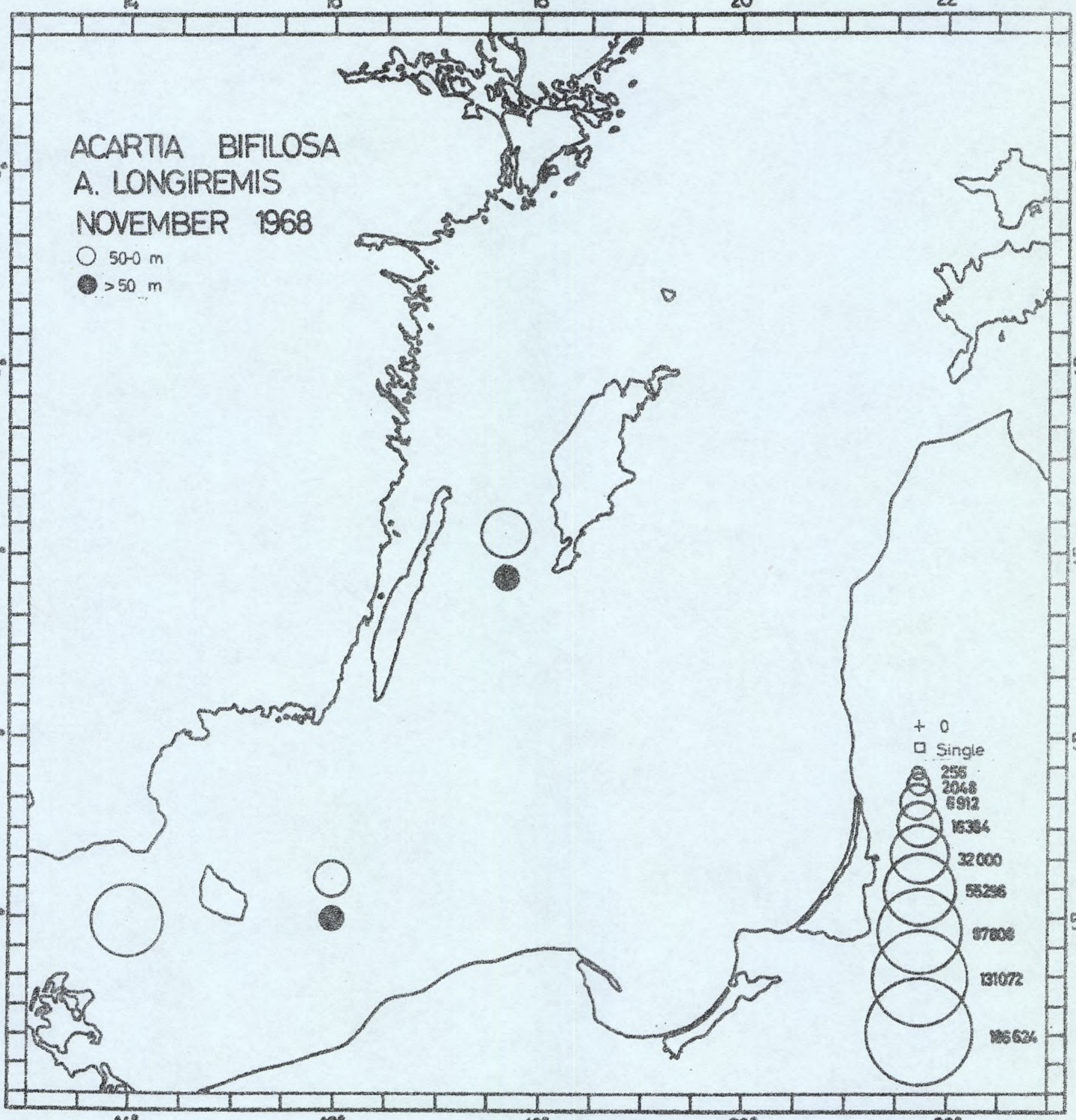
ACARTIA BIFILOSA
A. LONGIREMIS
JUNE 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 40.



14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
ACARTIA BIFILOSA
A. LONGIREMIS
SEPTEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 41.


ACARTIA BIFILOSA
A. LONGIREMIS
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
255
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

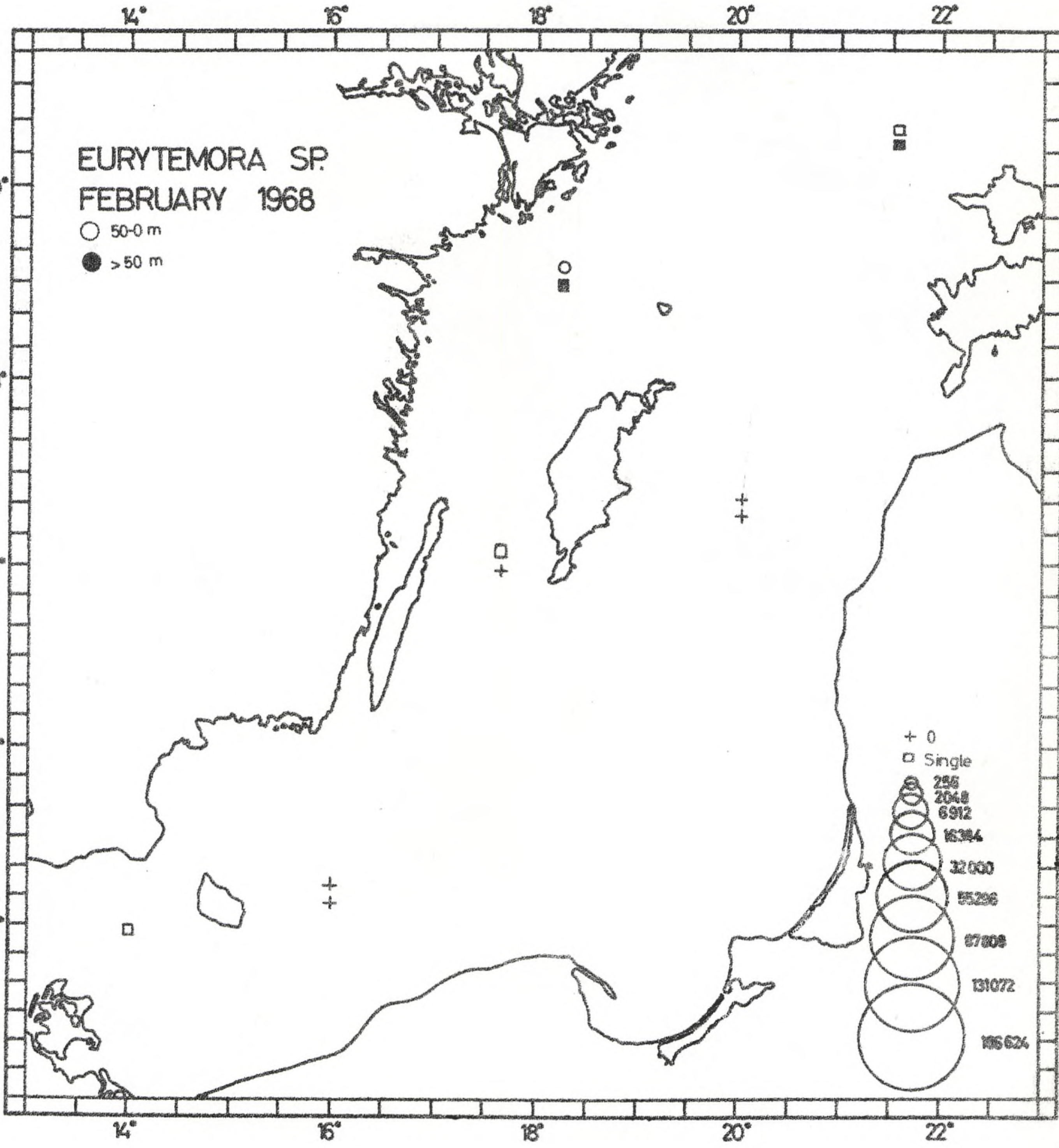
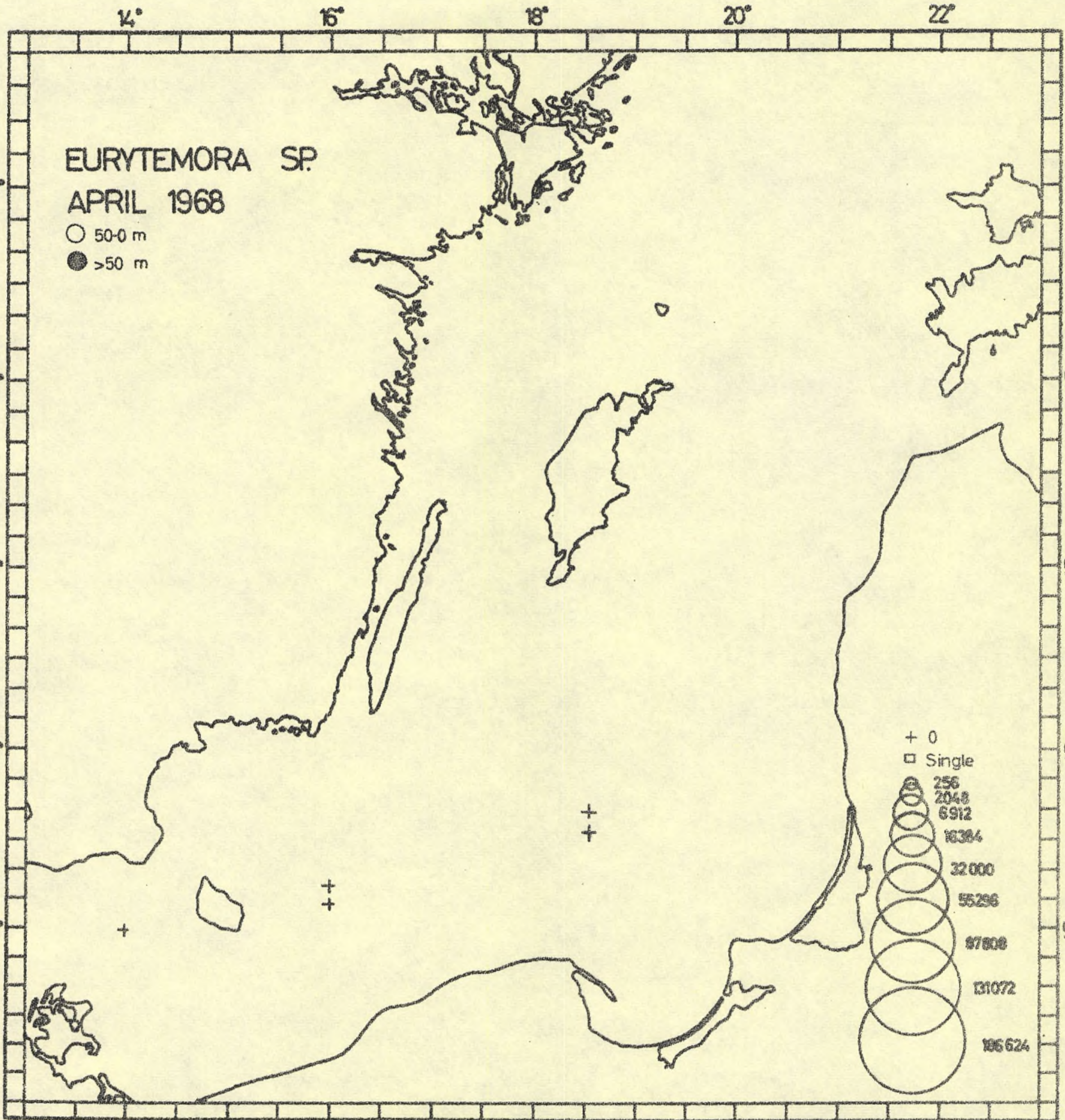
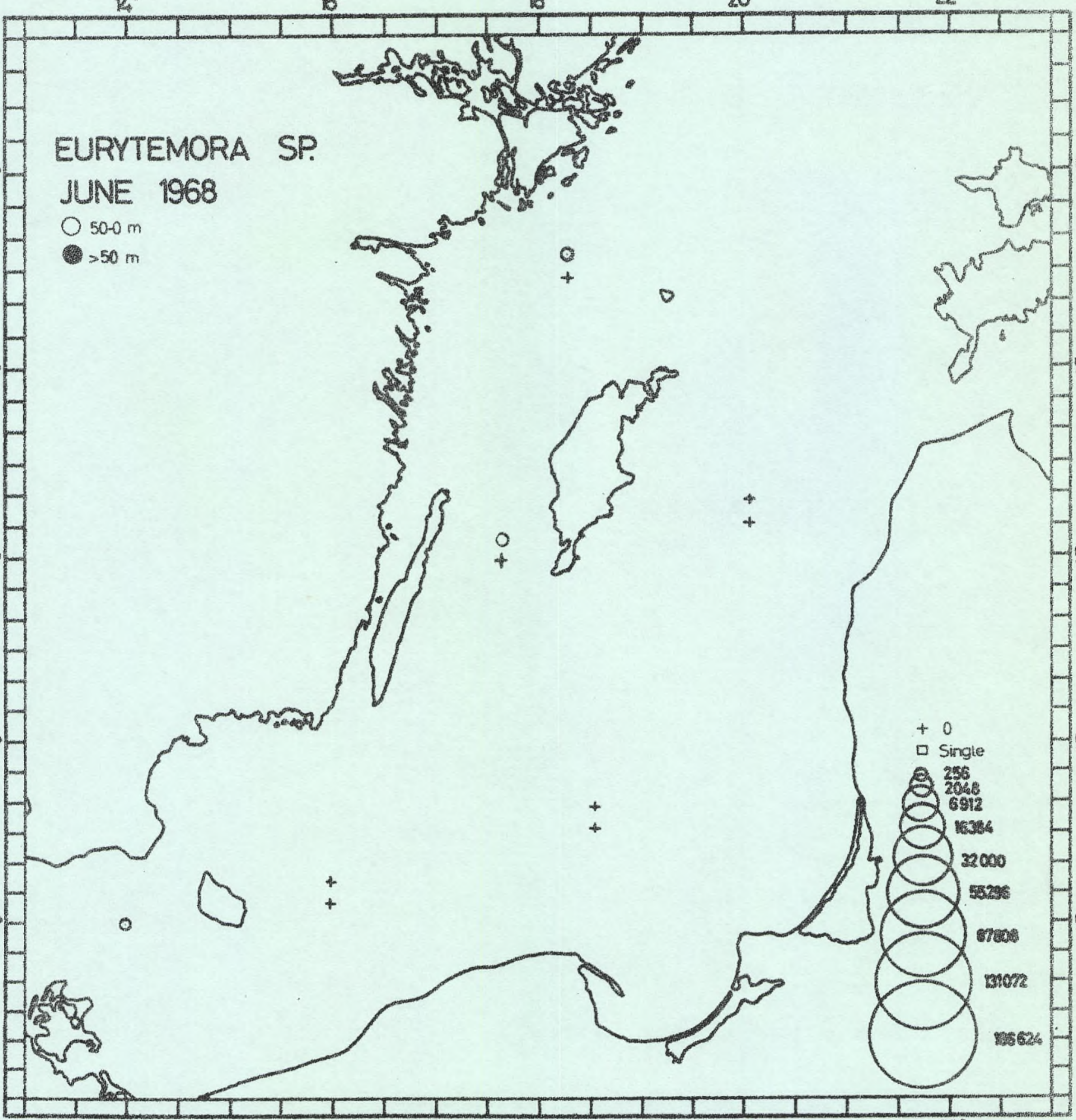

EURYTEMORA SP.
FEBRUARY 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196 624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 43.



EURYTEMORA SP.
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 44.



EURYTEMORA SP.
JUNE 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 45.

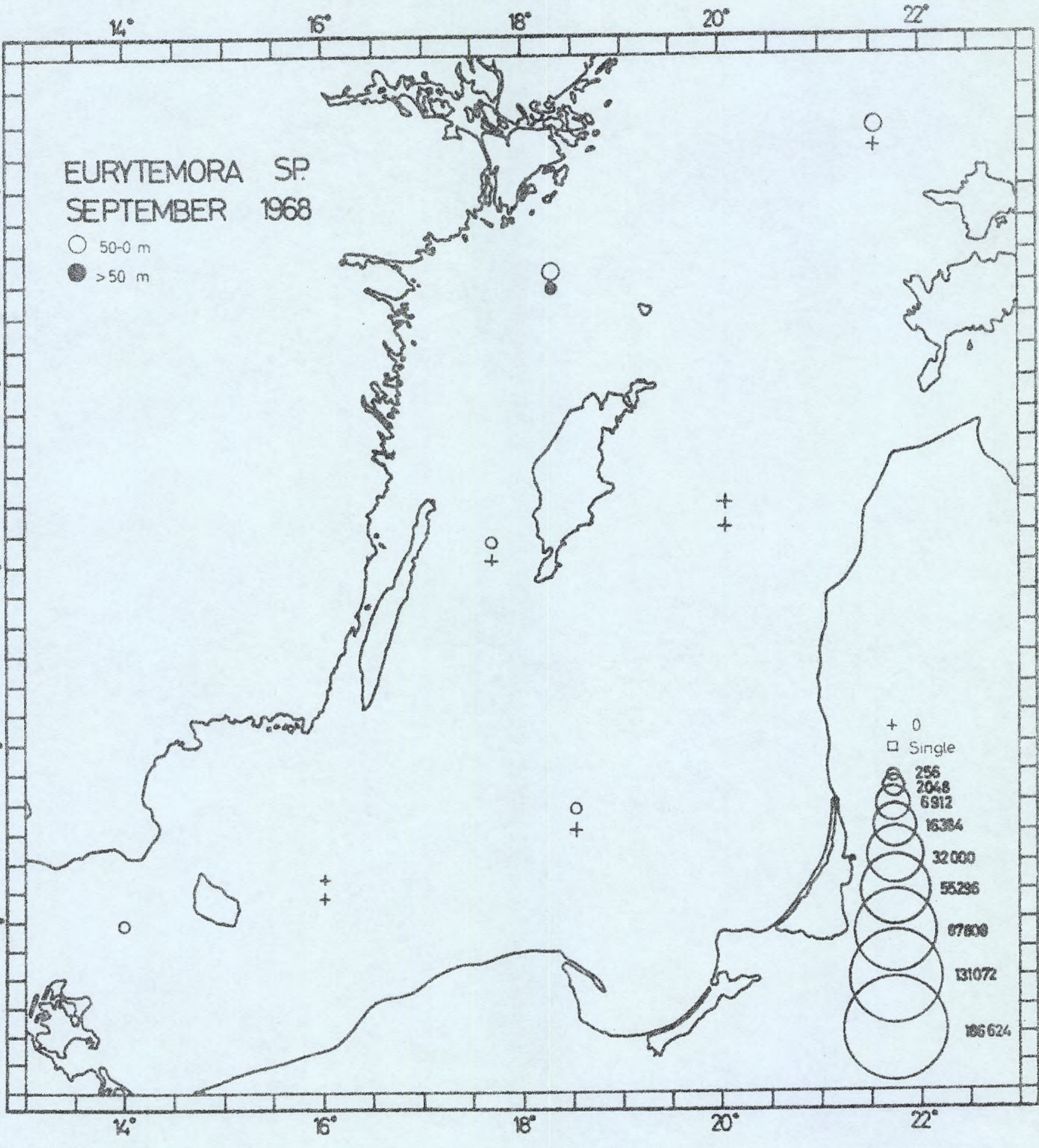
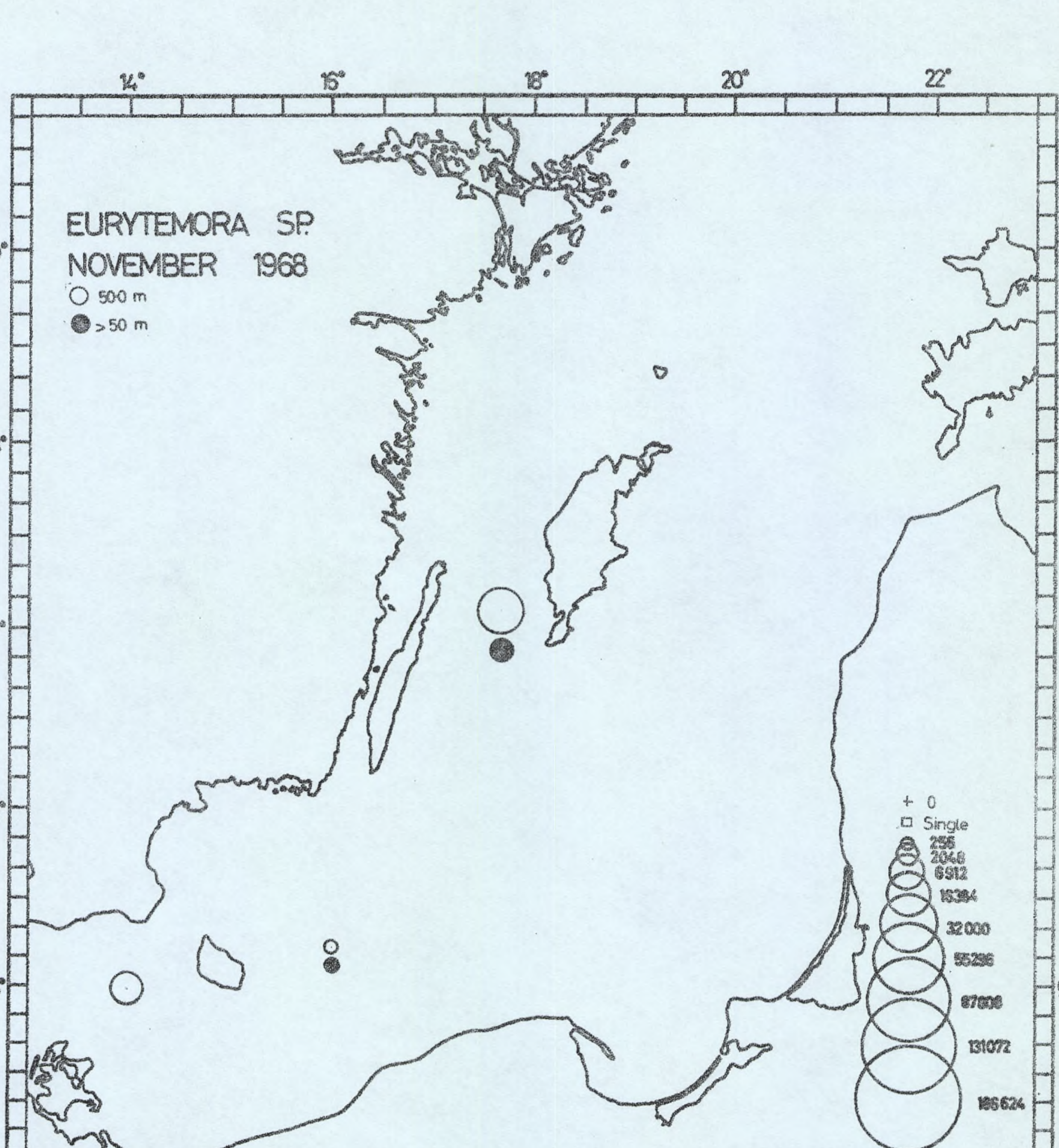
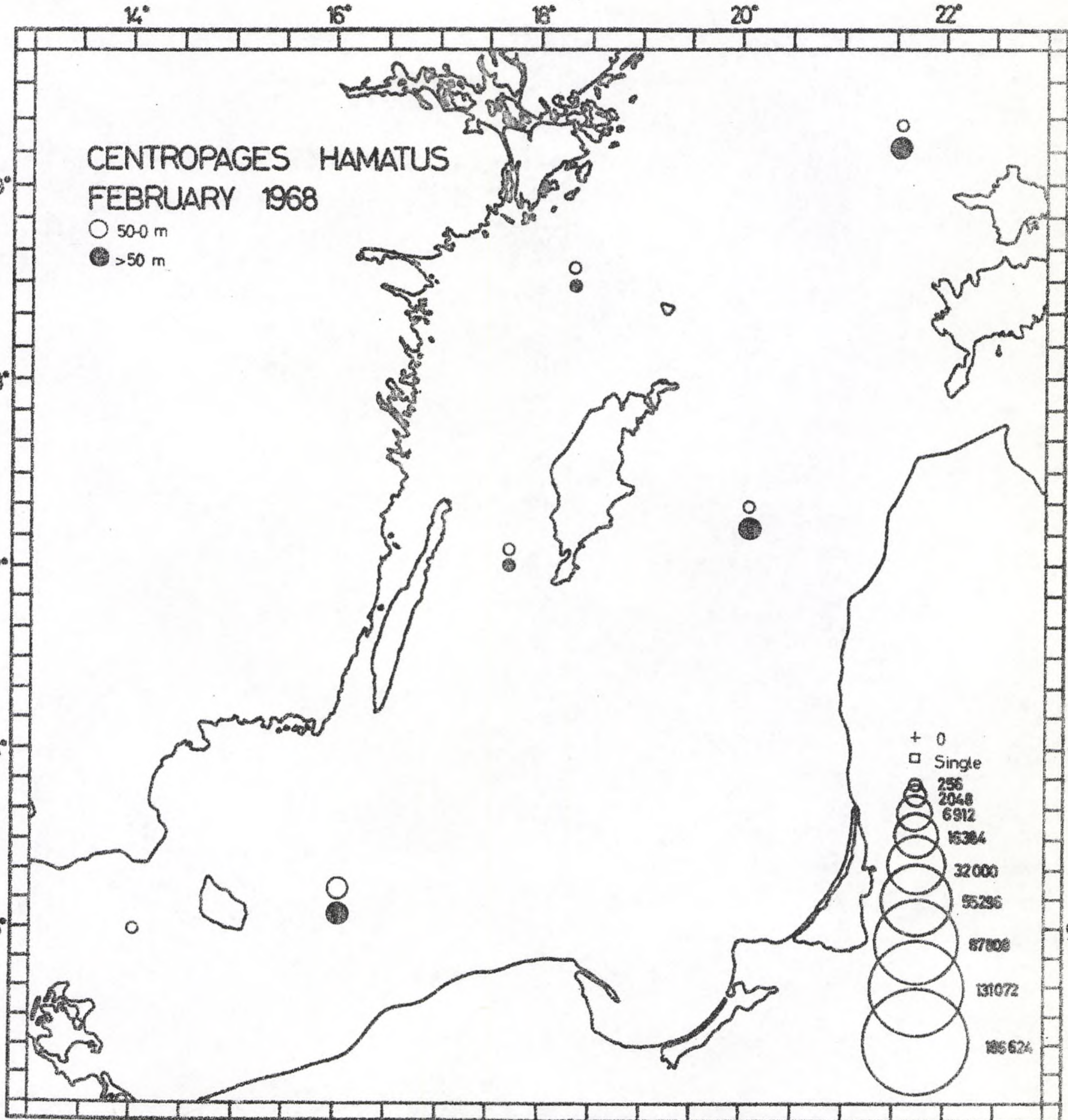

EURYTEMORA SP.
SEPTEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 46.



EURYTEMORA SP.
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32 000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 47.



CENTROPAGES HAMATUS
FEBRUARY 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

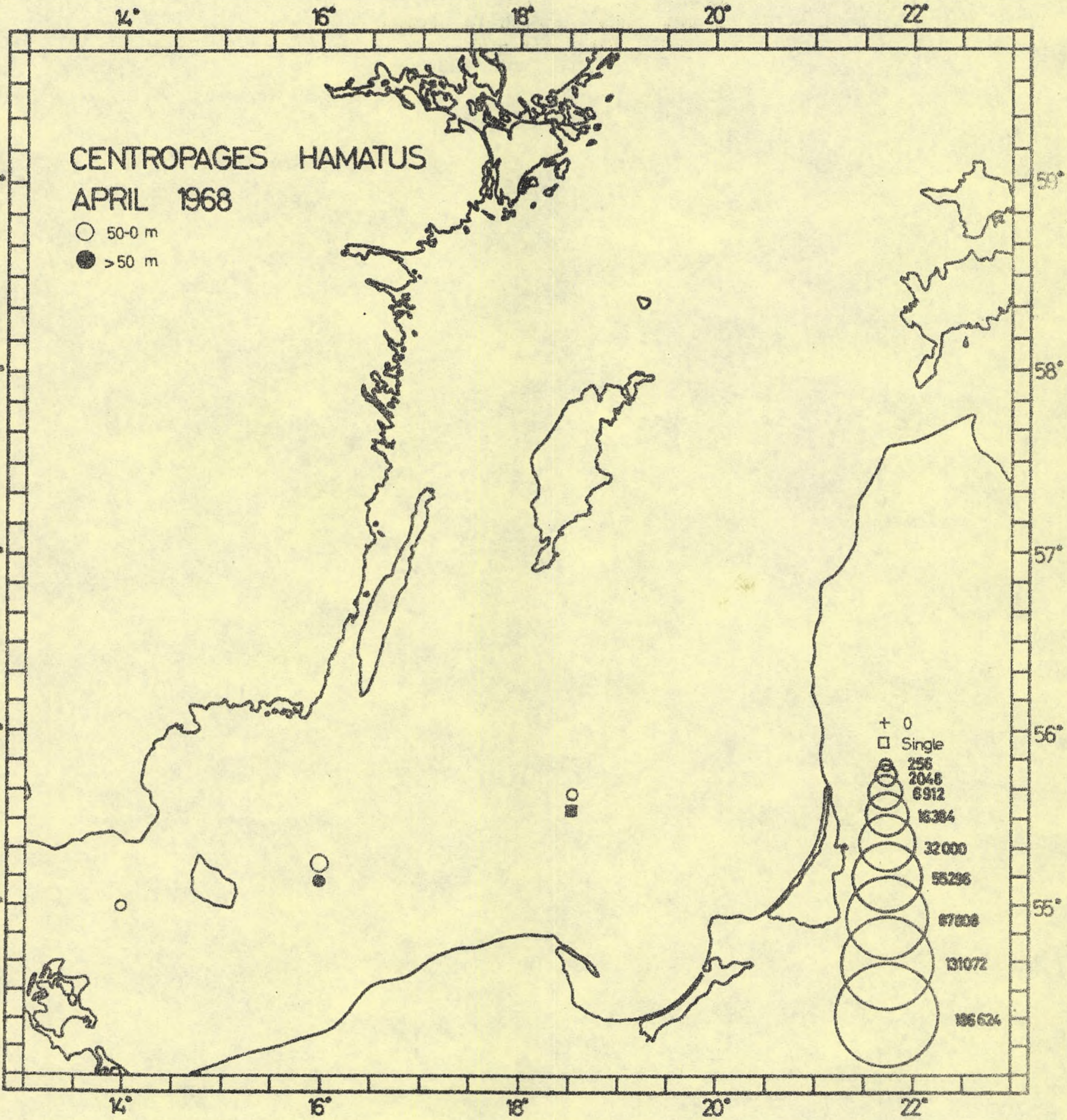
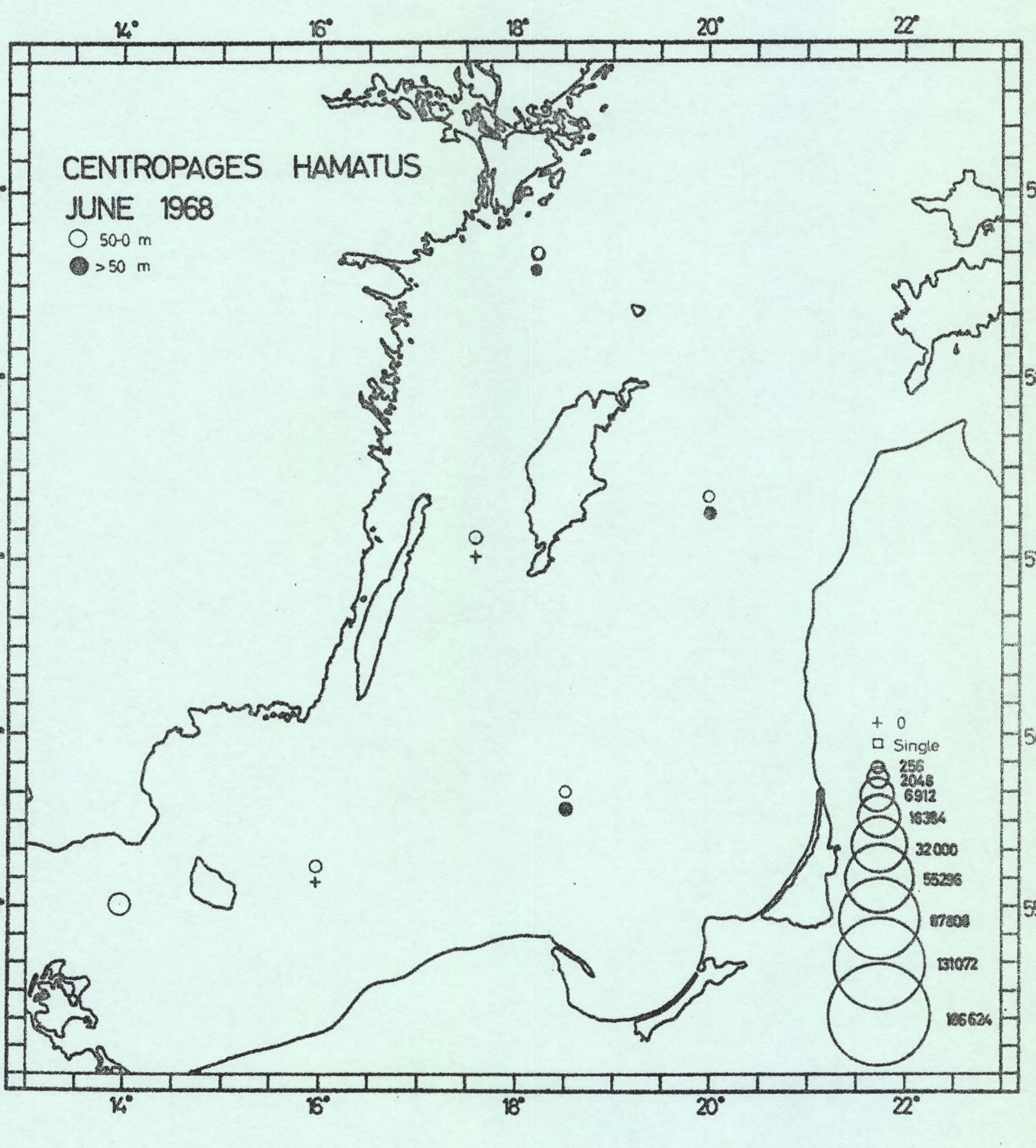

CENTROPAGES HAMATUS
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 49.



CENTROPAGES HAMATUS
JUNE 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 50.

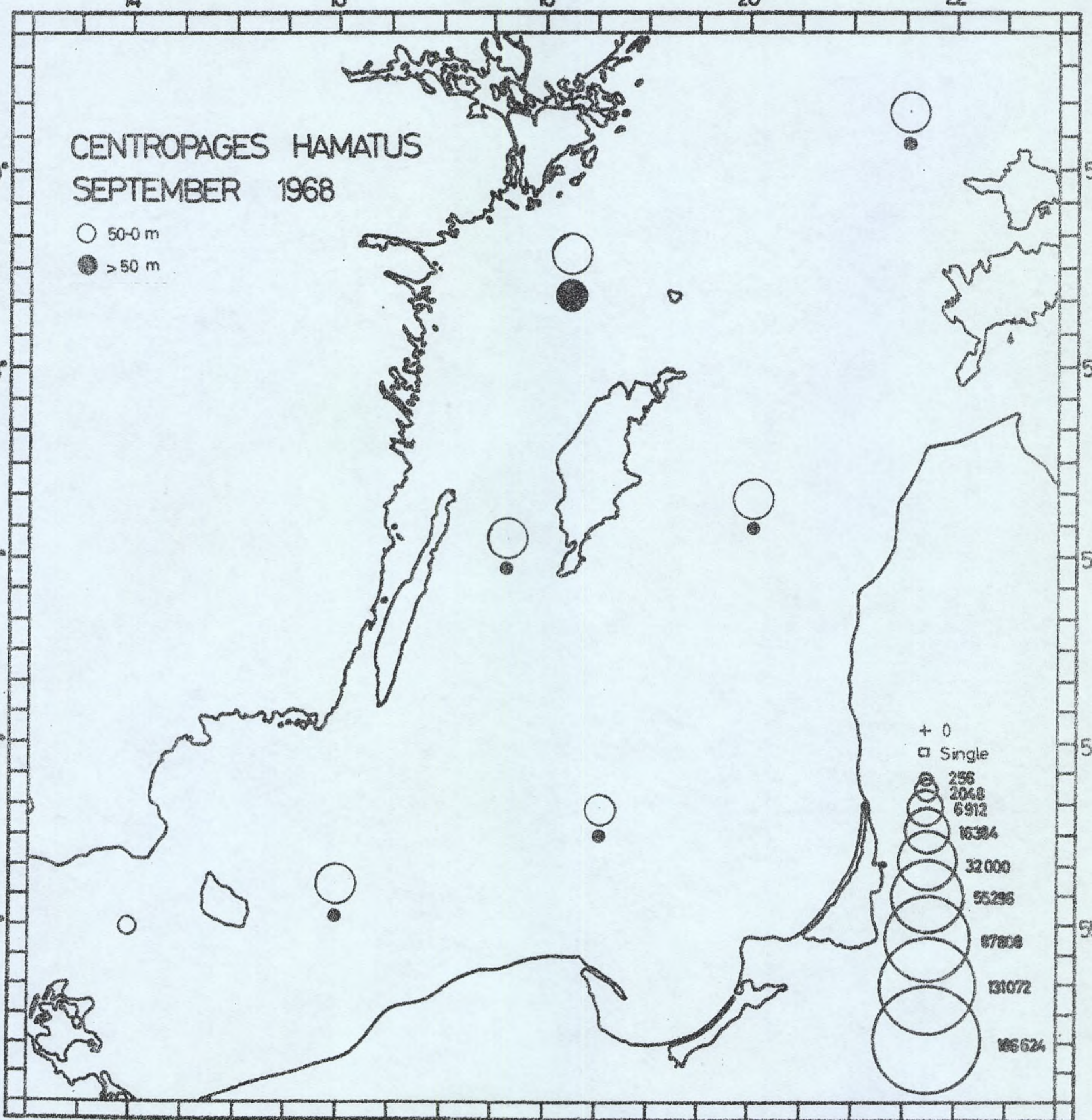
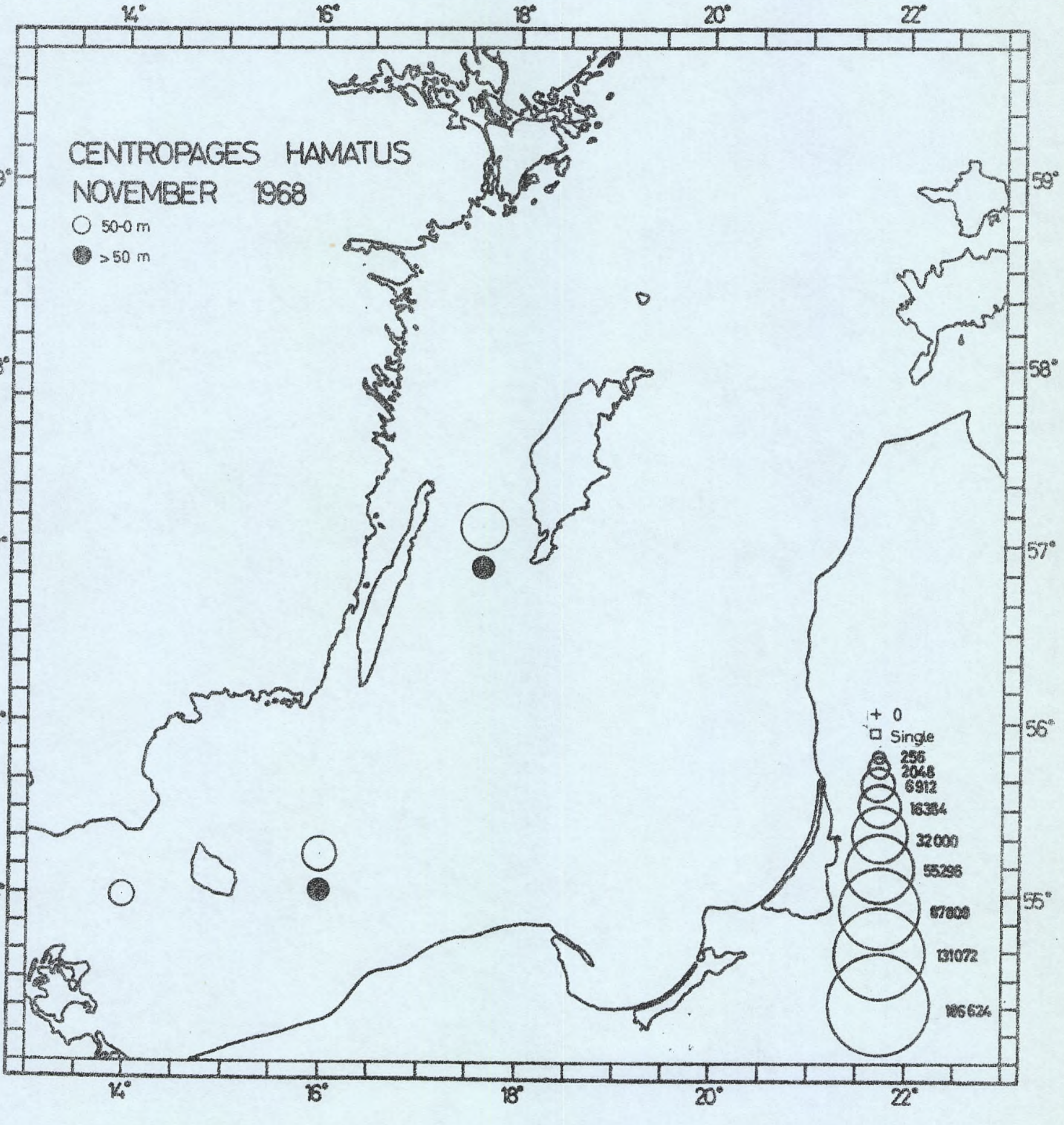

CENTROPAGES HAMATUS
SEPTEMBER 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 51.



CENTROPAGES HAMATUS
NOVEMBER 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 52.

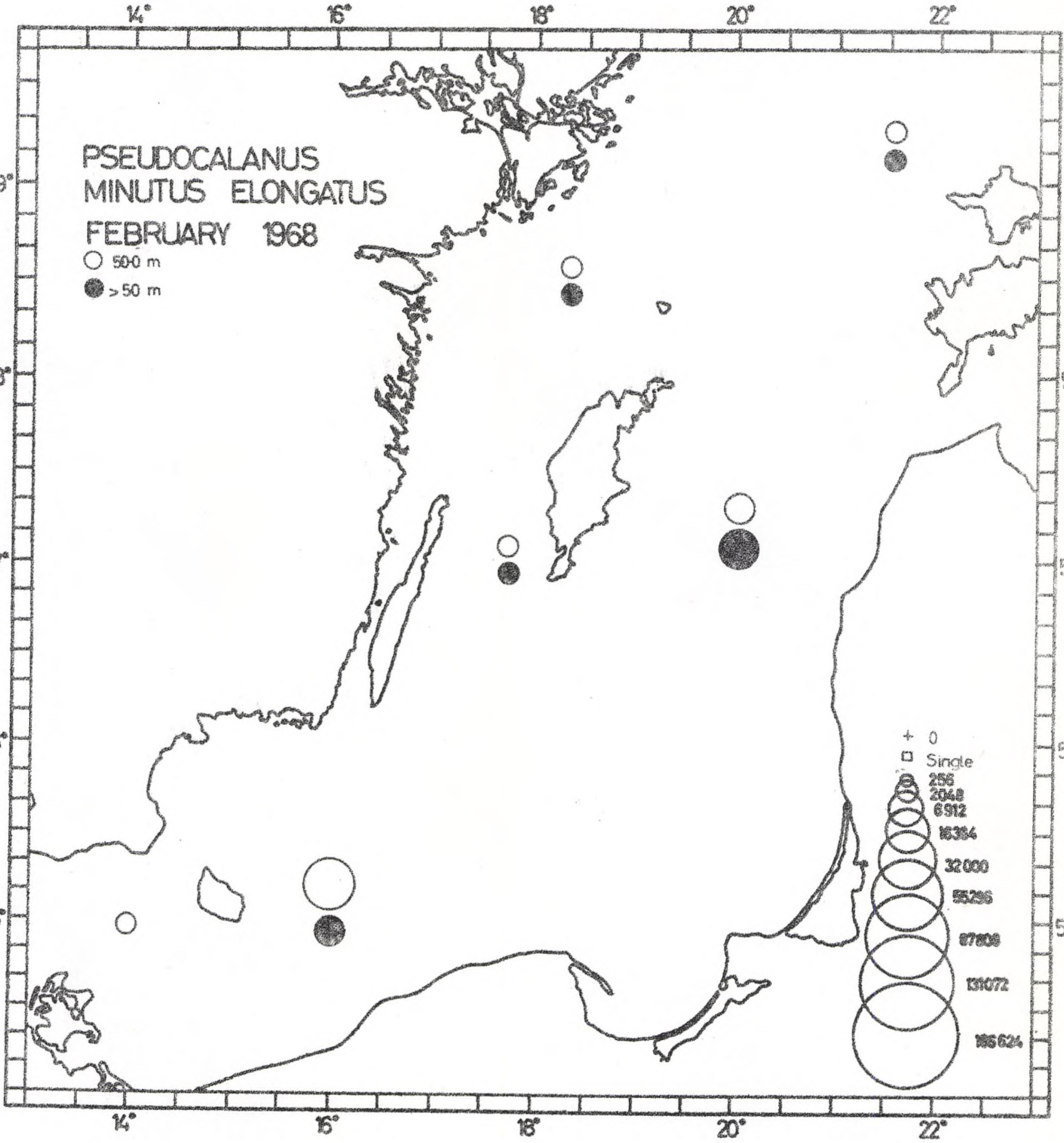
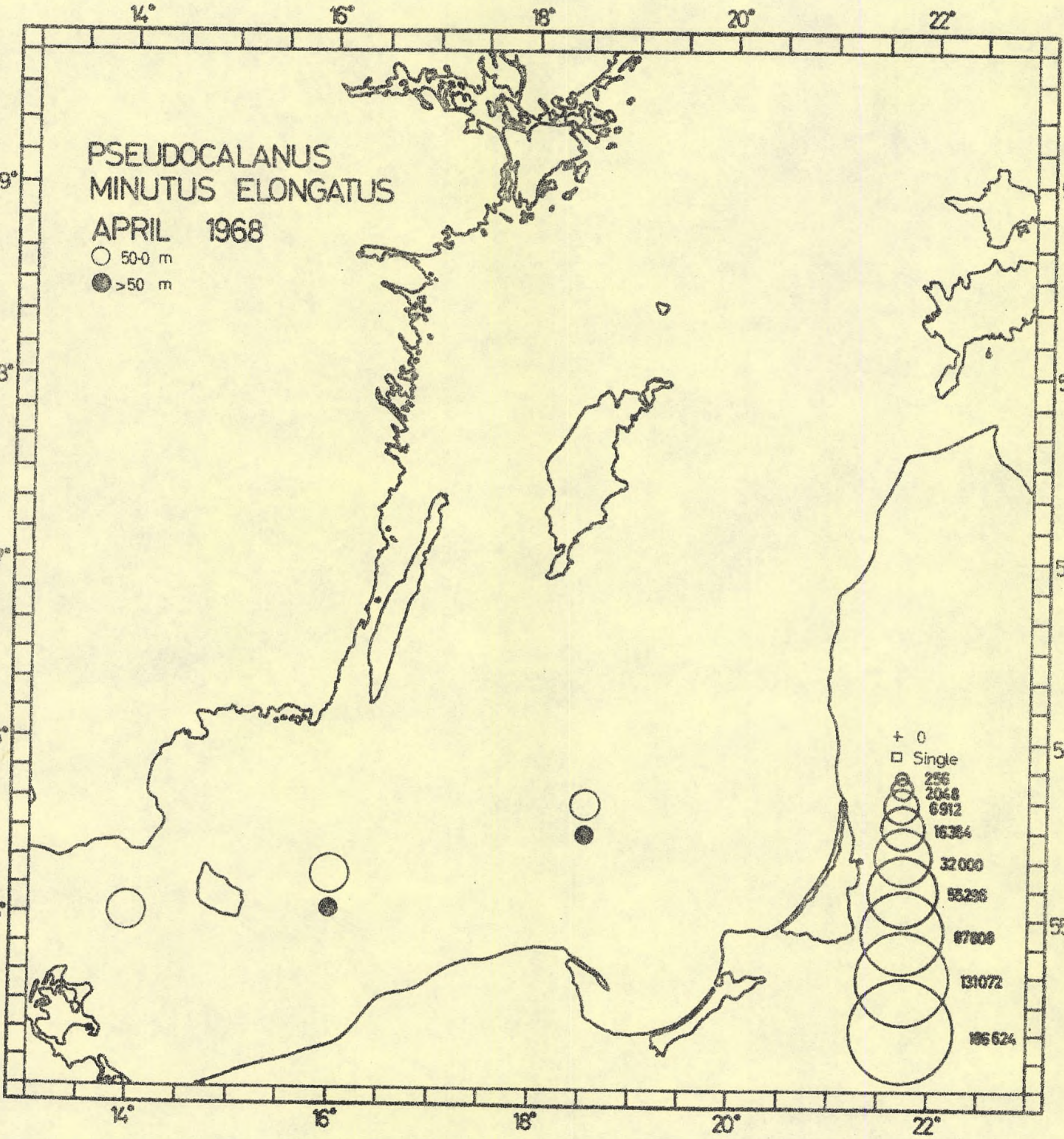
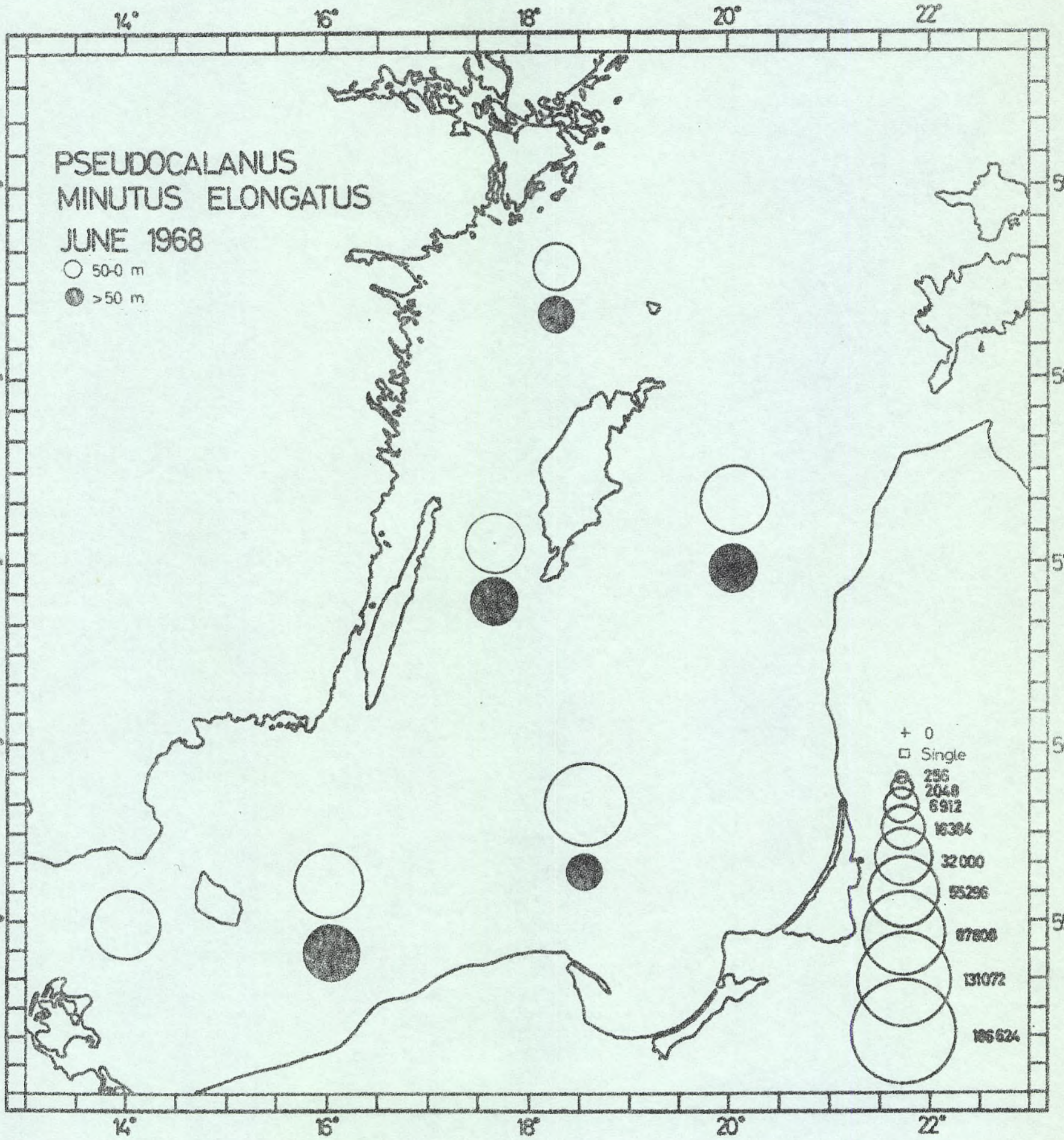

PSEUDOCALANUS
MINUTUS ELONGATUS
FEBRUARY 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
196624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 53.



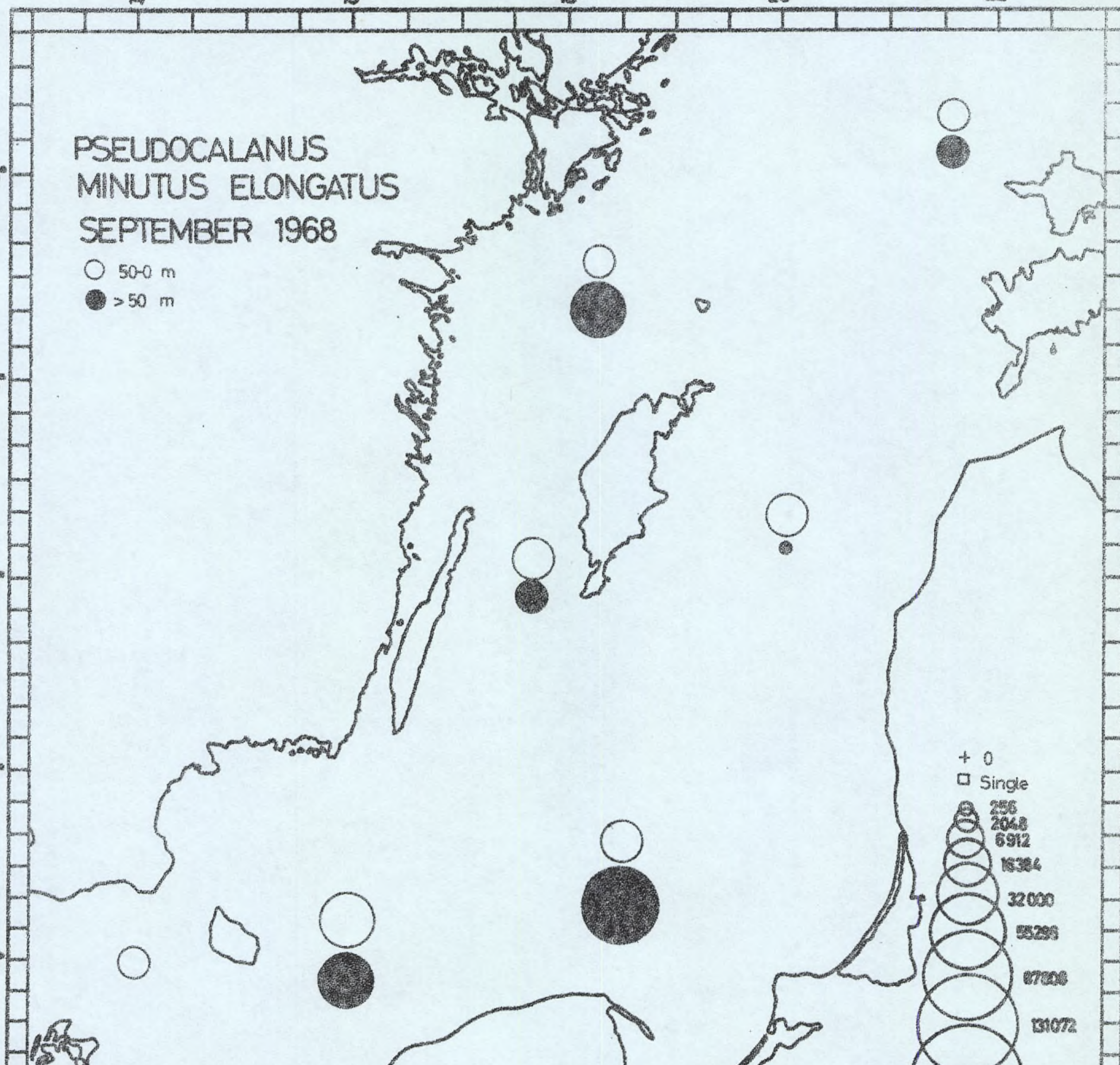
PSEUDOCALANUS
MINUTUS ELONGATUS
APRIL 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 54.



PSEUDOCALANUS
MINUTUS ELONGATUS
JUNE 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 55.



14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
PSEUDOCALANUS
MINUTUS ELONGATUS
SEPTEMBER 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
131072
186 624

Fig 56.

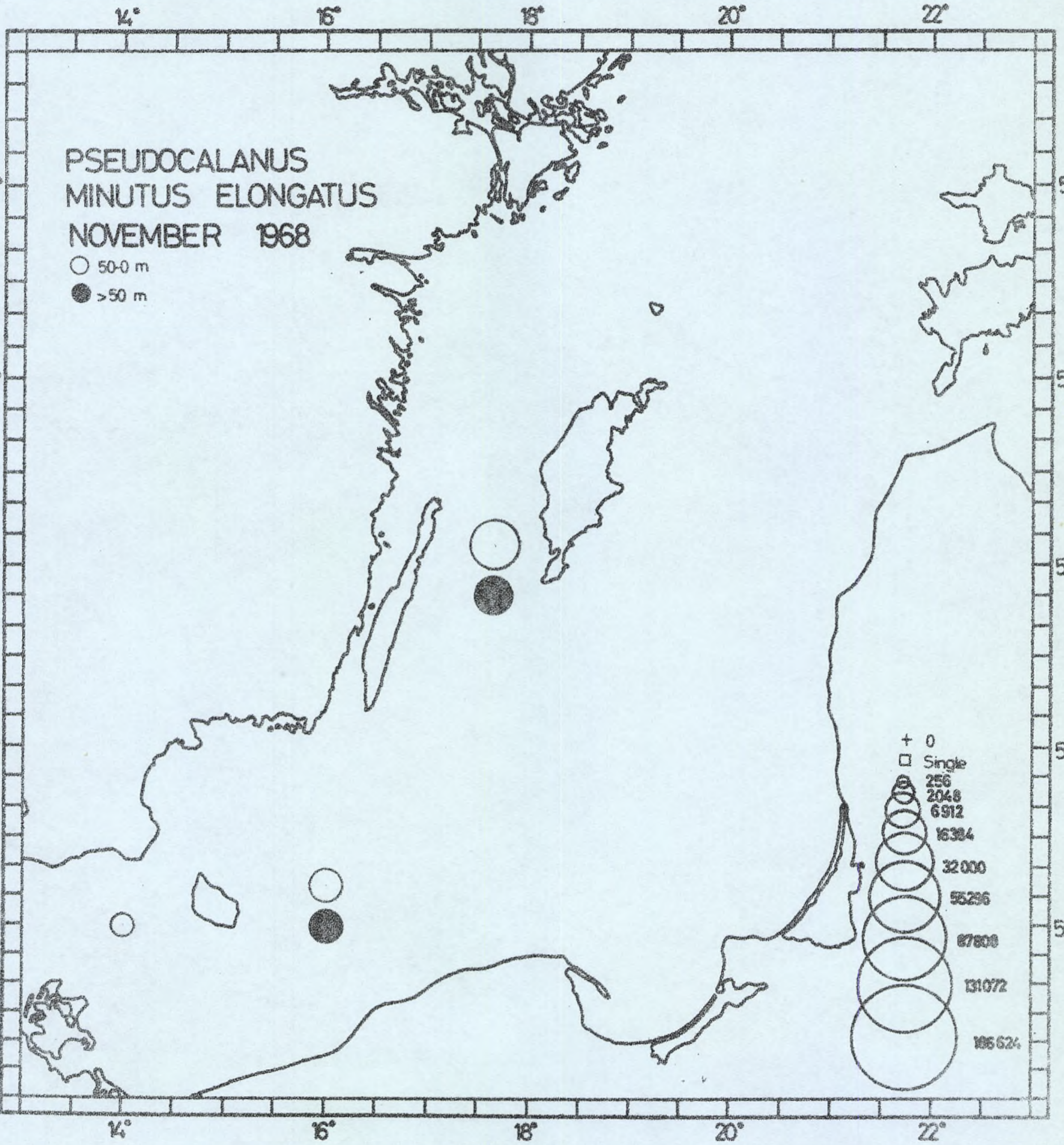
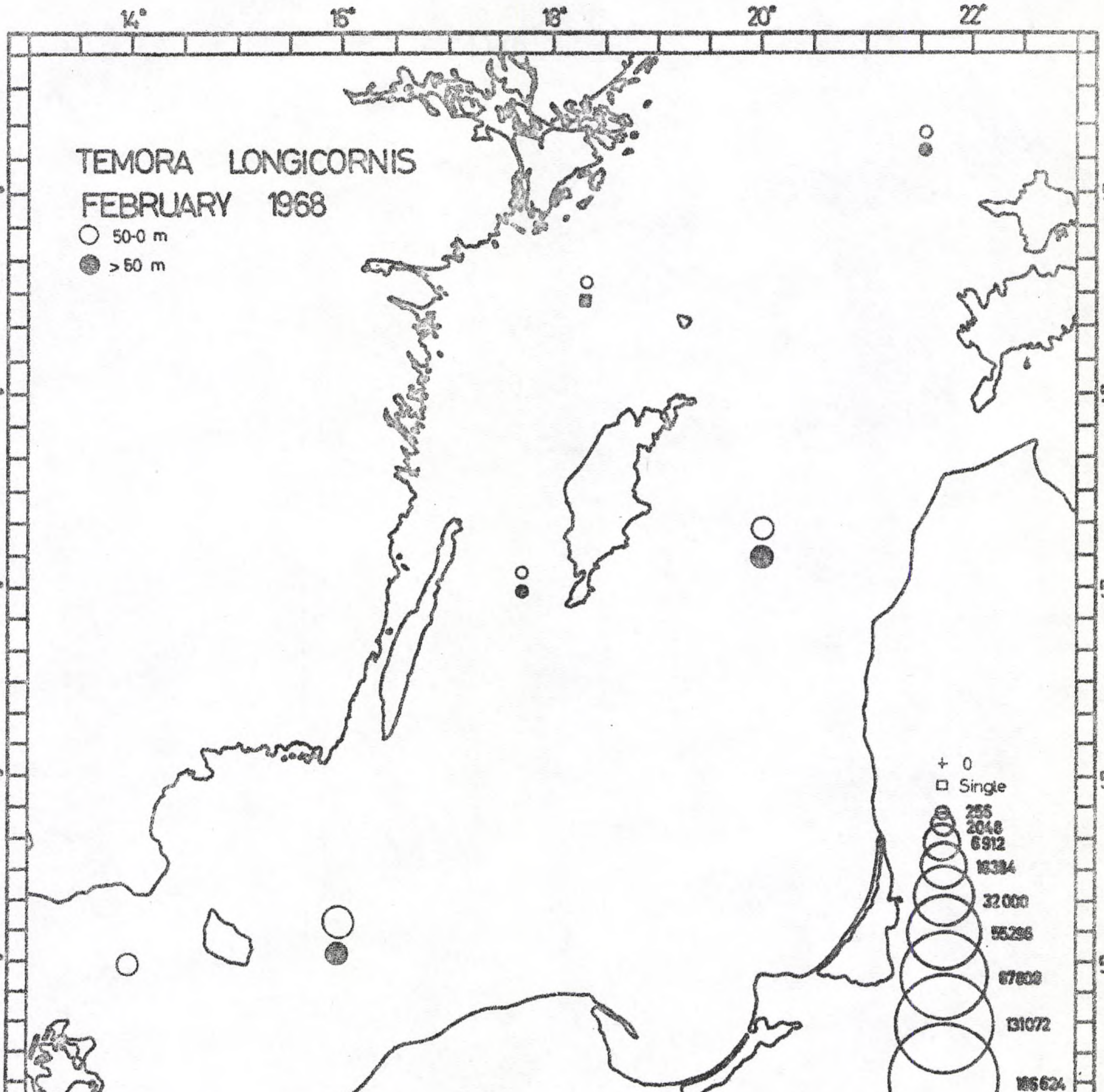
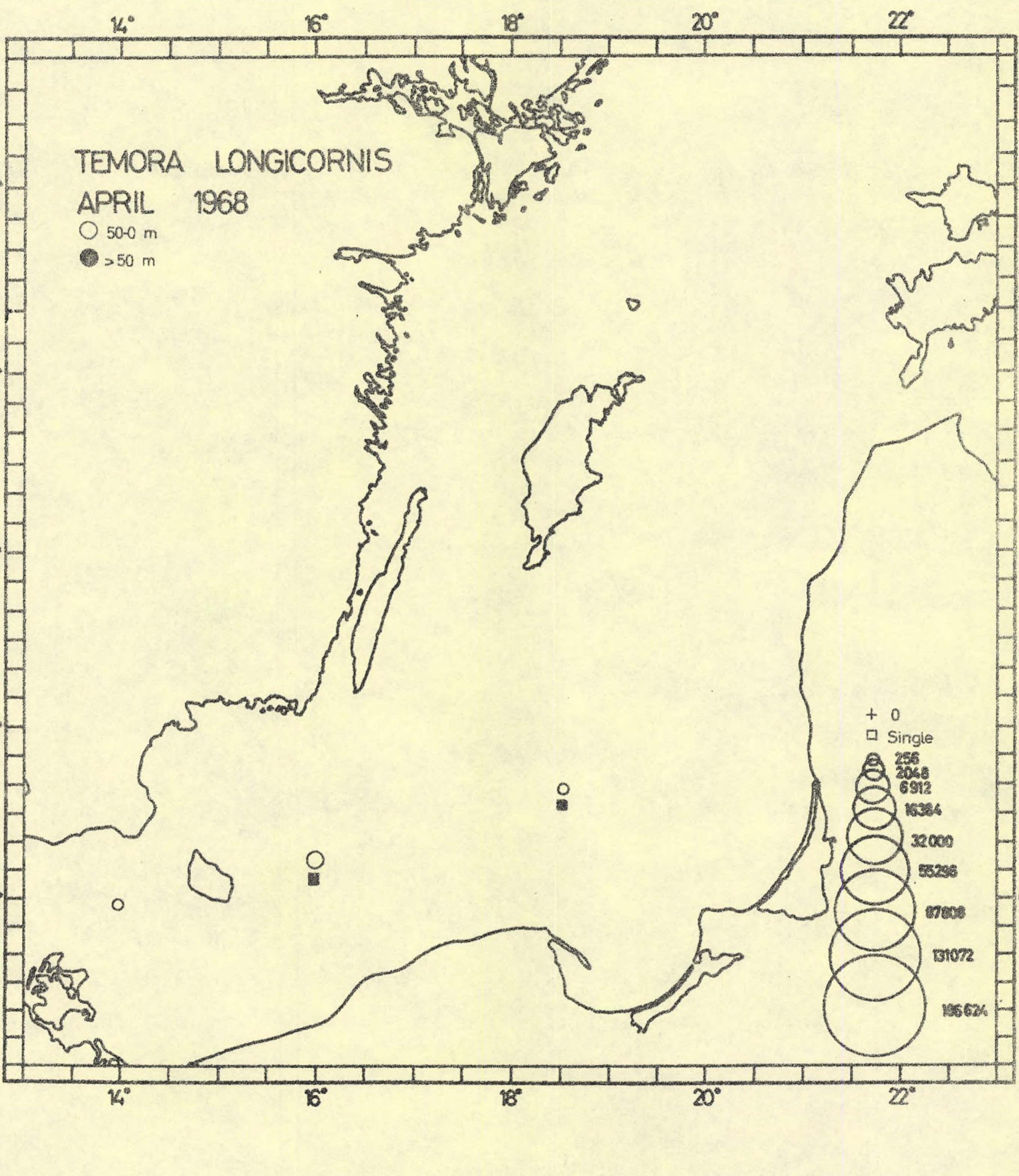

PSEUDOCALANUS
MINUTUS ELONGATUS
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 57.



TEMORA LONGICORNIS
FEBRUARY 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 58.



TEMORA LONGICORNIS
APRIL 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 59.

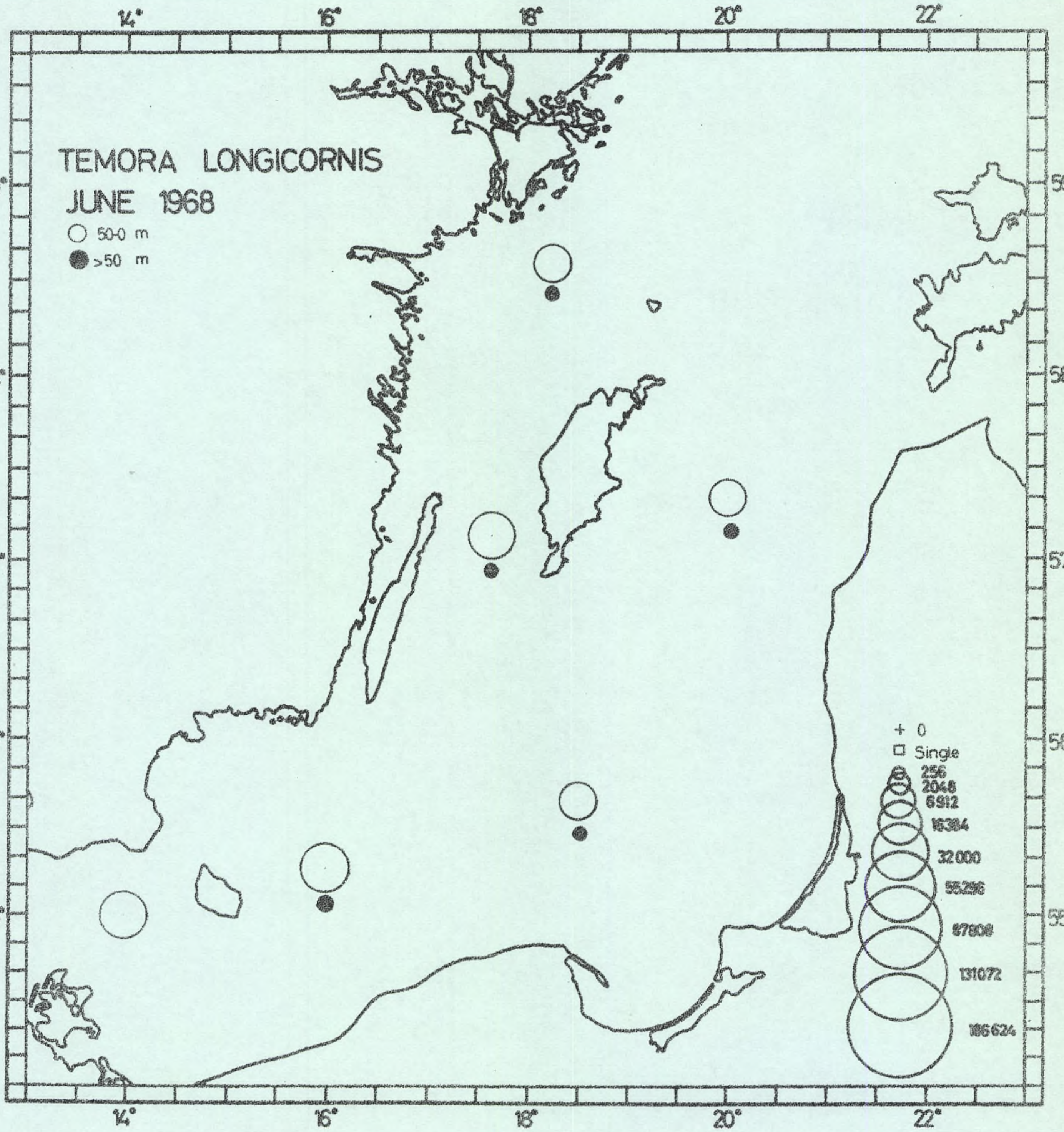
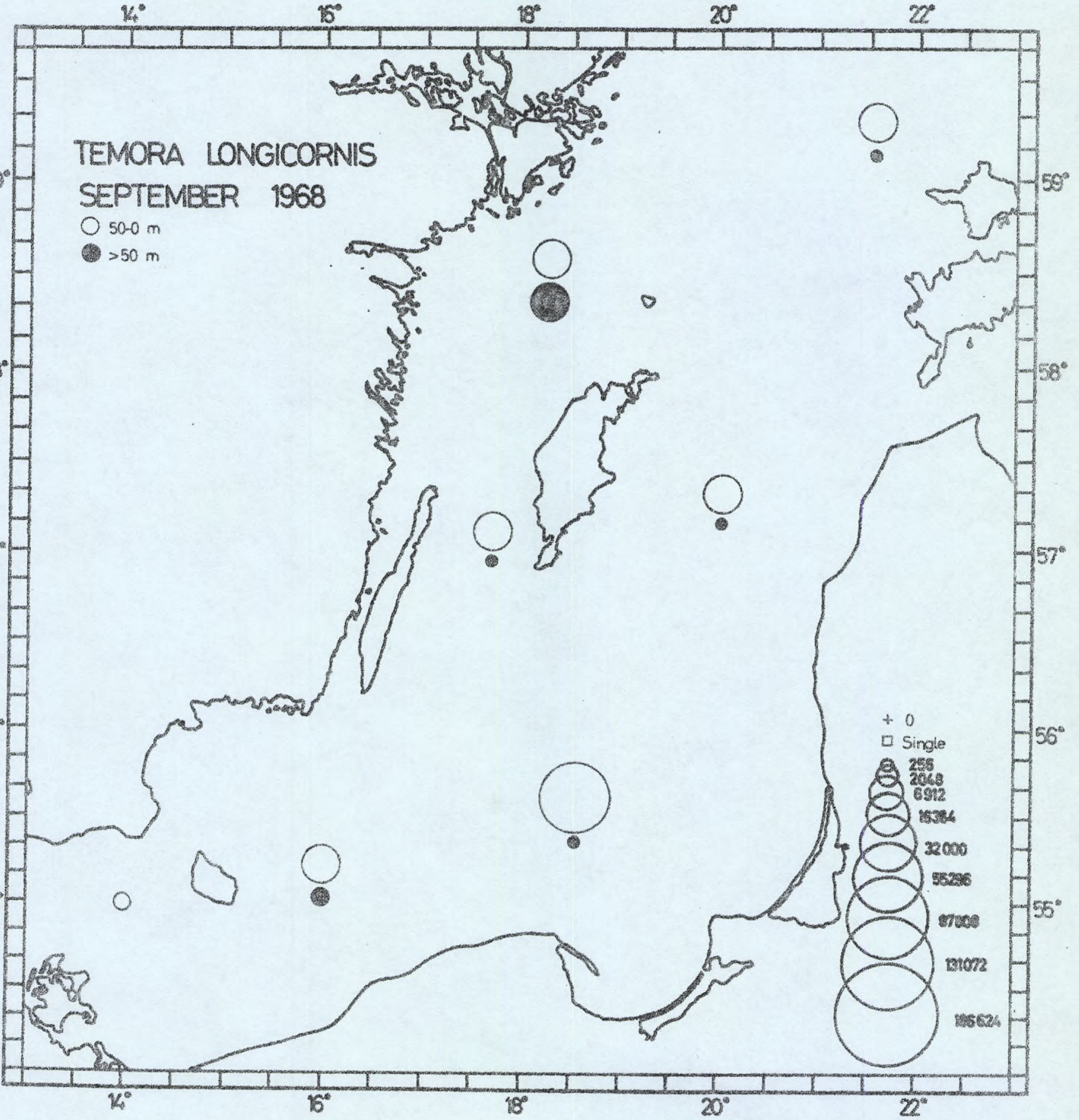
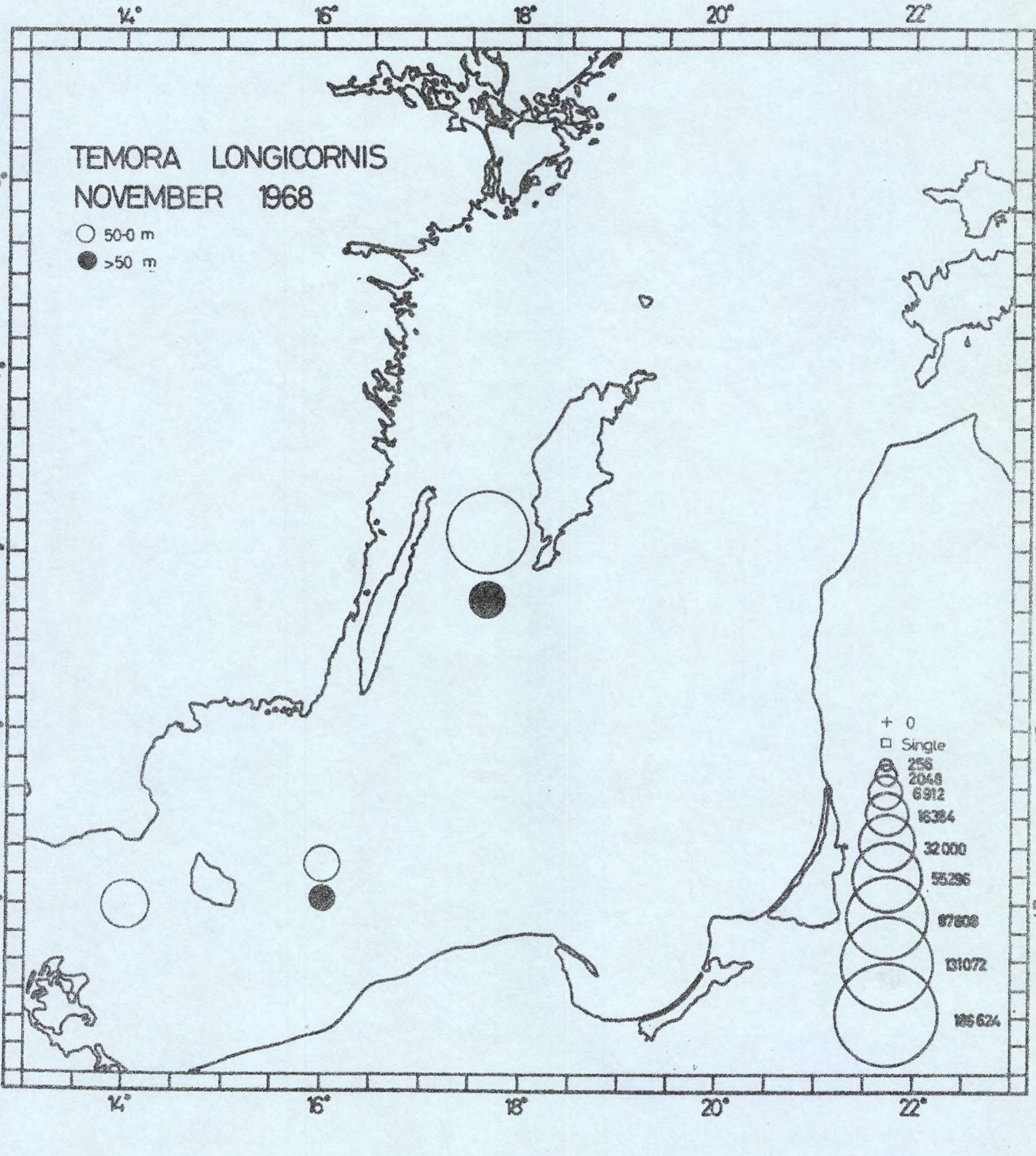

TEMORA LONGICORNIS
JUNE 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 60.



TEMORA LONGICORNIS
SEPTEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 61.



TEMORA LONGICORNIS
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
185624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

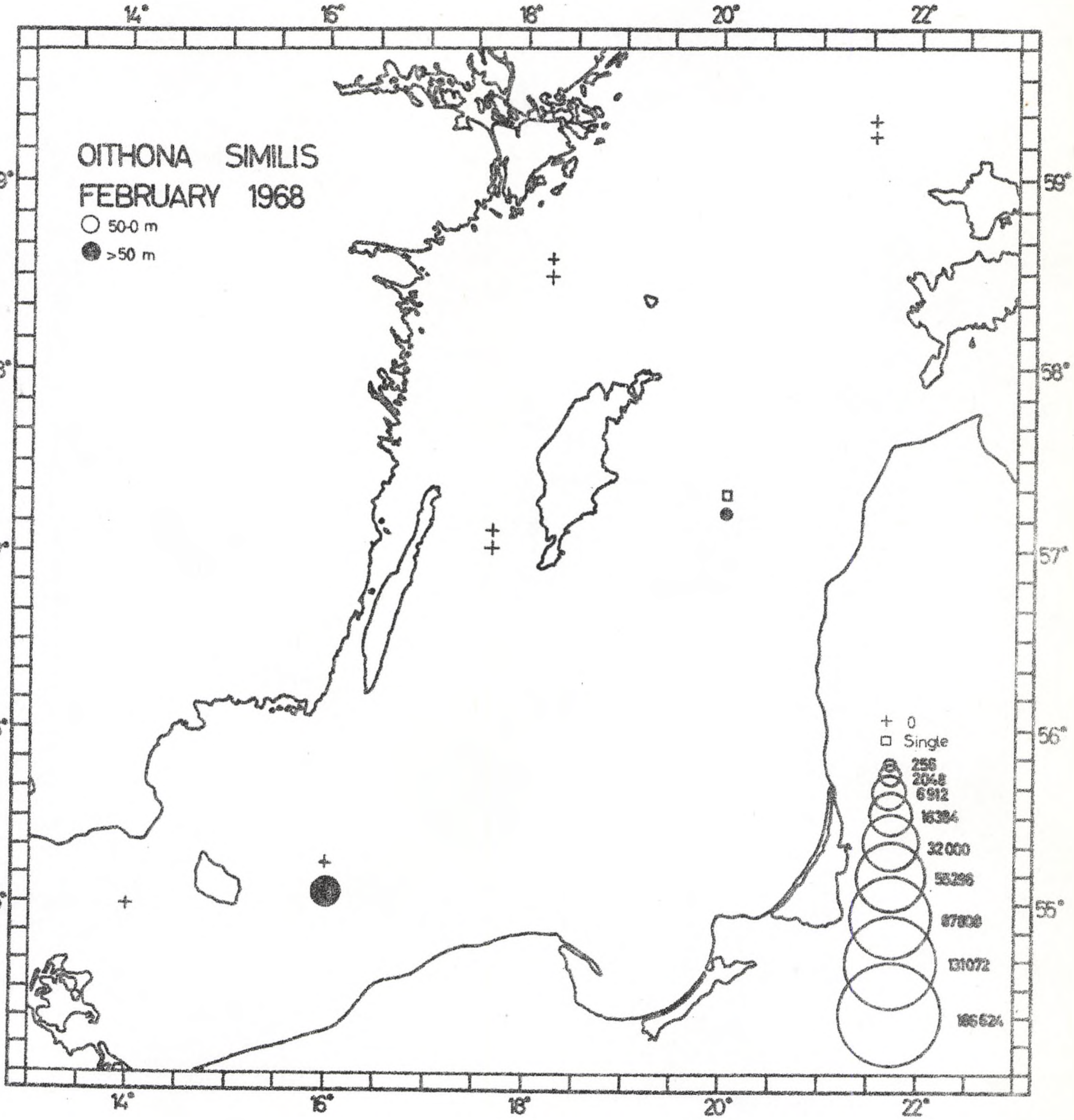
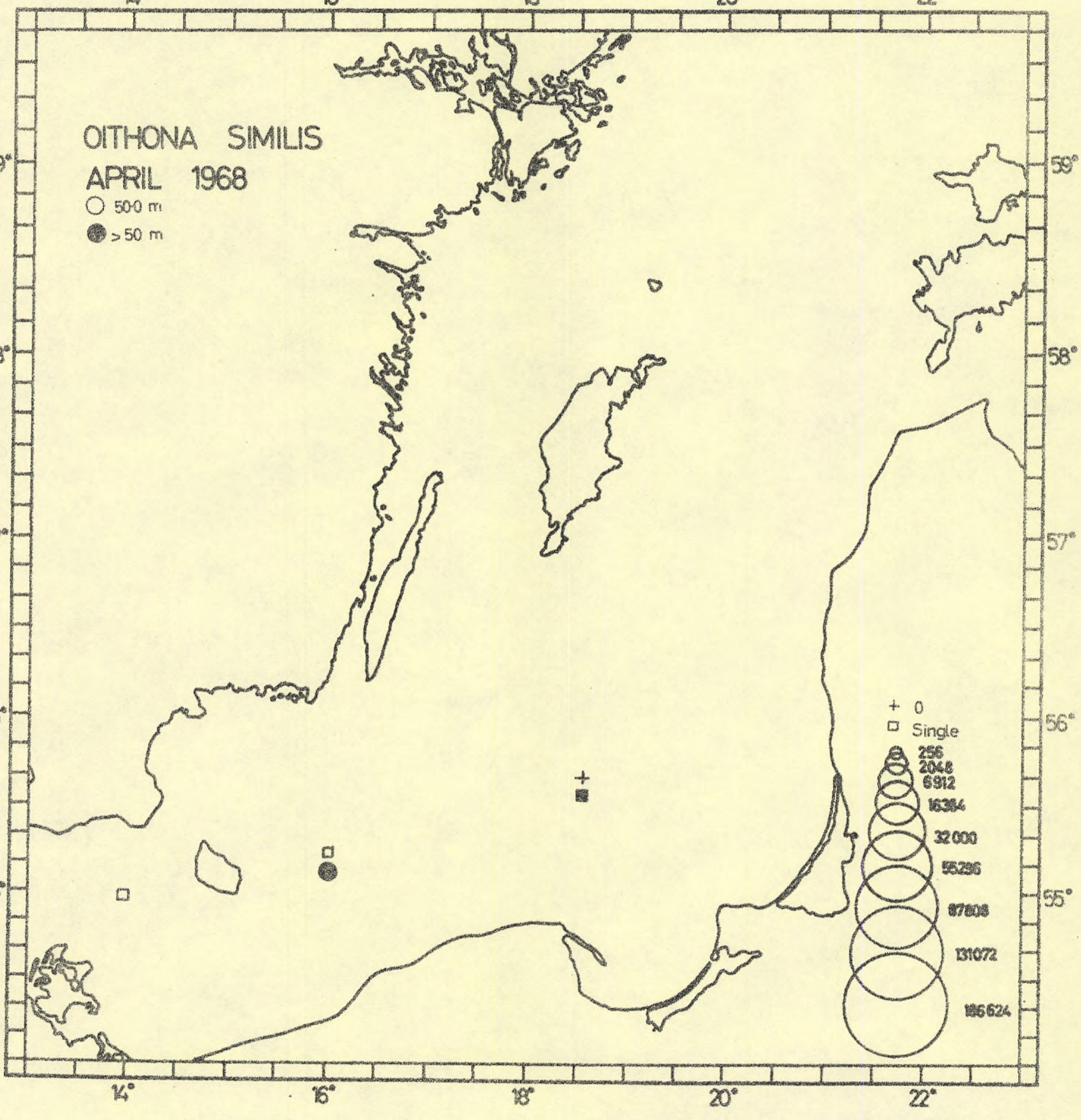
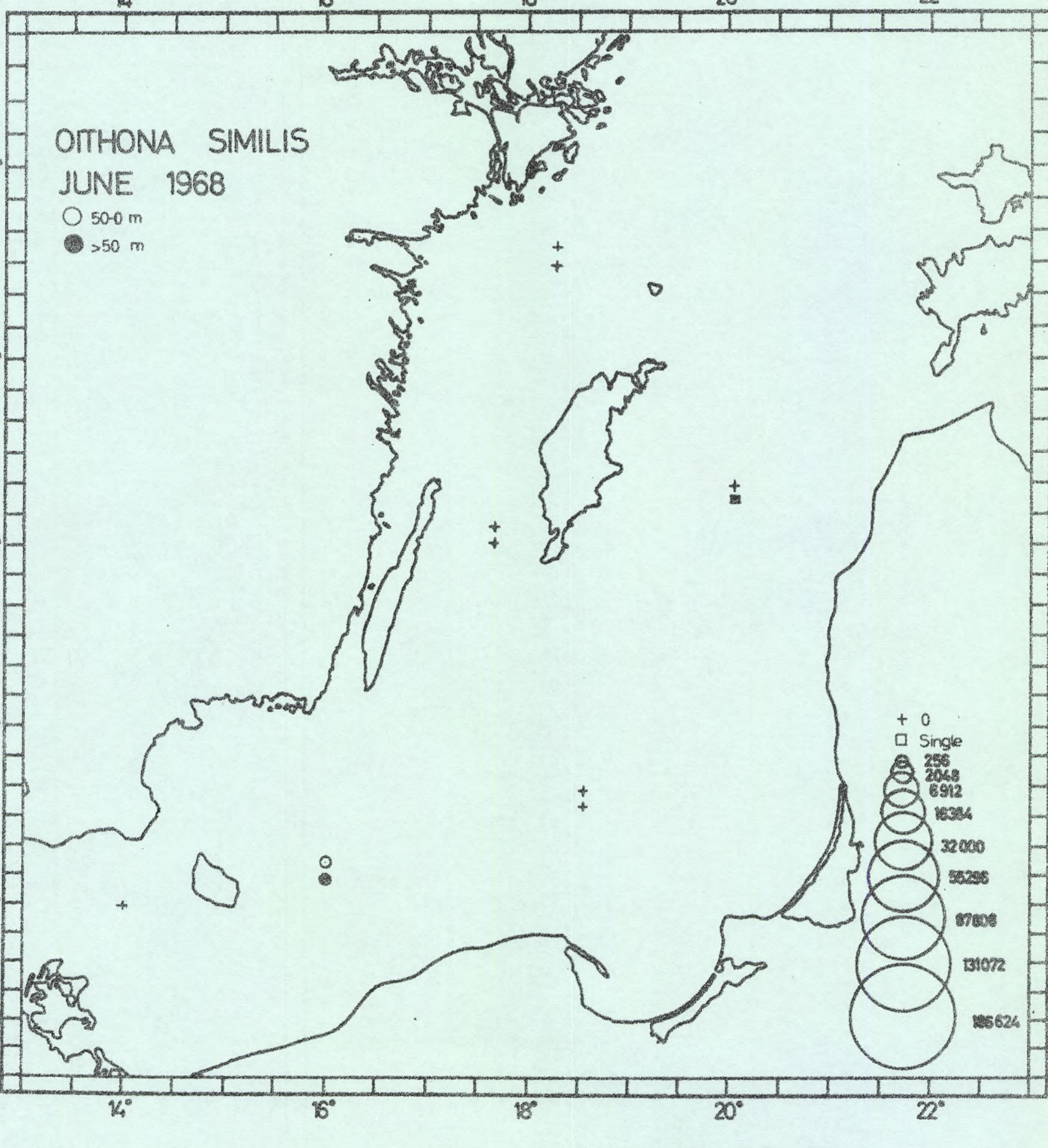

OITHONA SIMILIS
FEBRUARY 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
58296
87808
131072
186624

Fig 63.



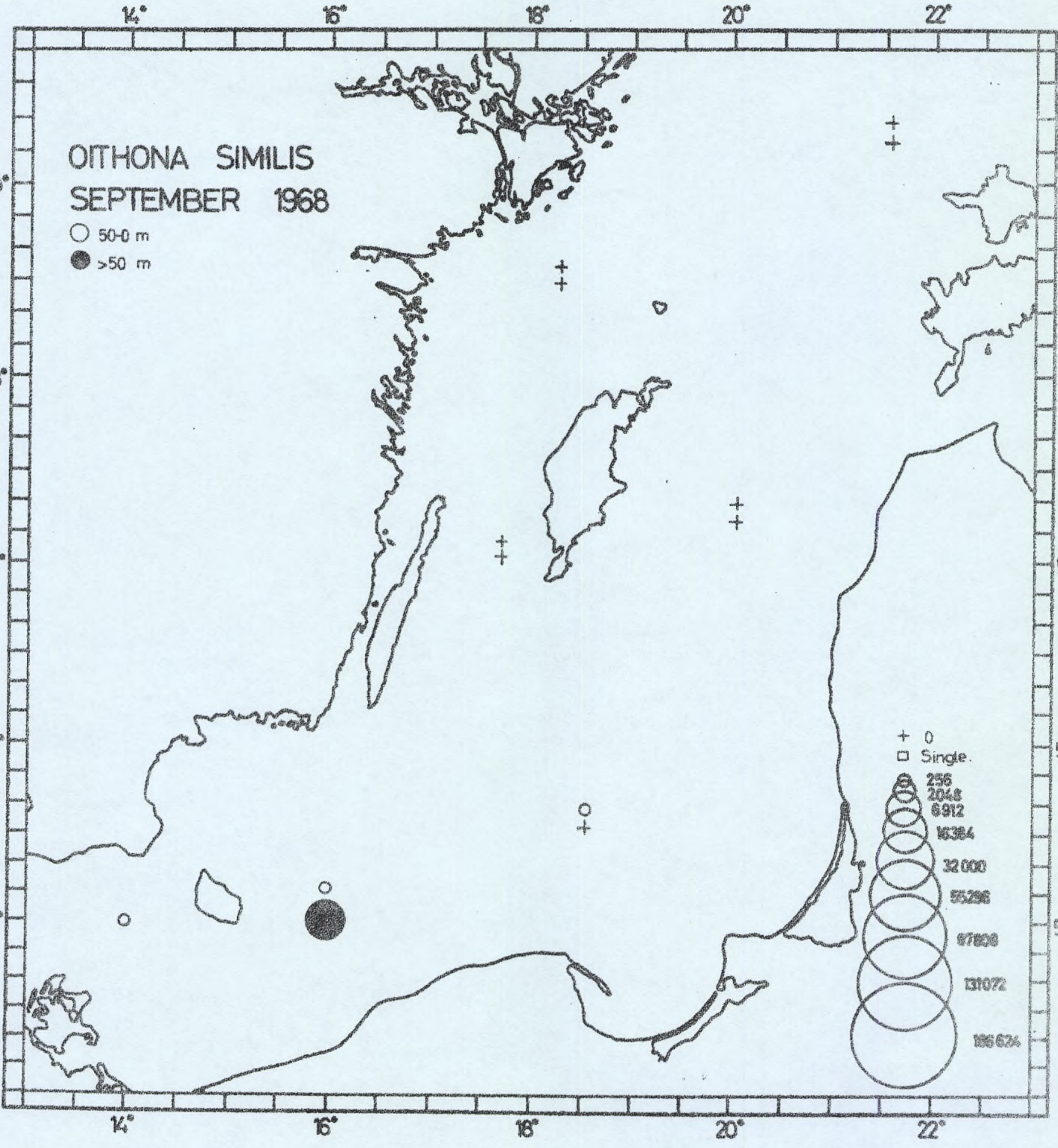
OITHONA SIMILIS
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 64.



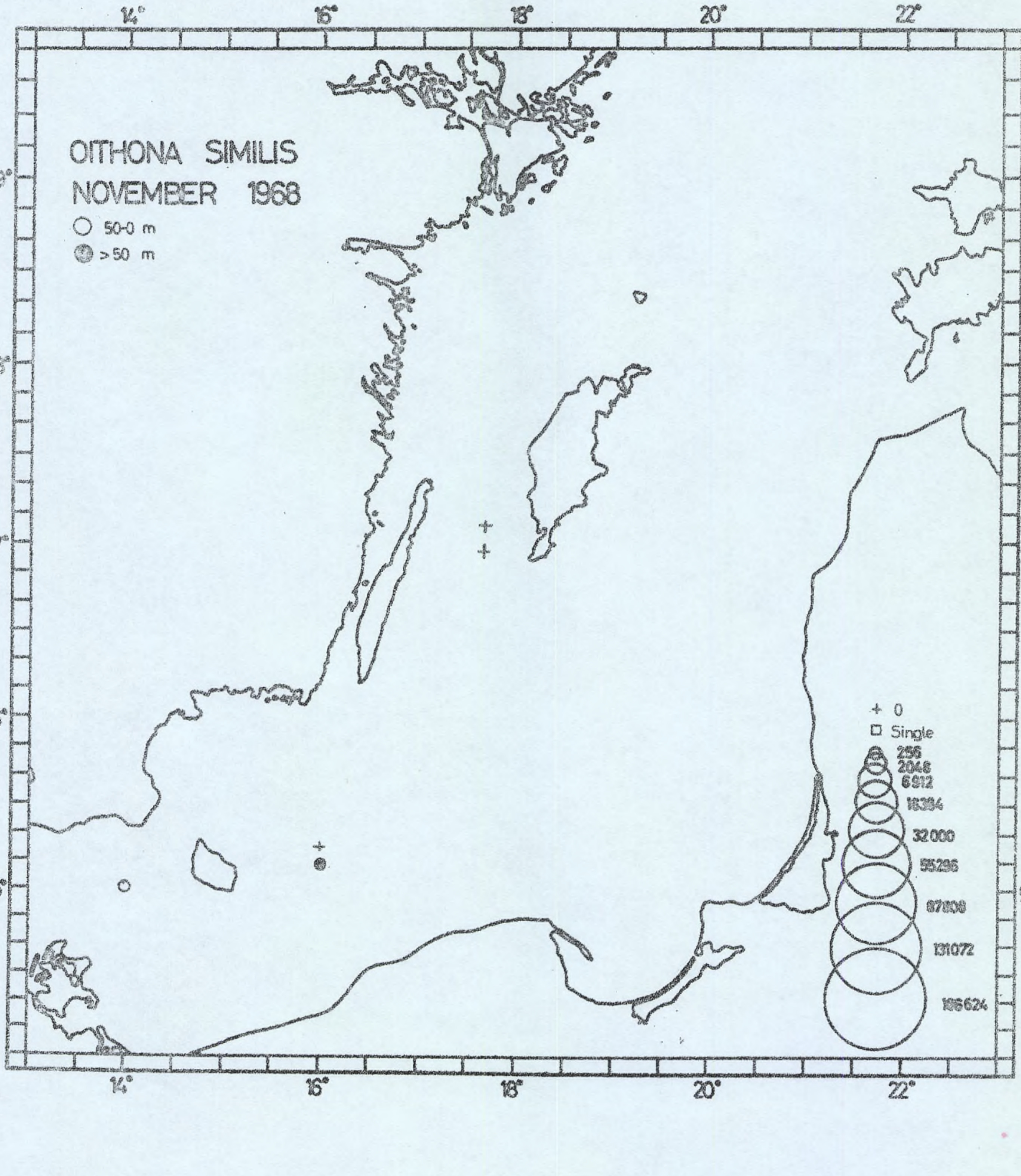
OITHONA SIMILIS
JUNE 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 65.

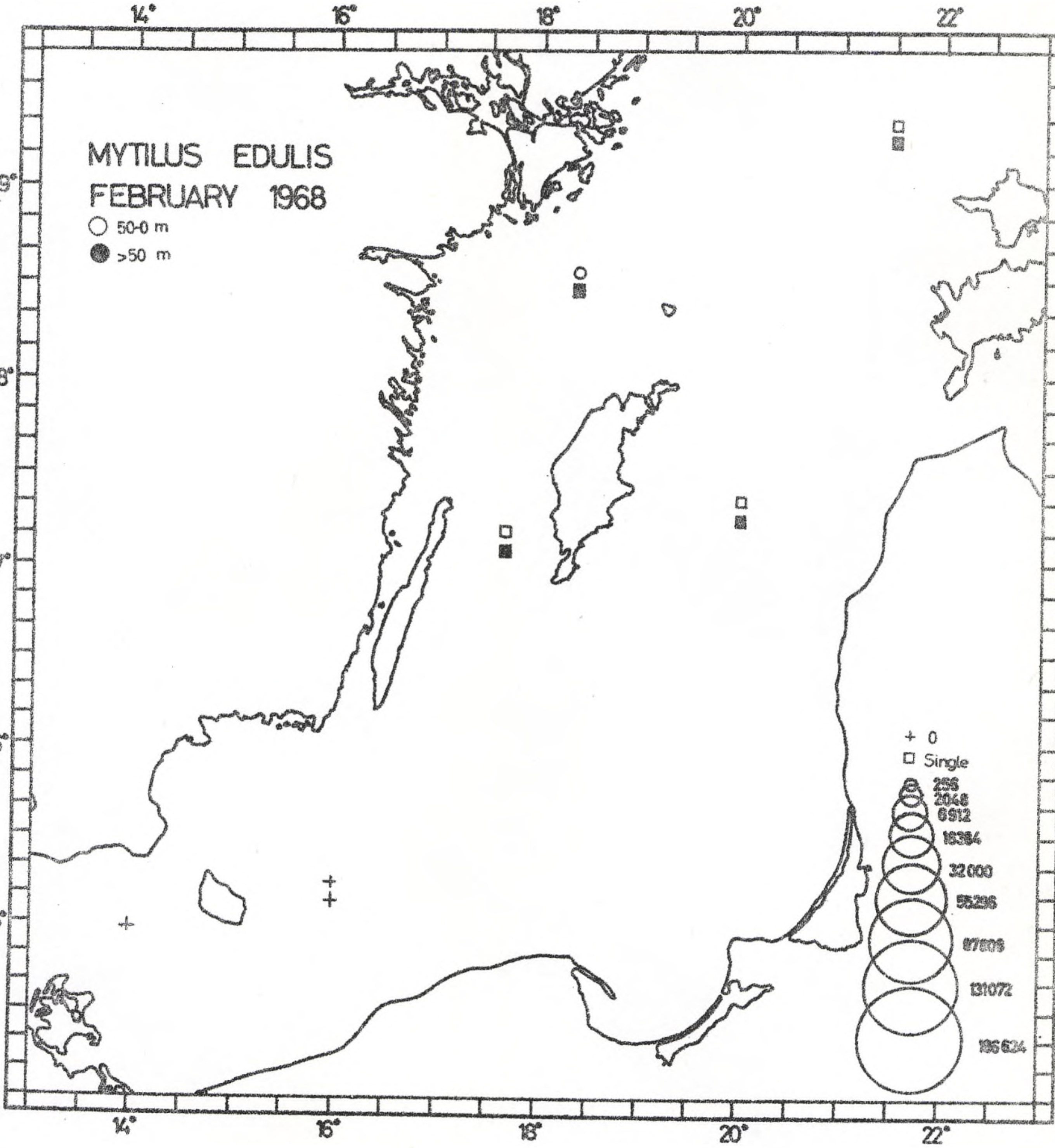


OITHONA SIMILIS
SEPTEMBER 1968
50-0 m
>50 m
+ 0
Single.
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 66.

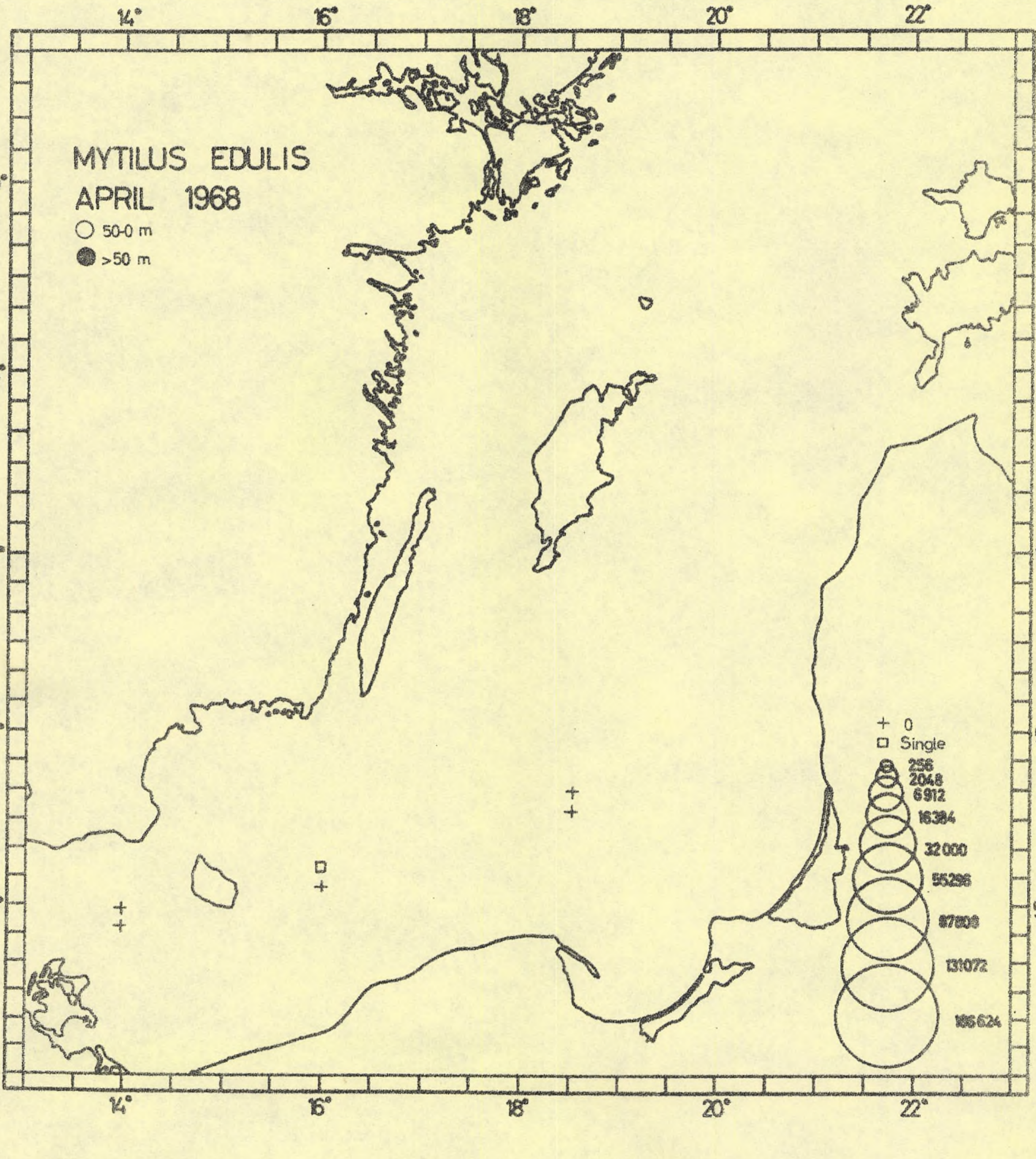


OITHONA SIMILIS
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°



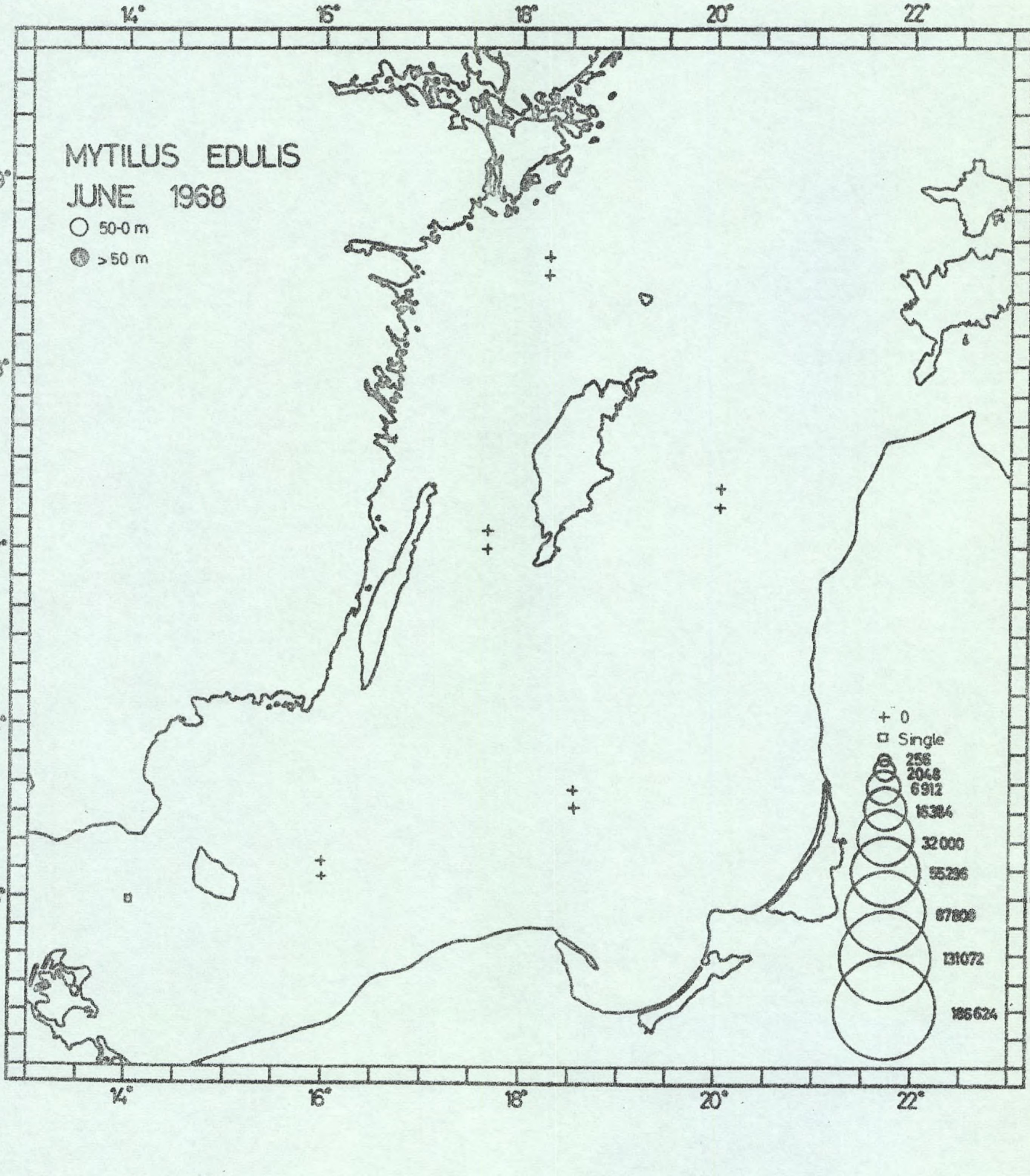
MYTILUS EDULIS
FEBRUARY 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 68.



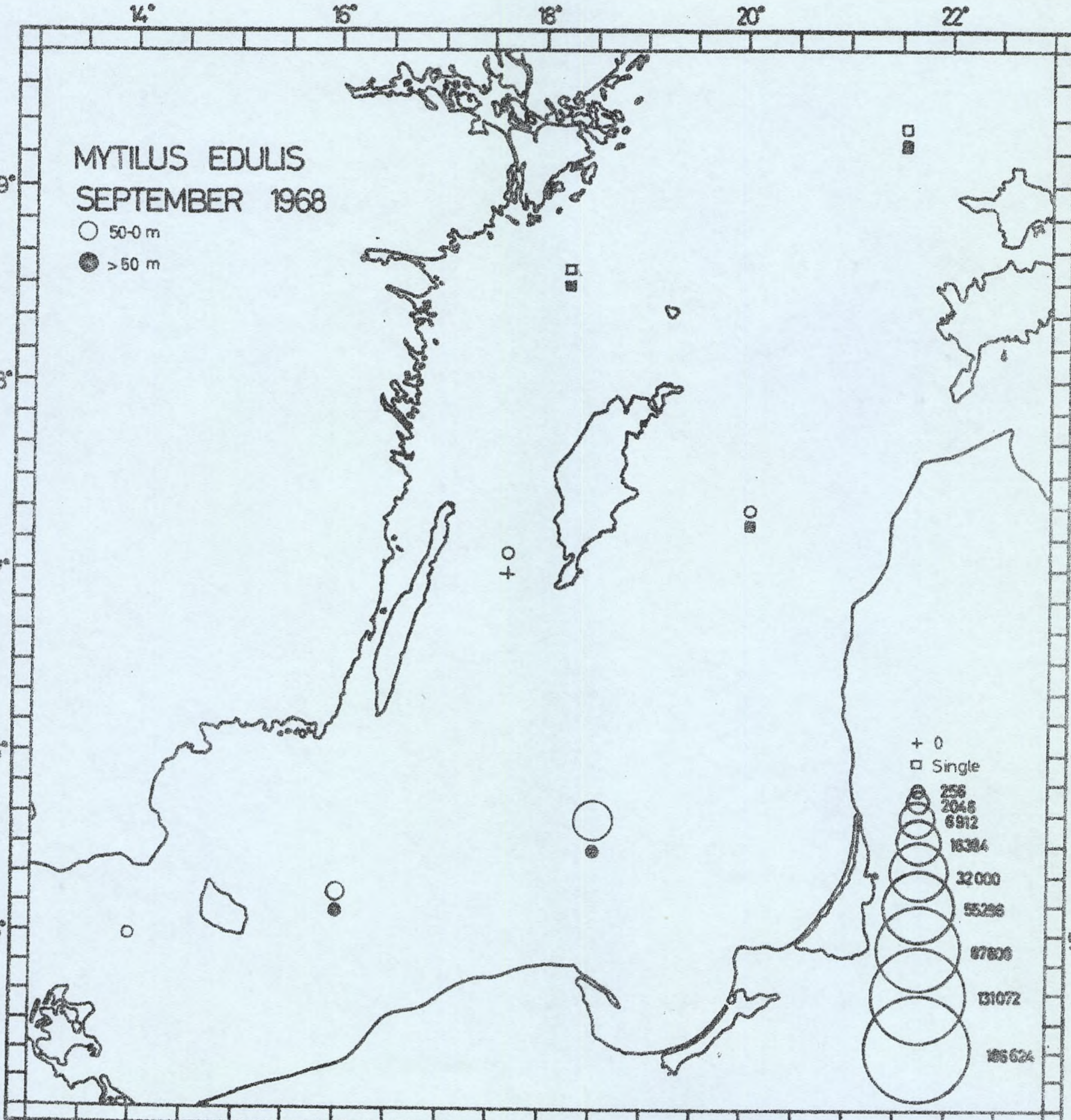
MYTILUS EDULIS
APRIL 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 69.



MYTILUS EDULIS
JUNE 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 70.



MYTILUS EDULIS
SEPTEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 71.

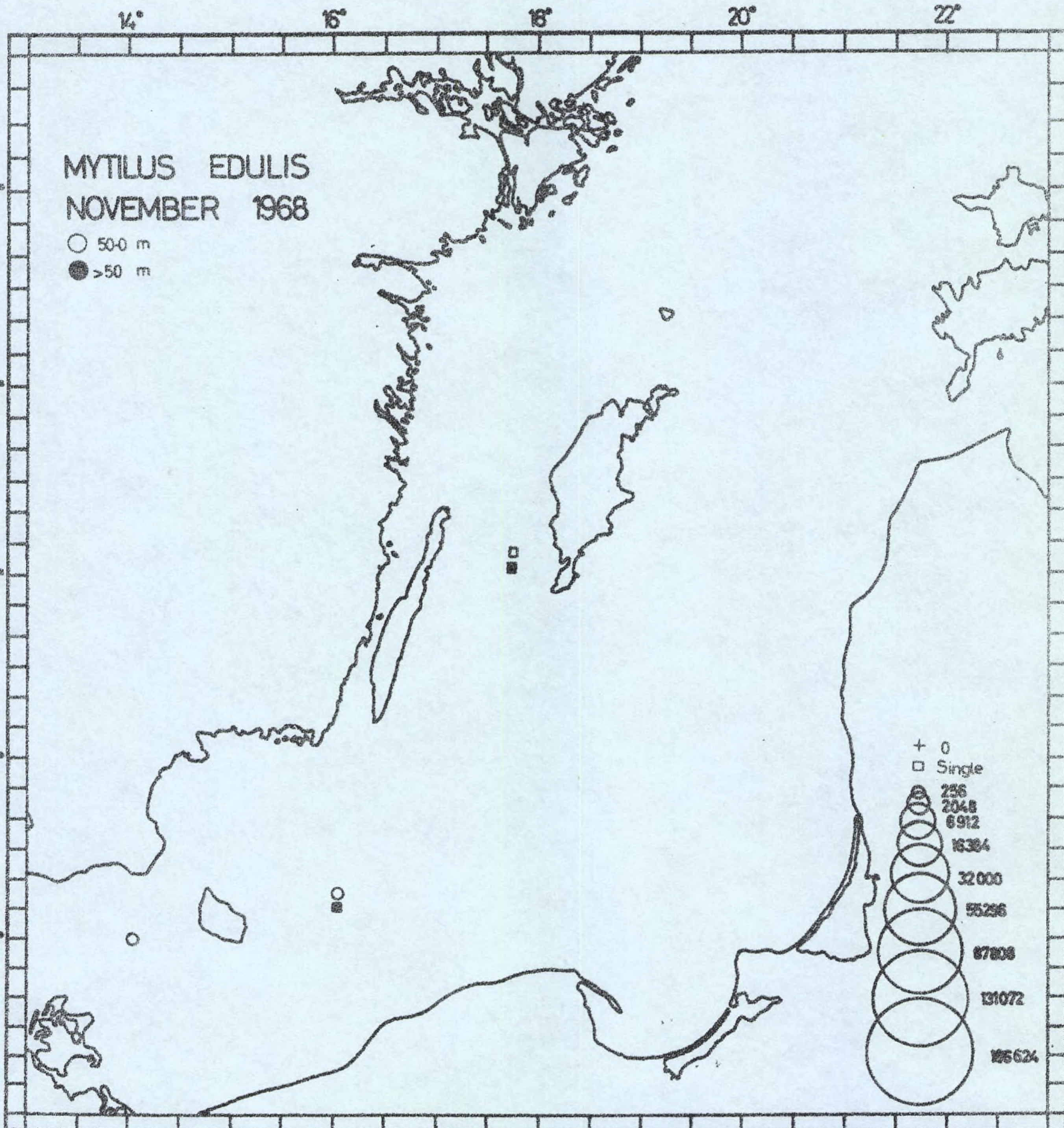
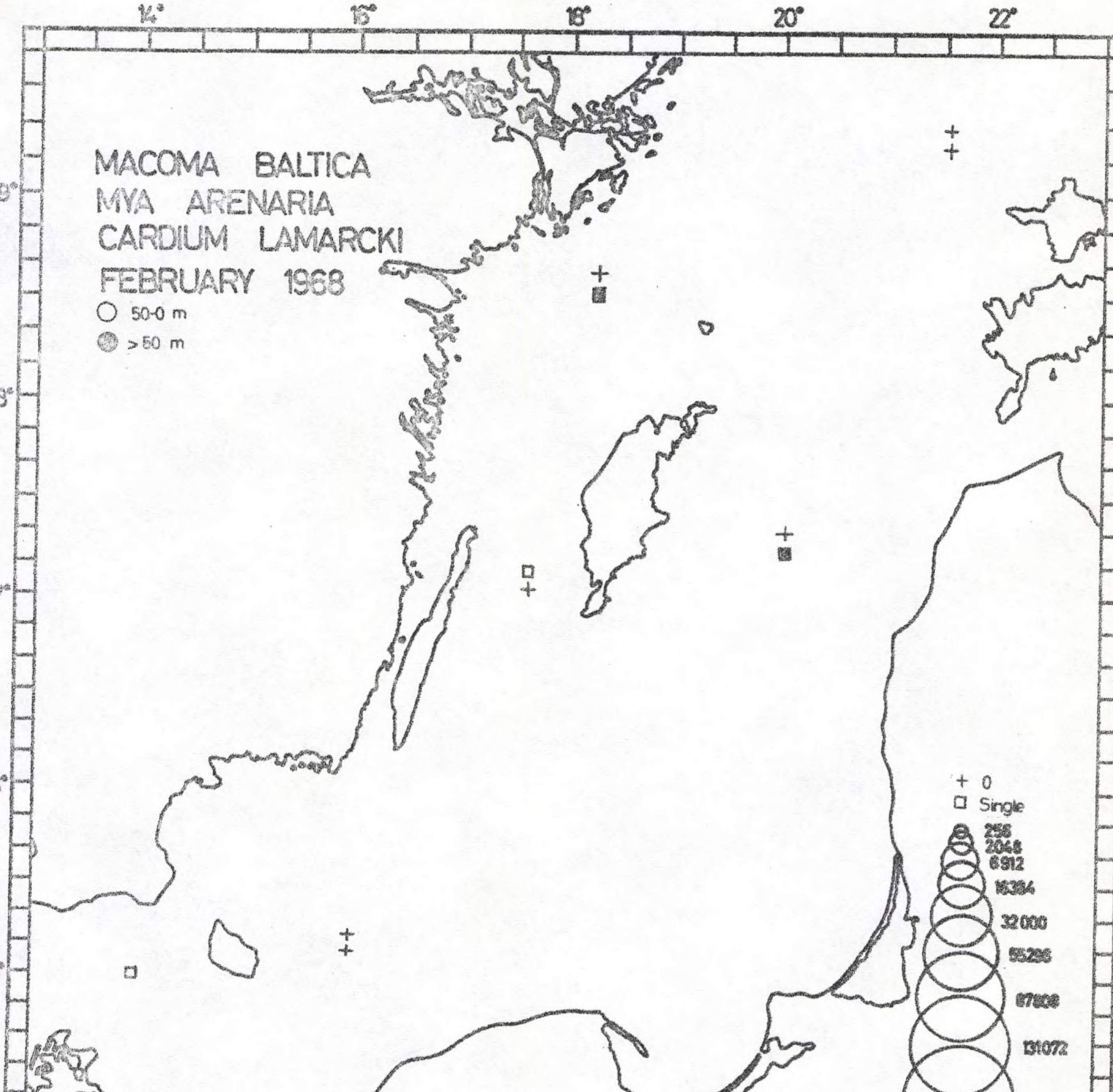
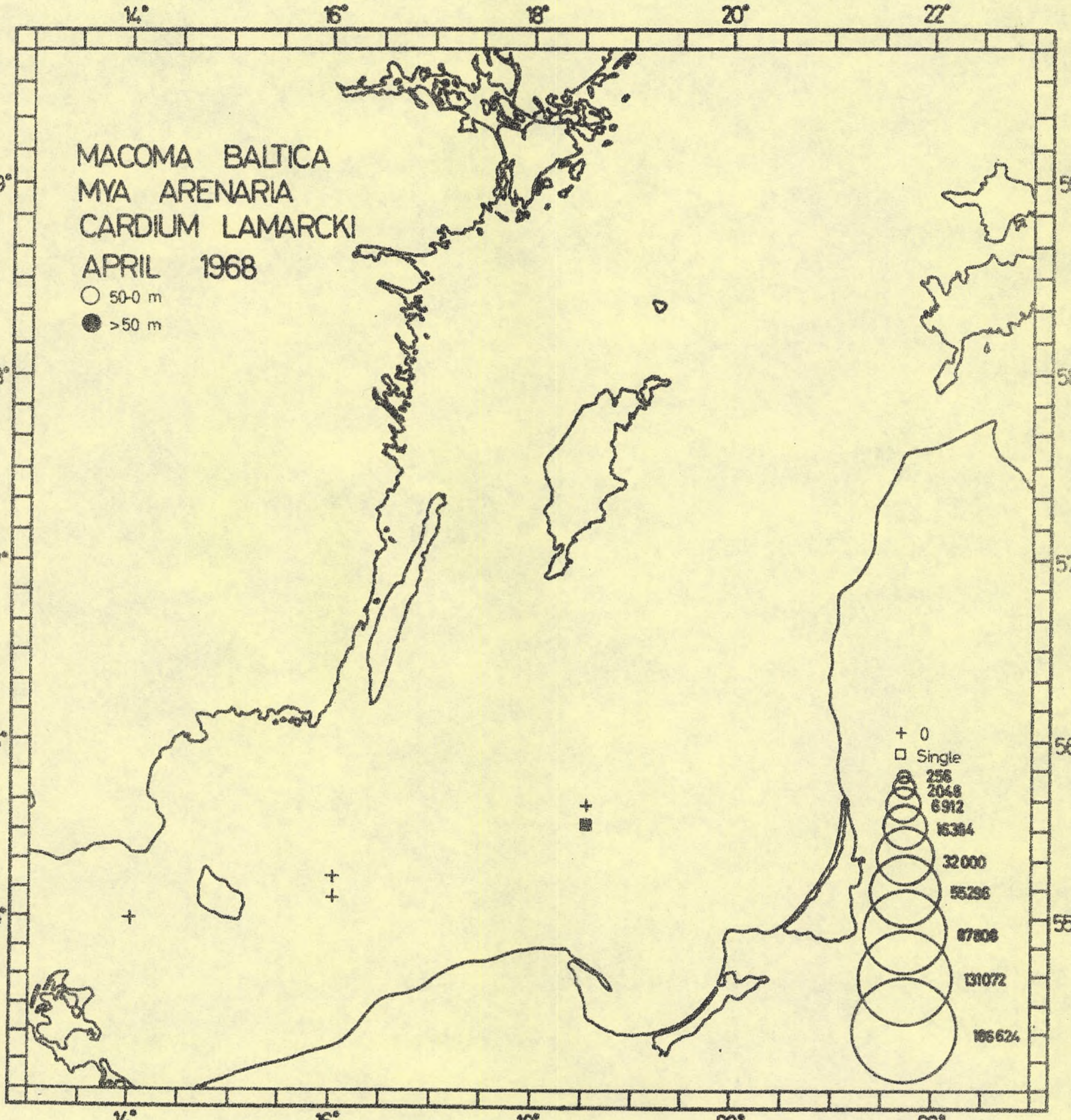

MYTILUS EDULIS
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 72.



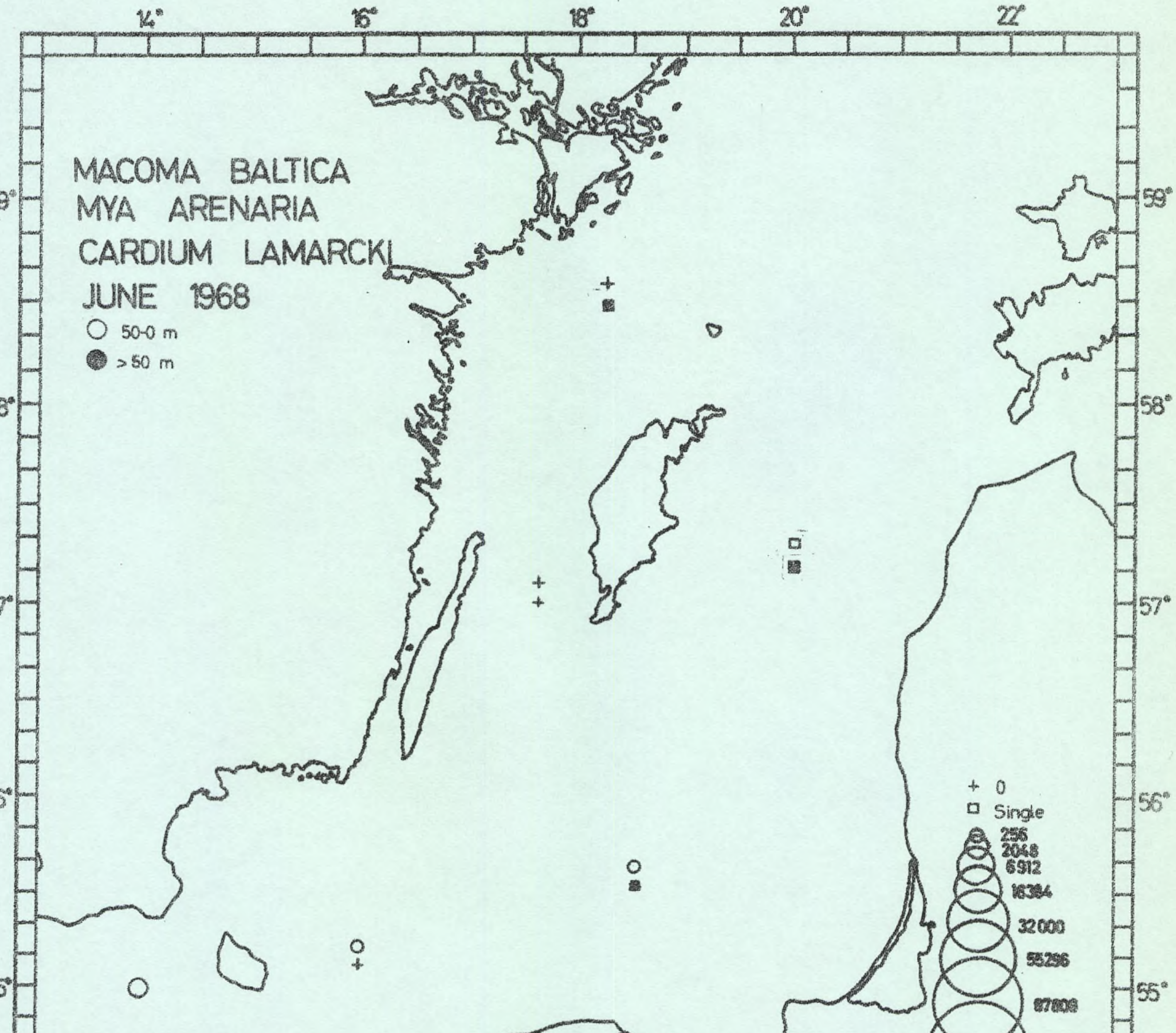
MACOMA BALTICA
MYA ARENARIA
CARDIUM LAMARCKI
FEBRUARY 1968
50-0 m
> 50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 73.



MACOMA BALTICA
MYA ARENARIA
CARDIUM LAMARCKI
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 74.



MACOMA BALTICA
MYA ARENARIA
CARDIUM LAMARCKI
JUNE 1968
50-0 m
> 50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 75.

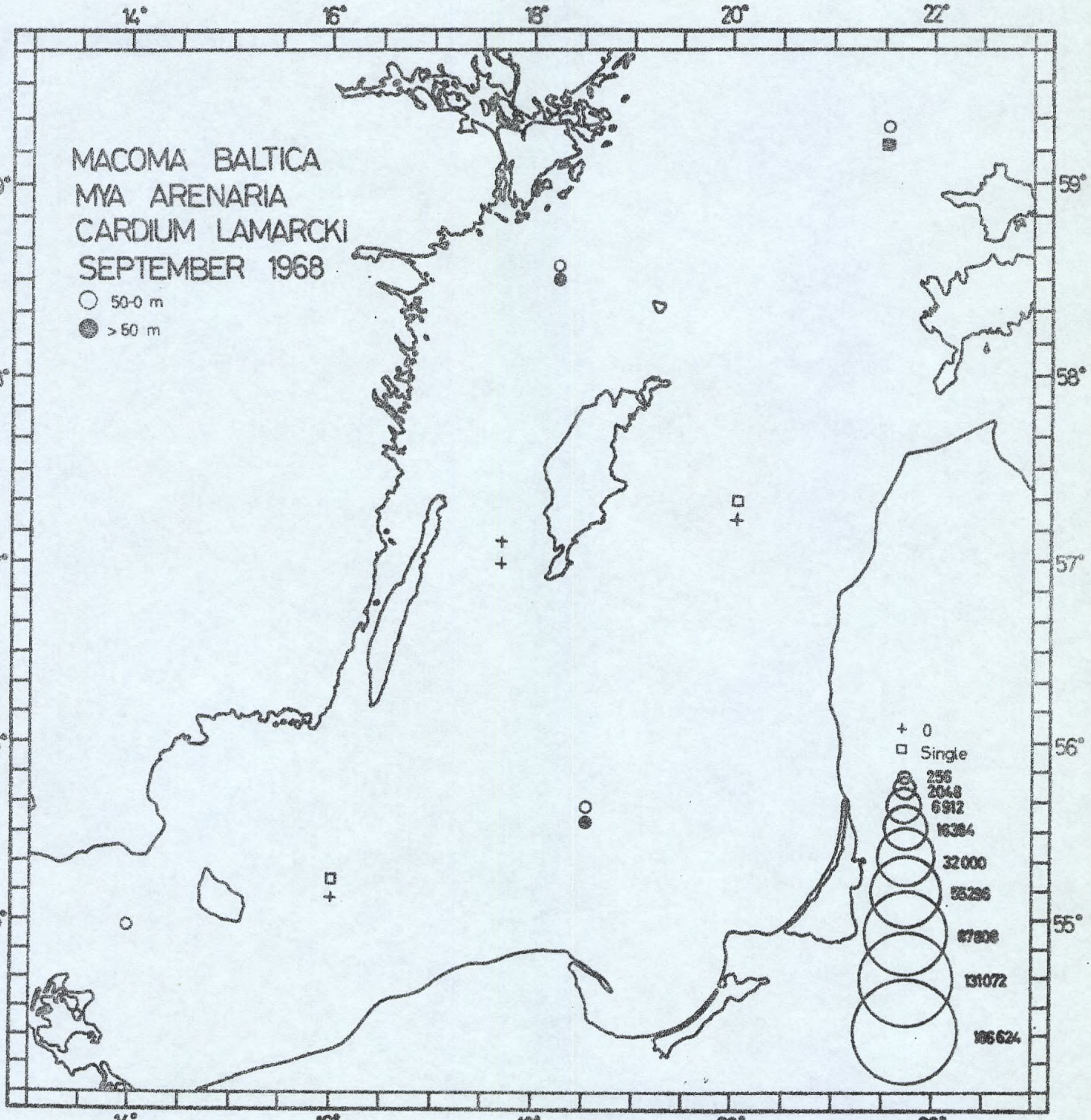
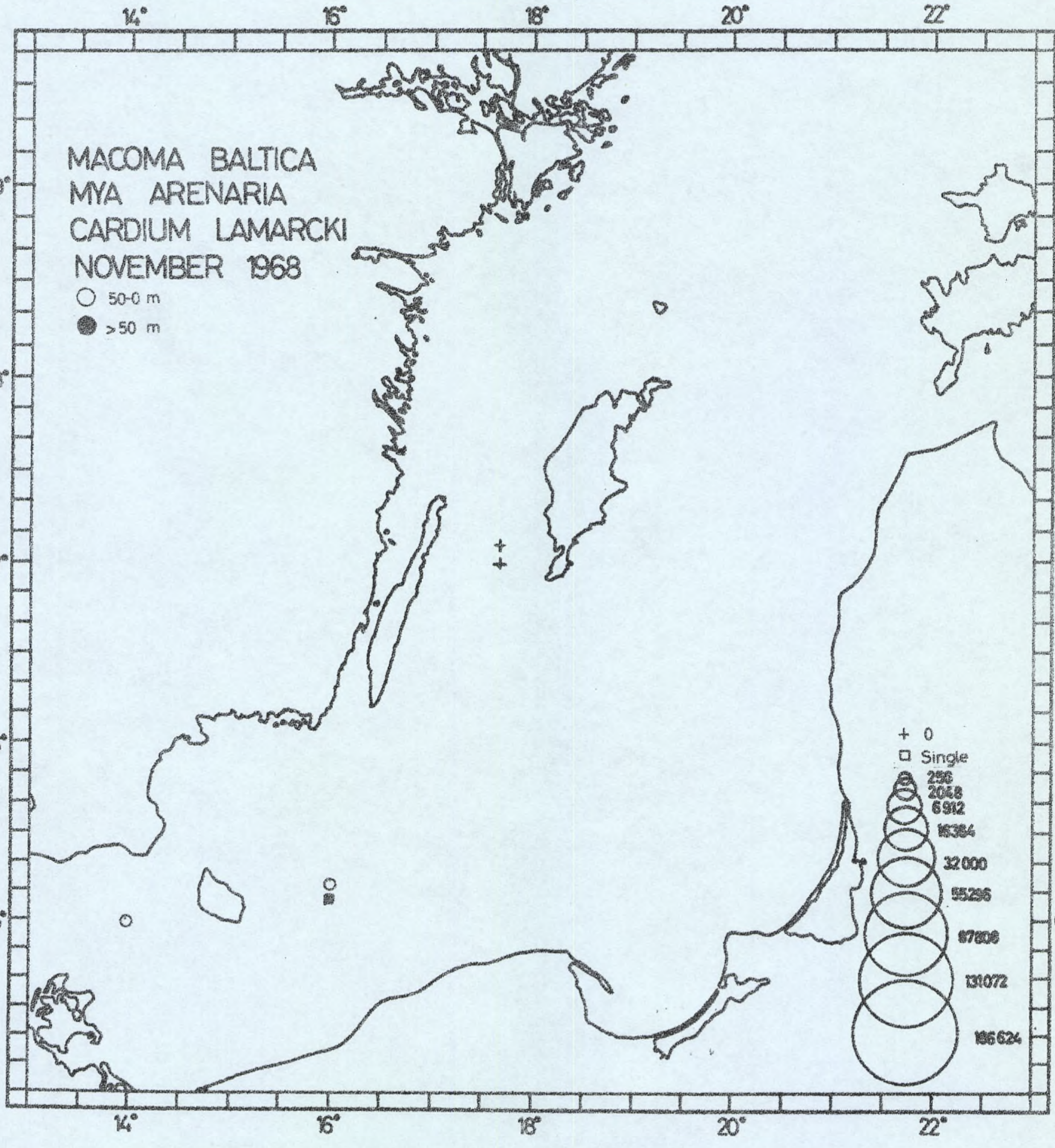

14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
MACOMA BALTICA
MYA ARENARIA
CARDIUM LAMARCKI
SEPTEMBER 1968
50-0 m
> 50 m
0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 76.



MACOMA BALTICA
MYA ARENARIA
CARDIUM LAMARCKI
NOVEMBER 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

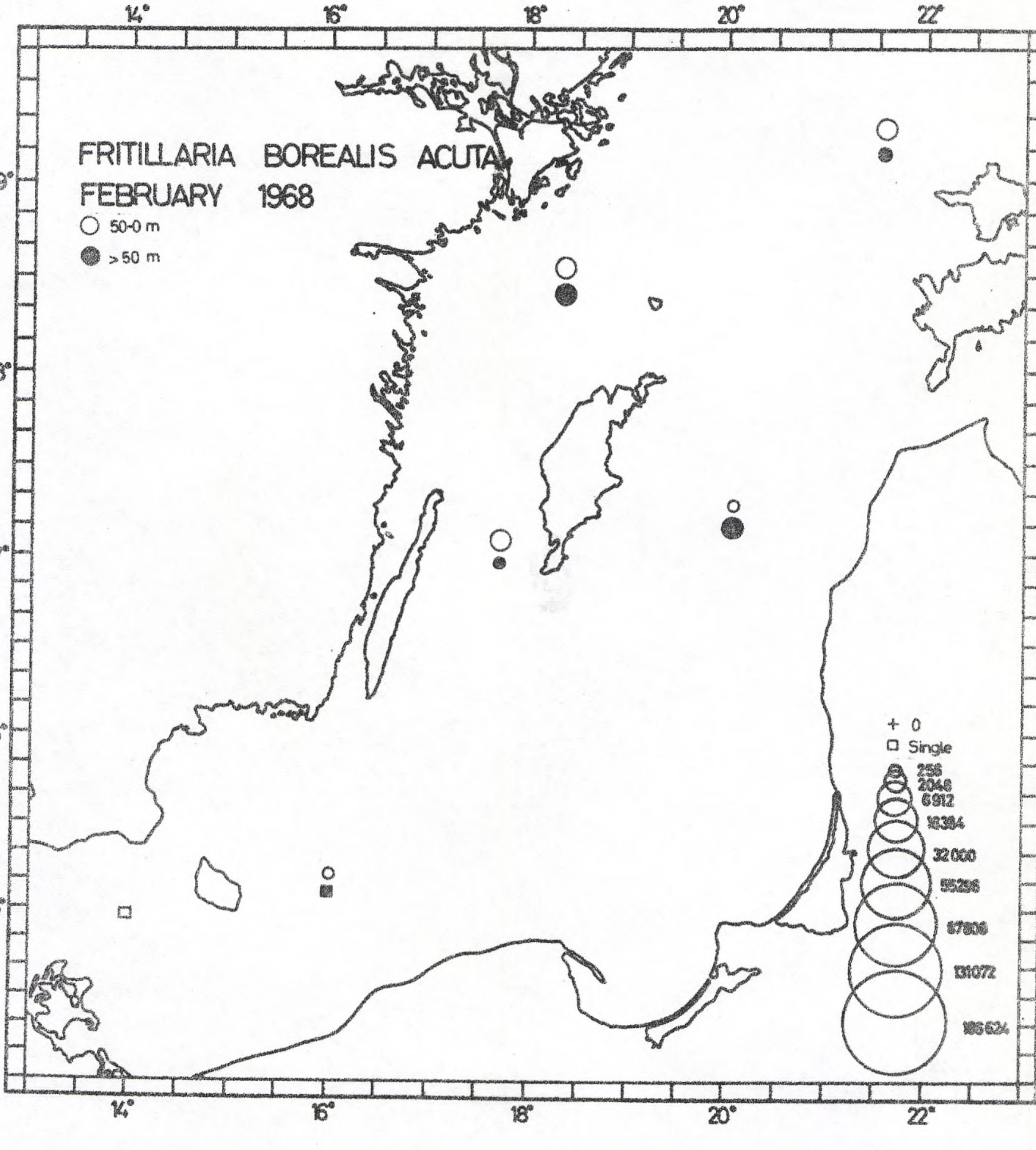
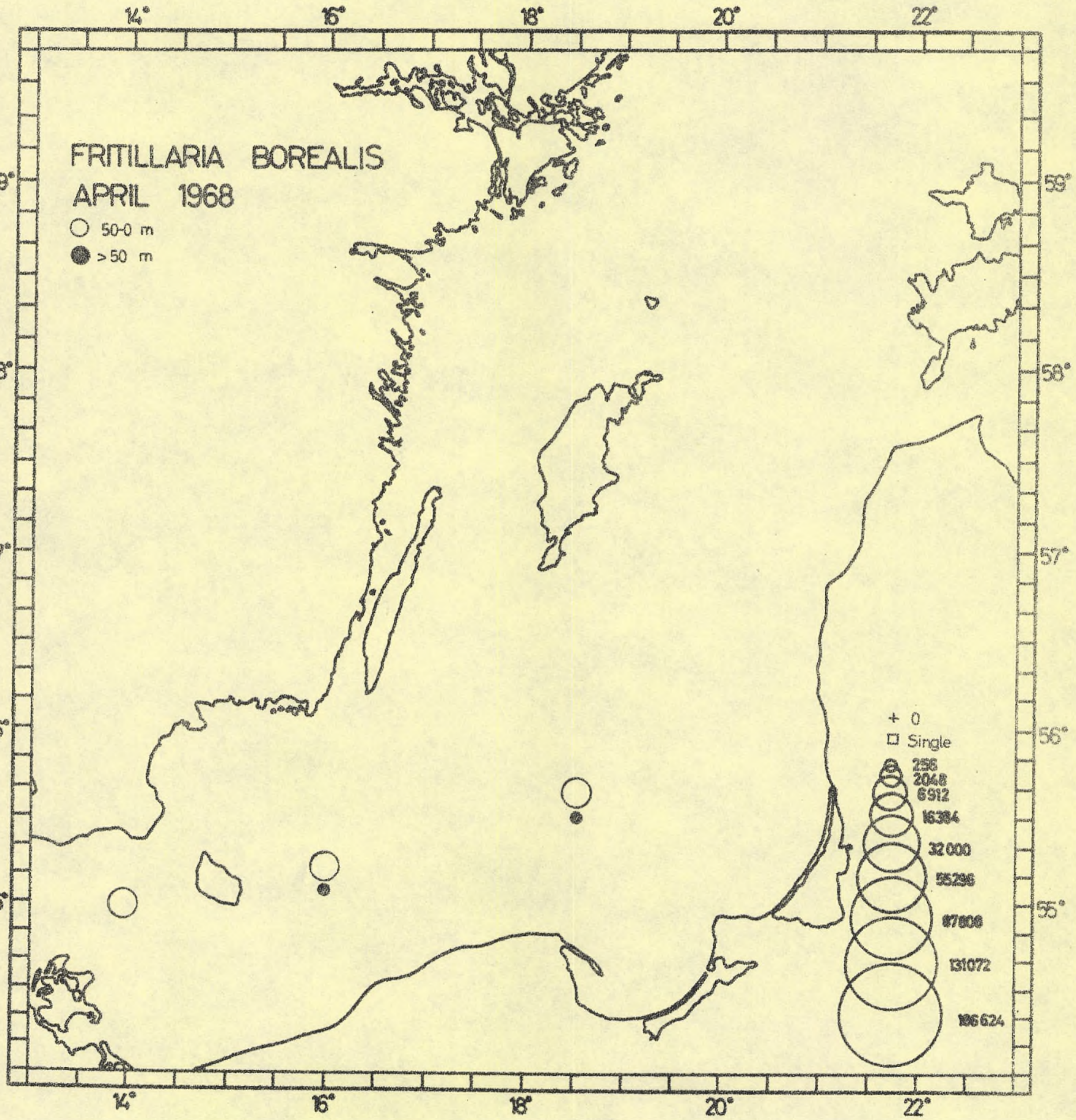
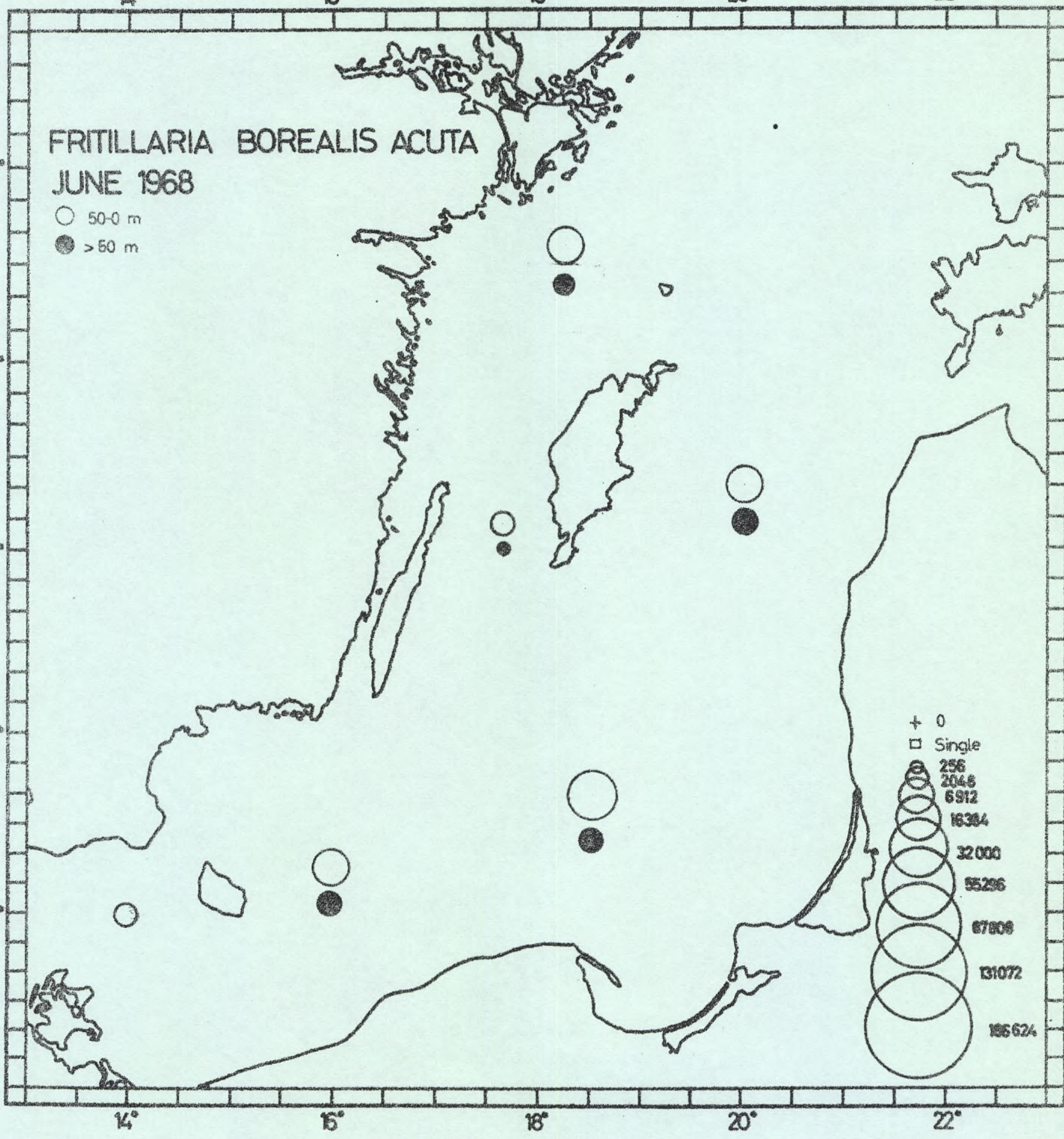

FRITILLARIA BOREALIS ACUTA
FEBRUARY 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
55°
56°
57°
58°
59°

Fig 78.



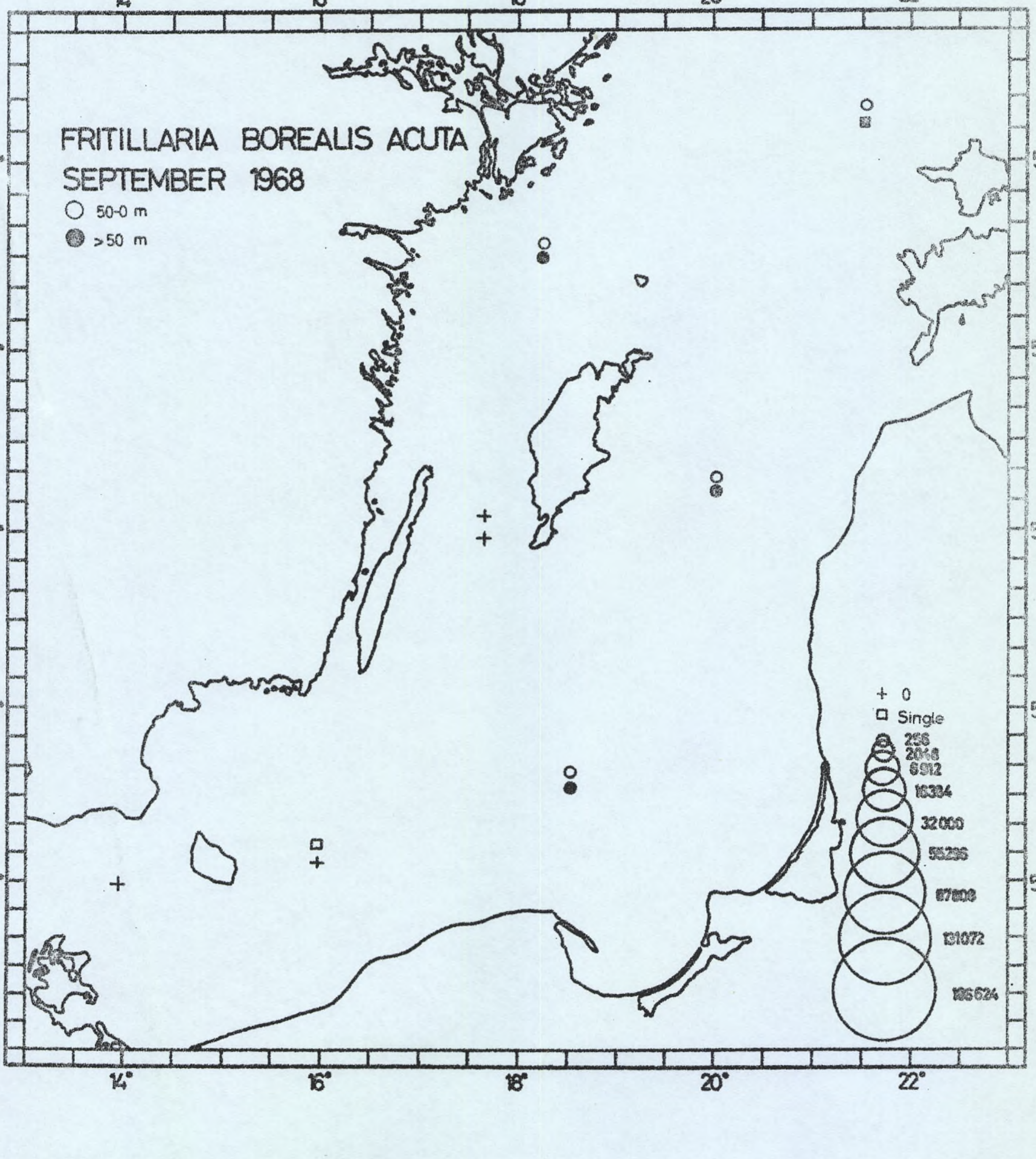
FRITILLARIA BOREALIS
APRIL 1968
50-0 m
>50 m
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 79.



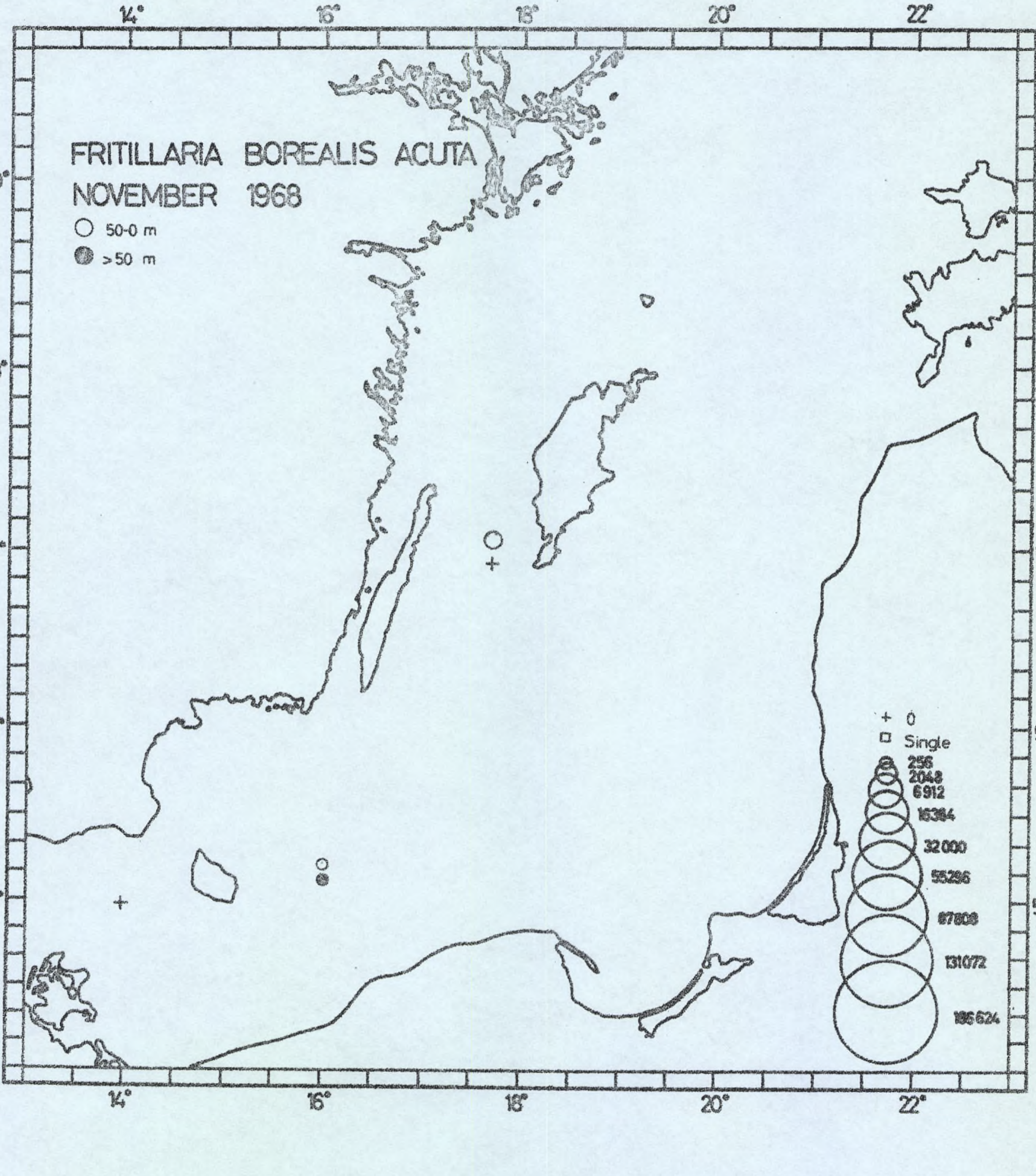
FRITILLARIA BOREALIS ACUTA
JUNE 1968
50-0 m
> 50 m
+ 0
Single
256
2046
6912
16384
32000
55296
87808
131072
186624
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°

Fig 80.



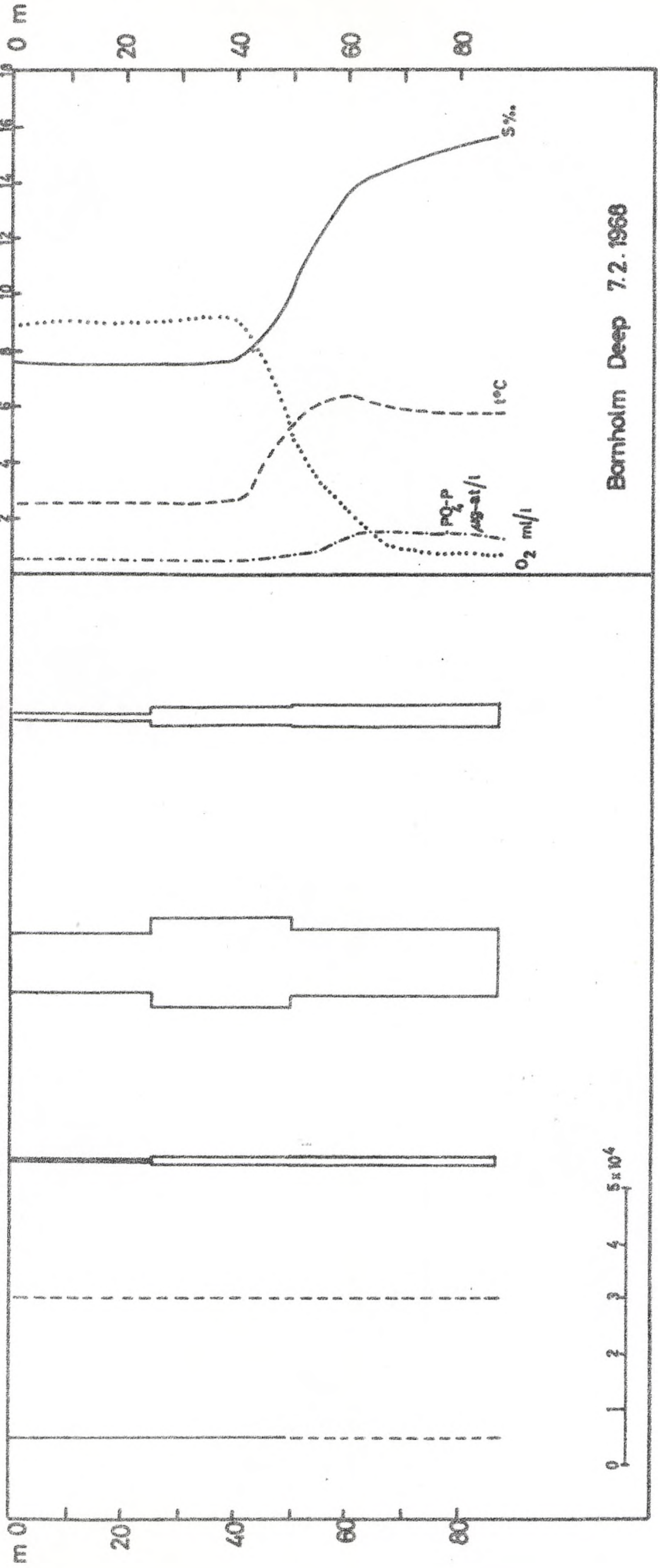
FRITILLARIA BOREALIS ACUTA
SEPTEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 81.



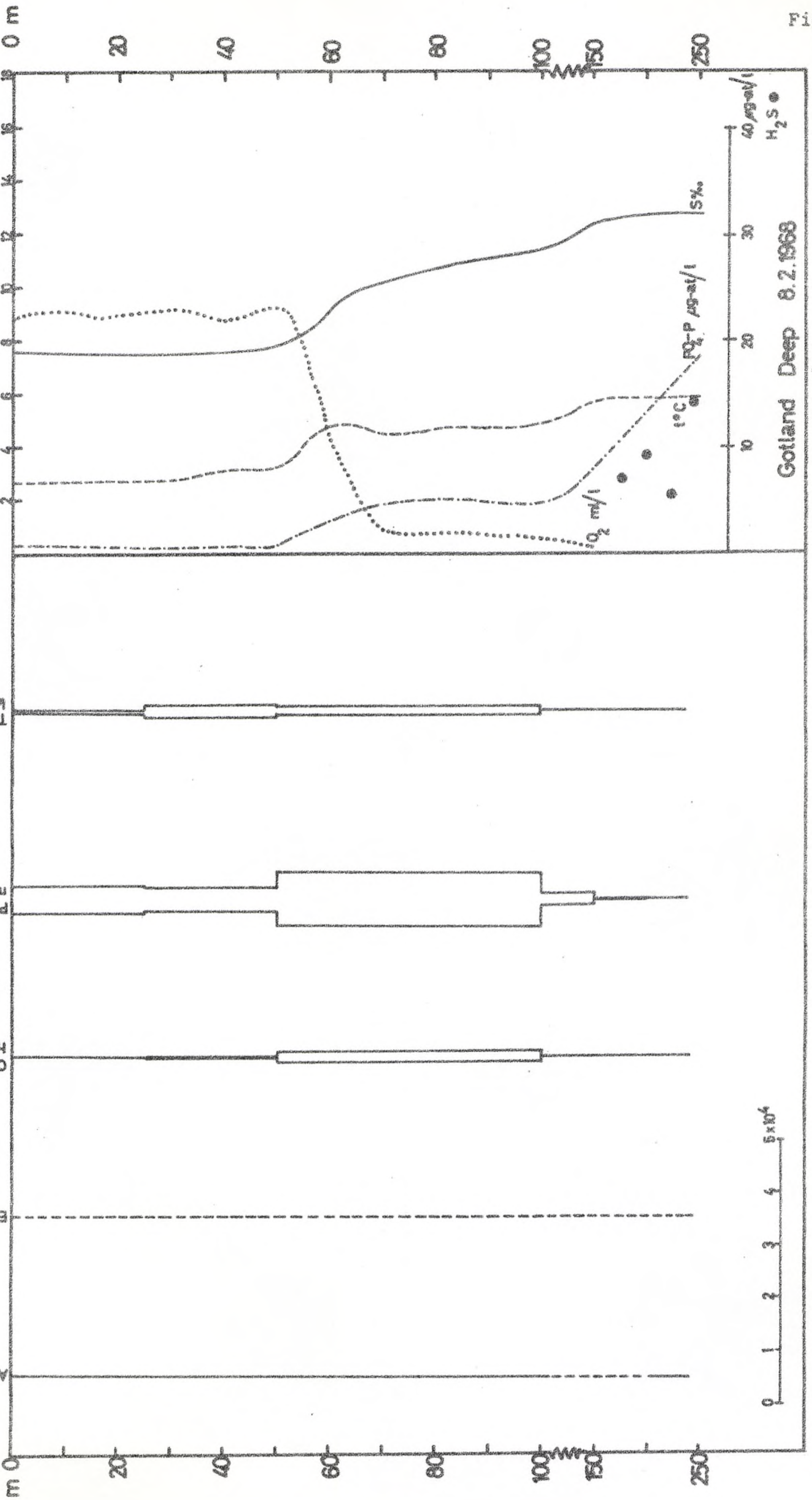
FRITILLARIA BOREALIS ACUTA
NOVEMBER 1968
50-0 m
>50 m
14°
16°
18°
20°
22°
59°
58°
57°
56°
55°
+ 0
Single
256
2048
6912
16384
32000
55296
87808
131072
186624

Fig 82.



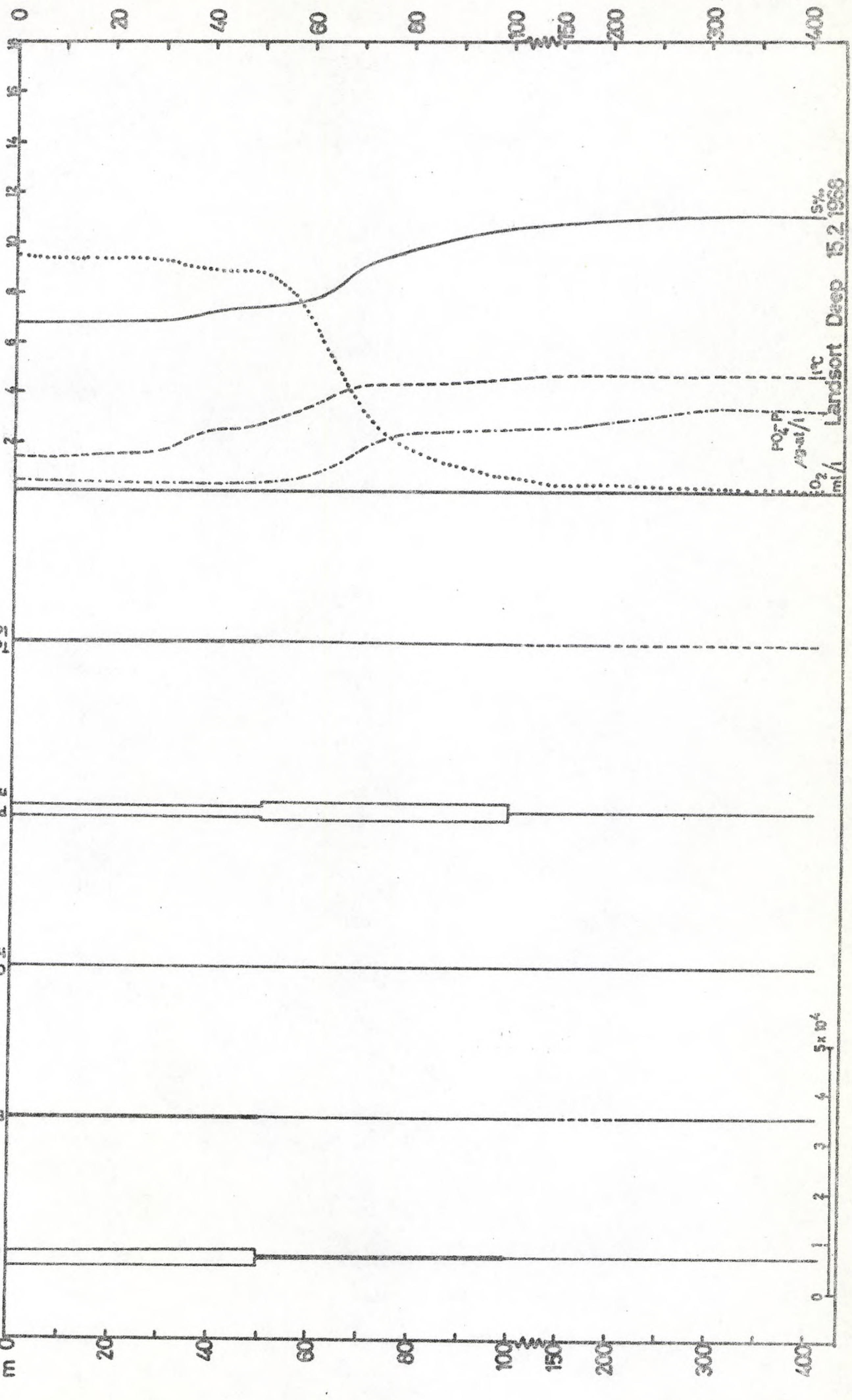
Bornholm Deep 7.2.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
0 m
20
40
60
80
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp
Acartia spp
0
1
2
3
4
5×10^4

Fig 83.



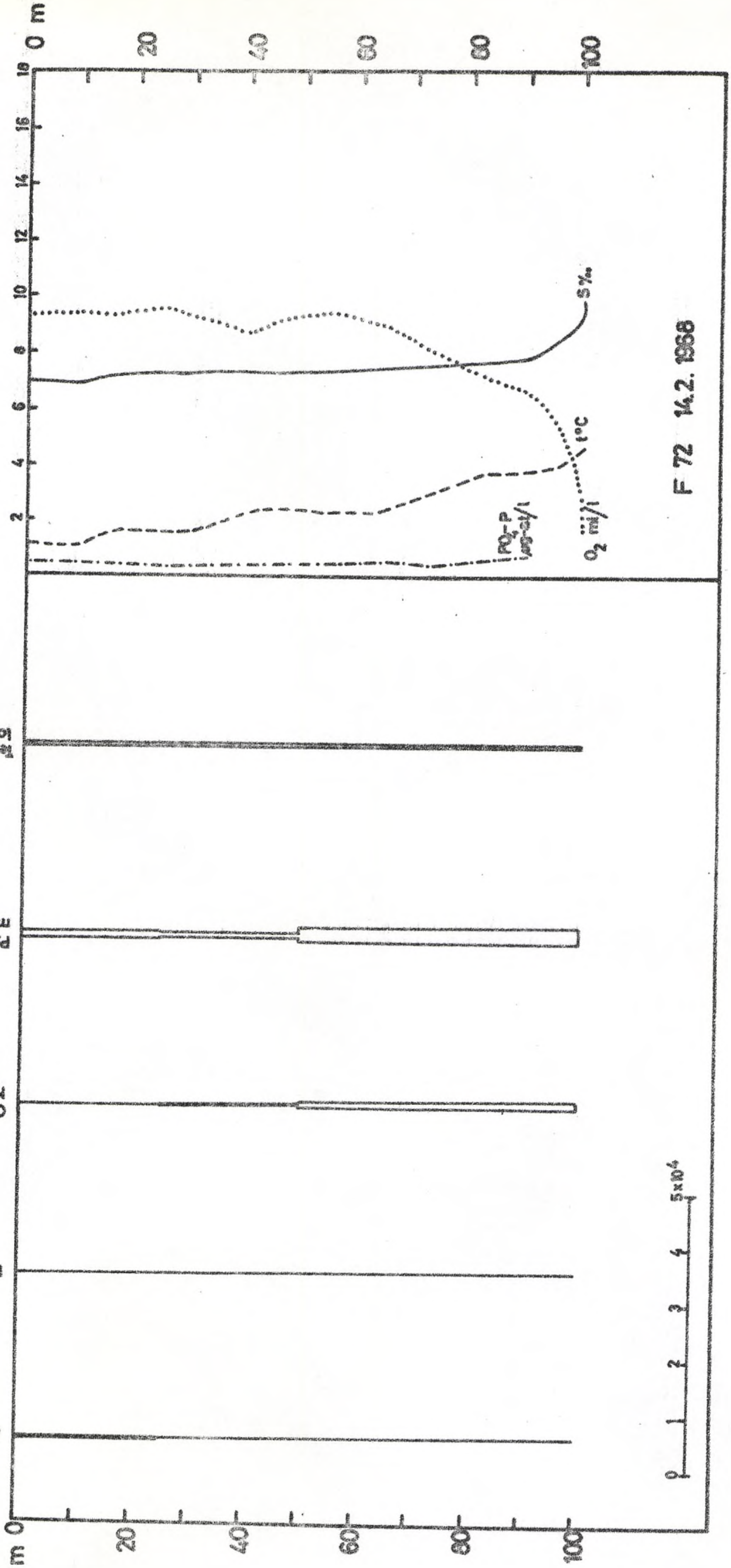
Gotland Deep 8.2.1968
S‰
$PO_4^{3-}$-P µg-at/l
t°C
$O_2$ ml/l
$H_2S$
40 µg-at/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
5 x 10⁴
0 m
20
40
60
80
100
150
250

Fig 84.

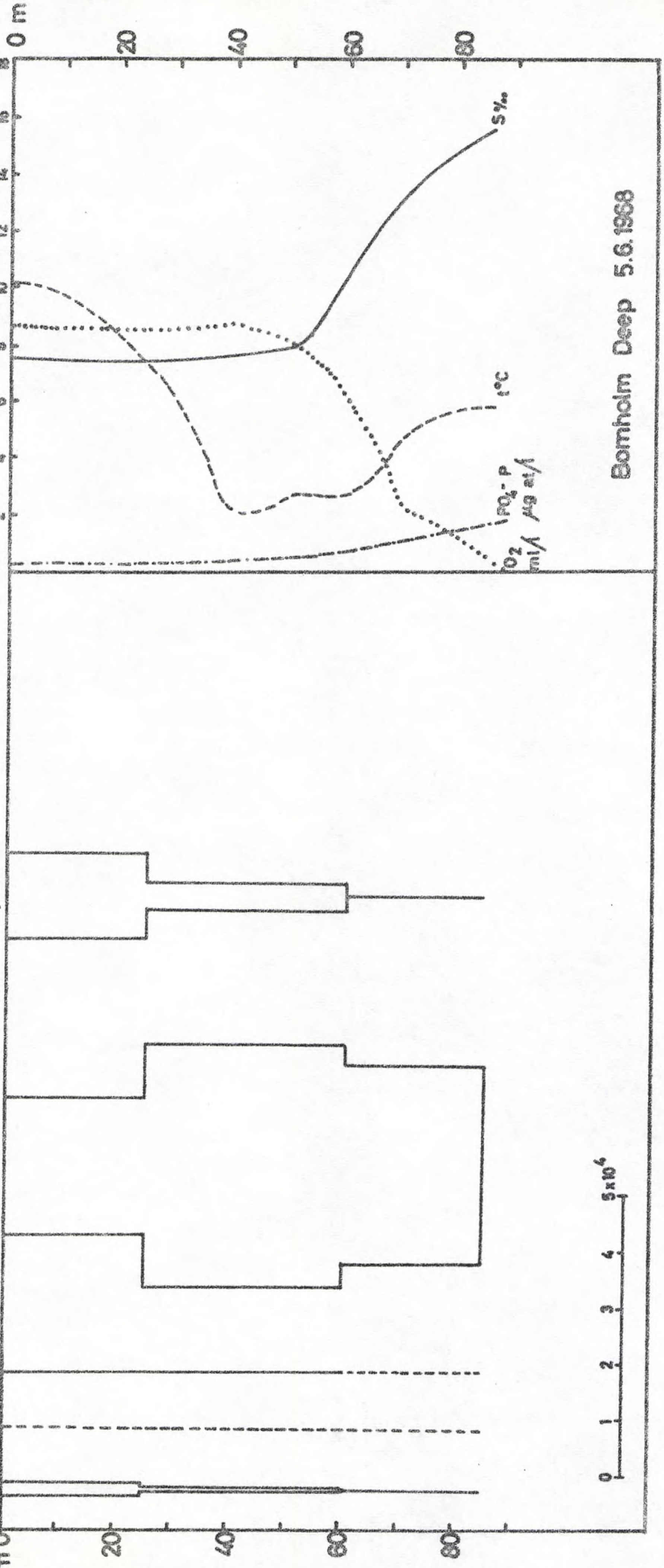


Landsort Deep 15.2.1958
S‰
t°C
$PO_4^{-}$-P µg-at/l
$O_2$ ml/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
5 x $10^4$
m

Fig 85.



F 72 14.2.1968
S‰
t°C
$O_2$ ml/l
$PO_4$-P µg-at/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
5x10^4
0 m


Bornholm Deep 5.6.1968
S‰
t°C
$PO_4$- P µg at/l
$O_2$ ml/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
0 m
20
40
60
80
2
4
6
8
10
12
14
16
18
0
1
2
3
4
5x10⁴

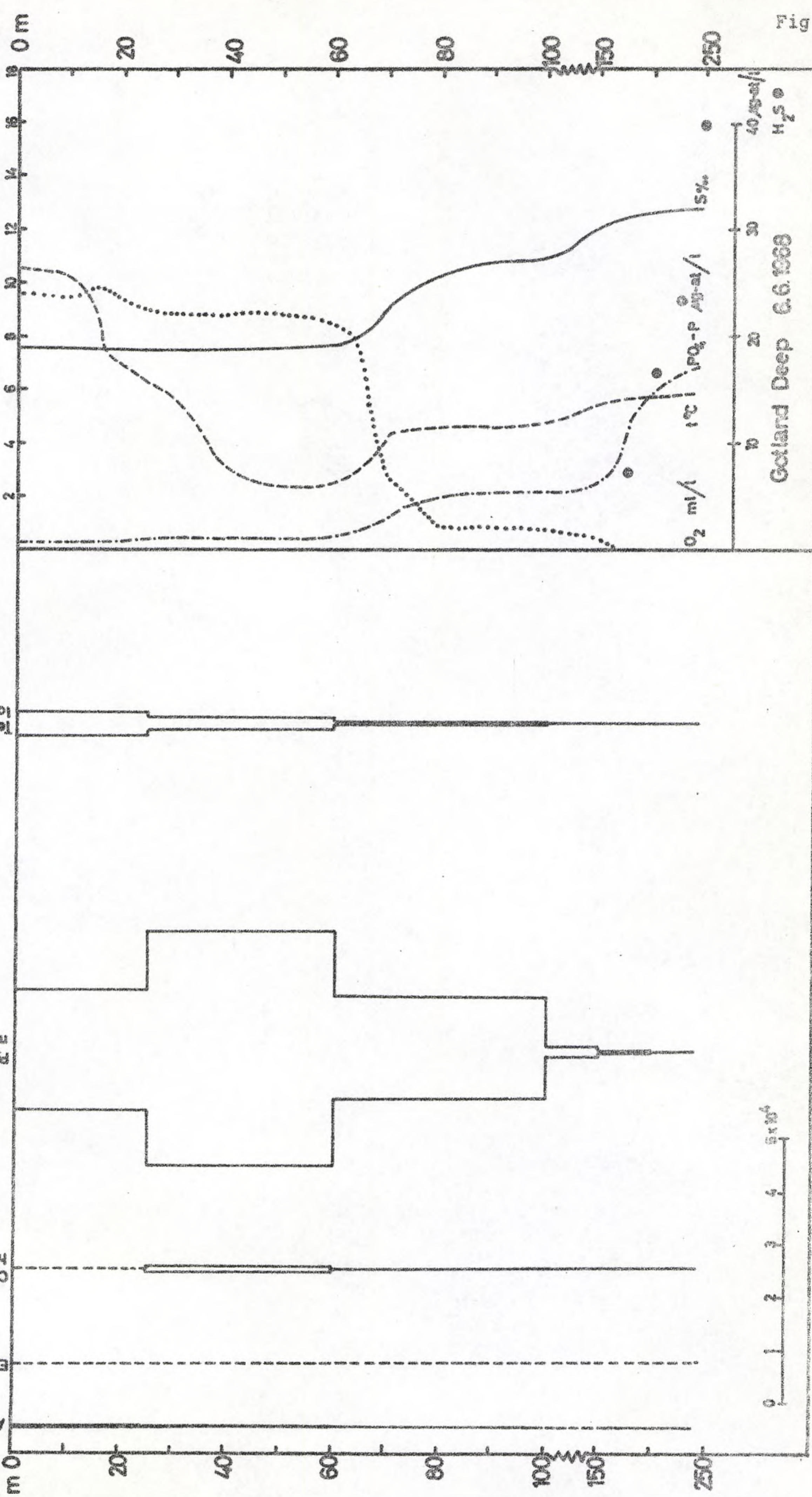
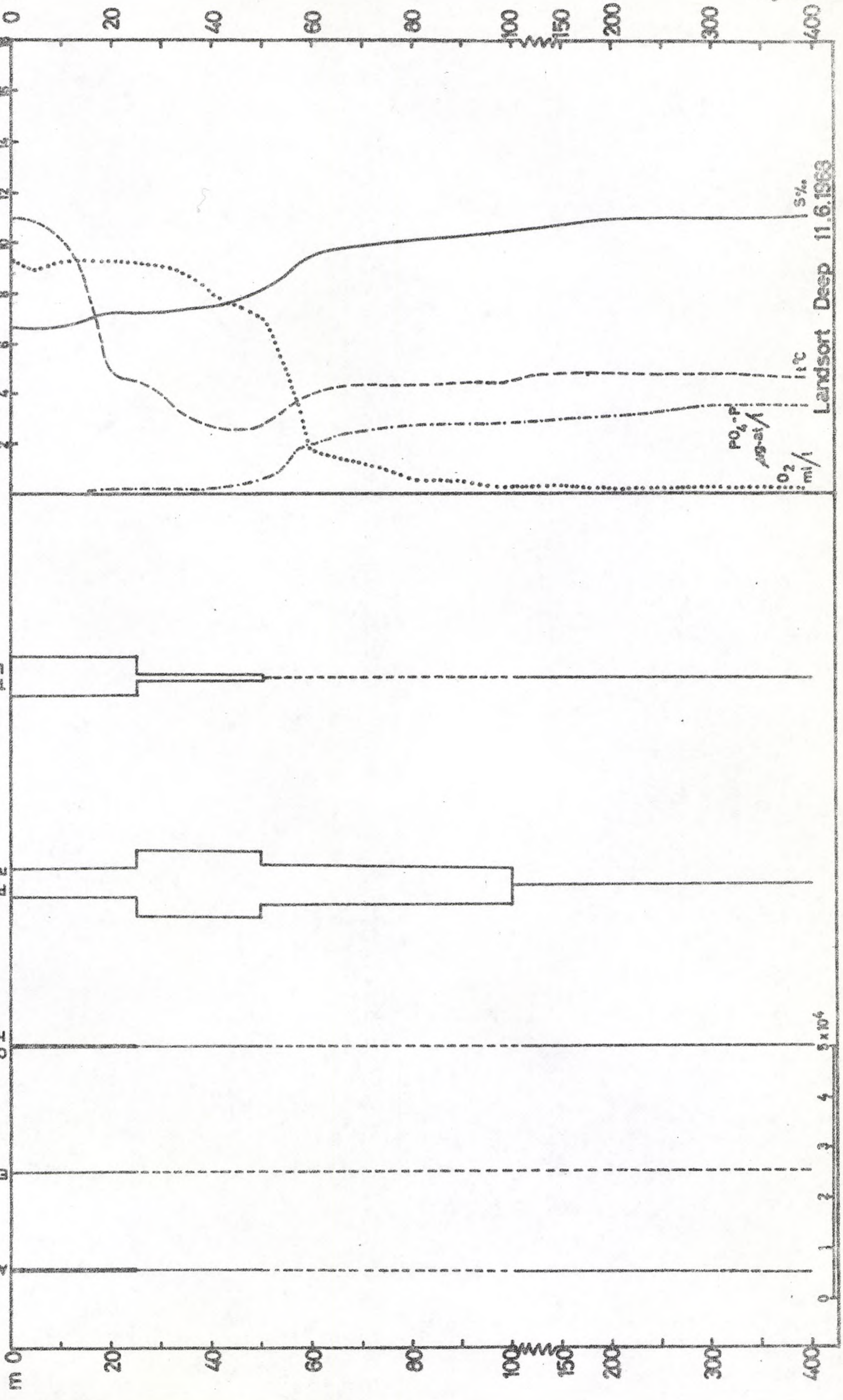

Gotland Deep 6.6.1968
$O_2$ ml/l
t°C
$PO_4$-P µg-at/l
S‰
$H_2S$ µg-at/l
0 m
m 0
Acartia spp.
Eurytemora sp.
Centropages hamatus
Pseudocalanus m. elongatus
Temora longicornis
5×10⁴

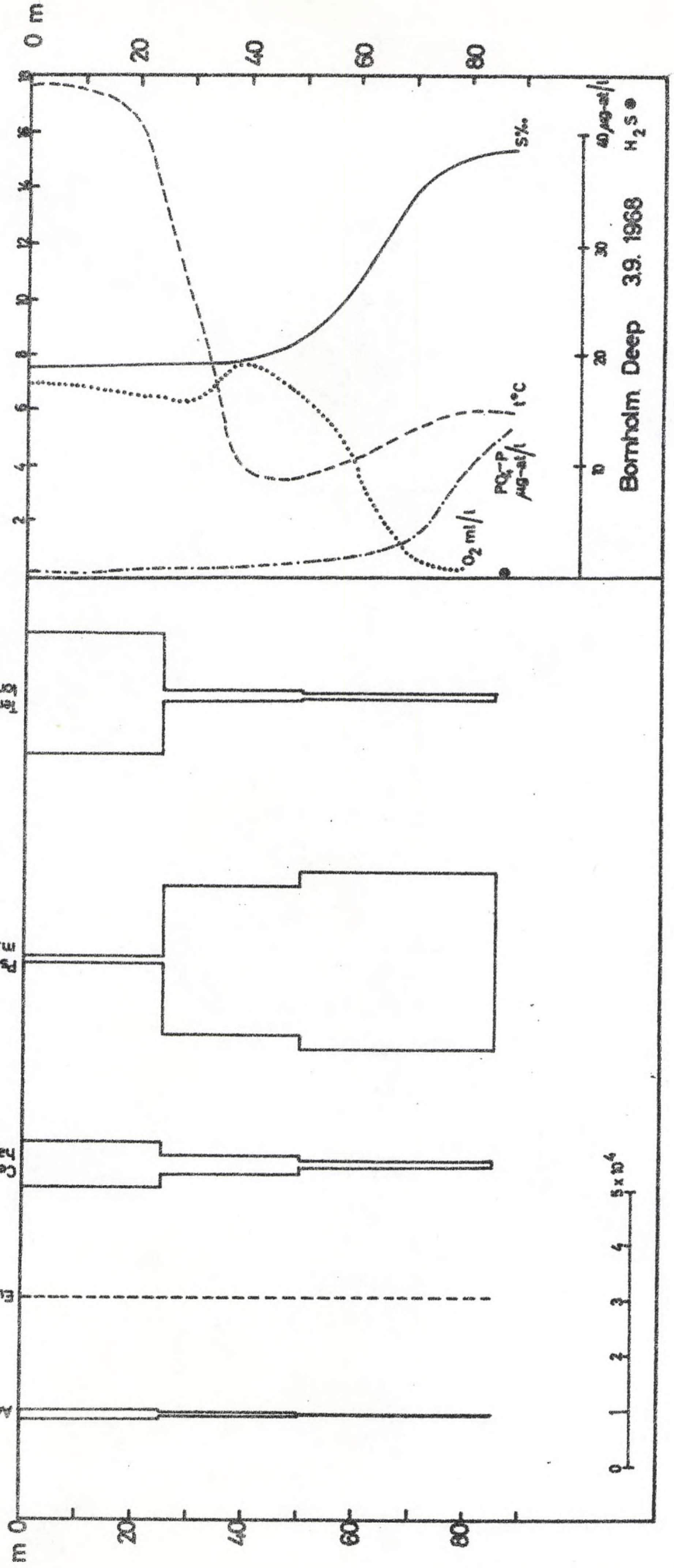
Fig 87.

Fig 88.



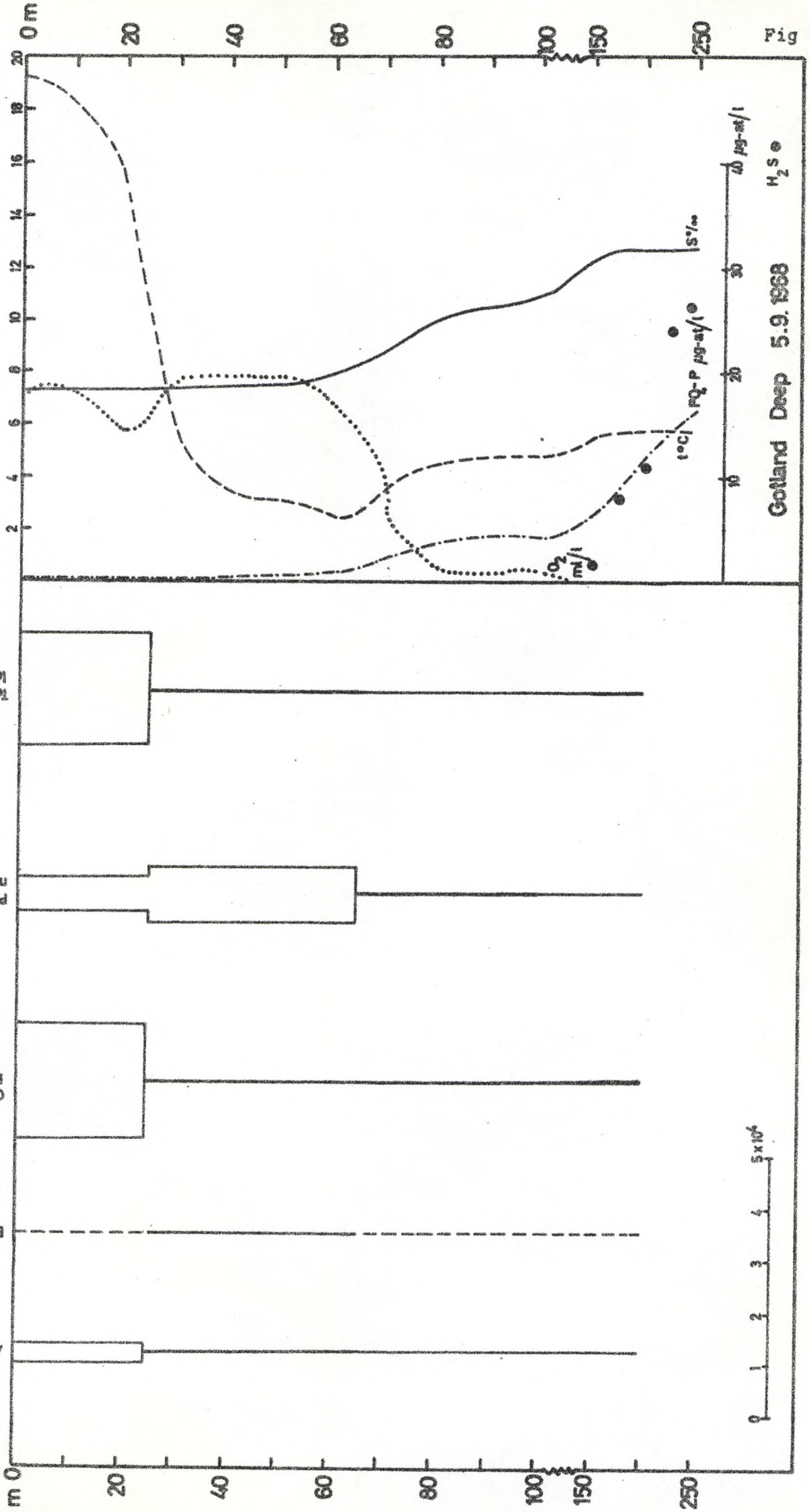
Landsort Deep 11.6.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
5 x 10⁴
m
0
20
40
60
80
100
150
200
300
400

Fig 89.



Bornholm Deep 3.9.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
$H_2S$
40 µg-at/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
$5 \times 10^4$
0 m
m

Fig 90.


Gotland Deep 5.9.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
$H_2S$
µg-at/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
5x10⁴
0 m
m 0

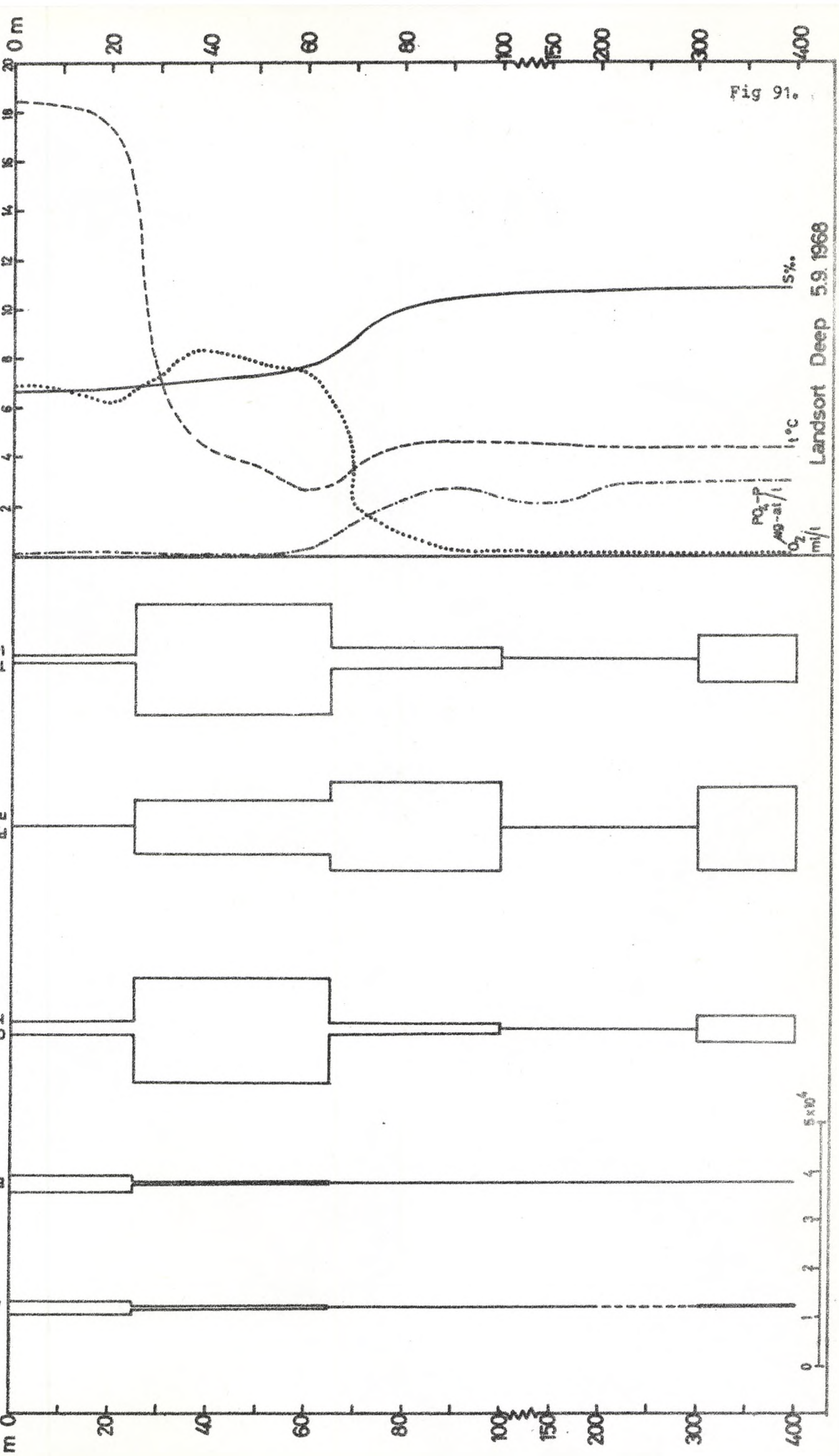
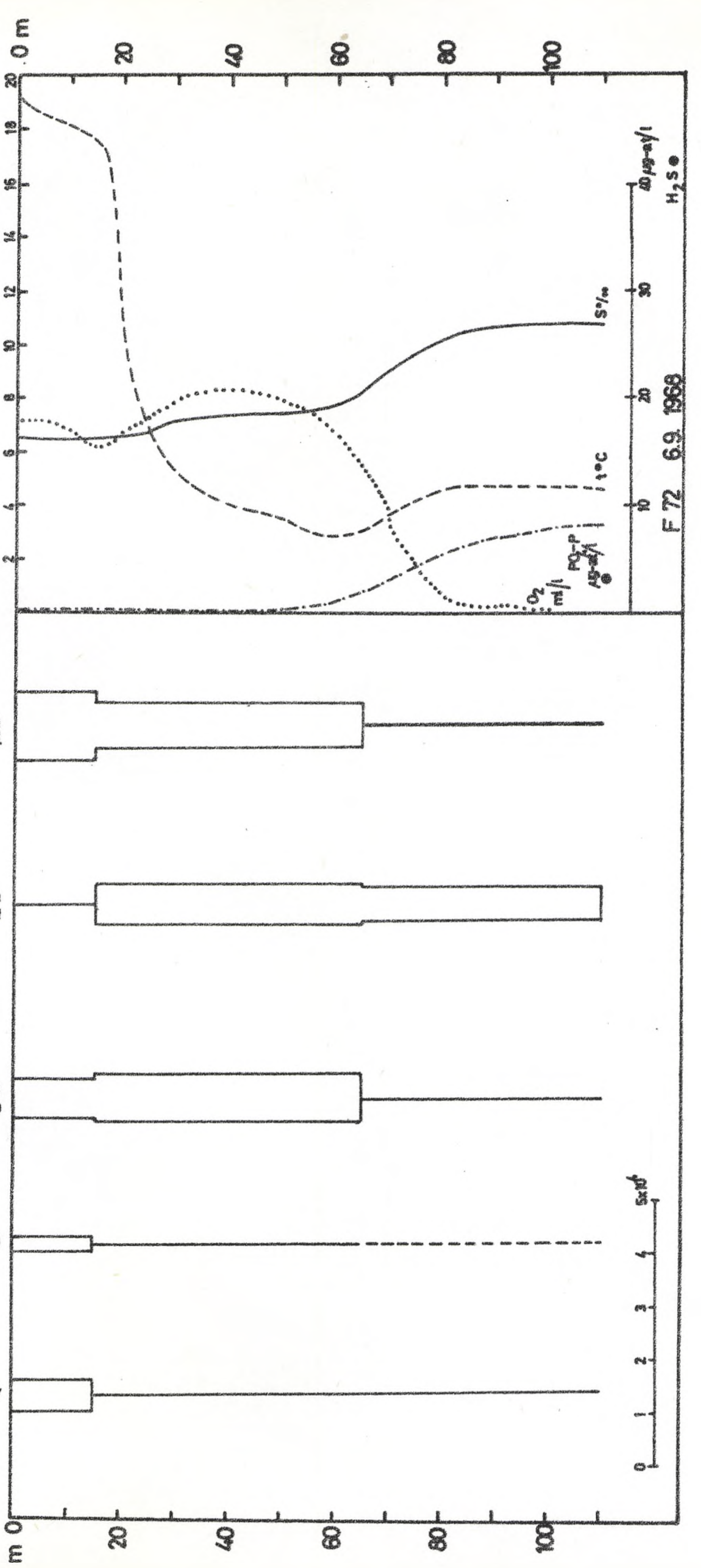

Landsort Deep 5.9.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
Temora longicornis
Pseudocalanus m. elongatus
Centropages hamatus
Eurytemora sp.
Acartia spp.
m
5×10⁴

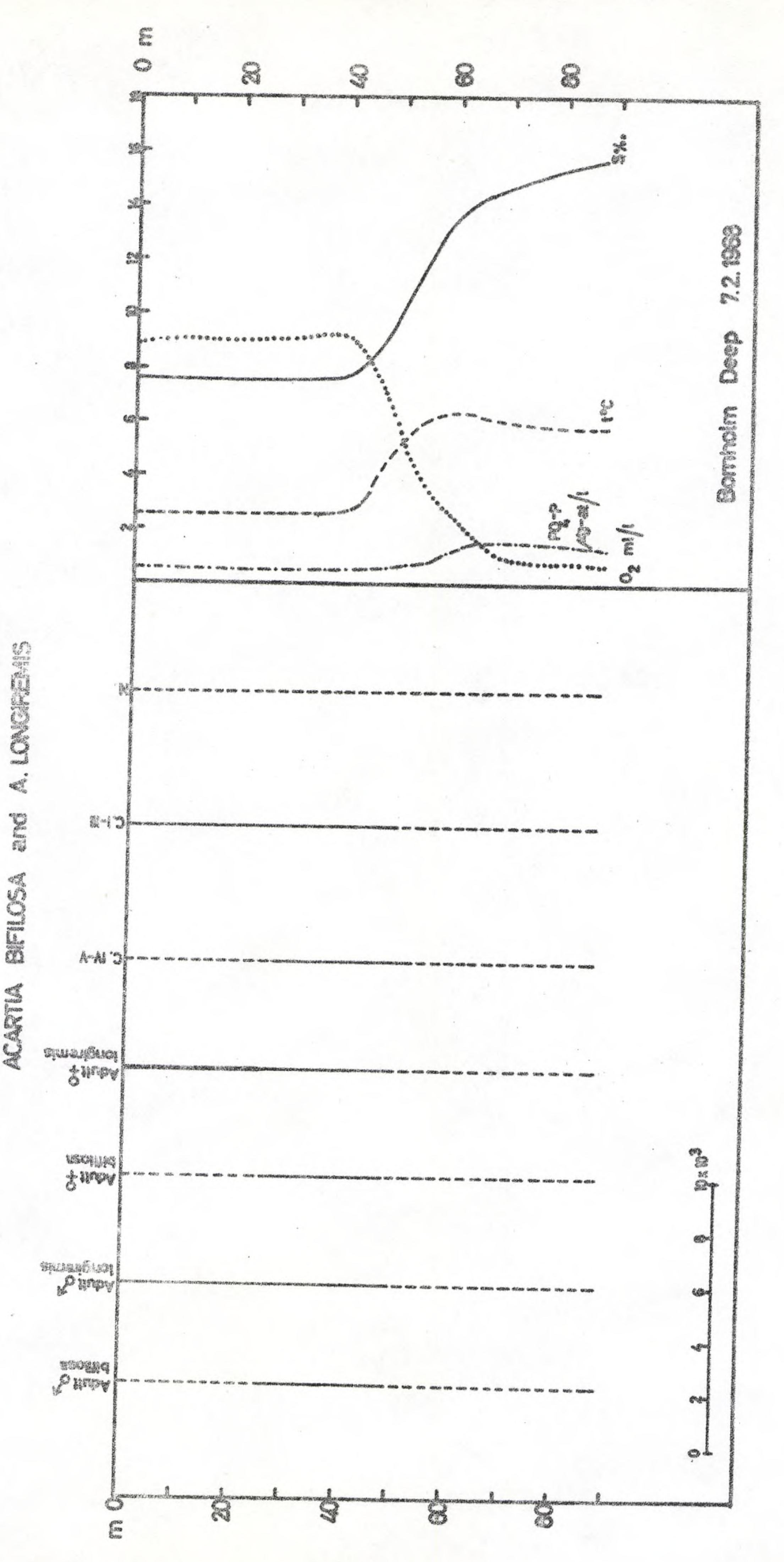
Fig 91.

Fig. 92.



Acartia spp.
Eurytemora sp.
Centropages hamatus
Pseudocalanus m. elongatus
Temora longicornis
F 72 6.9.1968
S‰
t°C
$O_2$ ml/l
$H_2S$

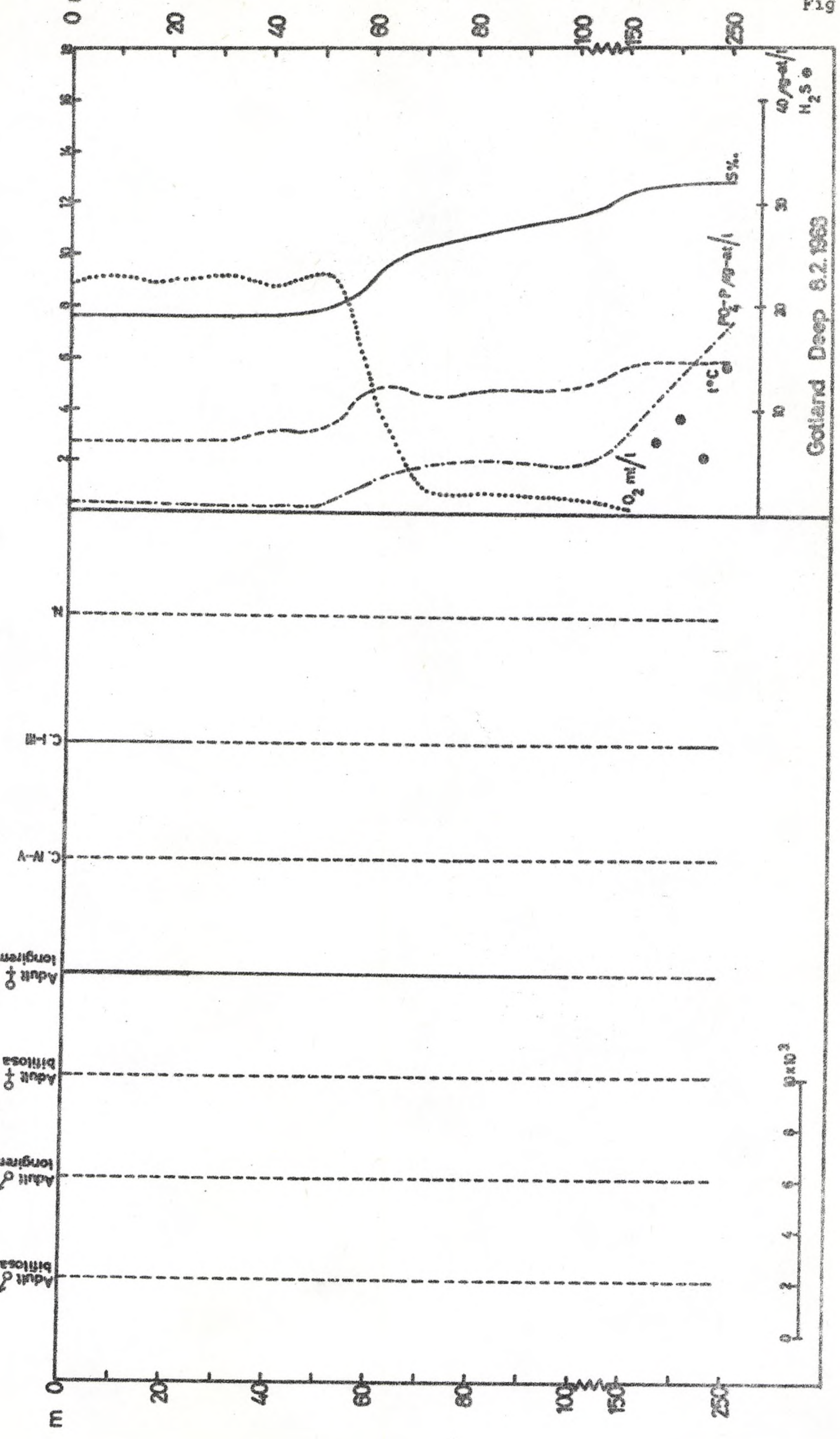
Fig 93.



ACARTIA BIFILOSA and A. LONGIREMIS
Bornholm Deep 7.2.1968
S‰
t°C
PO4-P µg-at/l
O2 ml/l
0 m
20
40
60
80
N
C.I-III
C.IV-V
Adult ♀ longiremis
Adult ♀ bifilosa
Adult ♂ longiremis
Adult ♂ bifilosa
0
2
4
6
8
10
12
14
16
18
No x 10³

Fig 94.

ACARTIA BIFILOSA and A. LONGIREMIS



ACARTIA BIFILOSA and A. LONGIREMIS

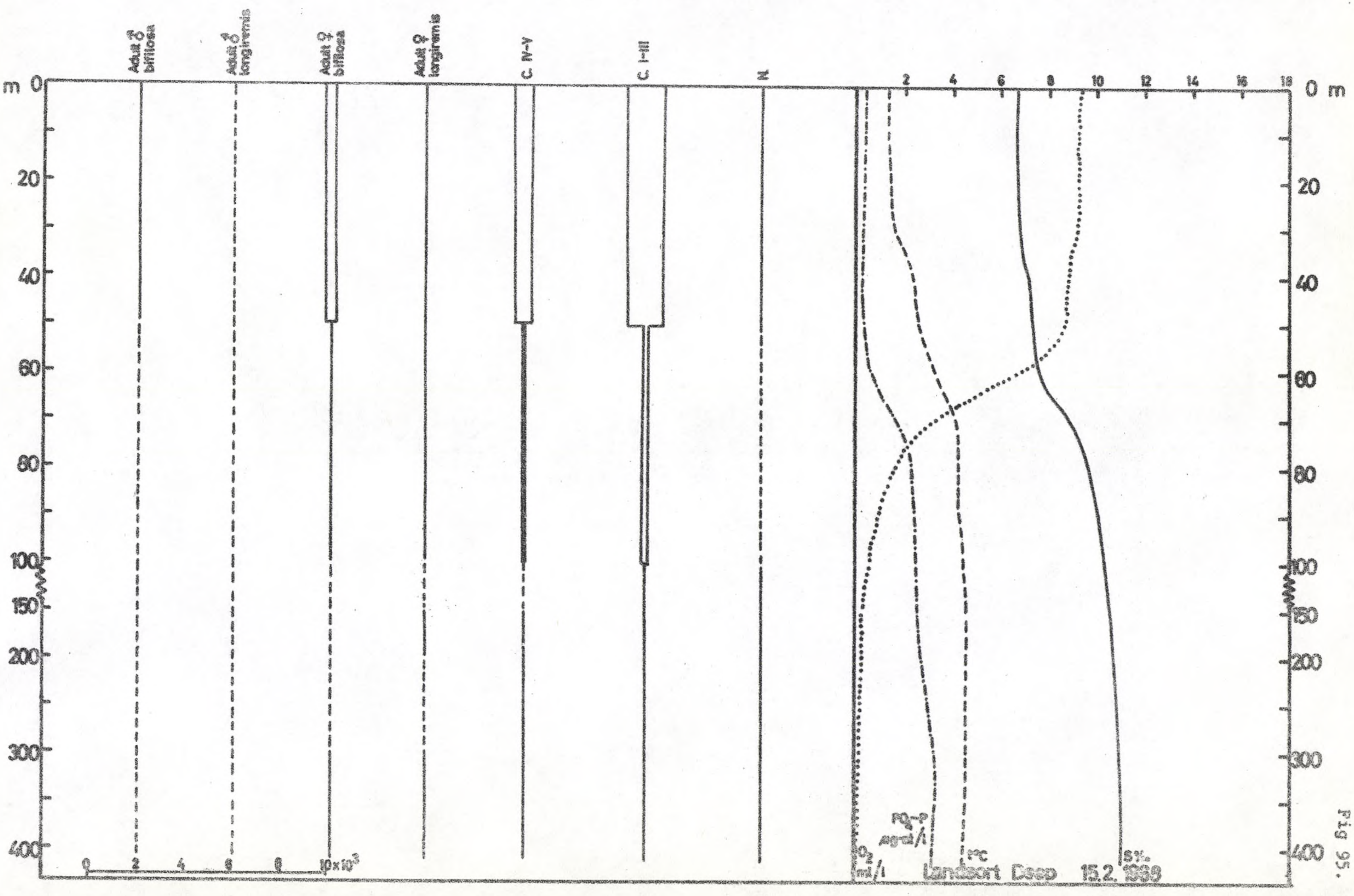



Fig 95.

Fig 96.

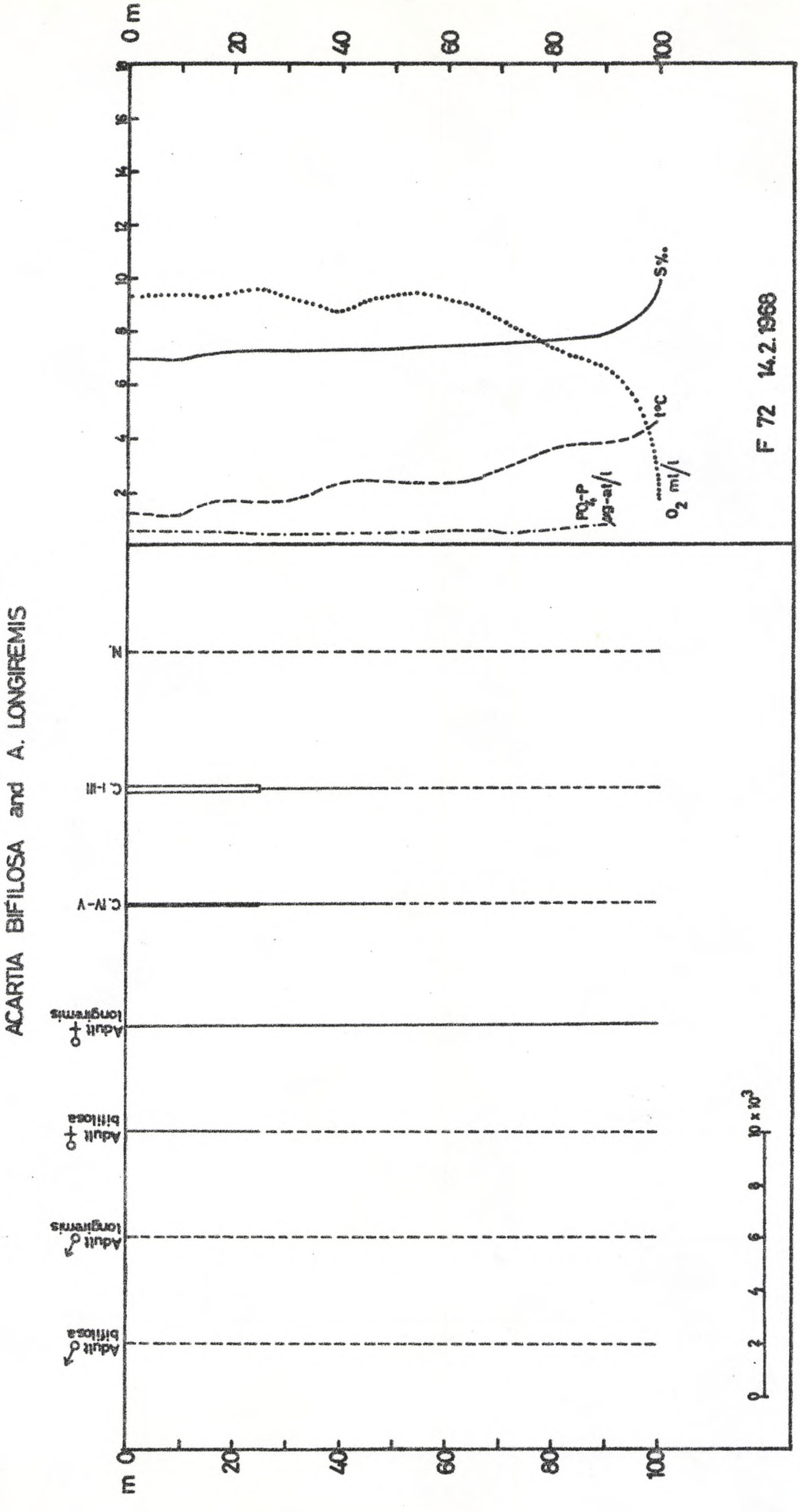
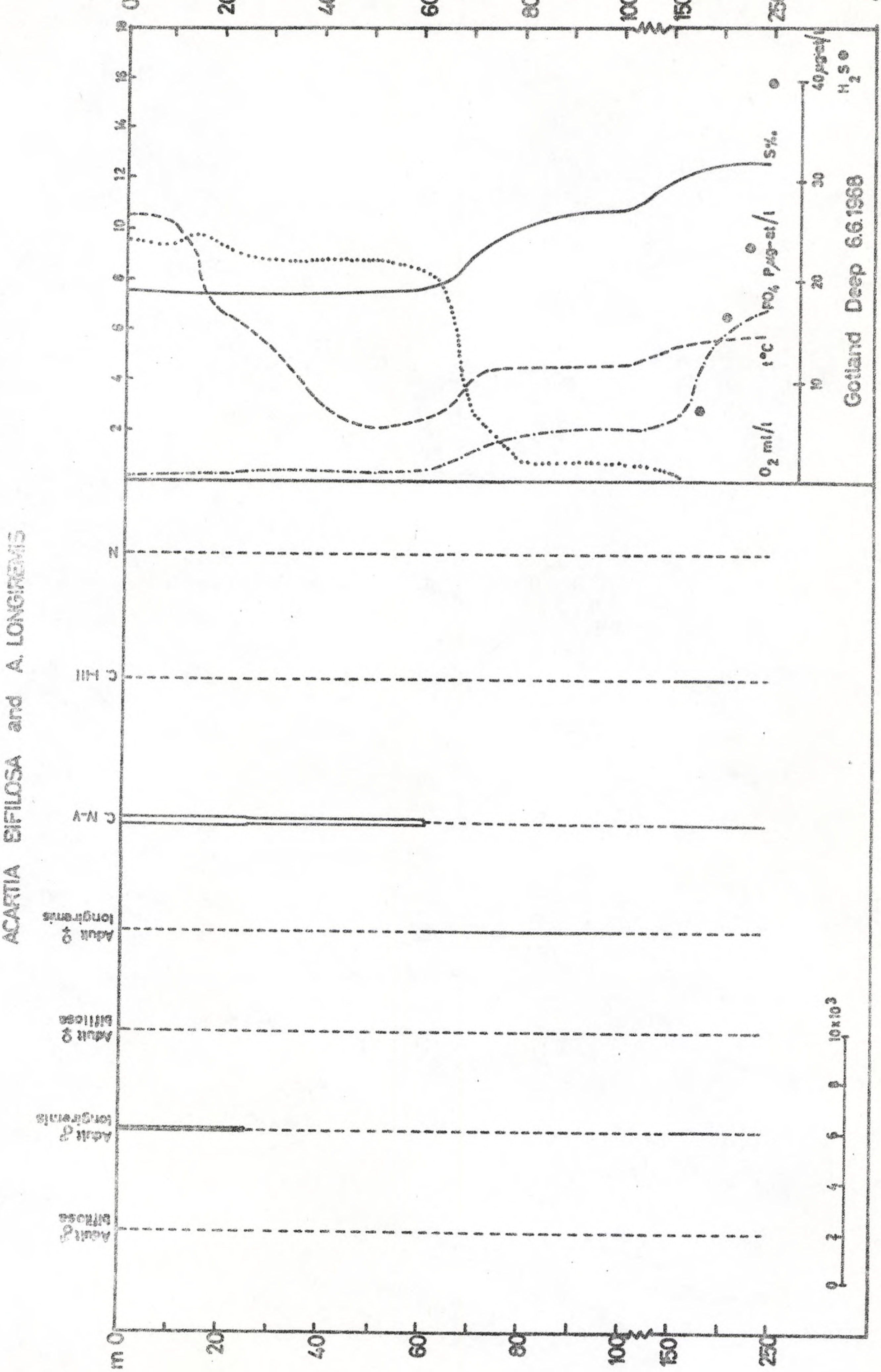
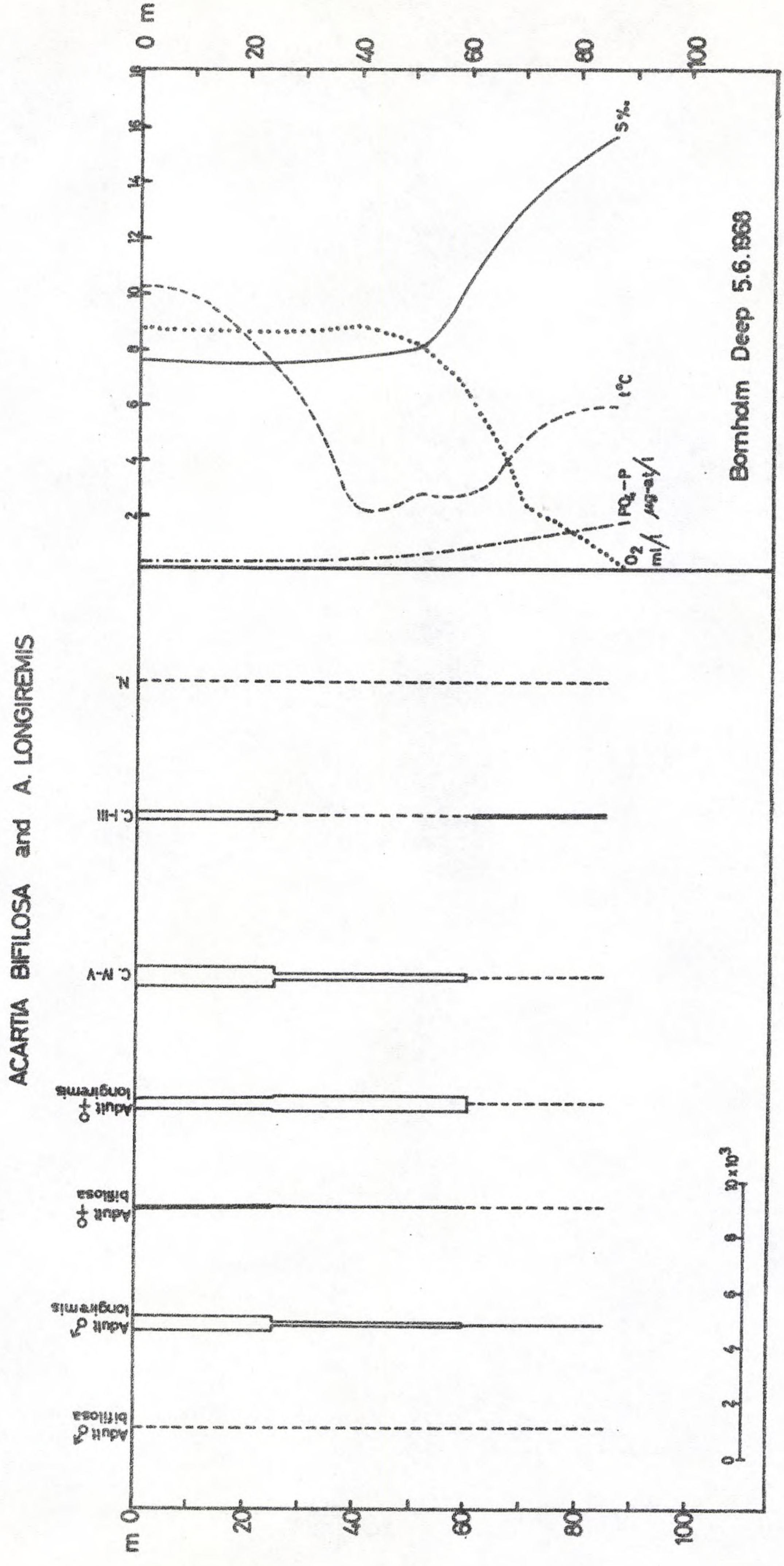

ACARTIA BIFILOSA and A. LONGIREMIS
F 72 14.2.1968
S‰
t°C
O2 ml/l
PO4-P µg-at/l
N.
C.I-III
C.IV-V
Adult ♀ longiremis
Adult ♀ bifilosa
Adult ♂ longiremis
Adult ♂ bifilosa
10 x 10³
0 m
m

Fig 97.



ACARTIA BIFILOSA and A. LONGIREMIS
Gotland Deep 6.6.1968
$O_2$ ml/l
t°C
$PO_4$ P µg-at/l
S‰
$H_2S$
40 µg-at/l
0 m
20
40
60
80
100
150
250
Adult ♂ bifilosa
Adult ♂ longiremis
Adult ♀ bifilosa
Adult ♀ longiremis
C IV-V
C I-III
N
10x10³

Fig 98.



ACARTIA BIFILOSA and A. LONGIREMIS
Bornholm Deep 5.6.1968
S‰
t°C
$PO_4$–P µg-at/l
$O_2$ ml/l
Adult ♂ bifilosa
Adult ♂ longiremis
Adult ♀ bifilosa
Adult ♀ longiremis
C. IV–V
C. I–III
N.
10 x 10³
m
0 m

ACARTIA BIFILOSA and A. LONGIREMIS

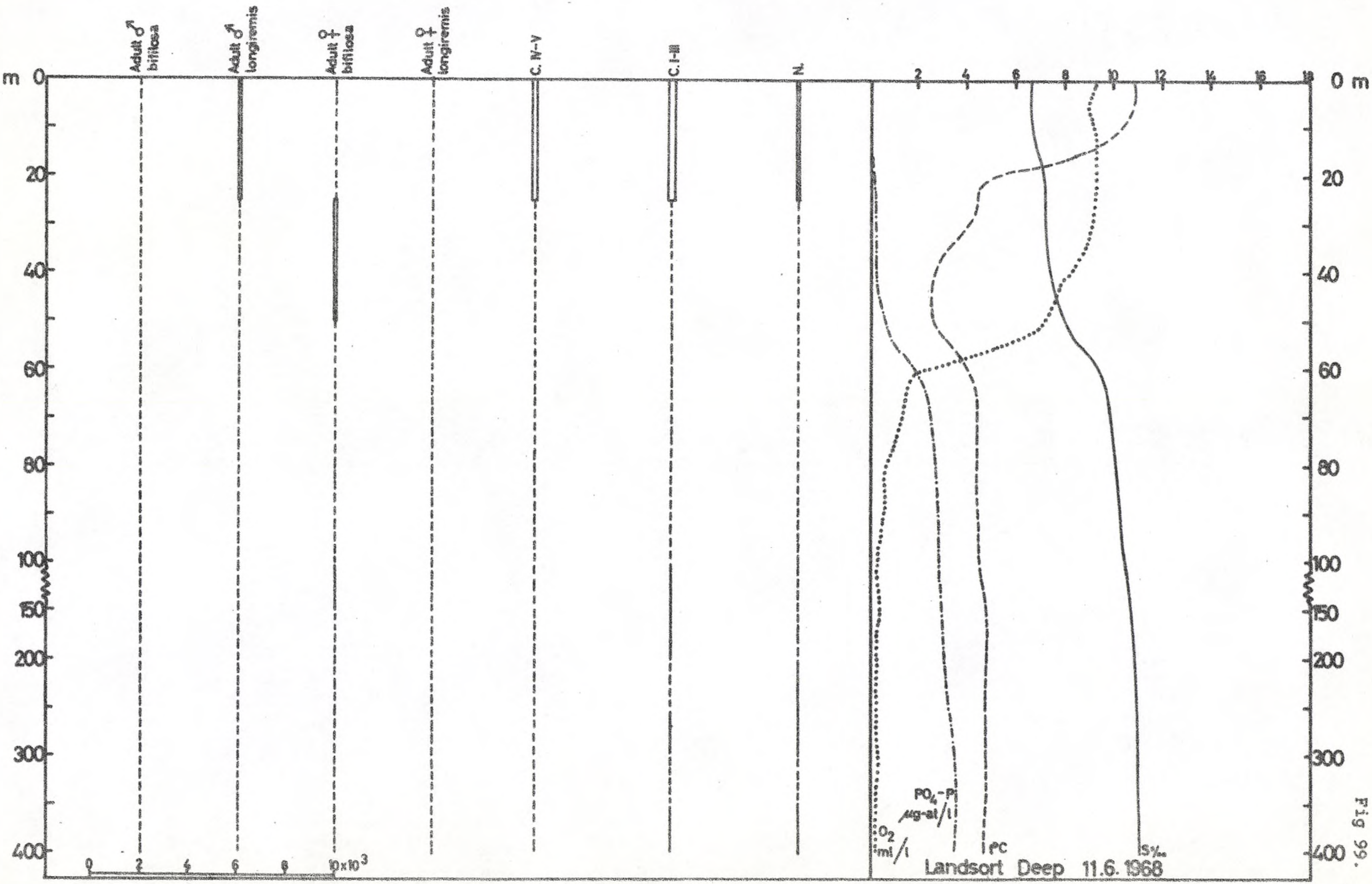
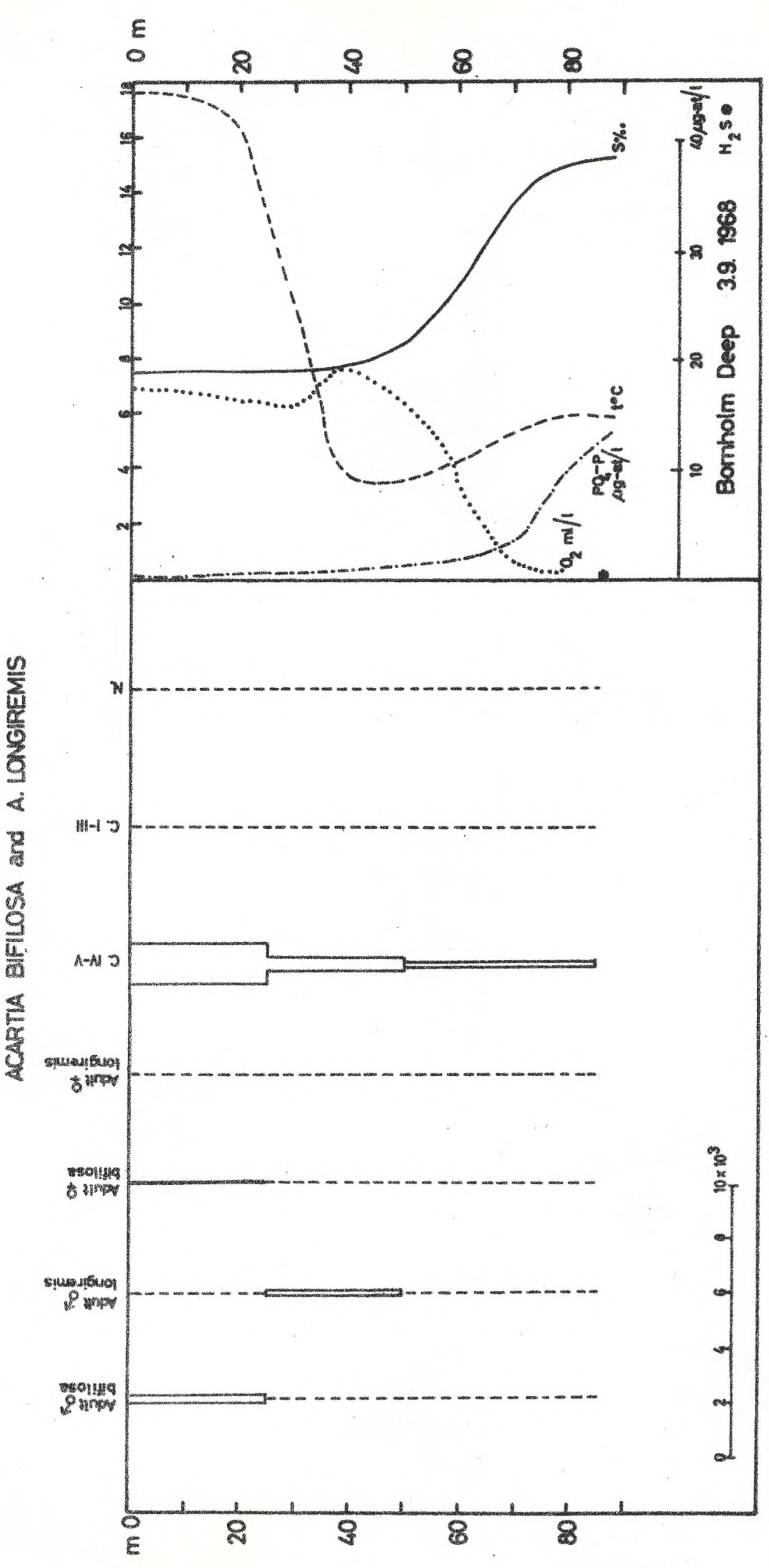


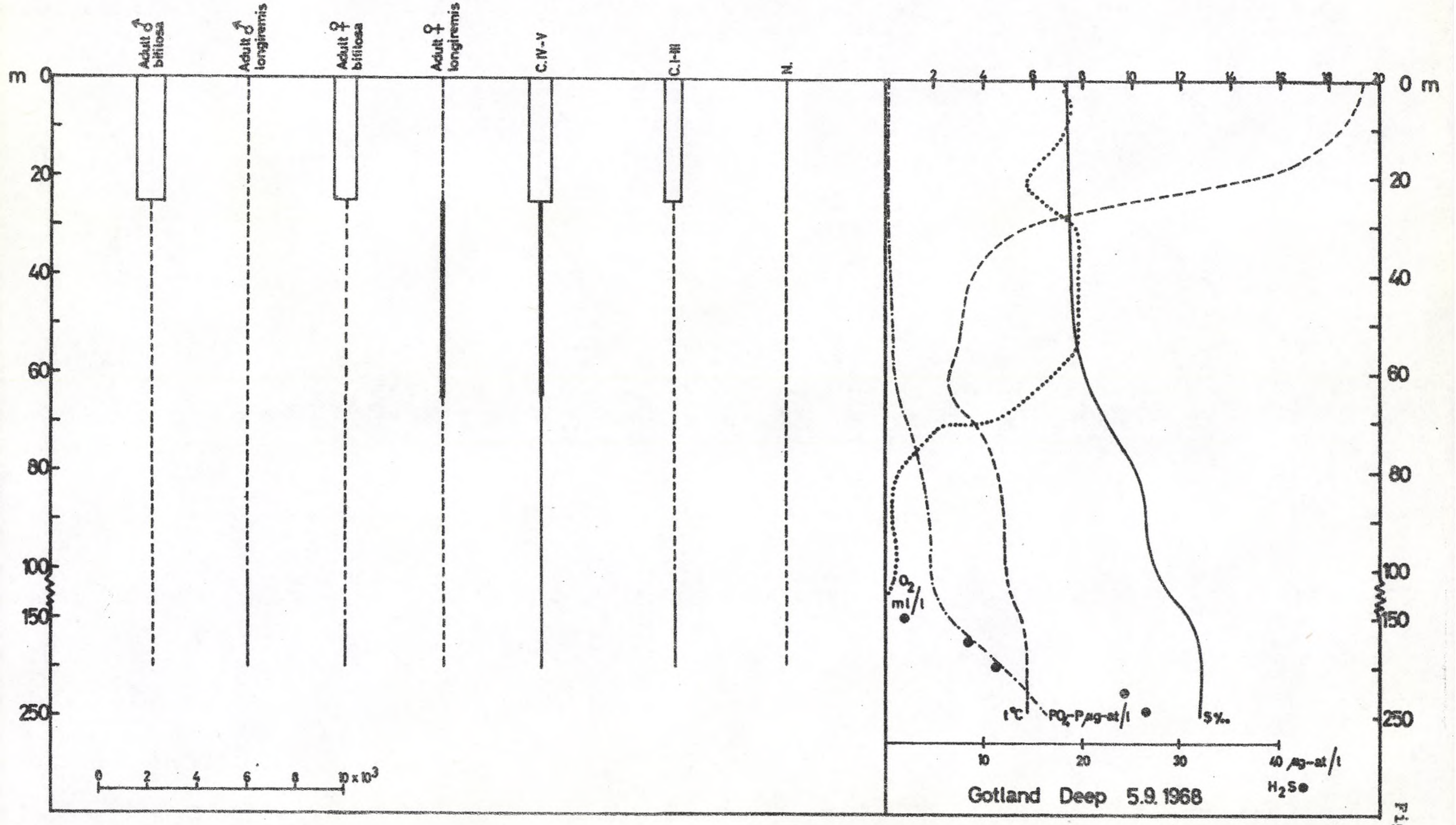

Fig 99.

Fig 100.



ACARTIA BIFILOSA and A. LONGIREMIS
Bornholm Deep 3.9. 1968
S‰
t°C
$O_2$ ml/l
$PO_4$-P µg-at/l
$H_2S$
N
C I-III
C IV-V
Adult ♀ longiremis
Adult ♀ bifilosa
Adult ♂ longiremis
Adult ♂ bifilosa
$10 \times 10^3$
0 m
m 0

ACARTIA BIFILOSA and A. LONGIREMIS



Gotland Deep 5.9.1968

Fig 101.

ACARTIA BIFILOSA and A. LONGIREMIS

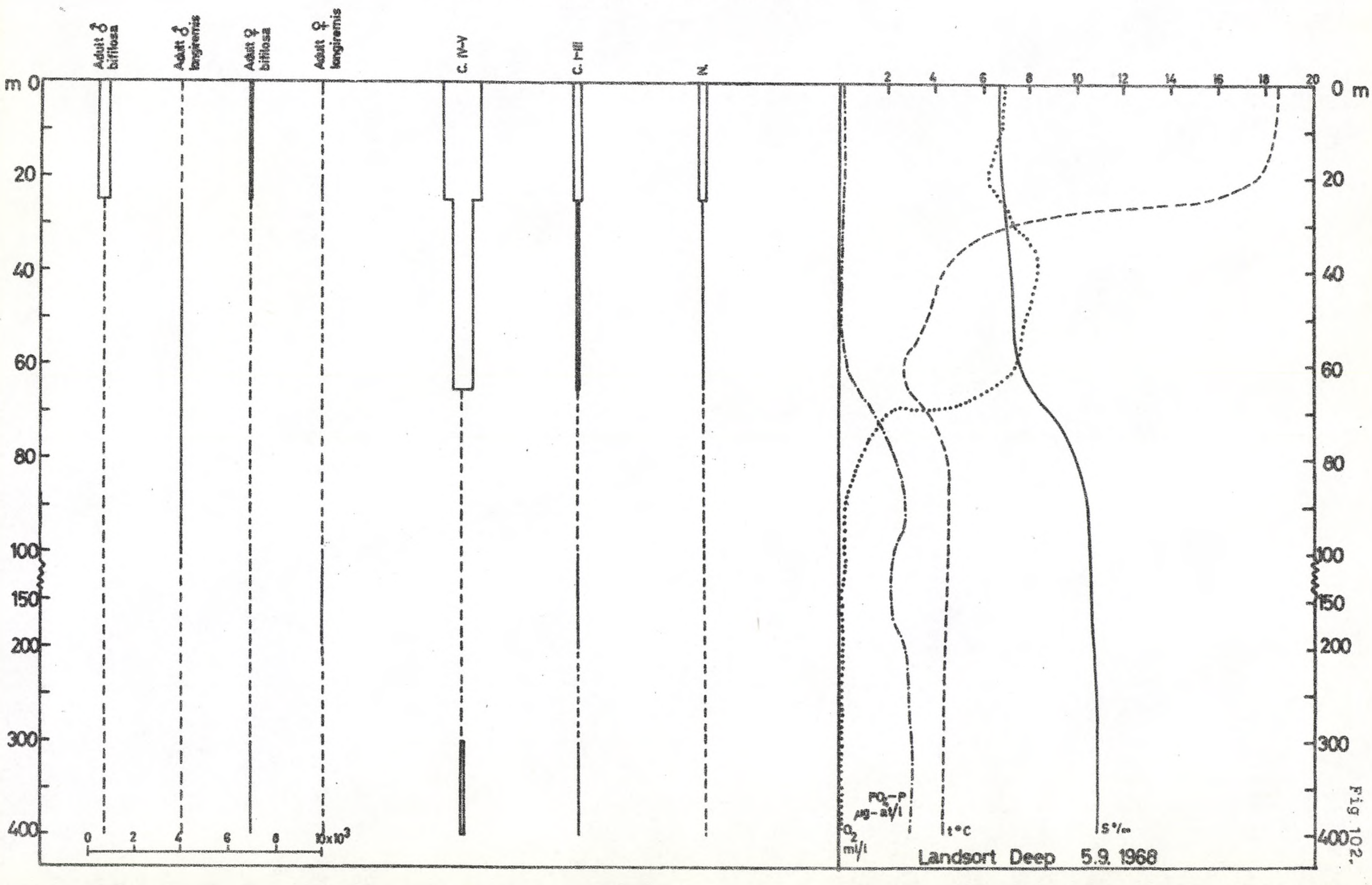



Fig 102.

ACARTIA BIFILOSA and A. LONGIREMIS

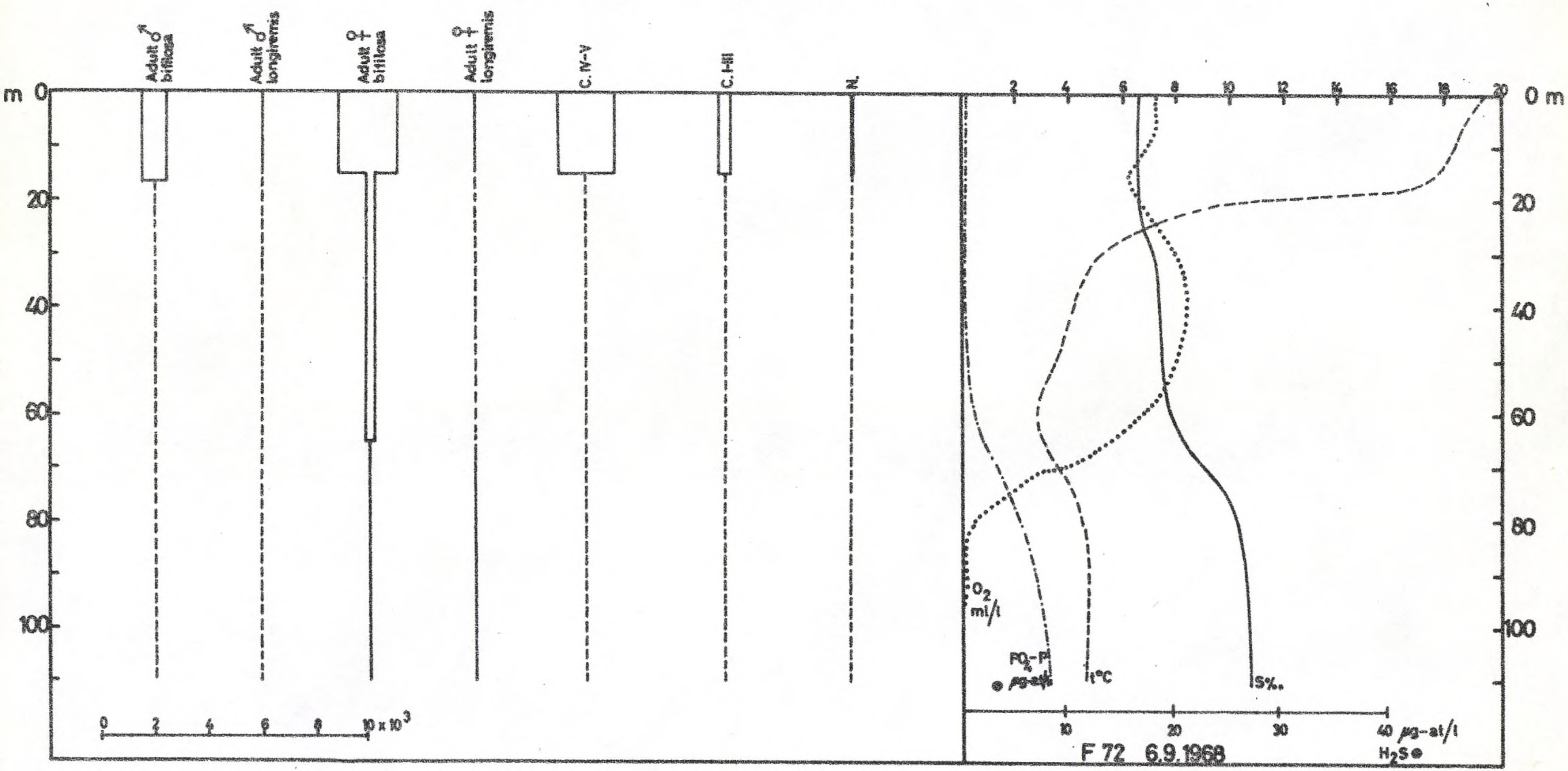



Fig 103.

Fig 104.

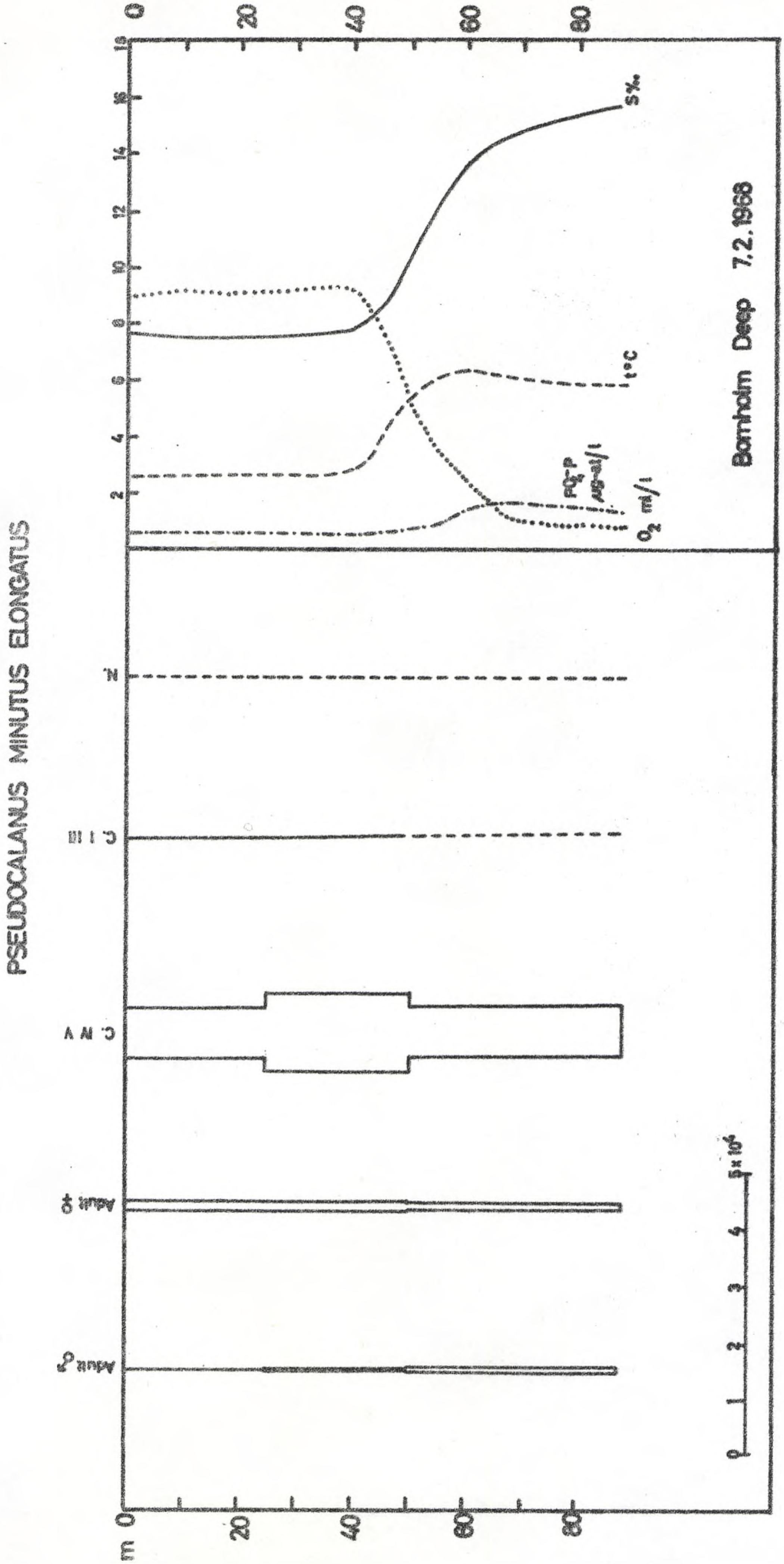
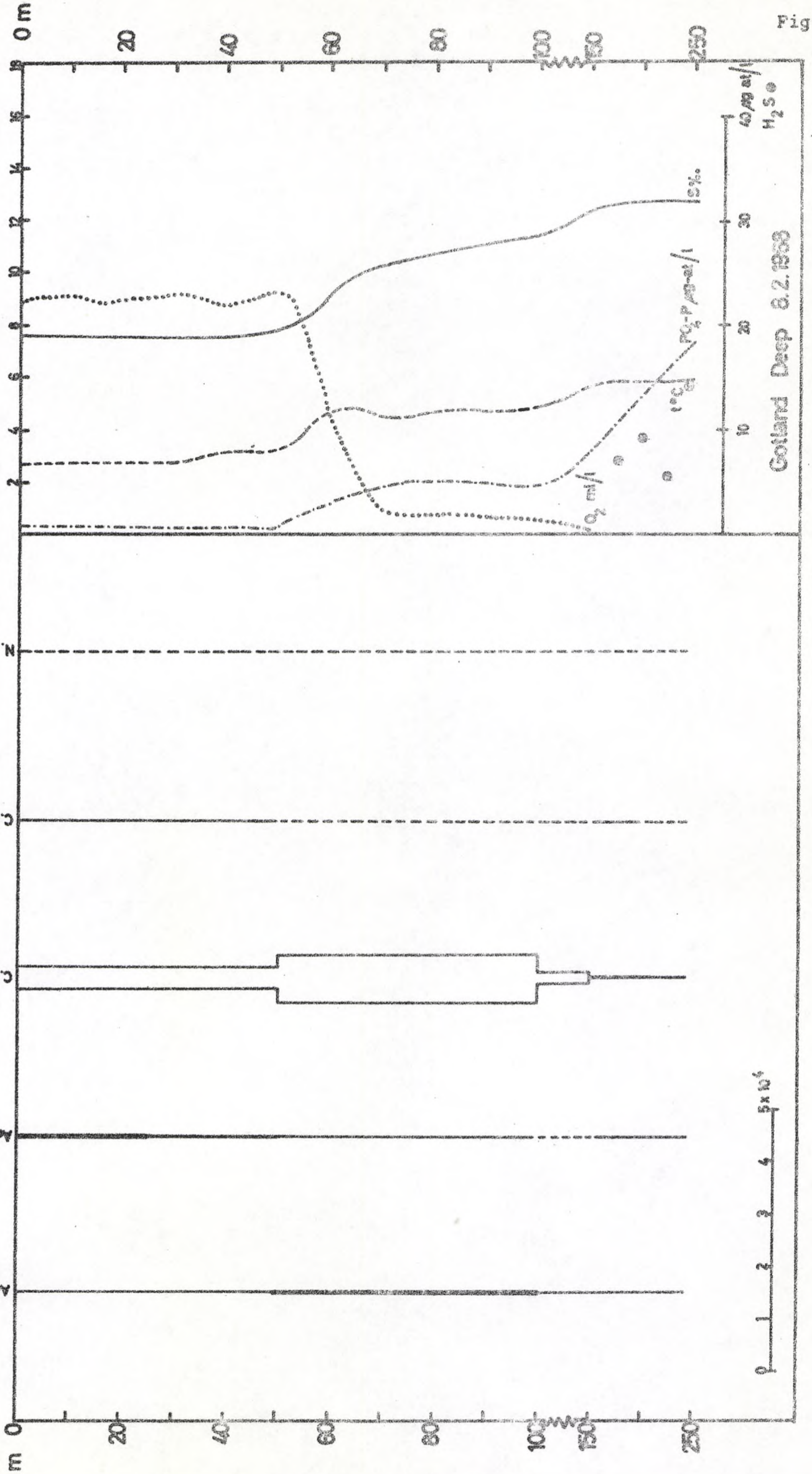

PSEUDOCALANUS MINUTUS ELONGATUS
Bornholm Deep 7.2.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
N.
C. I III
C. IV V
Adult ♀
Adult ♂
0 m
20
40
60
80
m
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5 x 10⁴

Fig 105.


PSEUDOCALANUS MINUTUS ELONGATUS
Gotland Deep 8.2.1958
N.
C.I-III
C.IV-V
Adult ♀
Adult ♂
0 m
m
5 x 10⁴
S ‰
t °C
$O_2$ ml/l
$PO_4$-P µg-at/l
40 µg at/l
$H_2S$

PSEUDOCALANUS MINUTUS ELONGATUS

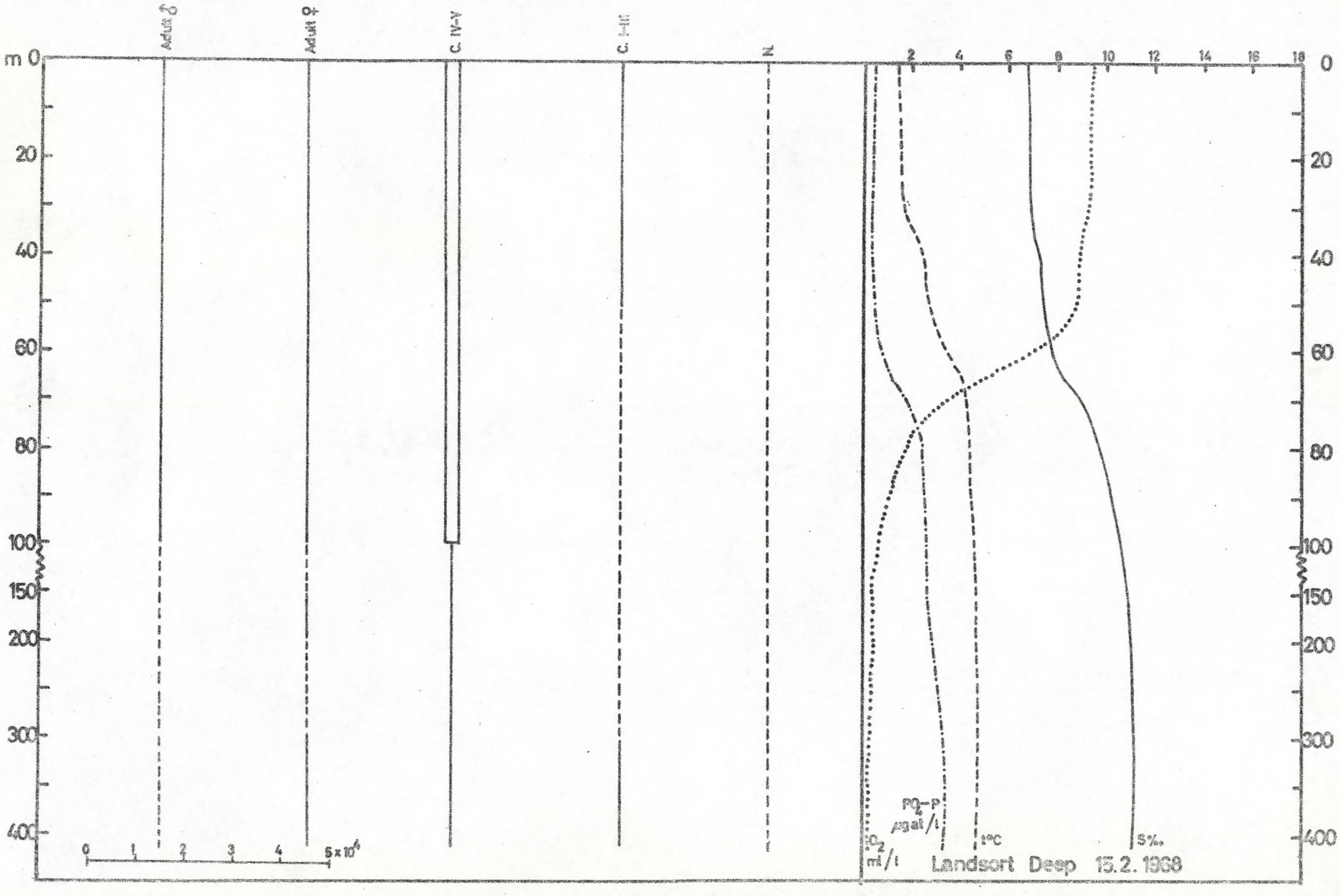



Fig 106.

Fig 107.

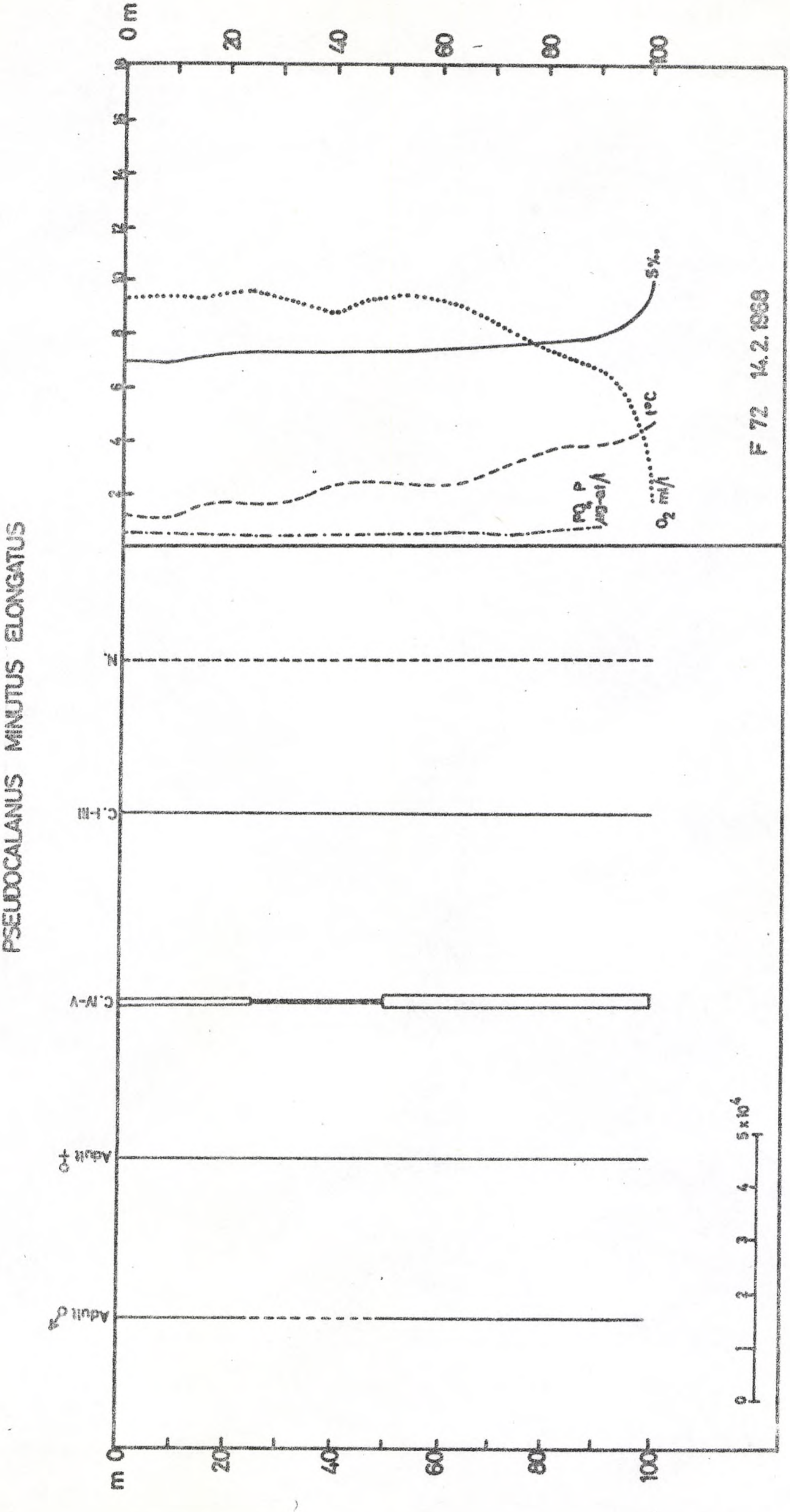
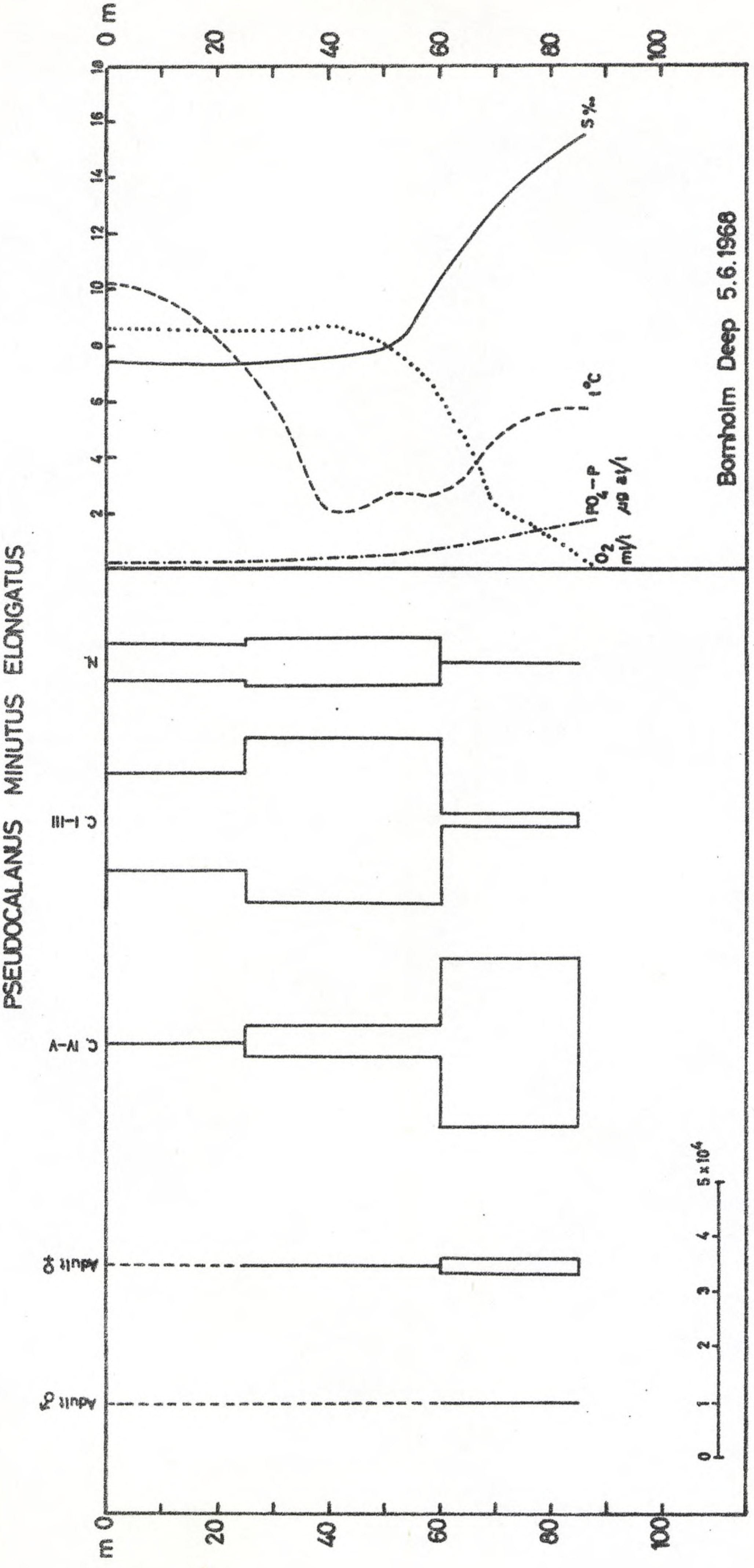
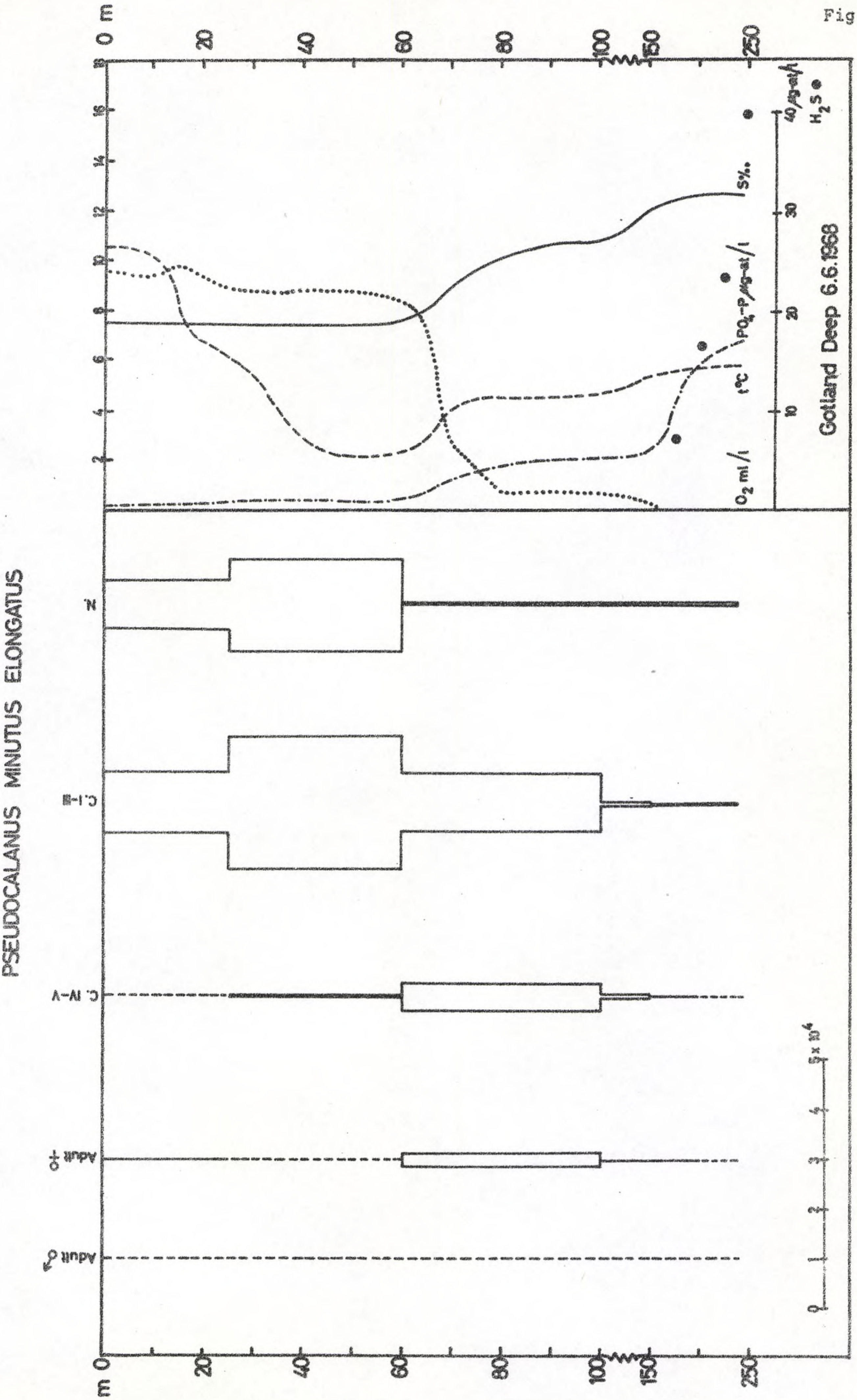

PSEUDOCALANUS MINUTUS ELONGATUS
F 72 14.2.1968
S‰
t°C
$O_2$ ml/l
$PO_4$-P µg-at/l
N.
C.I-III
C.IV-V
Adult ♀
Adult ♂
5 x 10⁴
m
0 m

Fig 108



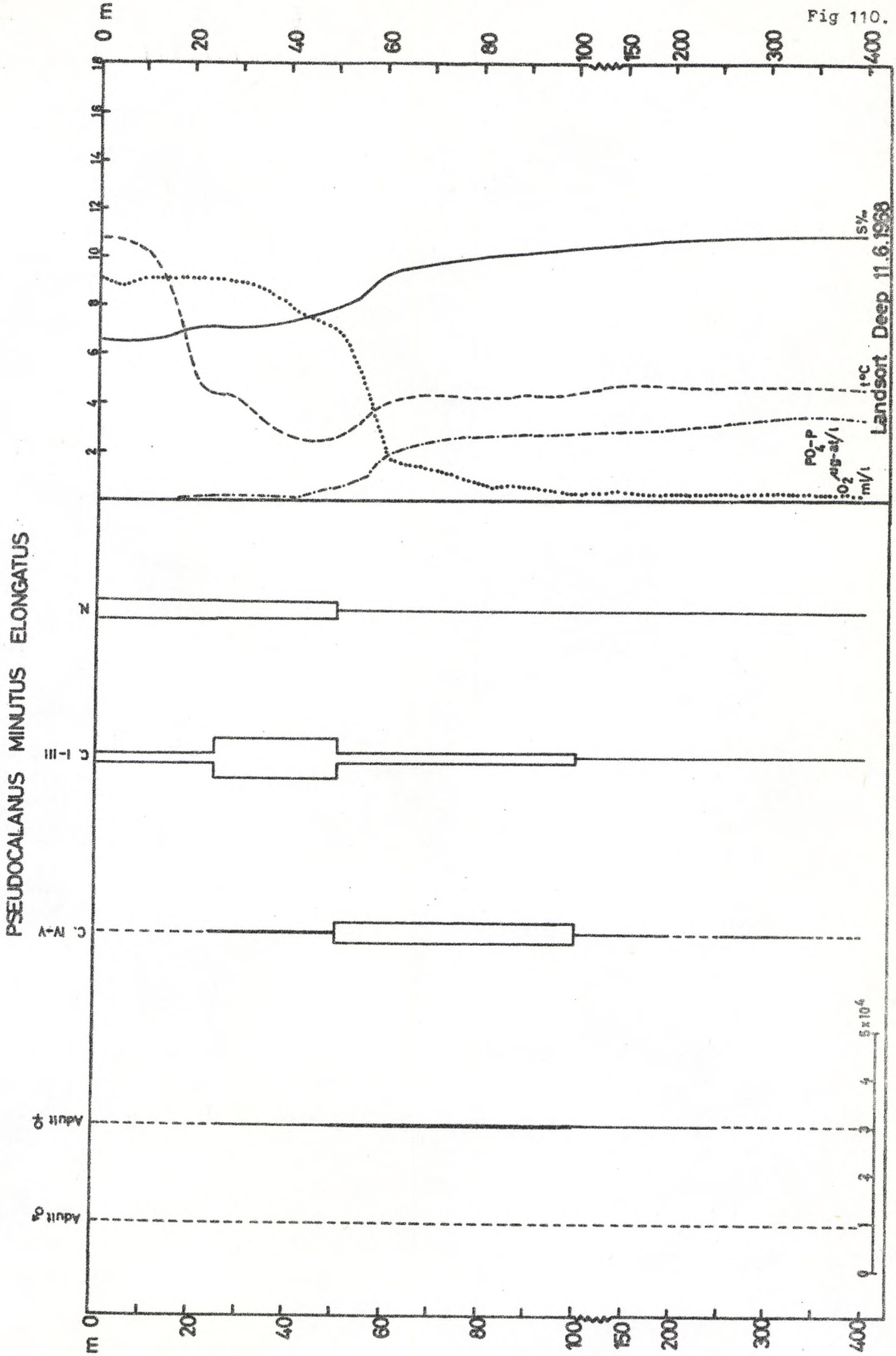
PSEUDOCALANUS MINUTUS ELONGATUS
Bornholm Deep 5.6.1968
S ‰
t°C
PO4–P µg at/l
O2 ml/l
N
C I–III
C IV–V
Adult ♀
Adult ♂
5 x 10^4
m

Fig 109.



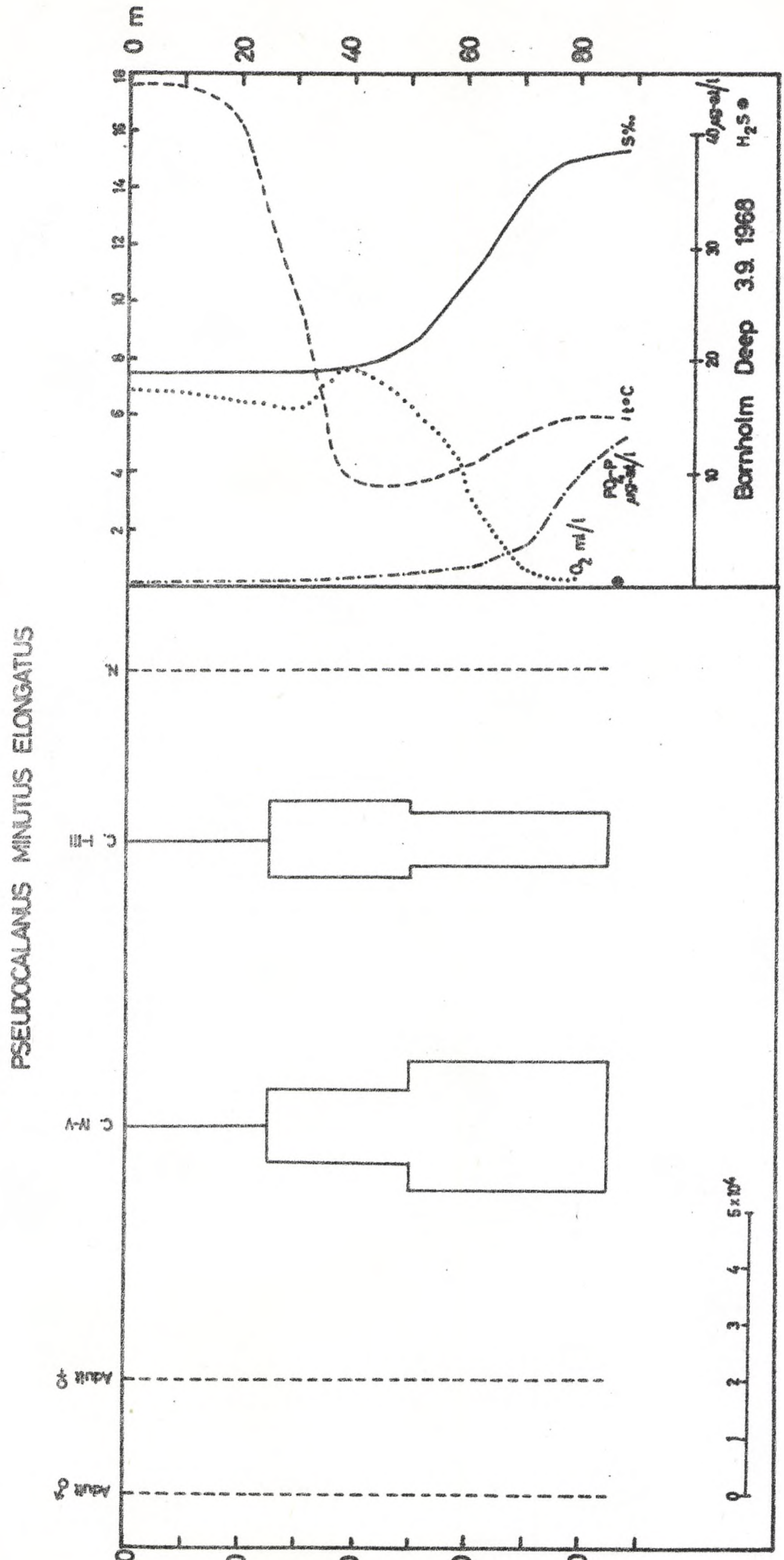
PSEUDOCALANUS MINUTUS ELONGATUS
N.
C.I-III
C.IV-V
Adult ♀
Adult ♂
Gotland Deep 6.6.1968
$O_2$ ml/l
t°C
$PO_4$-P µg-at/l
S‰
40 µg-at/l
$H_2S$
5 x $10^4$
m

Fig 110.



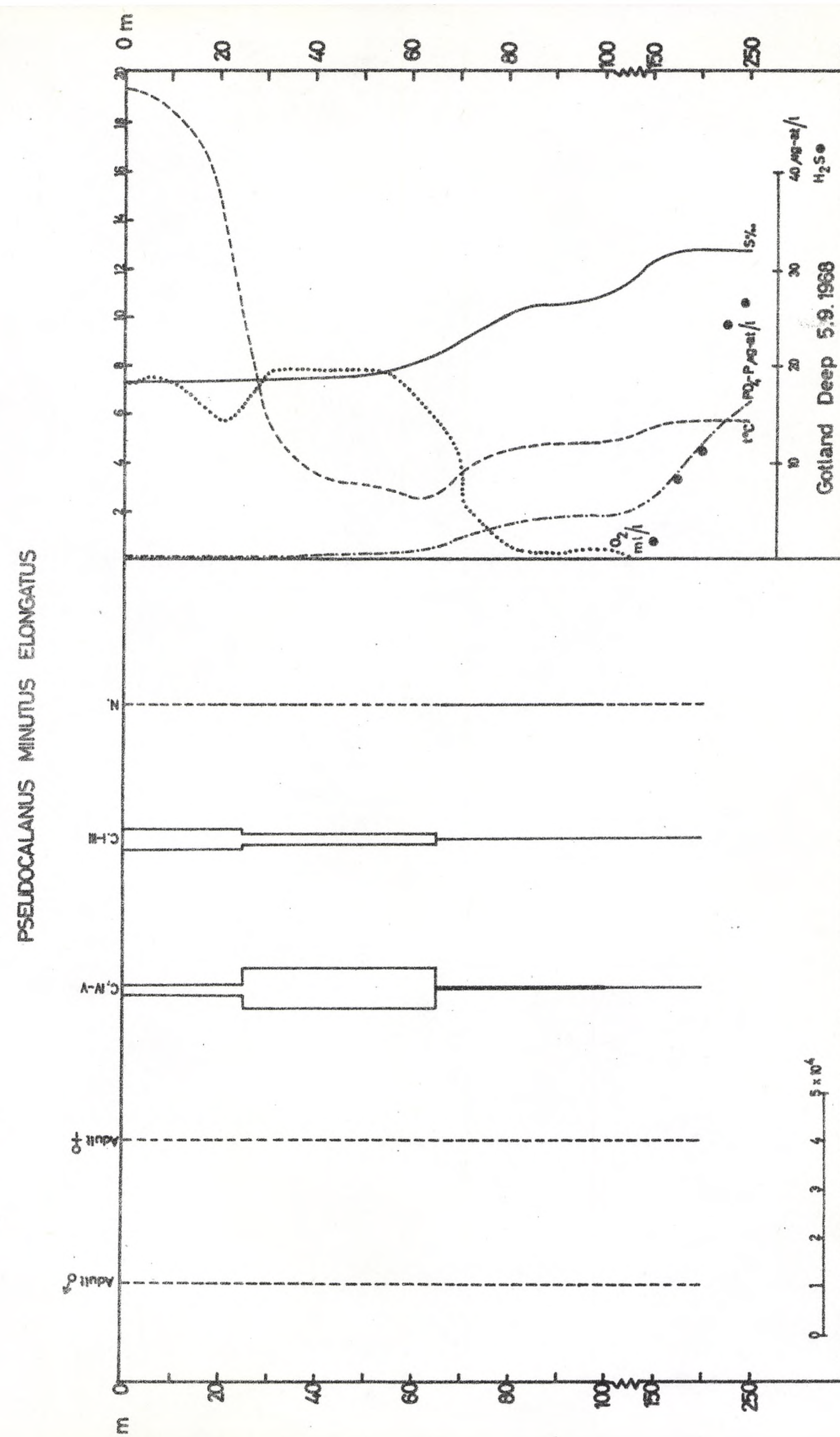
PSEUDOCALANUS MINUTUS ELONGATUS
Landsort Deep 11.6.1938
S‰
t°C
PO4-P µg-at/l
O2 ml/l
N
C. I-III
C. IV-V
Adult ♀
Adult ♂
5x10^4
m

Fig 111.



PSEUDOCALANUS MINUTUS ELONGATUS
Bornholm Deep 3.9. 1968
S‰
t°C
$O_2$ ml/l
$PO_4$-P µg-at/l
40 µg-at/l
$H_2S$
N
C. I-III
C. IV-V
Adult ♀
Adult ♂
$5 \times 10^4$
0 m
m 0

Fig 112.



PSEUDOCALANUS MINUTUS ELONGATUS
Gotland Deep 5.9.1968
S‰
t°C
O2 ml/l
PO4-P µg-at/l
H2S●
40 µg-at/l
N.
C.I-III
C.IV-V
Adult ♀
Adult ♂
5 x 10^4
0 m
m

PSEUDOCALANUS MINUTUS ELONGATUS

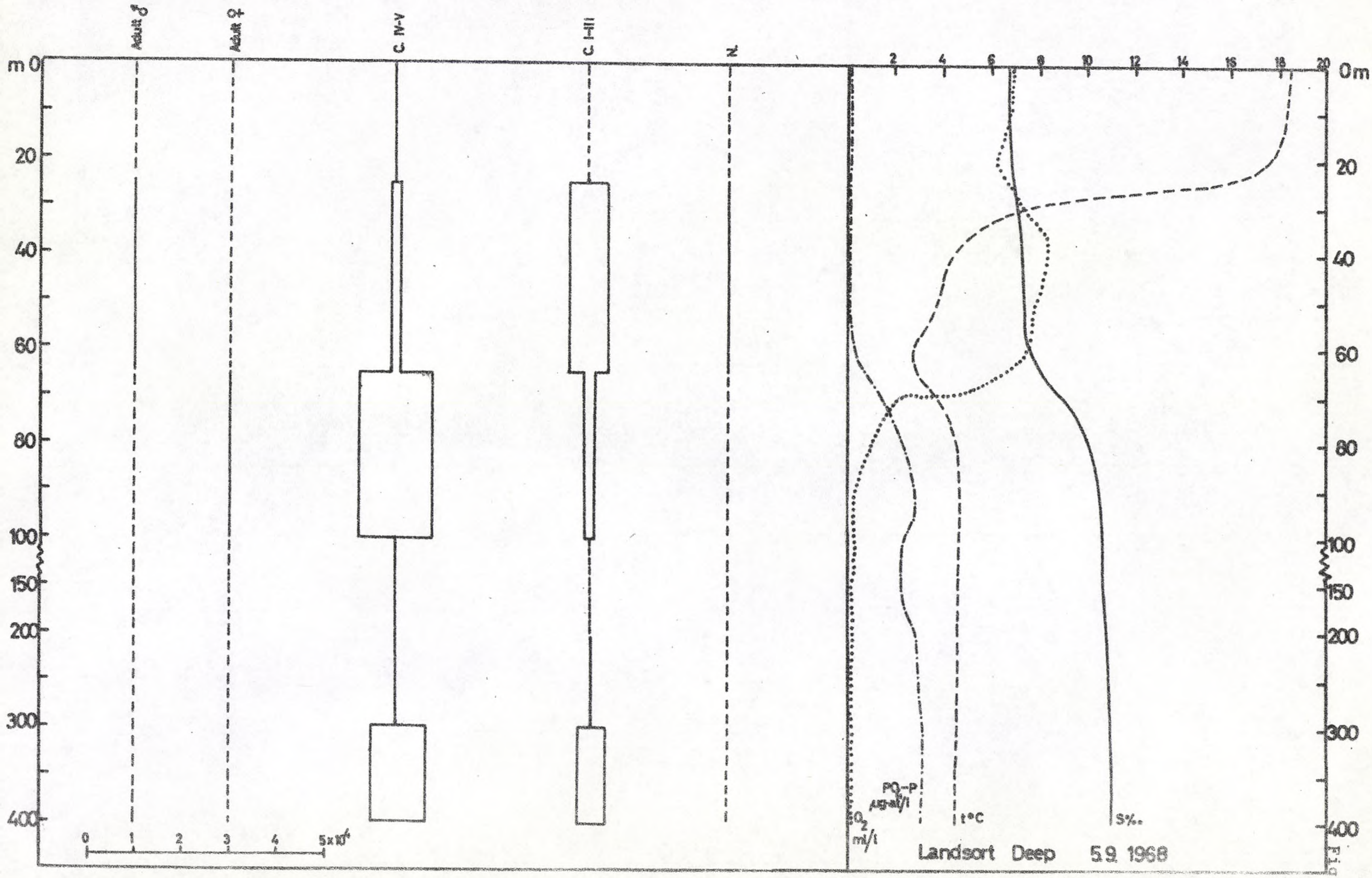
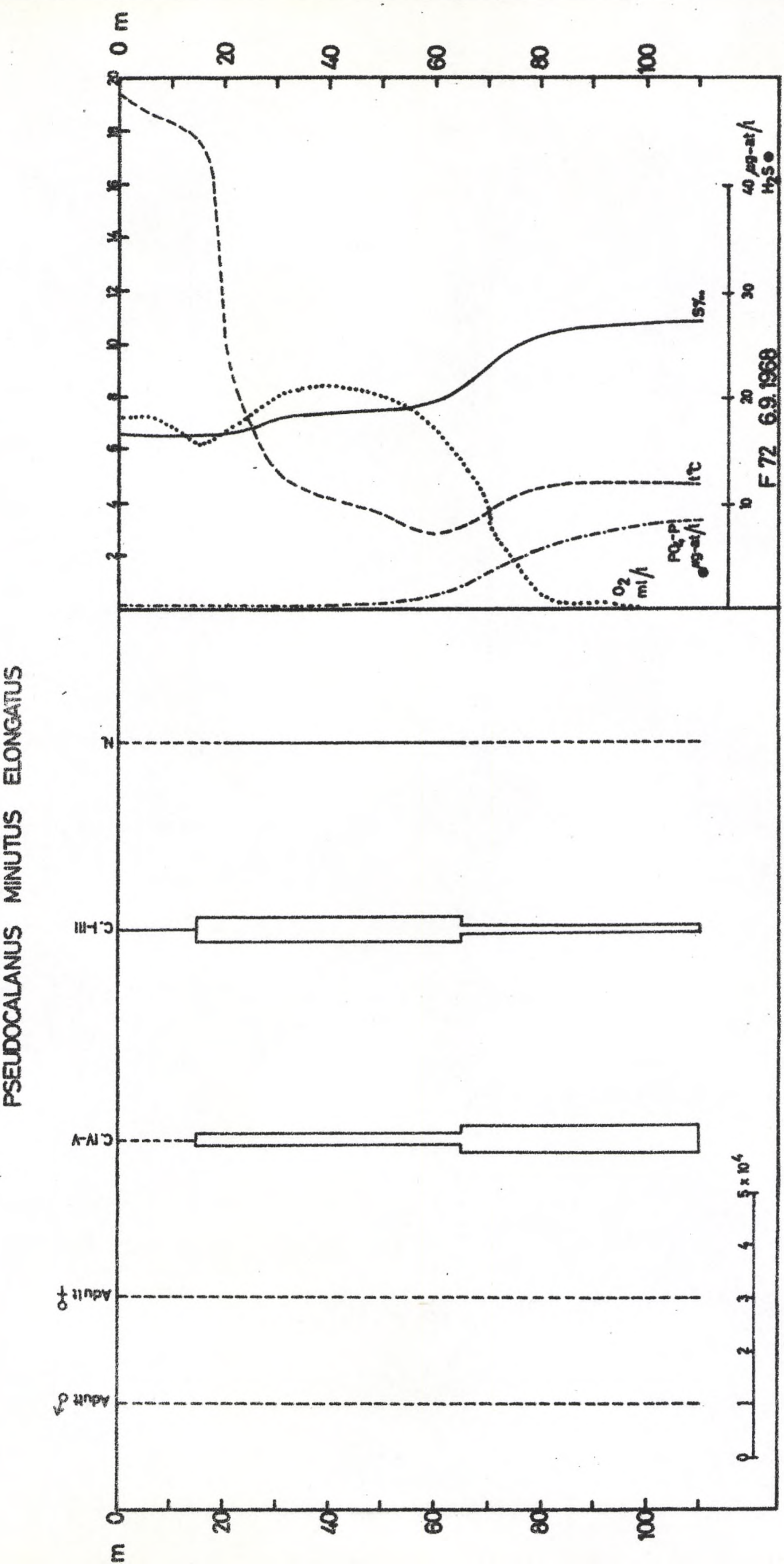



Fig 113

Fig 114.



PSEUDOCALANUS MINUTUS ELONGATUS
F 72 6.9.1968
S‰
t°C
$O_2$ ml/l
$PO_4$-P µg-at/l
µg-at/l $H_2S$
N
C.I-III
C.IV-V
Adult ♀
Adult ♂
5 x $10^4$
0 m
20
40
60
80
100

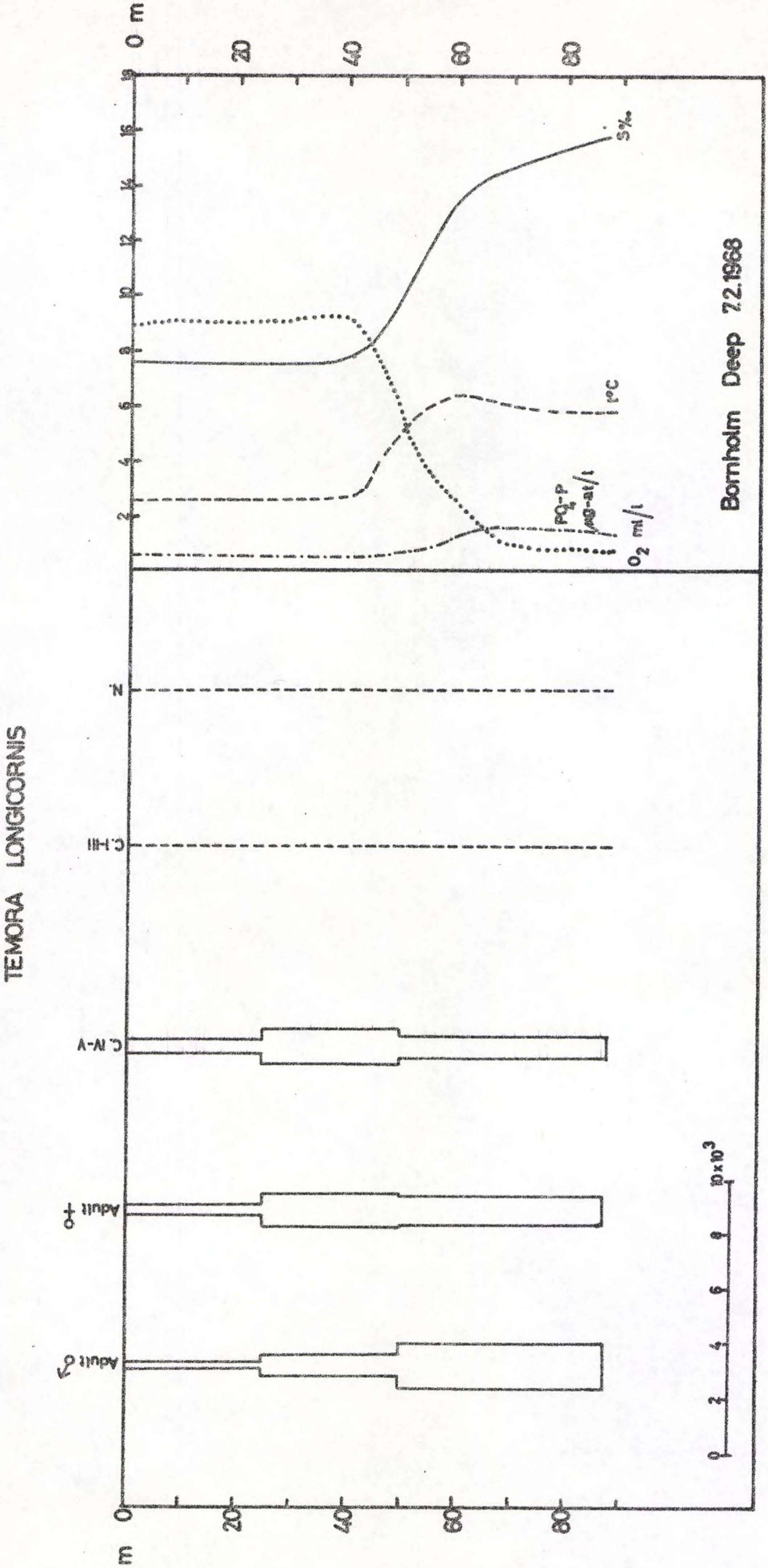

TEMORA LONGICORNIS
Bornholm Deep 7.2.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
N.
C.I-III
C.IV-V
Adult ♀
Adult ♂
$10 \times 10^3$
m
0
20
40
60
80

Fig 116.

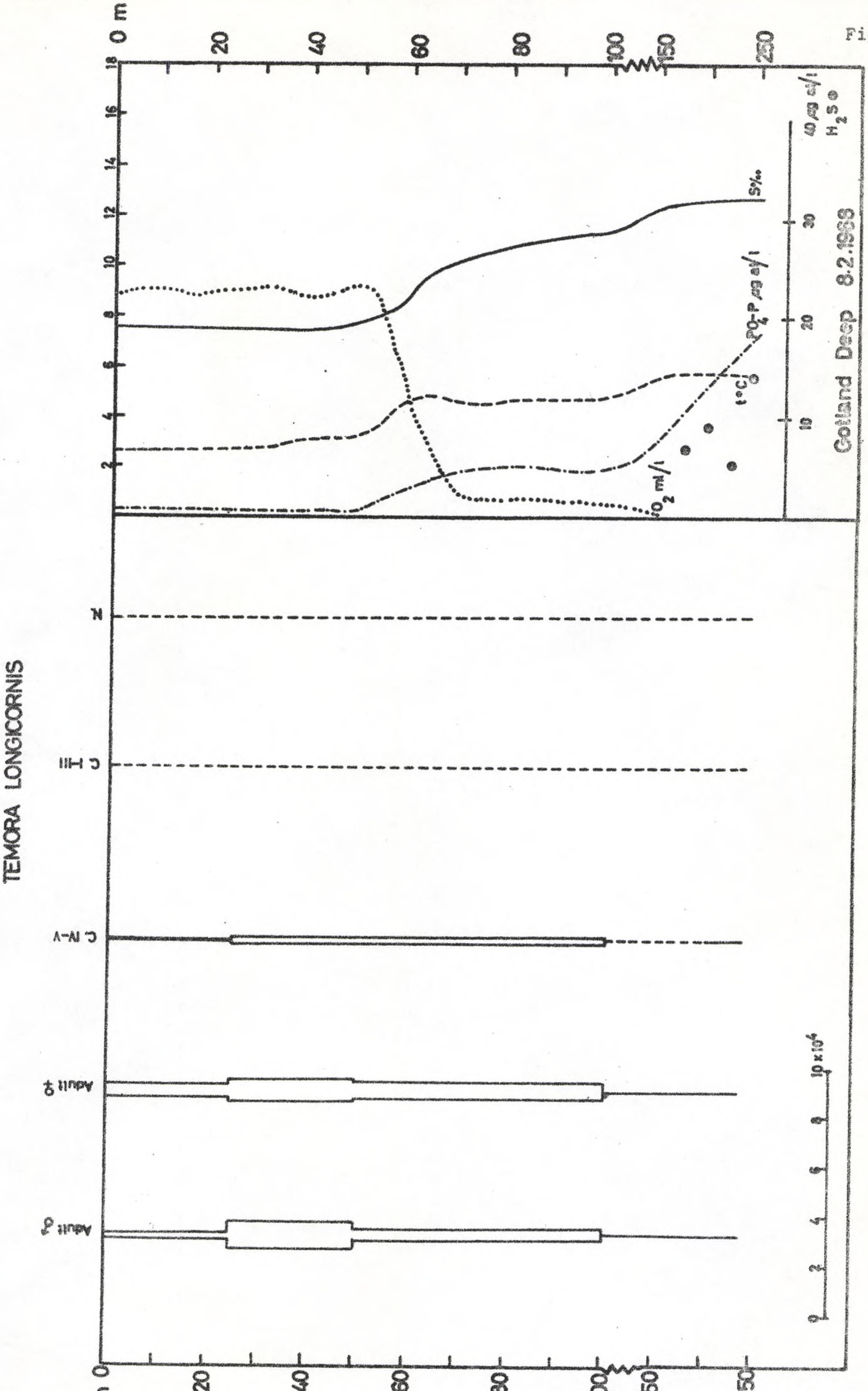
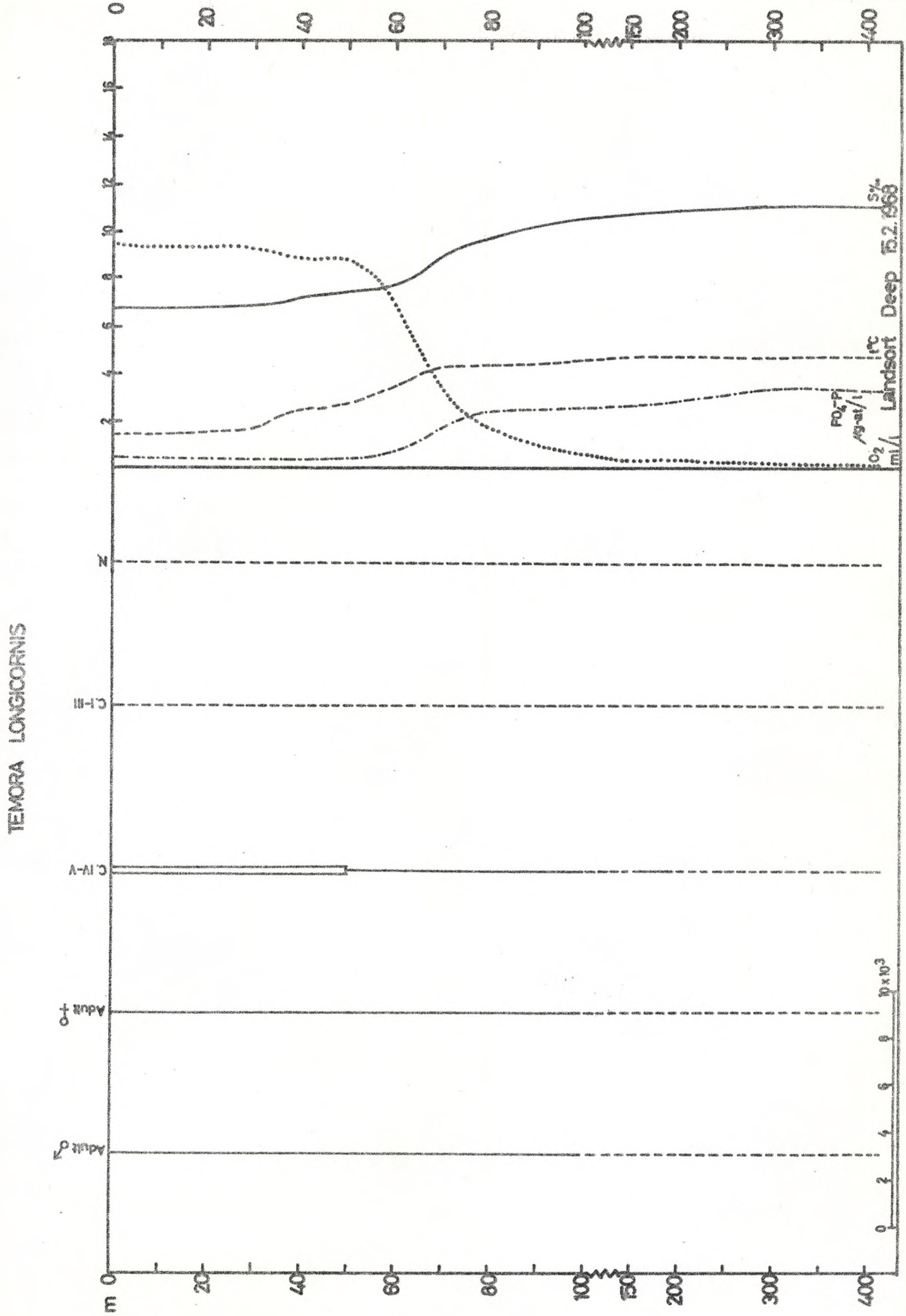
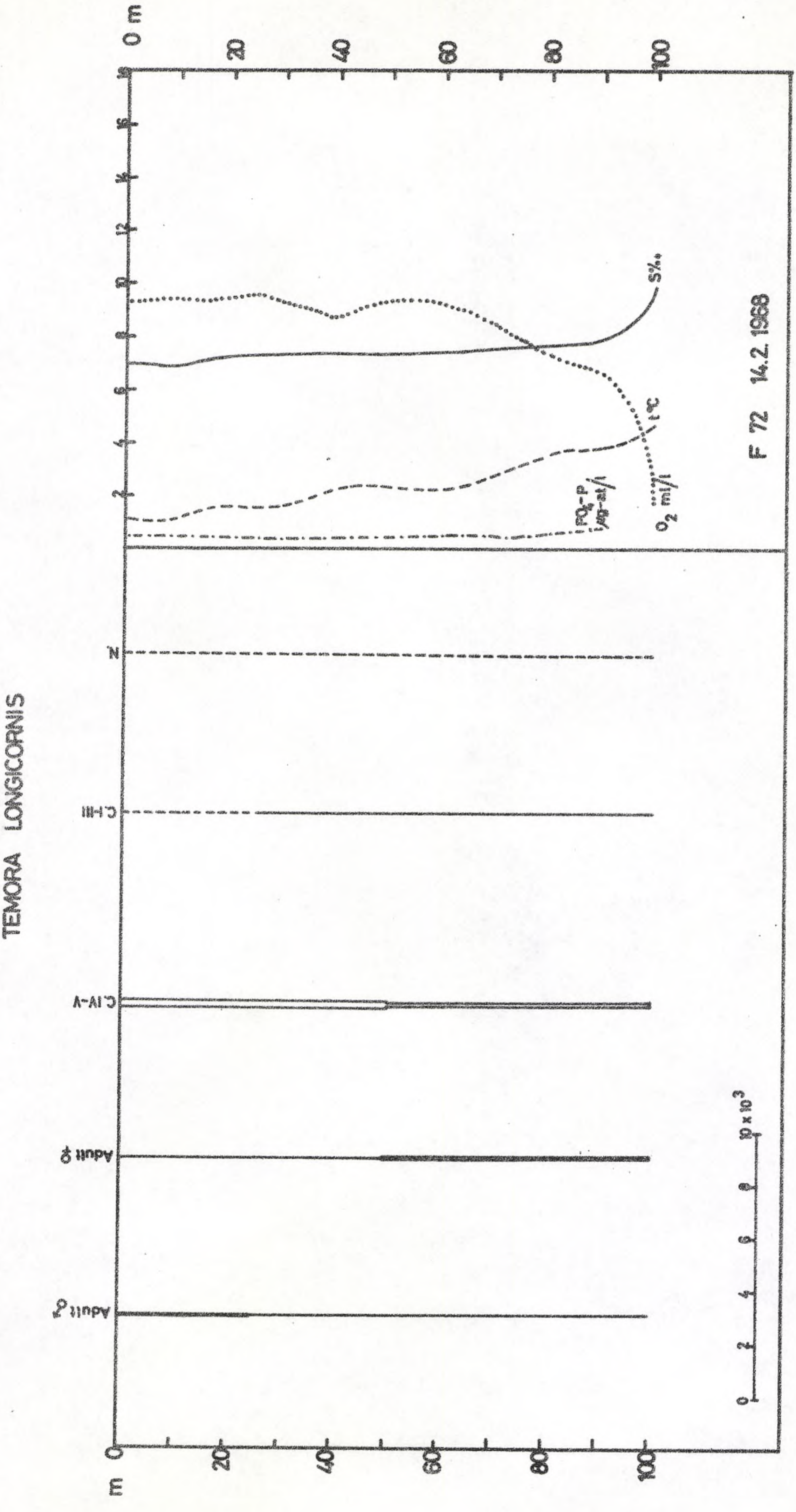

TEMORA LONGICORNIS
Gotland Deep 8.2.1968
S‰
t°C
$PO_4$-P µg at/l
$O_2$ ml/l
40 µg at/l
$H_2S$
N
C I-III
C IV-V
Adult ♀
Adult ♂
$10 \times 10^4$
0 m
20
40
60
80
100
150
250

Fig 117.



TEMORA LONGICORNIS
Landsort Deep 15.2.1968
S‰
t°C
$PO_4$-P µg-at/l
$O_2$ ml/l
N
C.I-III
C.IV-V
Adult ♀
Adult ♂
10 x 10³
m

Fig 118.



TEMORA LONGICORNIS
F 72 14.2.1968
S‰
t°C
$O_2$ ml/l
$PO_4$-P µg-at/l
N
C.I-III
C.IV-V
Adult ♀
Adult ♂
10 x 10$^3$
0 m
m

Fig 119

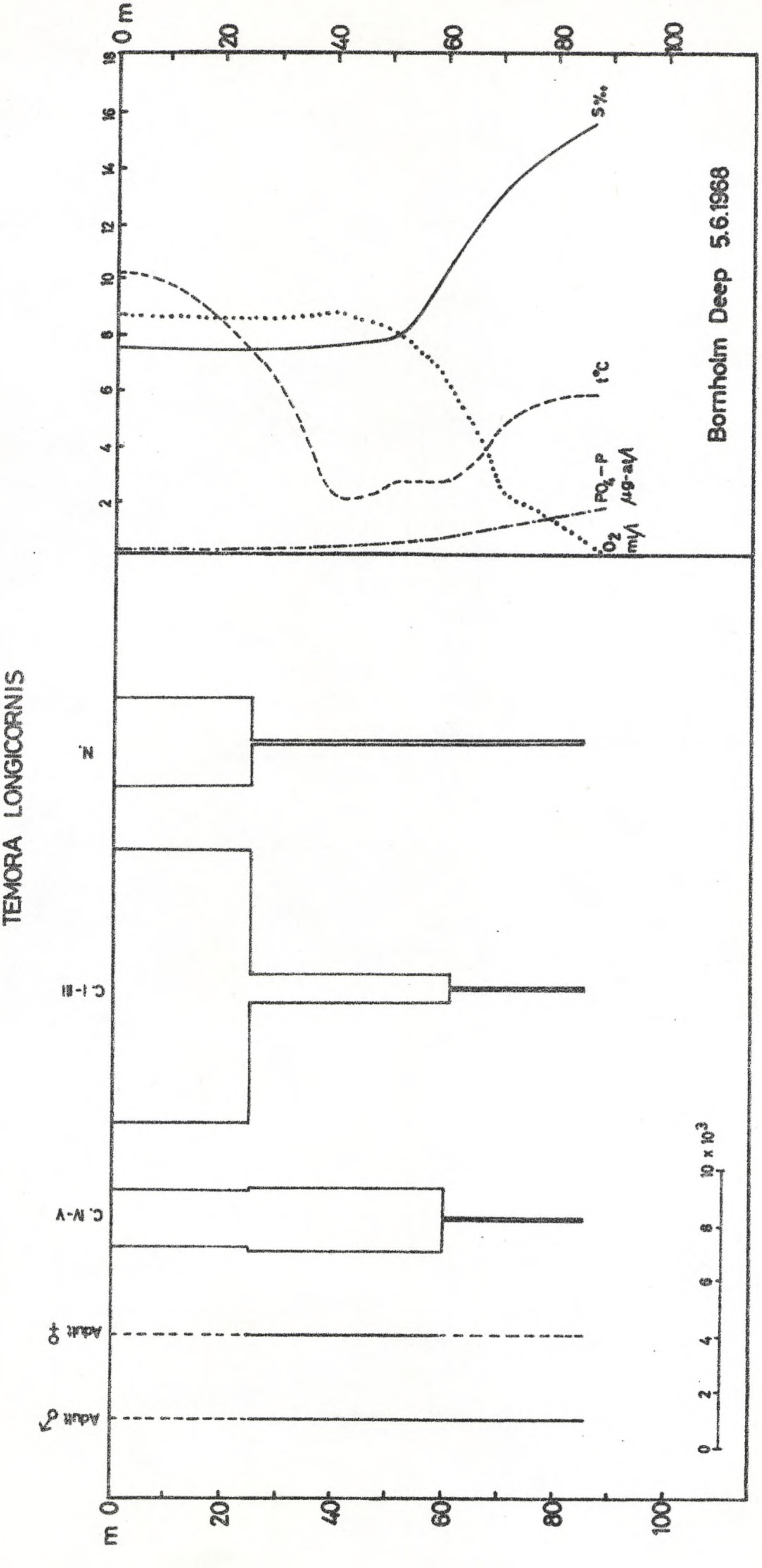
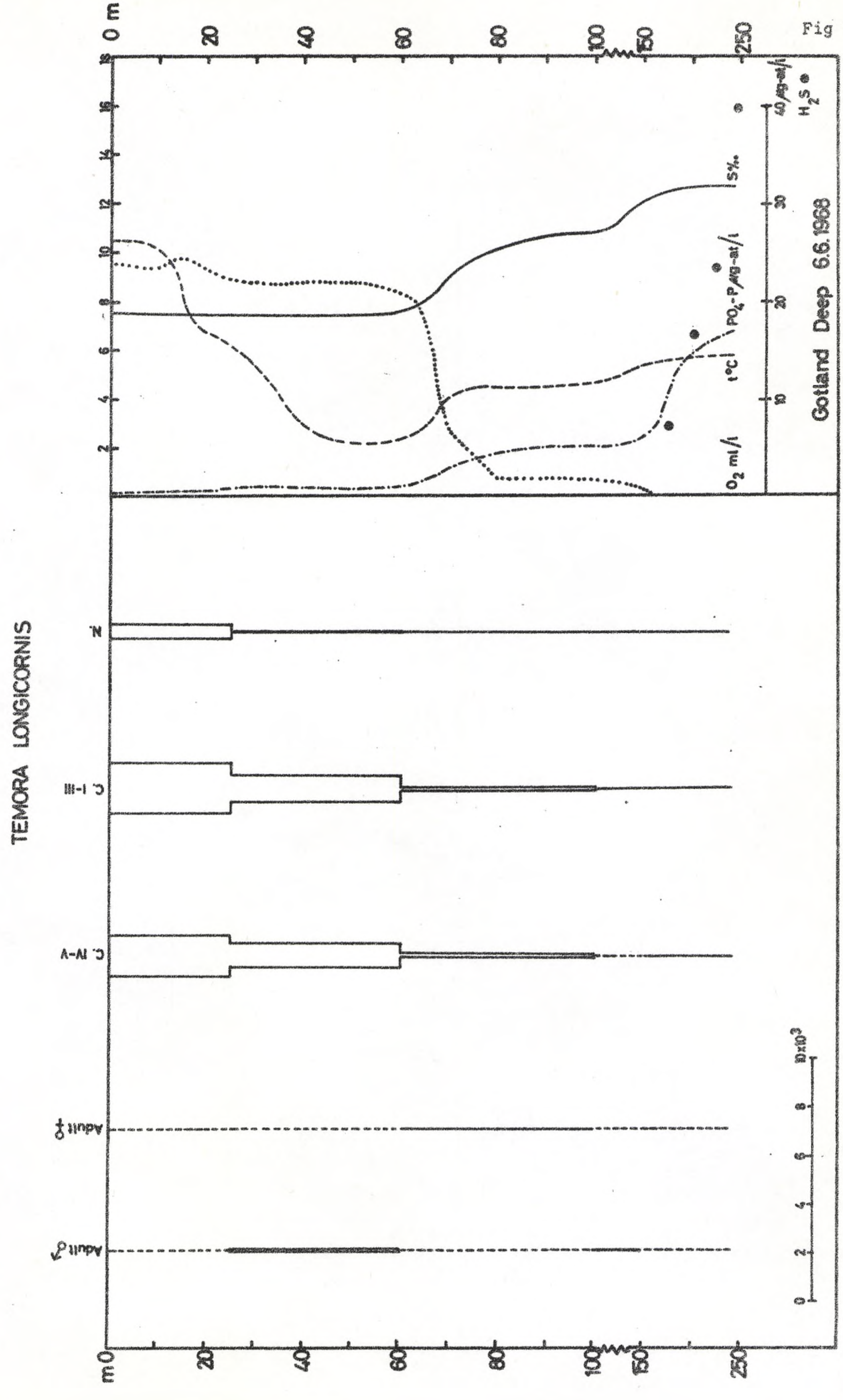
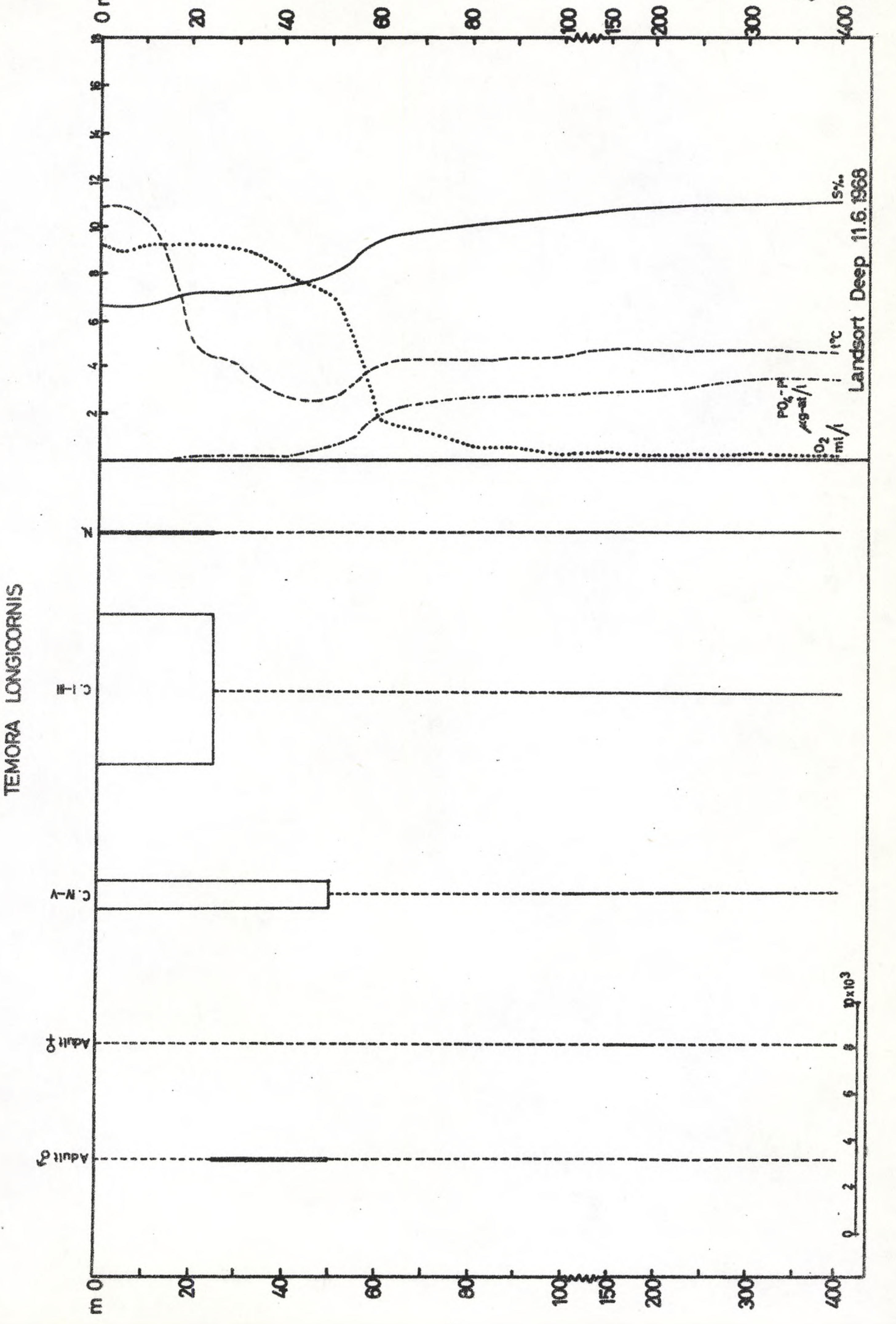

TEMORA LONGICORNIS
Bornholm Deep 5.6.1968
S‰
t°C
$PO_4$–P µg-at/l
$O_2$ ml/l
N.
C. I-III
C. IV-V
Adult ♀
Adult ♂
10 x $10^3$
m
0
20
40
60
80
100
0 m
2
4
6
8
10
12
14
16
18

Fig 120.



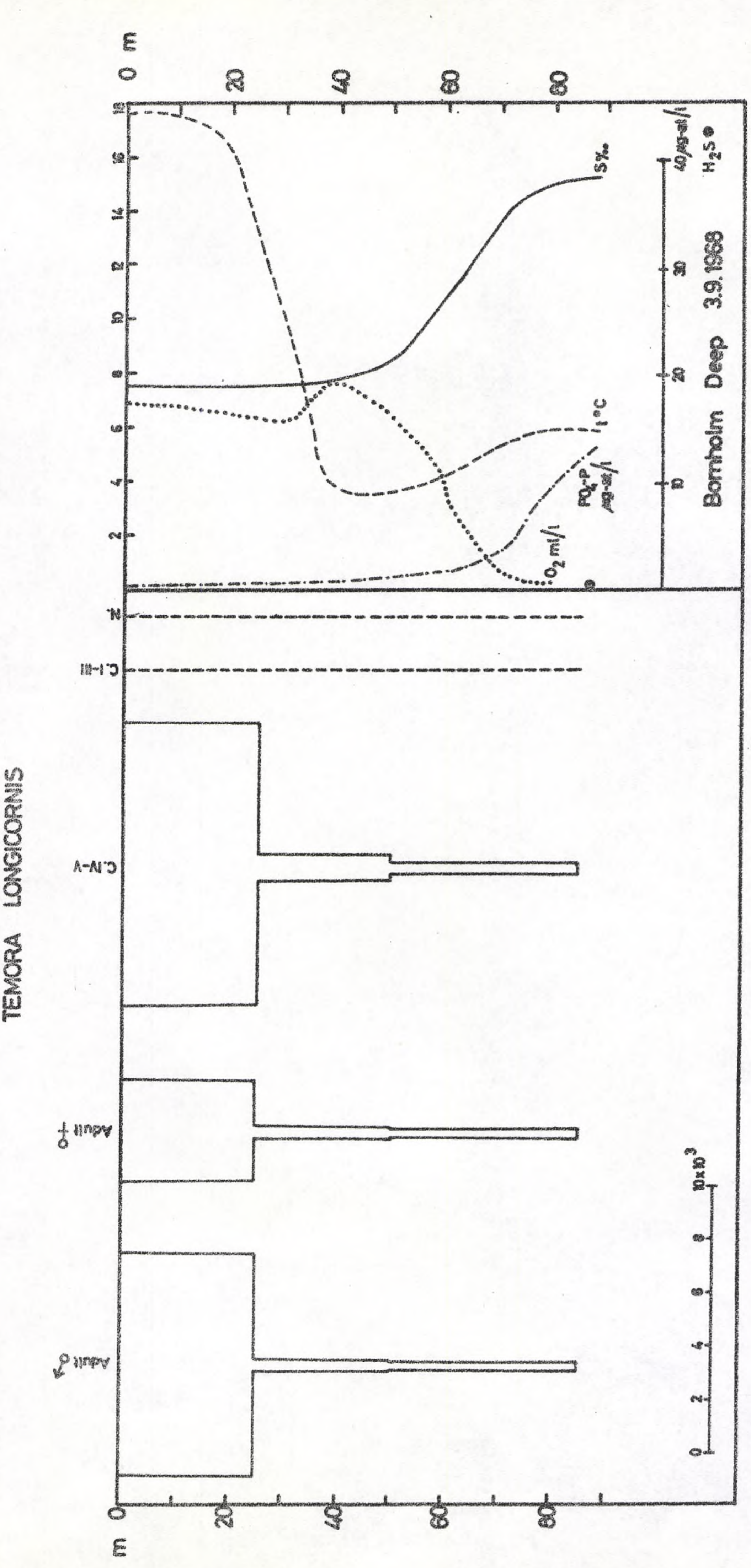
TEMORA LONGICORNIS
Gotland Deep 6.6.1968
N.
C. I-III
C. IV-V
Adult ♂
Adult ♀
10x10³
$O_2$ ml/l
t°C
$PO_4$-P µg-at/l
S‰
$H_2S$
40 µg-at/l
m 0
0 m
20
40
60
80
100
150
250

Fig 121.



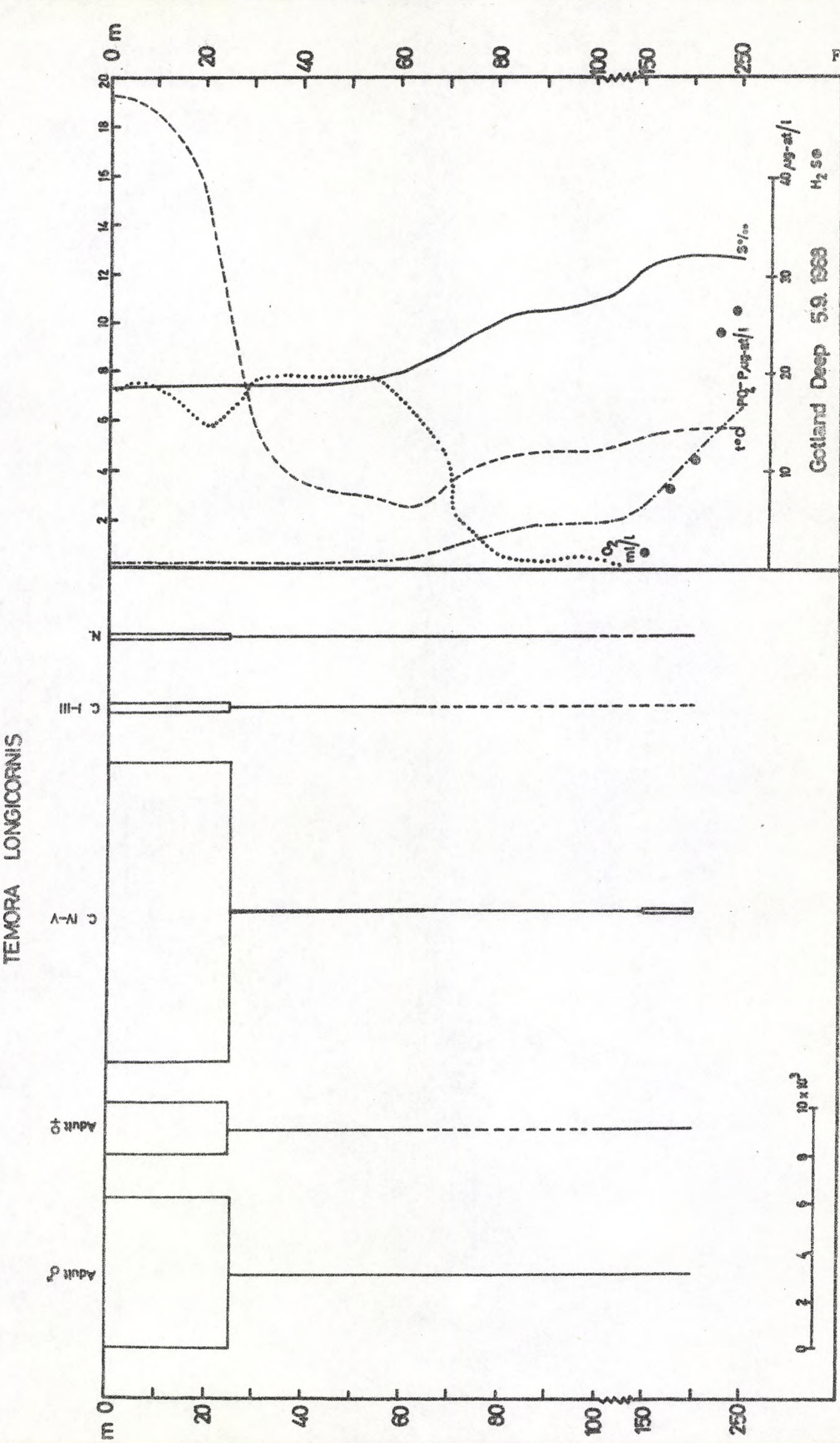
TEMORA LONGICORNIS
Landsort Deep 11.6.1968
S‰
t°C
PO4-P µg-at/l
O2 ml/l
N
C.I–III
C.IV–V
Adult ♀
Adult ♂
n x 10³
0 m
20
40
60
80
100
150
200
300
400

Fig 122.



TEMORA LONGICORNIS
Bornholm Deep 3.9.1968
S‰
t °C
$O_2$ ml/l
$PO_4$-P µg-at/l
$H_2S$
40 µg-at/l
Adult ♂
Adult ♀
C.IV-V
C.I-III
N.
$10 \times 10^3$
m

Fig 123.



TEMORA LONGICORNIS
Adult ♂
Adult ♀
C IV-V
C I-III
N.
Gotland Deep 5.9. 1968
S‰
$O_2$ ml/l
$PO_4$-P µg-at/l
µg-at/l
$H_2S$
10 x $10^2$
m

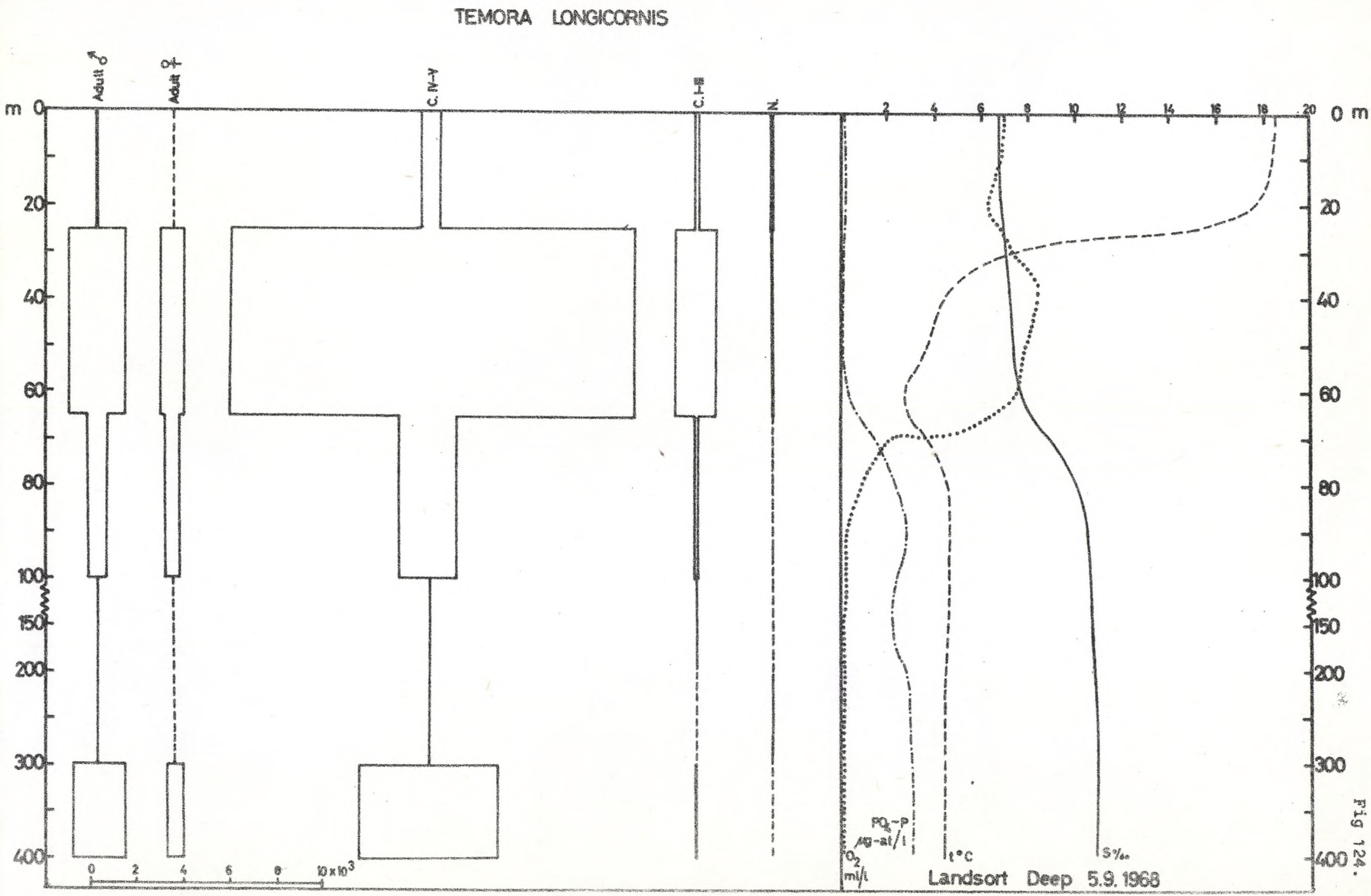
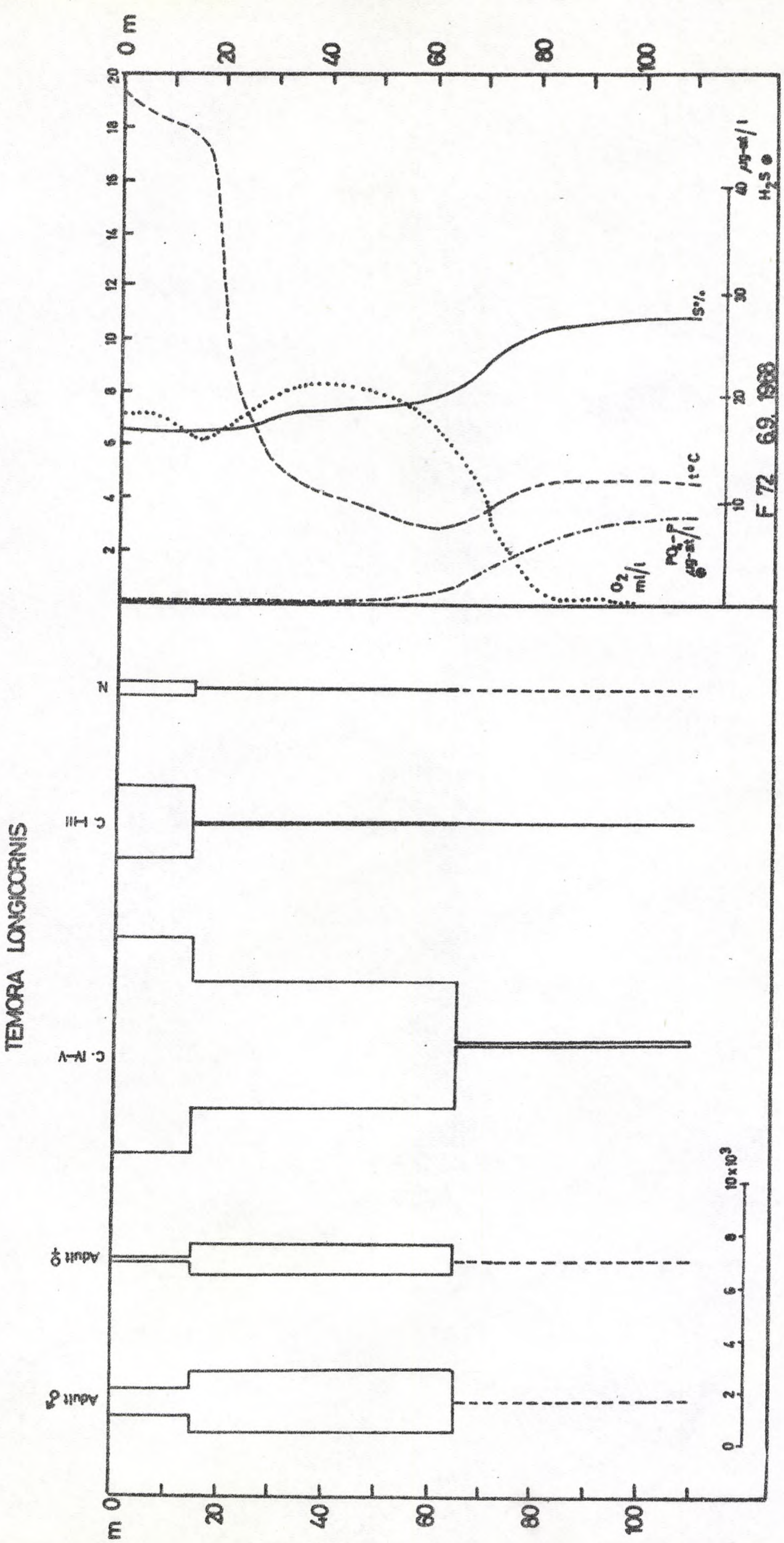

TEMORA LONGICORNIS
Adult ♂
Adult ♀
C. IV-V
C. I-III
N.
m
0 m
0
20
40
60
80
100
150
200
300
400
2
4
6
8
10
12
14
16
18
20
10 x 10^3
$O_2$ ml/l
$PO_4$-P µg-at/l
t °C
S ‰
Landsort Deep 5.9.1968

Fig 124.

Fig 125.



TEMORA LONGICORNIS
Adult ♂
Adult ♀
C. IV–V
C. I–III
N
F 72 6.9.1968
S‰
t°C
O2 ml/l
PO4-P µg-at/l
H2S µg-at/l
10x10³
m

Table 1. Plankton stations visited in 1968.

| | | |
|---|---|---|
| S 12 (2A) Arkona | 55°00'N | 14°05'E |
| S 24 (5A) Bornholm Deep | 55°15'N | 15°59'E |
| 8A "Rysshålan" | 55°38'N | 18°36'E |
| F 81(15A) Gotland Deep | 57°20'N | 20°03'E |
| F 72 | 59°18'N | 21°28'E |
| F 78 (31A) Landsort Deep | 58°35'N | 18°14'E |
| S 41 (38A) | 57°07'N | 17°40'E |

Table 2. Temperature, salinity, oxygen and hydrogen sulphide values at stations S 12, S 24, 8A, F 81, F 72, F 78 and S 41 in the Baltic proper, February 1968 (ANON., 1969 a).

Station S 12; 6 February, 1968

| Depth m | t°C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 1.84 | 7.51 | 9.18 |
| 5 | 1.77 | 7.49 | 9.22 |
| 10 | 1.77 | 7.39 | 9.21 |
| 15 | 1.78 | 7.41 | 9.22 |
| 20 | 1.80 | 7.41 | 9.26 |
| 30 | 1.72 | 7.81 | 9.16 |
| 40 | 2.02 | 8.36 | 8.75 |
| 45 | 4.55 | 14.95 | 5.23 |

Station S 24; 7 February, 1968

| Depth m | t°C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 2.47 | 7.66 | 8.99 |
| 5 | 2.49 | 7.62 | 9.00 |
| 10 | 2.50 | 7.64 | 9.03 |
| 15 | 2.47 | 7.63 | 8.97 |
| 20 | 2.50 | 7.64 | 8.98 |
| 30 | | 7.63 | 9.05 |
| 40 | 2.48 | 7.64 | 9.06 |
| 50 | 5.20 | 10.33 | 4.91 |
| 60 | 6.17 | 13.71 | 2.16 |
| 70 | 5.94 | 14.60 | 0.97 |
| 80 | 5.93 | 15.14 | 0.88 |
| 87 | 5.99 | 15.66 | 0.82 |

Continued

Table 2.(Continued)

Station 8 A; 7 February, 1968

| Depth m | $t^{\circ}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 2.94 | 7.58 | 8.96 |
| 5 | 2.92 | 7.57 | |
| 10 | 2.89 | 7.58 | 8.83 |
| 15 | 2.93 | 7.58 | |
| 20 | 2.96 | 7.58 | 8.88 |
| 30 | 2.89 | 7.58 | 8.85 |
| 40 | 2.96 | 7.59 | 8.81 |
| 50 | 4.23 | 9.04 | 3.34 |
| 60 | 4.32 | 10.11 | 0.85 |
| 70 | 4.61 | 10.74 | 0.54 |
| 80 | 4.89 | 11.18 | 0.52 |

Station F 81; 8 February, 1968

| Depth m | $t^{\circ}C$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 2.73 | 7.60 | 8.96 | |
| 5 | 2.74 | 7.61 | 9.03 | |
| 10 | 2.75 | 7.60 | 9.01 | |
| 15 | 2.73 | 7.57 | 8.96 | |
| 20 | 2.75 | 7.58 | 8.91 | |
| 30 | 2.78 | 7.58 | 9.05 | |
| 40 | 3.09 | 7.68 | 8.82 | |
| 50 | 3.06 | 7.68 | 9.14 | |
| 60 | 4.91 | 9.19 | 4.13 | |
| 70 | 4.44 | 10.26 | 0.96 | |
| 80 | 4.67 | 10.73 | 0.82 | |
| 90 | 4.83 | 11.07 | 0.75 | |
| 100 | 4.96 | 11.26 | 0.72 | |
| 125 | 5.31 | 11.88 | 0.68 | |
| 150 | 5.68 | 12.32 | 0.19 | |
| 175 | 5.67 | 12.55 | | 7.10 |
| 200 | 5.74 | 12.66 | | 8.58 |
| 225 | 5.79 | 12.78 | | 5.20 |
| 240 | 5.83 | 12.81 | | 14.07 |

Station F 72; 14 February, 1968

| Depth m | $t^{\circ}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 1.08 | 6.90 | 9.29 |
| 5 | 1.04 | 6.90 | 9.29 |
| 10 | 1.08 | 6.90 | 9.27 |
| 15 | 1.56 | 7.11 | 9.21 |
| 20 | 1.58 | 7.11 | 9.33 |
| 30 | 1.63 | 7.13 | 9.10 |
| 40 | 2.26 | 7.21 | 8.73 |
| 50 | 2.19 | 7.25 | 9.18 |
| 60 | 2.17 | 7.30 | 9.06 |
| 70 | 2.81 | 7.43 | 8.37 |
| 80 | 3.56 | 7.72 | 7.23 |
| 90 | 3.67 | 7.90 | 6.63 |
| 100 | 4.79 | 9.97 | 1.66 |

Continued

Table 2. (Continued)

Station F 78; 15 February, 1968

| Depth m | $t^{\circ}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 1.38 | 6.86 | 9.41 |
| 5 | 1.35 | 6.85 | 9.37 |
| 10 | 1.44 | 6.88 | 9.28 |
| 15 | 1.56 | 6.92 | 9.33 |
| 20 | 1.64 | 6.94 | 9.21 |
| 30 | 1.74 | 6.99 | 9.16 |
| 40 | 2.47 | 7.27 | 8.98 |
| 50 | 2.74 | 7.31 | 8.84 |
| 60 | 3.39 | 7.84 | 6.78 |
| 70 | 4.19 | 9.07 | 3.16 |
| 80 | 4.27 | 9.64 | 1.67 |
| 90 | 4.41 | 10.10 | 1.00 |
| 100 | 4.59 | 10.49 | 0.63 |
| 125 | 4.73 | 10.80 | 0.29 |
| 150 | 4.70 | 10.88 | 0.19 |
| 200 | 4.73 | 10.93 | 0.35 |
| 300 | 4.79 | 11.05 | 0.20 |
| 400 | 4.80 | 11.10 | 0.07 |
| 440 | 4.85 | 11.10 | 0.06 |

Station S 41; 21 February, 1968

| Depth m | $t^{\circ}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 1.59 | 7.12 | 9.14 |
| 5 | 1.61 | 7.12 | 9.17 |
| 10 | 1.52 | 7.11 | 9.21 |
| 15 | 1.58 | 7.11 | 9.13 |
| 20 | 1.60 | 7.11 | 9.09 |
| 30 | 1.82 | 7.15 | 9.02 |
| 40 | 2.07 | 7.19 | 8.94 |
| 50 | 2.38 | 7.23 | 8.86 |
| 60 | 3.39 | 7.76 | 7.03 |
| 70 | 4.04 | 8.88 | 3.09 |
| 80 | 4.10 | 9.68 | 1.01 |
| 90 | 4.21 | 10.08 | 0.73 |
| 100 | 4.29 | 10.26 | 0.25 |
| 105 | 4.30 | 10.28 | 0.25 |

Table 3. Temperature, salinity and oxygen values at stations S 12, S 24 and 8 A in the Baltic proper, April 1968 (ANON., 1969 a).

Station S 12; 24 April, 1968

| Depth m | $t^{\circ}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 4.62 | 7.66 | |
| 10 | 4.44 | 7.66 | |
| 20 | 3.30 | 7.67 | |
| 30 | 4.77 | 7.83 | 8.92 |
| 40 | 1.82 | 12.42 | 7.88 |
| 45 | 1.89 | 12.95 | 7.40 |

Continued

Table 3. Continued)

Station S 24; 22 april, 1968

| Depth m | t °C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 3.91 | 7.54 | |
| 10 | 3.85 | 7.53 | 9.41 |
| 30 | 2.63 | 7.57 | |
| 50 | 2.45 | 7.61 | 8.95 |
| 60 | 4.23 | 9.95 | |
| 70 | 4.76 | 12.16 | 4.22 |
| 80 | 5.82 | 14.73 | 1.00 |
| 87 | 5.97 | 15.22 | 0.63 |

Station 8 A; 18 April, 1968

| Depth m | t °C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 3.79 | 7.29 | |
| 20 | 2.71 | 7.43 | |
| 40 | 2.64 | 7.51 | 9.17 |
| 60 | 2.50 | 7.58 | 8.87 |
| 70 | 2.58 | 8.01 | 7.39 |
| 80 | 4.48 | 9.81 | 2.16 |
| 100 | 5.00 | 10.94 | 1.40 |
| 110 | 5.11 | 11.38 | 0.94 |
| 115 | 5.25 | 11.76 | 0.09 |

Table 4. Temperature, salinity, oxygen and hydrogen sulphide values at stations S 12, S 24, 8 A, F 81, F 78 and S 41 in the Baltic proper, June, 1968 (ANON., 1969 a).

Station S 12;5 June, 1968

| Depth m | t °C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 10.42 | 7.66 | 8.26 |
| 5 | 10.46 | 7.55 | 8.18 |
| 10 | 10.29 | 7.56 | 8.27 |
| 15 | 9.86 | 7.68 | 8.27 |
| 20 | 9.18 | 7.80 | 8.36 |
| 30 | | 7.71 | 8.38 |
| 40 | 3.07 | 8.30 | 8.28 |
| 45 | 2.78 | 13.72 | 1.47 |

Station S 24; 5 June, 1968

| Depth m | t °C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 10.16 | 7.51 | 8.75 |
| 5 | 10.17 | 7.53 | 8.86 |
| 10 | 9.85 | 7.55 | 8.82 |
| 15 | 9.22 | 7.57 | 8.87 |
| 20 | 8.25 | 7.53 | 8.73 |
| 30 | 6.05 | 7.57 | |
| 40 | 2.07 | 7.65 | 8.92 |
| 50 | 2.79 | 7.91 | 8.09 |
| 60 | 2.77 | 10.34 | 6.20 |
| 70 | 4.88 | 13.09 | 2.60 |
| 80 | 5.73 | 14.74 | 1.17 |
| 87 | 5.99 | 15.22 | 0 |

Station 8 A; 6 June, 1968

| Depth m | t °C | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 10.50 | 7.52 | 9.00 |
| 5 | 10.53 | 7.51 | 9.01 |
| 10 | 10.45 | 7.48 | 9.12 |
| 15 | 9.72 | 7.47 | 9.33 |
| 20 | 7.59 | 7.48 | 8.92 |
| 30 | 5.79 | 7.48 | 8.79 |
| 40 | 2.81 | 7.62 | 8.88 |
| 50 | 2.49 | 7.65 | 8.80 |
| 60 | 2.37 | 7.72 | 8.75 |
| 70 | 2.87 | 8.39 | 6.70 |
| 80 | 4.31 | 10.11 | 1.66 |
| 90 | 4.38 | 10.68 | 1.96 |

Station F 81; 6 June, 1968

| Depth m | t °C | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 10.33 | 7.49 | 9.52 | |
| 5 | 10.31 | 7.49 | 9.55 | |
| 10 | 10.25 | 7.49 | 9.50 | |
| 15 | 7.77 | 7.52 | 9.91 | |
| 20 | 6.81 | 7.47 | 9.29 | |
| 30 | 5.44 | 7.49 | 8.85 | |
| 40 | 2.95 | 7.57 | 8.92 | |
| 50 | 2.62 | 7.63 | 8.87 | |
| 60 | 2.44 | 7.75 | 8.27 | |
| 70 | 4.06 | 9.26 | 2.68 | |
| 80 | 4.54 | 10.20 | 0.80 | |
| 90 | 4.71 | 10.72 | 0.70 | |
| 100 | 4.79 | 10.88 | 0.69 | |
| 125 | 5.10 | 11.46 | 0.54 | |
| 150 | 5.43 | 12.12 | 0.24 | |
| 175 | 5.61 | 12.48 | 0 | 7.60 |
| 200 | 5.75 | 12.62 | 0 | 16.85 |
| 225 | 5.77 | 12.70 | 0 | 23.10 |
| 240 | 5.79 | 12.74 | 0 | 39.50 |

Continued

Table 4. Continued)

Station F 78; 11 June, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 10.83 | 6.59 | 9.06 |
| 5 | 10.83 | 6.55 | 8.98 |
| 10 | 10.32 | 6.69 | 9.08 |
| 15 | 8.87 | 6.89 | 9.24 |
| 20 | 4.99 | 7.12 | 9.14 |
| 30 | 4.20 | 7.21 | 9.00 |
| 40 | 2.93 | 7.40 | 8.00 |
| 50 | 2.70 | 7.93 | 6.96 |
| 60 | 2.99 | 9.36 | 1.91 |
| 70 | 4.28 | 9.76 | 1.21 |
| 80 | 4.25 | 10.00 | 0.61 |
| 90 | 4.32 | 10.10 | 0.60 |
| 100 | 4.45 | 10.38 | 0.24 |
| 125 | 4.60 | 10.68 | 0.38 |
| 150 | 4.73 | 10.79 | 0.24 |
| 175 | 4.72 | 10.88 | 0.20 |
| 200 | 4.74 | 10.94 | 0.16 |
| 300 | 4.83 | 11.00 | 0.28 |
| 400 | 4.79 | 11.04 | 0.14 |
| 440 | 4.80 | 11.04 | 0.13 |

Station S 41; 12 June, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 11.05 | 7.17 | 8.44 | |
| 5 | 10.81 | 7.17 | 8.66 | |
| 10 | 10.12 | 7.18 | 8.55 | |
| 15 | 7.24 | 7.18 | 8.90 | |
| 20 | 5.42 | 7.21 | 8.82 | |
| 30 | 3.76 | 7.23 | 8.81 | |
| 40 | 2.72 | 7.33 | 8.40 | |
| 50 | 2.52 | 7.52 | 7.59 | |
| 60 | 2.95 | 7.95 | 6.21 | |
| 70 | 3.80 | 9.10 | 2.04 | |
| 80 | 4.07 | 9.61 | 0.88 | |
| 90 | 4.30 | 10.09 | 0.22 | |
| 100 | 4.33 | 10.22 | | 10.40 |
| 105 | 4.33 | 10.25 | | 22.60 |

Table 5. Temperature, salinity, oxygen and hydrogen sulphide values at stations S 12, S 24, 8 A, S 41, F 78, F 81 and F 72 in the Baltic proper, September, 1968 (ANON., 1969 b).

Station S 12; 3 September, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 17.75 | 7.46 | 6.70 |
| 5 | 17.67 | 7.49 | 6.61 |
| 10 | 17.14 | 7.52 | 6.52 |
| 15 | 16.98 | 7.49 | 6.49 |
| 20 | 14.86 | 7.61 | 6.07 |
| 30 | 9.14 | 9.13 | 5.39 |
| 40 | 13.30 | 11.96 | 4.57 |
| 45 | 14.06 | 14.48 | 3.75 |

Station S 24; 3 September, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 17.60 | 7.47 | 6.82 | |
| 5 | 17.57 | 7.53 | 6.80 | |
| 10 | 17.53 | 7.54 | 6.80 | |
| 15 | 17.13 | 7.53 | 6.61 | |
| 20 | 16.22 | 7.53 | 6.40 | |
| 30 | 10.40 | 7.55 | 6.16 | |
| 40 | 3.83 | 7.69 | 7.62 | |
| 50 | 3.63 | 8.21 | 6.49 | |
| 60 | 4.29 | 10.64 | 3.73 | |
| 70 | 5.13 | 13.45 | 0.67 | |
| 80 | 5.91 | 15.02 | 0.17 | |
| 87 | 5.90 | 15.10 | | 0.90 |

Continued

Table 5. Continued)

Station 8 A; 4 September, 1968

| Depth m | $t^{o}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 19.01 | 7.40 | 6.43 |
| 5 | 18.99 | 7.42 | 6.89 |
| 10 | 17.36 | 7.44 | 6.79 |
| 15 | 16.85 | 7.44 | 6.33 |
| 20 | 16.59 | 7.45 | 6.13 |
| 30 | 8.54 | 7.46 | 6.59 |
| 40 | 3.50 | 7.62 | 7.75 |
| 50 | 2.59 | 7.71 | 8.20 |
| 60 | 2.46 | 7.76 | 7.93 |
| 70 | 3.28 | 8.74 | 4.74 |
| 80 | 4.30 | 10.29 | 1.50 |
| 90 | 4.25 | 10.70 | 1.11 |

Station S 41; 4 September, 1968

| Depth m | $t^{o}C$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 18.99 | 7.04 | 6.88 | |
| 5 | 18.97 | 7.01 | 6.78 | |
| 10 | 18.69 | 7.04 | 6.85 | |
| 15 | 16.68 | 7.16 | 6.46 | |
| 20 | 15.58 | 7.27 | 6.41 | |
| 30 | 7.94 | 7.20 | 7.16 | |
| 40 | 4.44 | 7.44 | 7.38 | |
| 50 | 3.56 | 7.85 | 6.01 | |
| 60 | 3.58 | 8.28 | 4.54 | |
| 70 | 4.03 | 9.39 | 1.23 | |
| 80 | 4.31 | 10.07 | 0.10 | |
| 90 | 4.36 | 10.25 | 0.11 | |
| 100 | 4.39 | 10.29 | | 5.20 |
| 105 | 4.39 | 10.33 | | 6.10 |

Station F 78; 5 September, 1968

| Depth m | $t^{o}C$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 18.49 | 6.76 | 6.93 |
| 5 | 18.45 | 6.76 | 6.81 |
| 10 | 18.37 | 6.78 | 6.76 |
| 15 | 18.05 | 6.83 | 6.48 |
| 20 | 17.52 | 6.90 | 6.16 |
| 30 | 7.78 | 7.12 | 7.18 |
| 40 | 4.53 | 7.22 | 8.19 |
| 50 | 3.95 | 7.41 | 7.95 |
| 60 | 2.86 | 7.69 | 7.53 |
| 70 | 3.72 | 9.01 | 2.58 |
| 80 | 4.36 | 10.13 | |
| 90 | 4.51 | 10.42 | 0.19 |
| 100 | 4.60 | 10.54 | 0.20 |
| 125 | 4.09 | 10.73 | 0.15 |
| 150 | 4.79 | 10.84 | 0.09 |
| 175 | 4.78 | 10.95 | 0.11 |
| 200 | 4.82 | 11.00 | 0.13 |
| 300 | 4.85 | 11.06 | 0.12 |
| 400 | 4.88 | 11.09 | 0.11 |
| 440 | 4.91 | 11.09 | 0.10 |

Station F 81; 5 September, 1968

| Depth m | $t^{o}C$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 19.15 | 7.28 | 7.19 | |
| 5 | 19.09 | 7.27 | 7.30 | |
| 10 | 18.39 | 7.26 | 7.16 | |
| 15 | 17.33 | 7.27 | 6.51 | |
| 20 | 14.27 | 7.32 | 5.84 | |
| 30 | 5.48 | 7.48 | 7.69 | |
| 40 | 3.63 | 7.56 | 7.80 | |
| 50 | 3.06 | 7.66 | 7.75 | |
| 60 | 2.75 | 8.01 | 6.71 | |
| 70 | 3.84 | 9.01 | 2.88 | |
| 80 | 4.50 | 10.13 | 0.53 | |
| 90 | 4.72 | 10.59 | 0.32 | |
| 100 | 4.89 | 10.96 | 0.43 | |
| 125 | 5.23 | 11.69 | 0.14 | |
| 150 | 5.53 | 12.30 | | 2.32 |
| 175 | 5.71 | 12.52 | | 8.38 |
| 200 | 5.79 | 12.67 | | 11.00 |
| 225 | 5.81 | 12.75 | | 24.60 |
| 240 | 5.86 | 12.75 | | 26.80 |

Continued

Table 5. Continued)

Station F 72; 6 September, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/m |
|---|---|---|---|---|
| 0 | 19.11 | 6.47 | 7.06 | |
| 5 | 18.46 | 6.48 | 7.08 | |
| 10 | 18.18 | 6.47 | 6.87 | |
| 15 | 17.71 | 6.58 | 6.02 | |
| 20 | 9.76 | 6.49 | 6.58 | |
| 30 | 5,03 | 7.04 | 7.99 | |
| 40 | 4.01 | 7.21 | 8.18 | |
| 50 | 3.53 | 7.38 | 7.92 | |
| 60 | 2.86 | 7.84 | 6.63 | |
| 70 | 3.67 | 9.03 | 3.06 | |
| 80 | 4.47 | 10.22 | 0.51 | |
| 90 | 4.66 | 10.54 | 0.17 | |
| 100 | 4.71 | 10.63 | 0.01 | |
| 110 | 4.77 | 10.78 | | 2.95 |

Table 6. Temperature, salinity, oxygen and hydrogen sulphide values at stations S 12, S 24 and S 41 in the Baltic proper, November, 1968 (ANON., 1969 b).

Station S 12; 5 November, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l |
|---|---|---|---|
| 0 | 11.12 | 7.91 | 7.30 |
| 5 | 11.10 | 7.89 | 7.32 |
| 10 | 11.12 | 7.87 | 7.29 |
| 15 | 11.13 | 7.87 | 6.78 |
| 20 | 11.27 | 8.04 | 7.29 |
| 30 | 12.88 | 10.96 | 5.94 |
| 40 | 12.15 | 16.82 | 4.53 |
| 45 | 12.16 | 16.88 | 4.56 |

Station S 24; 5 November, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 11.23 | 7.49 | 7.14 | |
| 5 | 11.22 | 7.49 | 7.16 | |
| 10 | 11.25 | 7.47 | 7.15 | |
| 15 | 11.24 | 7.47 | 7.12 | |
| 20 | 11.25 | 7.47 | 7.11 | |
| 30 | 11.23 | 7.47 | 7.07 | |
| 40 | 10.93 | 7.47 | 7.05 | |
| 50 | 6.87 | 8.30 | 5.69 | |
| 60 | 8.36 | 10.43 | 3.78 | |
| 70 | 6.19 | 13.33 | 0.52 | |
| 80 | 6.13 | 14.64 | 0.08 | |
| 87 | 5.97 | 14.76 | | 2.75 |

Station S 41; 6 November, 1968

| Depth m | $t^oC$ | S ‰ | $O_2$ ml/l | $H_2S$ µgat/l |
|---|---|---|---|---|
| 0 | 9.16 | 6.89 | 7.58 | |
| 5 | 9.14 | 6.91 | 7.71 | |
| 10 | 9.16 | 6.91 | 7.58 | |
| 15 | 9.17 | 6.91 | 7.59 | |
| 20 | 9.26 | 6.93 | 7.66 | |
| 30 | 9.35 | 6.95 | 7.05 | |
| 40 | 5.41 | 7.28 | 7.30 | |
| 50 | 4.10 | 7.63 | 6.31 | |
| 60 | 3.81 | 8.17 | 4.64 | |
| 70 | 4.08 | 9.68 | 0.62 | |
| 80 | 4.33 | 10.15 | 0.08 | |
| 90 | 4.37 | 10.26 | | 3.15 |
| 100 | 4.39 | 10.28 | | 6.25 |
| 108 | 4.40 | 10.28 | | 7.50 |