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ETUDE DU ZOOPLANKTON DE LA CROISIERE 02 (Aout 71)

par

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A. La composition qualitative du zooplancton (fig. 5) nous montre deux situations nettes.

1. Pour les points M16 à M20 nous trouvons une diversité assez grande des organismes mais d'une station à l'autre, une composition qualitative différente. Cependant, les chaetognathes se retrouvent en assez grand nombre pour chacun de ces points.
2. Pour les points M21 à M25 la diversité des organismes est nettement moins grande.

La grande proportion des rotifères aux points M21 et M22 (+ de 50 % du nombre total d'organismes) pourrait nous indiquer un phénomène particulier. En effet lors de la croisière 0 le point M06 présentait la même  $\frac{+}{-}$  en rotifères. Ce point avait déjà attiré l'attention des autres laboratoires.

B. La composition quantitative du zooplancton nous indique les mêmes subdivisions que précédemment.

Pour les points de M16 à M20 la quantité d'organismes par unité de volume est sensiblement la même quoique relativement faible. Nous n'observons pas de diminution en nombre avec l'éloignement des côtes.

Tandis que, pour les points M21 à M25, nous observons grosso modo une diminution d'organismes vers le large.

C. Matières sèche et organique

Par la fig. 6, nous voyons un très grand pourcentage de matière organique comparativement à la matière minérale, même le long des côtes.

Cette action inhibitrice s'atténuerait là où les eaux ont la possibilité de se mélanger aux eaux du large et où subsisterait l'action promotrice d'une plus haute teneur en sels nitritifs (M52) (M55) (M60).

Nous y observons un très grand nombre d'organismes par unité de volume.

2. Pour les points M63 à M72 nous observons une quantité assez variable d'un point à l'autre.

### C. Matières sèche et organique

Les fig. 9 et 10 montrent :

- un max. de matière sèche le long des côtes et une diminution vers le large
- un pourcentage très important de matières inorganiques et beaucoup plus faible au large.

STATION 16

M 16

170871

0830

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TOT.NUMB.INDIV./M3(PROT.EXCL.) 3100  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= .38  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 2.22  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .52  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 1.31  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS 2.173  
 ASHES IDEM .408  
 ORG. MAT. IDEM 1.765  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 4.346  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 3.53

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 20           |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 80           | 9             | 26             |
| ACNIDARIA     | 240          | 27            | 80             |
| NEMATHELMINT. | 60           | 6             | 20             |
| MOLLUSCA (L)  | 160          | 18            | 53             |
| ANNELIDA (L)  | 200          | 23            | 66             |
| CRUSTACEA     | 1040         |               |                |
| NAU.COP.      | 520          | 60            |                |
| COPEPODS      | 480          | 55            |                |
| N+C CIRR.     | 20           | 2             | 6              |
| OTHERS        | 20           | 2             | 6              |
| BRYOZOA (L)   | 120          | 13            | 40             |
| CHAETOGNATHA  | 660          | 76            |                |
| ECHINOD. (L)  | 180          | 20            | 60             |
| TUNICATA      | 360          | 41            |                |
| PISCES (OVA)  | 0            | 0             | 0              |

STATION 17

M 17

170871

2000

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TOT.NUMB.INDIV./M3(PROT.EXCL.) 1600  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= .63  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 1.59  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .17  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= .43  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS 3.114  
 ASHES IDEM .369  
 ORG. MAT. IDEM 2.745  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 6.228  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 5.49

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 0            |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 80           | 18            | 240            |
| ACNIDARIA     | 440          | 99            |                |
| NEMATHELMINT. | 180          | 40            |                |
| MOLLUSCA (L)  | 0            | 0             | 0              |
| ANNELIDA (L)  | 160          | 36            |                |
| CRUSTACEA     | 500          |               |                |
| NAU.COP.      | 220          | 49            |                |
| COPEPODS      | 260          | 58            |                |
| N+C CIRR.     | 0            | 0             | 0              |
| OTHERS        | 20           | 4             | 60             |
| BRYOZOA (L)   | 0            | 0             | 0              |
| CHAETOGNATHA  | 220          | 49            |                |
| ECHINOD. (L)  | 0            | 0             | 0              |
| TUNICATA      | 20           | 4             | 60             |
| PISCES (OVA)  | 0            | 0             | 0              |

STATION 18

M18

1808 71

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TOT.NUMB.INDIV./M3(PROT.EXCL.) 7640  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= 1.38  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 3.49  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .66  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 1.68  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS 2.293  
 ASHES IDEM .371  
 ORG. MAT. IDEM 1.922  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 4.586  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 3.844

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 0            |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 120          | 5             | 24             |
| ACNIDARIA     | 620          | 29            | 125            |
| NEMATHELMINT. | 540          | 25            | 109            |
| MOLLUSCA (L)  | 120          | 5             | 24             |
| ANNELIDA (L)  | 320          | 15            | 64             |
| CRUSTACEA     | 3580         |               |                |
| NAU.COP.      | 860          | 40            |                |
| COPEPODS      | 2680         | 126           |                |
| 0 N+C CIRR.   | 0            | 0             | 0              |
| OTHERS        | 40           | 1             | 8              |
| BRYOZOA (L)   | 0            | 0             | 0              |
| CHAETOGNATHA  | 2320         | 109           |                |
| ECHINOD. (L)  | 0            | 0             | 0              |
| TUNICATA      | 20           | 0             | 4              |
| PISCES (OVA)  | 0            | 0             | 0              |

STATION 19

M19

1808 71

1900

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TOT.NUMB.INDIV./M3(PROT.EXCL.) 8260  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= 1.43  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 3.63  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .46  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 1.18  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS 0  
 ASHES IDEM 0  
 ORG. MAT. IDEM 0  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 0  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 0

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 0            |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 80           | 3             | 32             |
| ACNIDARIA     | 360          | 15            | 147            |
| NEMATHELMINT. | 840          | 36            |                |
| MOLLUSCA (L)  | 80           | 3             | 32             |
| ANNELIDA (L)  | 260          | 11            | 106            |
| CRUSTACEA     | 5680         |               |                |
| NAU.COP.      | 1640         | 71            |                |
| COPEPODS      | 4000         | 174           |                |
| N+C CIRR.     | 0            | 0             | 0              |
| OTHERS        | 40           | 1             | 16             |
| BRYOZOA (L)   | 0            | 0             | 0              |
| CHAETOGNATHA  | 900          | 39            |                |
| ECHINOD. (L)  | 60           | 2             | 24             |
| TUNICATA      | 0            | 0             | 0              |
| PISCES (OVA)  | 0            | 0             | 0              |

STATION 20

M 20

190871

1600

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TOT.NUMB. INDIV./M3 (PROT. EXCL.) 5420

DIAGRAM CONSTRUCTION (WITH MAX. AREA R=4CM): R= 1.16

DIAGRAM CONSTRUCTION (NO MAX. AREA): R= 2.94

DIAGRAM CONSTRUCTION (WITH MAX. AREA) ORGAN.-10PC: R= .48

DIAGRAM CONSTRUCTION (NO MAX. AREA) ORGAN.-10PC: R= 1.21

DRY MAT. (G/M3) PARTICLES &gt; 40 MICRONS 0

ASHES IDEM 0

ORG. MAT. IDEM 0

DIAGRAM CONSTRUCTION DRY MAT.: D= 0

DIAGRAM CONSTRUCTION ORG. MAT.: D= 0

|               | TOT.NUMB./M3 | TOT.ANG. REPR. | ANG. REPR.-10PC |
|---------------|--------------|----------------|-----------------|
| PROTOZOA      |              |                |                 |
| NOCTILUCA     | 40           |                |                 |
| OTHERS        | 60           |                |                 |
| CNIDARIA      | 40           | 2              | 15              |
| ACNIDARIA     | 0            | 0              | 0               |
| NEMATHELMINT. | 1260         | 83             |                 |
| MOLLUSCA (L)  | 120          | 7              | 46              |
| ANNELIDA (L)  | 80           | 5              | 31              |
| CRUSTACEA     | 2240         |                |                 |
| NAU. COP.     | 280          | 18             | 109             |
| COPEPODS      | 1920         | 127            |                 |
| N+C CIRR.     | 20           | 1              | 7               |
| OTHERS        | 20           | 1              | 7               |
| BRYOZOA (L)   | 0            | 0              | 0               |
| CHAETOGNATHA  | 240          | 15             | 93              |
| ECHINOD. (L)  | 100          | 6              | 39              |
| TUNICATA      | 1320         | 87             |                 |
| PISCES (OVA)  | 20           | 1              | 7               |

STATION 21

M 21

260871

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TOT.NUMB. INDIV./M3 (PROT. EXCL.) 63860

DIAGRAM CONSTRUCTION (WITH MAX. AREA R=4CM): R= 4

DIAGRAM CONSTRUCTION (NO MAX. AREA): R= 10.1

DIAGRAM CONSTRUCTION (WITH MAX. AREA) ORGAN.-10PC: R= .78

DIAGRAM CONSTRUCTION (NO MAX. AREA) ORGAN.-10PC: R= 1.97

DRY MAT. (G/M3) PARTICLES &gt; 40 MICRONS 1.118

ASHES IDEM .218

ORG. MAT. IDEM .9

DIAGRAM CONSTRUCTION DRY MAT.: D= 2.236

DIAGRAM CONSTRUCTION ORG. MAT.: D= 1.8

|               | TOT.NUMB./M3 | TOT.ANG. REPR. | ANG. REPR.-10PC |
|---------------|--------------|----------------|-----------------|
| PROTOZOA      |              |                |                 |
| NOCTILUCA     | 2600         |                |                 |
| OTHERS        | 0            |                |                 |
| CNIDARIA      | 40           | 0              | 5               |
| ACNIDARIA     | 20           | 0              | 2               |
| NEMATHELMINT. | 37020        | 208            |                 |
| MOLLUSCA (L)  | 480          | 2              | 70              |
| ANNELIDA (L)  | 480          | 2              | 70              |
| CRUSTACEA     | 13520        |                |                 |
| NAU. COP.     | 13000        | 73             |                 |
| COPEPODS      | 440          | 2              | 64              |
| N+C CIRR.     | 0            | 0              | 0               |
| OTHERS        | 80           | 0              | 11              |
| BRYOZOA (L)   | 100          | 0              | 14              |
| CHAETOGNATHA  | 780          | 4              | 115             |
| ECHINOD. (L)  | 20           | 0              | 2               |
| TUNICATA      | 11400        | 64             |                 |
| PISCES (OVA)  | 0            | 0              | 0               |

STATION 22

M22

250871

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TOT.NUMB.INDIV./M3(Prot.EXCL.) 20460  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= 2.26  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 5.72  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .45  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 1.15  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS 1.307  
 ASHES IDEM .161  
 ORG. MAT. IDEM 1.146  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 2.614  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 2.292

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 100          |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 60           | 1             | 25             |
| ACNIDARIA     | 200          | 3             | 85             |
| NEMATHELMINT. | 11440        | 201           |                |
| MOLLUSCA (L)  | 80           | 1             | 34             |
| ANNELIDA (L)  | 0            | 0             | 0              |
| CRUSTACEA     | 8400         |               |                |
| NAU.COP.      | 8180         | 143           |                |
| COPEPODS      | 200          | 3             | 85             |
| N+C CIRR.     | 0            | 0             | 0              |
| OTHERS        | 20           | 0             | 8              |
| BRYOZOA (L)   | 0            | 0             | 0              |
| CHAETOGNATHA  | 220          | 3             | 94             |
| ECHINOD. (L)  | 20           | 0             | 8              |
| TUNICATA      | 40           | 0             | 17             |
| PISCES (OVA)  | 0            | 0             | 0              |

STATION 23

M23

240871

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TOT.NUMB.INDIV./M3(Prot.EXCL.) 7380  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= 1.35  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 3.43  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .57  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 1.44  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS 1.078  
 ASHES IDEM .316  
 ORG. MAT. IDEM .762  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 2.156  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 1.524

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 0            |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 0            | 0             | 0              |
| ACNIDARIA     | 140          | 6             | 38             |
| NEMATHELMINT. | 240          | 11            | 66             |
| MOLLUSCA (L)  | 0            | 0             | 0              |
| ANNELIDA (L)  | 200          | 9             | 55             |
| CRUSTACEA     | 6080         |               |                |
| NAU.COP.      | 4920         | 240           |                |
| COPEPODS      | 1160         | 56            |                |
| N+C CIRR.     | 0            | 0             | 0              |
| OTHERS        | 0            | 0             | 0              |
| BRYOZOA (L)   | 0            | 0             | 0              |
| CHAETOGNATHA  | 160          | 7             | 44             |
| ECHINOD. (L)  | 40           | 1             | 11             |
| TUNICATA      | 520          | 25            | 144            |
| PISCES (OVA)  | 0            | 0             | 0              |

STATION Q4

M24

240871

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TOT.NUMB.INDIV./M3(Prot.EXCL.) 19500  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= 2.21  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 5.58  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .62  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 1.57  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS .795  
 ASHES IDEM .659  
 ORG. MAT. IDEM .136  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 1.59  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= .272

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 600          |               |                |
| OTHERS        | 80           |               |                |
| CNIDARIA      | 0            | 0             | 0              |
| ACNIDARIA     | 0            | 0             | 0              |
| NEMATHELMINT. | 60           | 1             | 13             |
| MOLLUSCA (L)  | 320          | 5             | 73             |
| ANNELIDA (L)  | 20           | 0             | 4              |
| CRUSTACEA     | 18200        |               |                |
| NAU.COP.      | 12440        | 229           |                |
| COPEPODS      | 5500         | 101           |                |
| N+C CIRR.     | 0            | 0             | 0              |
| OTHERS        | 260          | 4             | 60             |
| BRYOZOA (L)   | 0            | 0             | 0              |
| CHAETOGNATHA  | 20           | 0             | 4              |
| ECHINOD. (L)  | 0            | 0             | 0              |
| TUNICATA      | 860          | 15            | 198            |
| PISCES (OVA)  | 20           | 0             | 4              |

STATION 25

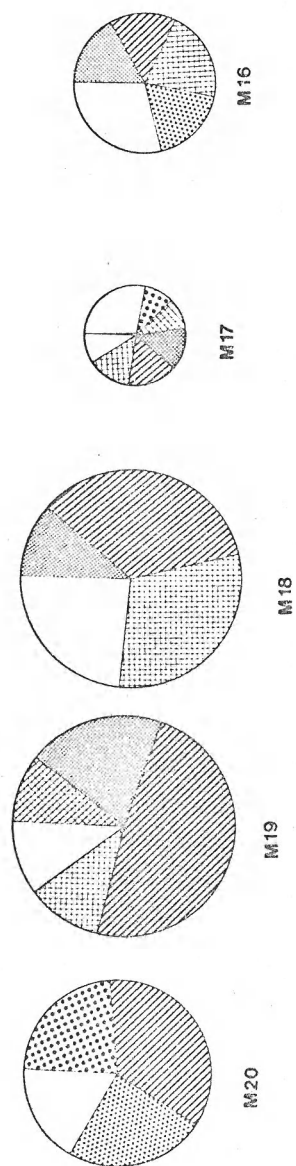
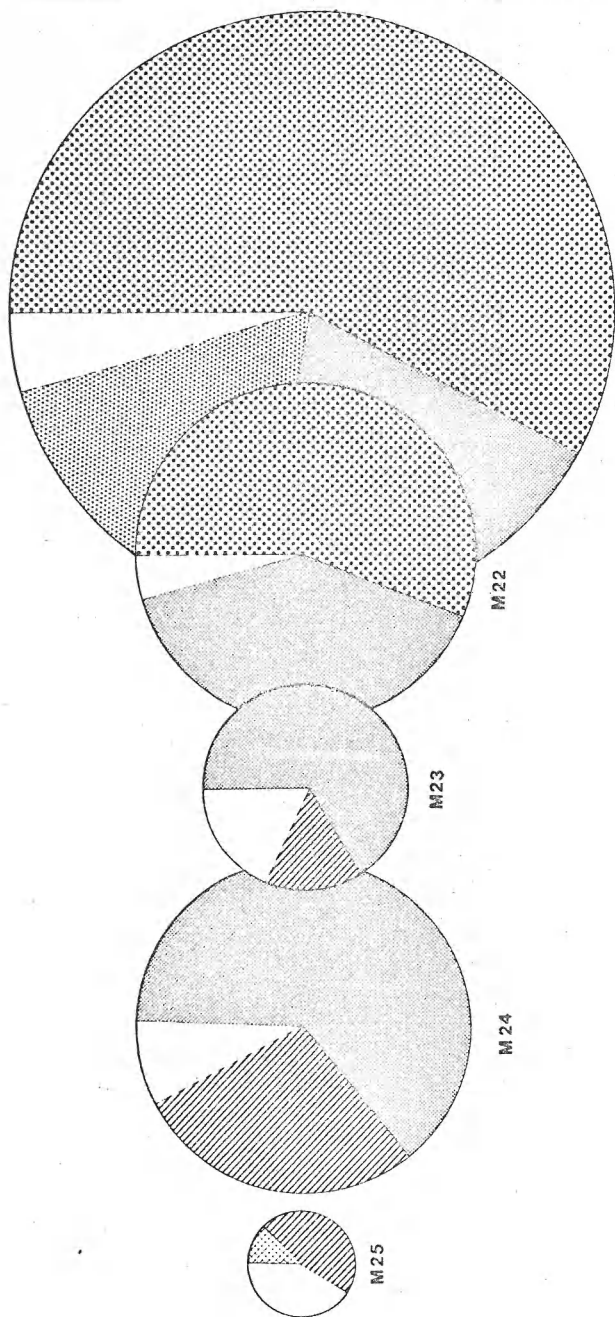
M25

24 0871

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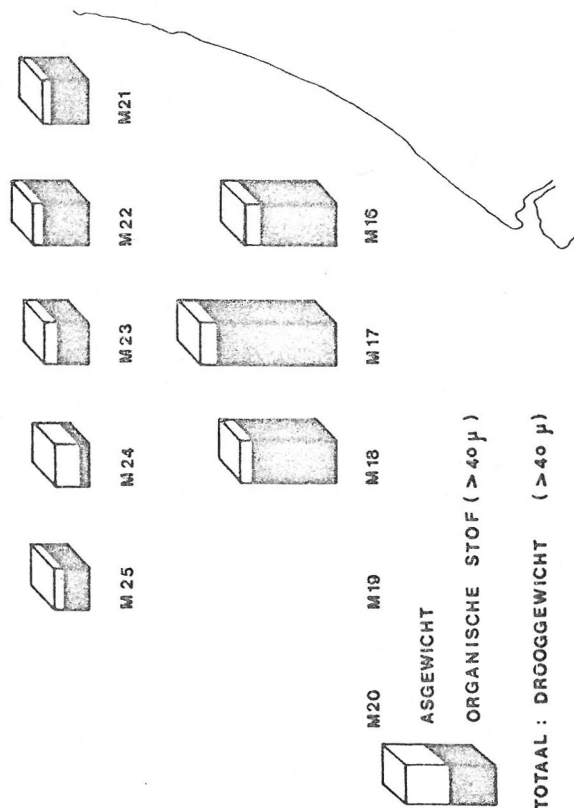
TOT.NUMB.INDIV./M3(Prot.EXCL.) 19160  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA R=4CM):R= 2.19  
 DIAGRAM CONSTRUCTION (NO MAX.AREA):R= 5.53  
 DIAGRAM CONSTRUCTION (WITH MAX.AREA) ORGAN.-10PC:R= .83  
 DIAGRAM CONSTRUCTION (NO MAX.AREA) ORGAN.-10PC:R= 2.1  
 DRY MAT.(G/M3) PARTICLES > 40 MICRONS .752  
 ASHES IDEM .246  
 ORG. MAT. IDEM .506  
 DIAGRAM CONSTRUCTION DRY MAT. :D= 1.504  
 DIAGRAM CONSTRUCTION ORG.MAT.:D= 1.012

|               | TOT.NUMB./M3 | TOT.ANG.REPR. | ANG.REPR.-10PC |
|---------------|--------------|---------------|----------------|
| PROTOZOA      |              |               |                |
| NOCTILUCA     | 3680         |               |                |
| OTHERS        | 0            |               |                |
| CNIDARIA      | 0            | 0             | 0              |
| ACNIDARIA     | 40           | 0             | 5              |
| NEMATHELMINT. | 100          | 1             | 13             |
| MOLLUSCA (L)  | 20           | 0             | 2              |
| ANNELIDA (L)  | 640          | 12            | 83             |
| CRUSTACEA     | 16420        |               |                |
| NAU.COP.      | 5180         | 97            |                |
| COPEPODS      | 11220        | 210           |                |
| N+C CIRR.     | 0            | 0             | 0              |
| OTHERS        | 20           | 0             | 2              |
| BRYOZOA (L)   | 20           | 0             | 2              |
| CHAETOGNATHA  | 260          | 4             | 33             |
| ECHINOD. (L)  | 20           | 0             | 2              |
| TUNICATA      | 1640         | 30            | 213            |
| PISCES (OVA)  | 0            | 0             | 0              |



CRUISE 2





CRUISE 2