

02634-1

DI: 77028-11

MS

P L A N K T O N - H A U L S

" P i e r " S c h e v e n i n g e n

18th September 1968 - 22nd September 1969

SAMPLING DATA

SEPTEMBER 1968

Station: "Pier" A, Scheveningen (two hours before high tide)

Date: 18th September 1968

I. Hauls "Pier" A, Scheveningen

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|--------------------------------------|--|
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Many clouds; locally rain. Wind light to moderate, mostly Northern
Little change in temperature |
| 4. Weather conditions during hauling | Clear sky, not much wind, sunny. Sea calm, |
| 5. Distance of hauling | + 144 meter |
| 6. Temperature | In the air 13°C
In the water 16°C |
| 7. Wind during hauling | Direction: N.N.E.
Force: 1/2 m/sec
"Semaphore"
Direction: N.E.
Force: 2m/sec |
| 8. Lighthours a day | 12.29 |
| 9. Time of hauling | 10.32 - 10.45 (with the fine net) |
| 10. Tides | 1st H.W. 12.19 |
| 11. Direction of streams | two hours before high water |
| 12. Water Level during hauling | a. + 12 cm N.A.P.
b. 1.1 m water level + 50 cm N.A.P.
c. Low water before hauling - 50 cm |

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| 13. Chemical analysis of seawater near the place of hauling | Chloride: 17230 mg/l
Phosphate: 0.40 mg/l
Nitrate: absent |
|---|---|

SAMPLING DATA

SEPTEMBER 1968

Station: "Pier" A, Scheveningen, two hours before H.W. with the
Date: 18th September 1968. fine net

1. B a c i l l a r i o p h y c e a e		
Bellarocha malleus		100
Biddulphia aurita		1000
" mobiliensis		3500
" sinensis		4100
Cerataulina bergonii		1750
Chaetoceros sp		1750
Coscinodiscus concinnus		26350
" excentricus		100100
" granii		50100
Ditylum brightwelli		350
Fragilaria sp		250
Mellosira borneri		100
Rhizosolenia sp		7250
Skeletonema costatum		5500
2. P r o t o z o a		
Noctiluca miliaris		4100
3. C o e l e n t e r a t a		
Phialidium hemisphericum		100
Steenstrupia mutans (polypoid phase)		
(polypoid Corymorpha nutans)		200
4. C h a e t o g n a t h a		
Sagitta sp		50
5. P o l y c h a e t a		
Empty vase of Terebella larva		50
Polychaeta sp		1800
Spionid larva		100
Terebella larva		300
6. C r u s t a c e a		
C o p e p o d a		
Acartia clausi		550
" " with eggs		50
Centropages hamatus		150
Microcalanus pusillus		100
Temora longicornis		450
C y c l o p o i d a		
Corycaeus anglicus		200
" " with eggs		50
M y s i d a c e a		
Leptomysis gracilis		100
C i r r i p e d i a		
Nauplius larva Cirripedia sp		150
7. M o l l u s c a		
G a s t r o p o d a		
Lamellibranchiata	Gastropoda sp	50
Mactra corallina (0.17 mm)		300 x 300
8. F i s h		
Syngnatus acus		
	length 7½ cm	50
	" 10 cm	50

SAMPLING DATA

SEPTEMBER 1968

Station: "Pier" B, Scheveningen (two hours after high tide)

Date: 18th September 1968.

II. Haul "Pier" B, Scheveningen.

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|--------------------------------------|--|
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Many clouds; locally rain. Wind light to moderate, mostly Northern. Little change in temperature. |
| 4. Weather conditions during Hauling | Clear sky, more wind than in the morning, the sea less calm |
| 5. Distance of hauling | + 144 meter |
| 6. Temperature | In the air 16°C
In the water 15½°C |
| 7. Wind during hauling | Direction N.N.E.
Semaphore: At times 6/m sec around the "Pier" deckpillar.
<i>Direction N.E. Force 5 m/sec</i> |
| 8. Time of hauling | By walking with the fine net 14.36-
14.49 |
| 9. Lighthours a day | 12.29 |
| 10. Tides: | 1st H.W. 12.19 |
| 11. Direction of streams | Two hours after high water. |
| 12. Water Level during hauling | a. 18 cm + N.A.P.
b. Water Level 50 cm + N.A.P.
c. Low water before hauling 48 cm. |

13. Chemical analysis of seawater near the place of hauling

Chloride: 17350 mg/l
Phosphate: 0.30 mg/l
Nitrate: absent

SAMPLING DATA

SEPTEMBER 1968

Station: "Pier"B, Scheveningen two hours after high water, with the fine net.

Date: 18th September 1968.

1. B a c i l l a r i o p h y c e a e	
Biddulphia aurita	1500
" mobiliensis	12450
" sinensis	13500
Cerataulina bergonii	600
Chaetoceros sp	2850
Coscinodiscus concinnus	11850
" excentricus	75750
" granii	42000
Ditylum brightwelli	300
Fragilaria sp	150
Leptocylindricus danicus	2250
Rhizosolenia sp	1200
Skeletonema sp	1500
2. P r o t o z o a	
Noctiluca miliaris	2250
3. C o e l e n t e r a t a	
Sarsia prolifera	50
Corymorpha nutans	50
4. C h a e t o g n a t h a	
Sagitta sp	50
5. P o l y c h a e t a sp	
Empty vase Terebella larva	300
Polychaeta sp	450
Spionid larva	450
Terebella larva	200
6. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	200
Centropages hamatus	50
Microcalanus pusillus	450
Temora longicornis	150
C y c l o p o i d a	
Coryæus anglicus	150
" " with eggs	50
C l a d o c e r a	
Podon sp	50
C i r r i p e d i a sp	
Nauplius larva Cirripedia sp	450
7. M o l l u s c a	
Lamellibranchiata	
Mactra corallina	50

SAMPLING DATA

OCTOBER 1968

Station: "Pier" A, Scheveningen, taken with the fine net

Date: 3rd October 1968

I. Haul "Pier" A, Scheveningen

1. Bacillariophyceae

Biddulphia alternans	100
" mobiliensis	4800
" regia	650
" sinensis	28800
Bellarochea malleus	50
Chaetoceros sp.	1100
Coscinodiscus concinnus	8900
" excentricus	15800
" granii	18350
Eucampia zoodiacus	1850
Fragilaria sp	50
Leptocylindricus damicus	150
Rhizosolenia sp	82100
Skeletonema costatum	600
Thalassiosira sp	50

2. Protozoa

Noctiluca miliaris	100
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3. Coelenterata

Coryomorpha nutans	50
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4. Chaetognatha

Sagitta sp	50
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5. Polychaeta

Empty vase	
Pectinaria larva	50
Polychaeta sp	100

6. Crustacea

Copepoda	
Acartia clausi	50
Centropages hamatus	50
Microcalanus pusillus	50
Nauplius larva	
Copepoda sp	100
Cyclopoidea	
Corycaeus anglicus	300
" " with eggs	50
Cirripedia	
Cypris larva Cirripedia sp	100
Nauplius " " "	100

7. Mollusca

Mactra corallina (0.2 mm)	50
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SAMPLING DATA

OCTOBER 1968

Station: "Pier" B, Scheveningen two hours after high water.

Date: 3rd October 1968

Hauls	419 "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	At first heavily clouded; temporarily rain; later on sunshine. Wind moderate to strong. Little change in temperature.
4. Weather conditions during hauling	Not much wind, no sunshine, sky <i>fully</i> overcast. A little misty and the sea not so smooth as in the mornin
5. Time of hauling	By walking with the fine net 14.51 - 15.03
6. Distance while hauling	By walking + 144 meter
7. Temperature	In the air 16°C In the water 13°C
8. Wind during hauling	"Pier" indication Direction: N-N-N-W Force of wind 2m/sec "Semaphore" Direction: W.S.W. Force: 1½m/sec.
9. Lighthours a day	11.29
10. Tides	2nd H.W. 13.10
11. Direction of streams	Two hours after H.W.
12. Water Level during hauling	a. + 52 cm. N.A.P. b. High water level + 90 cm N.A.P. c. Low water before hauling <i>4/5 NA</i>
13. Chemical analyses of the seawater near the place of hauling	Chloride: 9147 mg/l Phosphate: 0.38 mg/l Nitrate: 9 mg/l

SAMPLING DATA

OCTOBER 1968

Station: "Pier"B,Scheveningen, taken with the fine net

Date: 3rd October 1968

V. Haul "Pier"B,Scheveningen

1. B a c i l l a r i o p h y c e a e		
Biddulphia alternans		100
" mobiliensis		3100
" regia		750
" sinensis		9000
Chaetoceros sp		100
Coscinodiscus concinnus		500
" excentricus		500
" granii		2500
Eucampia zoodiacus		600
Fragilaria sp		100
Leptocylindricus danicus		250
Rhizosolenia sp		34350
Skeletonema sp		250
Thalassiosira sp		100
2. P o l y c h a e t a		
Polychaeta sp		50
3. C r u s t a c e a		
C o p e p o d a		
Nauplius larva Copepoda sp		50
C i r r i p e d i a		
Nauplius larva Cirripedia sp		100
C y c l o p o i d a		
Corycaeus anglicus		50
4. M o l l u s c a		
Glycymeris		
glycymeris (0.35 mm)		50

SAMPLING DATA

OCTOBER 1968

Station: "Pier" A, Scheveningen two hours before high water

Date: 18th October 1968

Hauls	117 "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Clearings up, but during the night and morning locally rain. Wind in the North of the Netherlands moderate to strong, later on veering to North-West
4. Weather condition during hauling	Calm sunny weather, though a little crisp; not watm.
5. Time of hauling	By walking with the fine net 10.24 - 10.36
6. Distance while hauling	By walking + 144 meter
7. Temperature	In the air 12 ^o C In the water 9 ¹ / ₂ ^o C
8. Wind during hauling	"Pier" indication Direction: N. Force: 1m/sec "Semaphore" Direction: S-S.S.E. Force: 1 ¹ / ₂ m/sec
9. Lighthours a day	10.30
10. Tides	2nd H.W. 12.36
11. Direction of streams	Two hours before H.W.
12. Water Level during hauling	a. -8 cm N.A.P. b. High water level + 70cm N.A.P. c. Low water before hauling -50 cm
13. Chemical analyses of the seawater near the place of hauling	Chloride: 12196 mg/l Phosphate: 0.4 mg/l Nitrate: 4 mg/l

Station: "Pier"A, Scheveningen taken with the fine net

Date: 18th October 1968

Haul "Pier"A, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	50
" aurita	1250
" mobiliensis	6550
" regia	28800
" sinensis	3300
Chaetoceros sp	250
Concinnus concinnus	6550
" excentricus	11400
" granii	41800
Eucampia zoodiacus	900
Fragilaria sp	50
Rhizosolenia sp	20800
Skeletonema sp	150
Thalassiosira sp	50
2. P r o t o z o a	
Noctiluca miliaris	1050
3. C h a e t o g n a t h a	
Sagitta setosa	50
4. P o l y c h a e t a	
Vase Terebella larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	100
Nauplius larva Copepoda sp	50
C y c l o p o i d a	
Corycaeus anglicus	300
" " with eggs	150
C i r r i p e d i a	
Nauplius larva Cirripedia sp	50
A m p h i p o d a	
Amphipoda sp	50
6. M o l l y s c a	
Venus striata	50

Station: "Pier" B, Scheveningen, ~~at~~ two hours after high water

Date: 18th October 1968

Hauls	W "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Clearings up, but during the night and morning locally rain. Wind in the North of the Netherlands moderate to strong, later on veering to North-West.
4. Weather conditions during hauling	Calm, though more wind than in the morning. Sunny, yet no so warm.
5. Time of hauling	By walking xx144 meter with the fine net 14.28 - 14.41
6. Distance while hauling	By walking + 144 meter
7. Temperature	In the air $13\frac{1}{2}^{\circ}\text{C}$ In the water $11\frac{1}{2}^{\circ}\text{C}$
8. Wind during hauling	"Pier" indication Direction: N. Force 2m/sec "Semaphore" Direction: E-N.E. Force: 2m/sec.
9. Light hours a day	10.30
10. Tides	2nd H.W. 12.36
11. Direction of streams	two hours after N.W.
12. Water Level during hauling	a. + 28 cm. N.A.P. b. High water Level + 70 cm N.A.P. c. Low water before hauling 50 cm
13. Chemical analyses of the seawater near the place of hauling	Chloride: 12501 mg/l Phosphate: 0,3 mg/l Nitrate: 5 mg/l

SAMPLING DATA

OCTOBER 1968

Station: "Pier" B, Scheveningen, taken with the fine netDate: 18th October 1968

IV. Haul "Pier" B, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia aurita	150
" mobiliensis	2900
" regia	2050
" sinensis	5050
Chaetoceros sp	50
Coscinodiscus concinnus	1150
" excentricus	1300
" granii	3400
Ditylum brightwelli	50
Eucampia zoodiacus	300
Rhizosolenia sp	5650
2. P r o t o z o a	
Noctila miliaris	500
3. P o l y c h a e t a	
Spionid larva	50
4. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	50
C i r r i p e d i a	
Nauplius larva Cirripedia sp	100

DATA SAMPLING

OCTOBER 1968

Station: "Pier" A, Scheveningen, two hours before high water

Date: 3rd October 1968

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- | | |
|---|---|
| Hauls | "Pier" A. Scheveningen |
| 1. Place of hauling | "Pier", Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | At first heavily clouded, temporarily rain; later on sunshine. Wind moderate to strong. Little change in temperature. |
| 4. Weather conditions during hauling | Not much wind, no sunshine, sky fully overcast. Sea calm. |
| 5. Time of hauling | By walking with the fine net:
11.09 - 11.20 |
| 6. Distance while hauling | By walking + 144 meter |
| 7. Temperature | In the air: 16°C
In the water: 13°C |
| 8. Wind during hauling | "Pier" indication
Direction: N.N.N.W.
Force: 1 m/sec
"Semaphore" indication
Direction: West
Force: 5/m sec. |
| 9. Lighthours a day | 11.29 |
| 10. Tides | 2nd H.W. |
| 11. Direction of streams | Two hours before H.W. |
| 12. Water Level during hauling | a. + 14 cm. N.A.P.
b. High water level + 90cm. N.A.P.
c. Low water before hauling - 45 N/AO |
| 13. Chemical analyses of the seawater near the place of hauling | Chloride: 11430 mg/l
Phosphate: 0.37 mg/l
Nitrate: 5 mg/l |

SAMPLING DATA

NOVEMBER 1968

Station: "Pier" A, Scheveningen, two hours before high water.

Date: 1th November 1968

Hauls	1 "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Mild weather. Locally clouded, but very changeable. Mostly dry. Wind moderate between South and South-West.
4. Weather condition during hauling	Grey dullish sky. Sea rather calm; yet the weather was not warm but very fresh. Some drops of rain were falling.
5. Time of hauling	By walking with the fine net 10.27 - 10.49
6. Distance, while hauling	By walking + 144 meter
7. Temperature	In the air 14°C In the water 12°C
8. Wind during hauling	"Pier" indications Direction: Force 6m/sec. "Semaphore indications Direction: no wind Force:
9. Lighthours a day	9.37
10. Tides	2nd H.W. 12.37
11. Direction of streams	two hours before high tide
12. Water Level during hauling	a. + 5 cm. N.A.P. b. High water level + 100 cm. N.A.P. c. Low water before hauling: 38 cm
13. Chemical analyses of the seawater near the place of hauling	Chloride: 16648 mg/l Phosphate: 0.3 mg/l Nitrate: 2 mg/l

Station: "Pier" A, Scheveningen, taken with the fine net

Date: 1st November 1968

I. Haul "Pier" A, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	100
" mobiliensis	37500
" sinensis	28450
" regia	8100
Chaetoceros sp	500
Coscinodiscus concinnus	16500
" excentricus	30250
" granii	83350
Ditylum brightwelli	1000
Eucampia zoodiacus	1500
Fragilaria sp.	100
Melosira borreri	100
Rhizosolenia sp	446350
Thalassiosira sp	250
2. P r o t o z o a	
Foraminifera sp.	100
Noctiluca miliaris	5600
3. C h a e t o g n a t h a	
Sagitta setosa	150
4. P o l y c h a e t a	
Polychaeta sp	100
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	100
Centropages hamatus	300
Microcalanus pusillus	300
C y c l o p o i d a	
Corycaeus anglicus	550
" " with eggs	100
M y s i d a c e a	
Leptomysis gracilis	600
C i r r i p e d i a	
Nauplius larva Cirripedia sp	200
Cypris larva Cirripedia sp	50
6. M o l l u s c a	
Lamellibranchiara	
Glycymeris glycymeris(0.30mm)	50
Modiolus modiolus (0.250mm)	100
G a s t r o p o d a XXXX	
Gastropoda larva	400
7. E c t o p r o c t a	
Cyphonantes larva	
Membranipora membranacea	100
8. S a l p i d a	
Oikopleura dioica	450
9. F i s h e g g	
Gadus luscus (0.125 mm)	100

SAMPLING DATA

NOVEMBER 1968.

Station: "Pier" B, Scheveningen, two hours after high water.Date: 1th November 1968

Hauls	II. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Mild weather. Locally clouded, but very changeable. Mostly dry. Wind moderate between South and South-West.
4. Weather conditions, during hauling	Grey sky ^{clouds} . Sea almost unnaturally calm, near the Pier the water was eddying by the influence of low tide; hardly any wind.
5. Time of hauling	By walking with the fine net 14.26 - 14.38
6. Distance, while hauling	By walking + 144 meter
7. Temperature	In the air 14°C In the water: 12°C
8. Wind during hauling	"Pier" indication Direction: ? Force 1m/sec "Semaphore" indications Direction: no wind Force:
9. Lighthours a day	9.37
10. Tides	2nd H.W. 12.37
11. Direction of streams	two hours after high tide
12. Water Level during hauling	a. + 50 c.m. N.A.P. b. High water level + 109 cm. N.A.P. c. Low water before hauling: -35 cm "
13. Chemical analyses of the seawater near the place of hauling	Chloride: 16038 mg/l Phosphate: 0.2 mg/l Nitrate: 2 mg/l

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SAMPLING DATA NOVEMBER 1968
 Station: "Pier" B, Scheveningen, taken with the fine net
 Date: 1th November 1968.

IV. Haul "Pier" B, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia aurita	350
" mobiliensis	22100
" sinensis	43000
" regia	1100
Chaetoceros sp	2100
Coscinodiscus concinnus	6350
" excentricus	15500
" granii	41600
Ditylum brightwelli	350
Eucampia zoodiacus	1350
Fragilaria sp	100
Melosira borreri	250
Thalassiosira sp	250
Rhizosolenia sp	390350
2. P r o t o z o a	
Noctiluca miliaris	1500
3. C h a e t o g n a t h a	
Sagitta setosa	100
4. P o l y c h a e t a	
Terebella larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	150
C y c l o p o i d a	
Corycaeus anglicus	150
M y s i d a c e a	
Leptomysis anglicus	100
" " with eggs	50
C i r r i p e d i a	
Nauplius larva Cirripedia sp	100
A m p h i p o d a	
Amphipoda sp	100
Harpacticoida	
Harpacticoida sp	150
6. M o l l u s c a	
Lamellibranchiata	
Mytilus edulis(0.2mm)	50
G a s t r o p o d a	
Larva Gastropoda sp	50

SAMPLING DATA

NOVEMBER 1968

Station: "Pier" A, Scheveningen, two hours before high water

Date: 18th November 1969

Hauls	III. "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Sky heavily clouded, more and more chance of snow. Wind moderate, strong, near the coast some times a very strong wind.
4. Weather conditions, during hauling	Sky fully overcast, grey and the atmosphere hazy. Wind not strong but sharp.
5. Time of hauling	By walking with the fine net 11.23 - 11.34
6. Distance, while hauling	By walking + 144 meter
7. Temperature	In the air 6°C In the water 1°C
8. Wind during hauling	"Pier" indication Direction? Force: 5m/sec "Semaphore" indications Direction: N. East Force: 3½ m/sec
9. Light hours a day	8.43
10. Tides	2nd H.W. 13.16
11. Direction of streams	Two hours before high tide
12. Water Level during hauling	a. - 3 c.m. N.A.P. b. High water level + 100cm N.A.P. c. Low water before hauling - 45 cm
13. Chemical analyses of the seawater near the place of hauling	Chloride: 16465 mg/l Phosphate: 0.2 mg/l Nitrate: 3 mg/l

Station: "Pier"A, Scheveningen taken with the fine net

Date: 18th November 1968~~III~~. Haul "Pier"A, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia mobiliensis	1000
" sinensis	2400
" regia	1300
Coscinodiscus concinnus	2200
" excentricus	5500
" granii	19100
Ditylum brightwelli	50
Rhizosolenia sp	50
2. P r o t o z o a	
Noctiluca miliaris	27900
3. C h a e t o g n a t h a	
Sagitta setosa	5200
4. C o e l e n t e r a t a	
Phialidium hemisphericum	50
id:um	
5. C t e n o p h o r e	
Pleurobrachia pileas	50
u	
6. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	1200
Anomalocera patersoni	100
Calanus finmarchicus	150
C y c l o p o i d a	
Corycaeus anglicus	250
M y s i d a c e a	
Leptomysis gracilis	100

SAMPLING DATA

NOVEMBER 1968

Station: "Pier" B, Scheveningen, two hours after high water

Date: 18th November 1968

Hauls	IV. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Sky heaving clouded, more and more chance of snow, Wind moderate, strong near the coast sometimes a very strong wind.
4. Weather conditions during hauling	Sea rather calm; though the weather resembles that of the morning, there was more mist and it was cold.
5. Time of hauling	By walking with the fine net 15.17 - 15.29
6. Distance, while hauling	By walking + 144 meter
7. Temperature	In the air $6\frac{1}{2}^{\circ}\text{C}$ In the water $1\frac{1}{2}^{\circ}\text{C}$
8. Wind during hauling	Direction: Force 5/m sec. "Semaphore" indications Direction: N. East Force: $4\frac{1}{2}$ m/sec.
9. Lighthours a day	8.43
10. Tides	2nd H.W. 13.16
11. Direction of streams	Two hours after high tide
12. Water Level during hauling	a. + 52 cm. N.A.P. b. High water level + 10 cm. N.A.P. c. Low water before hauling -45 cm
13. Chemical analyses of the seawater near the place of hauling	Chloride: 16465 mg/l Phosphate: 0.7 mg/l Nitrate: 2 mg/l

SAMPLING DATA

NOVEMBER 1968

Station: IV. Haul "Pier" B, Scheveningen, taken with the fine net

Date: 18th November 1968

IV. Haul "Pier" B, Scheveningen, taken with the fine net.

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	150
" mobiliensis	2100
" sinensis	7200
" regia	1650
Coscinodiscus concinnus	4500
" excentricus	14100
" granii	73050
Fragilaria	150
Rhizosolenia sp	2100
2. P r o t o z o a	
Noctiluca miliaris	123750
3. C h a e t o g n a t h a	
Sagitta setosa	1900
4. P o l y c h a e t a	
Polychaeta Larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	450
Anomalocera patersoni	150
Calanus fin marchicus	50
Centropages hamatus	50
M y s i d a c e a	
Leptomysis gracilis	50
Mysis sp	50
C y c l o p o i d a	
Corycaeus anglicus	900
" " with eggs	50
C i r r i p e d i a	
Cypris larva Cirripectia sp	50
6. E c t o p r o c t a	
Cyphonautes larva	50
Electra pilosa	

Station: "Pier" A, Scheveningen, two hours before high water

Date: 16th December 1968

Hauls 11

1. Place of hauling "Pier" A, Scheveningen

2. Situation + 300 meter from the beach

3. Weather forecast Dry weather, gradually more cloudy. Wind mostly moderate. Eastern. During the night frost moderate; in the day-time light frost.

4. Weather conditions while hauling Sky overcast, sea calm though a little shopy. At first some sun, later on fully overcast. The weather was grim

5. Distance of hauling + 144 meter by walking

6. Time of hauling By walking with the fine net 10-18-10.30

7. Temperature In the air $2\frac{1}{2}^{\circ}\text{C}$
In the water -1°C

8. Wind during hauling Indications "Pier"
Force 5m/sec Direction ~~SE~~
Indications Semaphore
Force $5\frac{1}{2}$ m/sec. Direction S.E.

9, Lighthours during the day of hauling 7.43

10. Tides 1st H.W. 11.47

11. Direction of streams 2 hours before high water

12. Water Level during hauling a. + 60 c.m.N.A.P.
b. High water level + 75 cm.N.A.P.
c. Low water before hauling -72cm NAP

13. Chemical analyses Chloride: 6465 mg/l
Phosphate: 0.4 mg/l
Nitrate: 3 mg/l

SAMPLING DATA

DECEMBER 1968

Station: "Pier"A, Scheveningen taken with the fine nets

Date: 16th December 1968

I. Haul "Pier"A, Scheveningen

1. B a c i l l a r i o p h t c e a e	
Biddulphia regia	1400
" sinensis	1300
Coscinodiscus concinnus	2900
" excentricus	2300
" granii	16800
Fragil/aria sp	100
2. P r o t o z o a	
Noctiluca miliaris	600
Foraminifera sp	100
Vase Tintinnid sp	100
3. C h a e t o g n a t h a	
Sagitta setosa	100
4. P o l y c h a e t a	
Empty vase Terebella larva	50
Polychaeta sp	50
5. C r u s t a c e a	
xxxxxxxxxxxx	
C i r r i p e d i a	
Cypris larva Elminius modestus	50
C o p e p o d a	
Acartia clausi	2100
Calanus fin marchicus	300
Centropages hamatus	50
Nauplius larva Copepoda sp	200
C y c l o p o i d a	
Corycaeus anglicus	700
H a r p a c t i c o i d a	
Harpacticoida sp	50
D e c a p o d a	
Larva Crangon vulgaris	50
6. M o l l u s c a	
Glycymeris glycymeris	100
Modiolus modiolus	500
7. F i s h E g g s	
Gadus luscus	50

SAMPLING DATA

DECEMBER 1968

Station: "Pier" B, Scheveningen, two hours after high waterDate: 16th December 1968.

Hauls *St.* "Pier" B, Scheveningen

1. Place of hauling "Pier" Scheveningen
2. Situation \pm 300 meter from the beach
3. Weather forecast Dry weather, gradually more cloudy. Wind mostly moderate. Eastern. During the night frost moderate, in the daytime light frost.
4. Weather conditions while hauling Sky fully overcast, one grey sky, a little misty, visibility poor. Water \times rather calm. The weather even more grim than in the morning. a few raindrops fell down, but the were like ice.
5. Distance of hauling \pm 144 meter by walking
6. Time of hauling By walking with the fine net
14.14 - 14.23
7. Temperature \times In the air $2\frac{1}{2}^{\circ}\text{C}$
In the water $-\frac{1}{2}^{\circ}\text{C}$
8. Wind during hauling Indication "Pier"
Force 4m/sec Direction ---
Indirection "Semaphore"
Force: $5\frac{1}{2}$ m/sec Direction S.E.
9. Lighthours during the day of hauling 7.43 $\text{\textcircled{5\frac{1}{2}}}$
10. Tides 1st H.W. 11.47
11. Direction of streams 2 hours after high water
12. Water Level during hauling a. + 80 cm. M.A.P.
b. High water Level + 75cm. N.A.P.
c. Low water before hauling -72cm

13. Chemical analyses Chloride: 16465 mg/l
Phosphate: 0.4 mg/l
Nitrate: 5 mg/l

SAMPLING DATA

DECEMBER 1968

Station: "Pier" B, Scheveningen, taken with the fine nets

Date: 16th December 1968

Hauls

~~St.~~ "Pier" B, Scheveningen

1. Bacillariophyceae	
Biddulphia regia	1400 x 50
" sinensis	100
Coscinodiscus concinnus	50
" excentricus	850
" granii	4450
Rhizosolenia sp	50
2. Protozoa	
Noctiluca miliaris	250
3. Chaetognatha	
Sagitta setosa	50
4. Crustacea	
Copepoda	
Acartia glausi	350
Cyclopoidea	
Corycaeus anglicus	100
5. Mollusca	
Lamelli branchiata	
Modiolus modiolus	50

Station: "Pier" A, Scheveningen two hours before high water

Date: 30th December 1968

Hauls ~~11.~~ "Pier" A, Scheveningen

1. Place of hauling "Pier" Scheveningen

2. Situation ± 300 meter from the beach

~~3.~~ Weather forecast Weather forecast for 28th December Snowshowers, especially near the beach. Wind is light to moderate, mainly between West and North. During noon temperature near freezing point

4. Weather conditions while hauling Sky fully overcast, misty. Though it was about 10 o'clock in the morning, the lights were burning along the coast. The sands were covered with frozen snow, it was icy and slippery, and cold, especially the wind.

5. Distance of hauling ± 144 meter by walking

6. Time of hauling By walking with the fine net
10.19 - 10.31

~~7.~~ Temperature In the air -4° C
In the water -4° C

8. Wind during hauling Indication "Pier"
Force 2m/sec Direction
Indications Semaphore
Force: 2m/sec Direction: East

9. Lighthours during the day of hauling

10. Tides 1st H.W. 12.07

11. Direction of streams Two hours before High water

12. Water Level during hauling
a. + 12 cm N.A.P.
b. High Water ~~xxxx~~ level +64 cm.
c. Low water before hauling -66 cm

13. Chemical analyses Chloride: 15550 mg/l
Phosphate: 0.7 mg/l
Nitrate: 2 mg/l

SAMPLING DATA

DECEMBER 1968

Station: "Pier" A, Scheveningen, taken with the fine nets.

Date: 30th December 1968

~~II~~. Haul "Pier" A, Scheveningen

1. B a c i l l a r i o p h y c e a e

Biddulphia alternans	100
" sinensis	50
Coscinodiscus concinnus	900
" excentricus	1000
" granii	4300

2. P r o t o z o a

Noctiluca miliaris	100
Radio L aria sp	100

3. P o l y c h a e t a

Empty vase	100
Terebella Larva	

4. C r u s t a c e a

C i r r i p e d i a

Nauplius Larva	50
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Nauplius Elminius modestus

Cypris Larva	50
--------------	----

Elminius modestus

C o p e p o d a

Acartia clausi	100
----------------	-----

Centropages hamatus	150
---------------------	-----

Microcalanus pusillus	50
-----------------------	----

Nauplius Larva Copepoda	50
-------------------------	----

C y c l o p o d i a

Corycaeus anglicus	150
--------------------	-----

Mysidacea

Mysid sp	50
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5. M o l l u s c a

Modiolus modiolus (0.25mm)	150
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" " (0.2 mm)	50
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DATA SAMPLING

DECEMBER 1968

Station: "Pier" B, Scheveningen two hours after high water

Date: 30th December 1968

Hauls	14. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Weather forecast for 28th December Snowshowers, especially near the beach Wind is light to moderate, mainly between West and North. During noon temperature near freezing-point
4. Weather conditions while hauling	Sunshine, a little misty and slightly clouded. Circumstances still were as in the morning. Frozen snow like ice; the sands covered with frozen snow. Though the temperature was higher, it still was very cold.
5. Distance of hauling	+ 144 meter by walking
6. Time of hauling	By walking with the fine net 14.23 - 14.35
7. Temperature	In the air -1°C In the water -2°C
8. Wind during hauling	Indications "Pier" Force 3m/sec Direction  Indirections Semaphore Forces 2m/sec. Direction: East
9. Lighthours during the day of hauling	
10. Tides	1st H.W. 12.07
11. Direction of streams	Two hours after high water
12. Water Level during hauling	a. + 14 c.m. N.A.P. b. High water level + 64 cm. NAP. c. Low water before hauling -66 cm
13. Chemical analyses	Chloride: 15550 mg/l Phosphate: 0,8 mg/l Nitrate: 2 mg/l

SAMPLING DATA

DECEMBER 1968

Station: "Pier"B, Scheveningen, taken with the fine nets

Date: 30th December 1968

IV. Haul "Pier"B, Scheveningen.

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	50
" mobiliensis	50
" sinensis	200
Coscinodiscus concinnus	200
" excentricus	1100
" granii	4550
Rhizosolenia sp	50
2. P r o t o z o a	
Noctiluca miliaris	1850
3. P o l y c h a e t a	
Empty vase Terebella larva	200
4. C r u s t a c e a	
C i r r i p e d i a	
Cypris larva Cirripedia sp	50
C o p e p o d a	
Acartia clausi	850
Centropages hamatus	250
Microcalanus pusillus	650
Nauplius larva Copepoda sp	50
C y c l o p o i d a	
Corycaeus anglicus	150
5. M o l l u s c a	
Glycymeris glycymeris	100
Modiolus modiolus	150

SAMPLING DATA

JANUARY 1969

Station: "Pier" A, Scheveningen, two hours before high water

Date: 15th January 1969

- | | |
|--|---|
| Hauls | I. "Pier" A, Scheveningen |
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Locally the sky will clear, yet also locally there will be rain. During the night and in the morning mist, Wind light to moderate, mainly between S.E. and S.W. Temperature the same or somewhat lower. |
| 4. Weather conditions, while hauling | No sunshine, sky partly overcast some blue with clouds here and there. Though a little hazy at the distance visibility was rather good. Wind rather cold, sea shippy. At the end of hauling, there was some sunshine. |
| 5. Distance, while hauling | + 144 meter by walking |
| 6. Time of hauling | By walking 10.11 - 10.28 with the fine net. |
| 7. Temperature | In the air 4 ⁰ C
In the water 1 ⁰ C |
| 8. Wind during hauling | Indications: " Pier " Semaphore
Direction: S.S. West
Force: 7m/sec. |
| 9. Lighthours during the day of hauling | 8.17 a day |
| 10. Tides | 1st H.W. 12.13 |
| 11. Direction of streams | 2 hours before H.W. |
| 12. Water Level, during hauling | a. + 65 c.m. N.A.P.
b. H.W. level + 108 c.m. N.A.P.
c. L.W. Level before hauling -35 cm. |
| 13. Chemical analyses at the sea near the place of hauling | Chloride: 15500 mg/l
Phosphate 0.25 mg/l
Nitrate: 6 mg/l |

SAMPLING DATA

JANUARY 1969

Station: "Pier"A, Scheveningen two hours before high water

Date: 15th January 1969

I. Haul "Pier"A, Acheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	50
" mobiliensis	300
" regia	50
" sinensis	600
Cerataulina sp.	50
A c o c c o s p h e r e	50
Coscinodiscus concinnus	1200
" excentricus	1550
" granii	4550
Fragil aria sp.	200
2. P r o t o z o a	
Noctiluca miliaris	2300
3. C o e l e n t e r a t a	
Phialidium hemisphericum	300
4. C r u s t a c e a e	
C o p e p o d a	
Acartia clausi	1400
Centropages hamatus	1350
Microcalanus pusillus	250
Temora longicornis	300
C y c l o p o i d a	
Corycaeus anglicus	200
H a r p a c t i c o i d a	
Harpacticoida sp	50

SAMPLING DATA

JANUARY 1969

Station: "Pier" B, Scheveningen, two hours after high water

Date: 15th January 1969

Hauls	<i>11.9</i> "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Locally the sky will clear, yet also locally there will be rain. During the night and in the morning mist. Wind light to moderate, mainly between S.E. and S.W. Temperature the same or somewhat lower-
4. Weather conditions, while hauling	Sky fully overcast. No sunshine. Visibility poor. Sea calmer than in the morning.
5. Distance, while hauling	+ 144 meter by walking
6. Time of hauling	By walking 14.15-14.27 with the fine net.
7. Temperature	In the air 4°C In the water ½°C
8. Wind, during hauling	Indications: "Pier" Semaphore Direction: South 6/m sec Force: 7/8 m/sec. →
9. Lighthouses during the day of hauling	8.17 a day
10. Tides	1st H.W. 12.13
11. Direction of streams	2 hours after H.W.
12. Water Level during hauling	a. + 50 c.m.N.A.P. b. H.W. level: + 108 c.m.N.A-P. c. L.W. Level before hauling -35 cm
13. Chemical analyses at the sea near the place of Hauling	Chloride: 15300 mg/l Phosphate: 0.26 mg/l Nitrate: 6 mg/l

DATA SAMPLING

JANUARY 1969

Station: "Pier" B, two hours after high water

Date: 15th January 1969

I Hauls "Pier" B, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia aurita	100
" mobiliensis	100
" sinensis	1400
" regia	500
A coccosphere	50
Coscinodiscus coxciannus	900
" excentricus	1650
" granii	4000
Rhizosolenia sp.	50
2. P r o t o z o a	
Noctiluca miliaris	2500
3. N e m a t o d a	
Nematoda sp.	50
4. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	3950
Centropages hamatus	8750
Microcalanus pusillus	600
Nauplius larva Copepoda sp	250
Temora longicornis	700
C y c l o p o i d a	
Corycaeus anglicus	150
5. M o l l u s c a	
G a s t r o p o d a	
Young Gastropoda (0.7 m.m.)	50
6. E g g s	
E v e r t e b r a t a	
Gastropoda egg	100

SAMPLING DATA

JANUARY 1969

Station: "Pier" A, Scheveningen, two hours before high water

Date: 29th January 1969

Hauls	III. "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Occasionally rain; very cloudy. Wind mostly moderate. At first Southern, later on Western, Little change in temperature.
4. Weather conditions while Hauling	Slightly cloudy, sometimes sunshine. Hazy and visibility moderate. Weather mild for the time of the year. Sea not so calm, as one could expect.
5. Distance while hauling	+ 144 meter by walking.
6. Time of hauling	By walking 11.36 - 11.44 with the fine net
7. Temperature	In the air: 6°C In the water: 1°C
8. Wind during hauling	Indications: "Pier" Semaphore Force: 5 6 1/2 /msec. Direction: West
9. Lighthours during the day of hauling	8.57 a day
10. Tides	1st H.W. 12.32
11. Direction of streams	one hour before H.W.
12. Water Level during hauling	a. + 95 cm. N.A.P. b. High water level: + 102 cm. N.A.P. c. Low water level before hauling: -28 cm. N.A.
13. Chemical analyses at the sea near the place of hauling	Chloride: 14400 mg/l Phosphate: 0.34 mg/l Nitrate: 8 mg/l

DATA SAMPLING

JANUARY 1969

Station: "Pier" A, Scheveningen two hours before high water

Date: 29th January 1969

V.P.N. Haul "Pier" A, Scheveningen

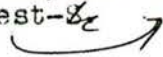
1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	50
Biddulphia regia	50
" sinensis	350
Chaetoceros sp.	200
A. Cocosphere	50
Coscinodiscus concinnus	900
" excentricus	650
" granii	2750
Thalassiosira sp	50
2. P r o t o z o a	
Noctiluca miliaris	1900
3. N e m a t o d a	
Nematoda sp.	50
4. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	700
" " with eggs	50
Centropages hamatus	150
Microcalanus pusillus	50
C i r r i p e d i a	
Nauplius larva Cirripedia sp.	50
Cypris larva Cirripedia sp.	200
C y c l o p o i d a	
Corycaeus anglicus	450
5. M o l l u s c a	
Mactra corallina (0.2 m.m.)	50
6. E g g s	
E v e r t e b r a t a	
Gastropoda eggs	50

SAMPLING DATA

JANUARY 1969

Station: "Pier" B, Scheveningen, two hours after high water

Date: 29th January 1969

Hauls	IV "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. \pm 300 meter from the beach	Situation
3. Weather forecast	Occasionally rain, very cloudy. Wind mostly moderate. At first Southern, later on Western. Little change in temperature.
4. Weather conditions, while hauling	Sky fully overcast. A little misty. No blue, no sunshine. Not very cold. Sea calmer, which also may be partly caused by low water.
5. Distance while hauling	\pm 144 144 meter by walking
6. Time of hauling	By walking 14.46 - 14.58 with the fine net
7. Temperature	In the air $6\frac{1}{2}^{\circ}\text{C}$ In the water: 1°C
8. Wind during hauling	Indications: "Pier" Semaphore Force: 6m/sec 6 $\frac{1}{2}$ m/sec Direction: West- SE 
9. Lighthours during the day of hauling	8.57 a day
10. Tides	1st H.W. 12.32
11. Direction of streams	2 hours after H.W.
12. Water Level during hauling	a. + 60 c.m. N.A.P. b. High water level + 102 cm.N.A.P. c. Low water level before hauling - 28 c.m.NAP _i
13. Chemical analyses at the sea near the place of hauling	Chloride: 14600mg/l Phosphate: 0.29 mg/l Nitrate: 9 mg/l

SAMPLING DATA

JANUARY ~~1968~~ 1969

Station: "Pier" B, Scheveningen twonhours after high wat

Date: 29th January 1969

IV. Haul "Pier" B, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	50
" mobiliensis	50
" sinensis	100
Cerataulina sp.	50
Chaetoceros sp.	150
Coscinodiscus concinnus	150
" excentricus	350
" granii	1500
Eucampia zoodiacus	100
Skeletonema costatum	50
Rhizosolenia sp.	150
2. P r o t o z o a	
Noctiluca miliaris	2050
3. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	950
" " with eggs	50
Centropages hamatus	850
Nauplius larva Copepoda sp	100
Temora Longicornis	200
C y c l o p o i d a	
Corycaeus anglicus	400
4. M o l l u s c a	
Mactra corallina (0.2 m.m.)	100

SAMPLING DATA

FEBRUARY 1969

Station: "Pier" A, Scheveningen, two hours before highwater

Date: 14th February 1969

Hauls

~~I~~ "Pier" A, Scheveningen

- | | |
|--------------------------------------|---|
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Frost increasing; clearing of the sky with locally snowshowers. Wind strong to moderate, N. Eastern |
| | During the night severe frost; in the afternoon light frost. |
| 4. Weather conditions, while hauling | Visibility rather good. Sky clear, only a little hazy near the horizon |
| | Sea calmer, though still choppy, after the stormy weather of the last days |
| | Cold winter weather. Pier Covered with snow and icy patches. Fishing was difficult and which never happened. I had the container and part of the net full of debris, for this reason I did two hauls. |
| 5. Distance, while hauling | + 144 meter by walking |
| 6. Time of hauling | By walking 10.38 - 10.50 |
| 7. Temperature | In the air: -2 ⁰ |
| | In the water -2 ⁰ |
| 8. Wind during hauling | "Semaphore" East-S. East |
| | Force: 4 m/sec. |
| 9. Lighthouse a day | 9.51 a day |
| 10. Tides | H.W. 12.02 |
| 11. Direction of streams | Two hours before high water |
| 12. Water Level, during hauling | a. - 48 c.m. N.A.P. |
| | b. High water level: + 75 c.m. N.A.P. |
| | c. Low water before hauling -96cm. |

13. Chemical analyses of the sea near the place of hauling

Chloride: 17000 mg/l

Phosphate: 0.25 mg/l

Nitrate: 3 mg/l

SAMPLING DATA

FEBRUARY 1969

Station: "Pier" A, Scheveningen, taken with the fine net

Date: 14th February 1969

I. Haul "Pier" A, Scheveningen

1. B A C I L L A R I O P H Y C E A E

Chaetoceros sp.	50
Coscinodiscus concinnus	100
" excentricus	1000
" granii	1000
Rhizosolenia sp	150

2. P R O T O Z O A

Foraminifera sp	50
Noctiluca miliaris	95750

3. P o l y c h a e t a

Polychaeta sp	50
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4. C r u s t a c e a

Copepoda	
Acartia clausi	1500
Anomalocera sp	200
Centropages hamatus	2750
Microcalanus pusillus	350
Nauplius larva Copepoda sp	150
Pseudocalanus sp.	150
Temora longicornis	1000
Cirripectida	
Cypris larva Cirripectida sp	50

5. M o l l u s c a

Gastropoda	
Egg Gastropoda	50
Lamellibranchiata	
Mactra corallina (0.2 mm)	50

Station: "Pier" B, Scheveningen, two hours after high water
 Date: 14th February 1969

Hauls ~~II.~~ "Pier" B, Scheveningen

1. Place of hauling "Pier" Scheveningen
2. Situation \pm 300 meter from the beach
3. Weather forecast Frost increasing; clearing of the sky with locally snowshowers. Wind strong to moderate, N. Eastern. During the night severe frost, in the afternoon light frost.
4. Weather conditions, while hauling Weather circumstances about the same as in the morning. "Pier" covered with snow and icy patches. Wind less sharp than in the morning. Not very hazy near the horizon. Sea calmer than in the morning; also because it was low water. Yet real winter weather.
5. Distance, while hauling \pm 144 meter by walking
6. Time of hauling By walking 14.14 - 14.26
7. Temperature In the air: -1°C
In the water: -2°C
8. Wind during hauling "Semaphore"
Direction: East
Force: 5 m/sec.
9. Lighthours a day 9.51 a day
10. Tides H.W. 12.02
11. Direction of stream Two hours after high water
12. Water Level, during hauling a. + 54 c.m. N.A.P.
b. High water level + 75 cm. N.A.P.
c. Low water before hauling -96 cm.

13. Chemical analyses of the sea near the place of hauling Chloride: 16100 mg/l
Phosphate: 0.24 mg/l
Nitrate: 5 mg/l

SAMPLING DATA

FEBRUARY 1969

Station: "Pier" B, Scheveningen, taken with the fine net.

Date: 14th February 1969

II. Haul "Pier" B, Scheveningen.

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	150
Biddulphia mobiliensis	400
" sinensis	150
Chaetoceros sp-	400
Coscinodiscus concinnus	50
" excentricus	650
" granii	2550
Eucampia zodiacus	50
Rhizosolenia sp.	200
2. P r o t o z o a	
Noctiluca miliaris	140750
3. N e m a t o d a	
Nematoda sp	50
4. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	2250
Anomalocera sp.	50
Centropages hamatus	3250
Microcalanus pusillus	650
Nauplius larva Copepoda sp	200
Temora longicornis	400
C i r r i p e d i a	
Cypris larva Cirripedia sp	100
5. M o l l u s c a	
G a s t r o p o d a	
Gastropoda postal larva	50
6. E g g s	
E v e r t e b r a t a	
Packet Copepoda eggs	300

SAMPLING DATA

FEBRUARY 1969

Station: "Pier" A, Scheveningen, two hours before high water
 Date: 27th February 1969

Hauls	III. "Pier" A. Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Locally clearing of the sky. However locally light snow-showers. Wind moderate, North-Eastern. During the night light frost, during the day-time temperature about freezing point.
4. Weather conditions, while hauling	Visibility very poor. Misty and one greyish atmosphere. Snow was falling in fine, small flakes, driven by the wind. At the end of hauling the sun was shining through the mist, as a bulb, having milk glass. Sea not rough, though a little choppy
5. Distance while hauling	+ 144 meter by walking
6. Time of hauling	By walking 10.04 - 10.16
7. Temperature	In the air: -2°C In the water: -4°C
8. Wind during hauling	"Semaphore" Direction: E.N.E. Force: 3m/sec
9. Light hours a day	10.45 a day
10. Tides	H.W. 11.56
11. Direction of streams	Two hours before high water
12. Water Level, during hauling	a. + 10 cm. N.A.P. b. High water level + 55 cm. N.A.P. c. Low water before hauling -61 cm.
13. Chemical analyses of the sea near the place of hauling	Chloride: 17200 mg/l Phosphate: 0.44 mg/l Nitrate: 4 mg/l

SAMPLING DATA

FEBRUARY 1969

Station: "Pier" A, Scheveningen, taken with the finze net

Date: 27th February 1969

III. Haul "Pier" A, Scheveningen

1. Bacillariophyceae	
Biddulphia aurita	300
" mobiliensis	1800
" sinensis	4050
" regia	1350
Cerataulina sp	300
Chaetoceros sp	23100
Coscinodiscus concinnus	300
" excentricus	3000
" granii	10950
Eucampia zoodiacus	3150
Fragilaria oceanica	150
Rhizosolenia sp	600
2. Protozoa	
Noctiluca miliaris	81300
3. Coelenterata	
Phialidium hemisphericul	50
4. Polychaeta	
Empty vase Terebella larva	50
Nectochaeta larva	50
Polychaeta sp.	50
Polynoid larva	50
Lepidonotus sp.	
5. Crustacea	
Copepoda	
Acartia clausi	1700
" " with eggs	50
Centropages hamatus	3100
Microcalanus pusillus	150
Nauplius larva Copepoda sp	100
Temora longicornis	1050
Cirripedia	
Nauplius larva Cirripedia sp.	100
Cyclopoida	
Corycaeus anglicus	50
6. Echinodermata	
Bipinnaria larvae	100
7. Eggs	
Evertebrata	
Gastropoda egg	50
Copepoda egg	200

SAMPLING DATA

FEBRUARY 1969.

Station: "Pier" B, Scheveningen, two hours after high water.

Date: 27th February 1969

Hauls	IV: "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Locally clearing of the sky. However locally light snow-showers. Wind moderate, North-Eastern. During the night light frost, during the day-time temperature about freezing point.
4. Weather conditions, while hauling	Visibility a little better than in the morning, as there was some clearing in the sky. Yet still misty and cold. Sea calmer than in the morning.
5. Distance, while hauling	+ 444 meter by walking
6. Time of hauling	By walking 14.15 - 14.27
7. Temperature	In the air: -1°C In the water: -3°C
8. Wind during hauling	"Semaphore" Direction: E.N.E. Force: 2m/sec.
9. Lighthours a day	10.45 a day
10. Tides	H.W. 11.56
11. Direction of stream	Two hours after high water
12. Water Level, during hauling	a. + 10 c.m. N.A.P. b. High water level: + 55 cm. N.A.P. c. Low water before hauling -61 cm
13. Chemical analyses of the sea near the place of hauling	Chloride: 17200 mg/l Phosphate: 0.41 mg/l Nitrate: 4 mg/l

SAMPLING DATA

FEBRUARY 1969

Station: "Pier" B, Scheveningen, taken with the fine net.

Date: 27th February 1969

IV. Haul "Pier" B, Scheveningen.

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	600
Biddulphia mobiliensis	1000
" sinensis	5600
Cerataulina sp.	100
Chaetoceros sp.	7300
Coscinodiscus excentricus	2100
" granii	4100
Eucampia zodiacus	38850
Rhizosolenia sp.	350
2. P r o t o z o a	
Noctiluca miliaris	114100
3. C t e n o p h o r a	
Pleurobrachia pileus	50
4. P o l y c h a e t a	
Nectochaeta larva	100
Polychaeta sp	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	850
Centropages hamatus	1900
Microcalanus pusillus	550
Temora longicornis	100
Nauplius larvae Copepoda sp	150
C i r r i p e d i a	
Nauplius Larvae Cirripedia sp	150
C y c l o p o i d a	
Corycaeus anglicus	200
A m p h i p o d a	
Hyperia sp.	50
6. E c t o p r o c t a	
Cyphonautes larva	
Membranipora membranacea	50
7. E c h i n o d e r m a t a	
Bipinnaria larvae	200
A s t e r i a s r u b e n s	
8. E g g s	
E v e r t e b r a t a	
Copepoda eggs	600

DATA SAMPLING

MARCH 1969

Station: "Pier" A, Scheveningen, two hours before high water

Date: 14th March 1969

Hauls

- | | |
|--------------------------------------|---|
| | <u>I.</u> "Pier" A Scheveningen |
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | In the North of the country very cloudy, with rain and temporarily milder. Wind strong to moderate, mainly Eastern. Elsewhere very cloudy with local rain. Also somewhere mist; little change of temperature. |
| 4. Weather conditions, while hauling | One greyish sky; no sun at all. Misty and visibility poor. Rather much wind. Sea choppy. |
| 5. Distance, while hauling | + 144 meter by walking. |
| 6. Time of hauling | By walking 10.10 - 10.22 |
| 7. Temperature | In the air 9°C
In the water 2°C |
| 8- Wind during hauling | Indication: "Pier"
"Semaphore"
Direction: S
Force: 6m/sec 4m/sec. |
| 9. Lighthouses a day | 11.45 a day |
| 10. Tides | 12.14 |
| 11. Direction of streams | Two hours before high water |
| 12. Water Level during hauling | a. + 48 cm N.A.P.
b. High water level + 83 cm N.A.P.
c. Low water before hauling -86 cm |

13. Chemical analyses

Chloride: 13700 mg/l
Phosphate: 0.35 mg/l
Nitrate 7 mg/l

Station: "Pier" B, Scheveningen, taken with the fine net

Date: 14th March 1969

L. Haul "Pier" B, Scheveningen

1. Bacillariophyceae	
Biddulphia alternans	200
" aurita	400
" mobiliensis	1800
" regia	2200
" sinensis	5800
Chaetoceros sp.	36600
Coscinodiscus concinns	1000
" excentricus	2000
" granii	6000
Ditylum brightwelli	600
Eucampia zodiacus	51000
Rhizosolenia sp.	16000
Skeletonema sp.	6800
2. Protozoa	
Foraminifera sp.	50
Noctiluca miliaris	8000
3. Polychaeta	
Noctuchaeta larva	100
4. Crustacea	
Copepoda	
Acartia clausi	300
Centropages hamatus	300
Microcalanus pusillus	300
Nauplius larva Copepoda sp	100
Temora longicornis	50
Harpacticoida sp	
Harpacticoida sp.	100
Cladocera	
Evadna sp.	50
5. Ectoprocta	
Cyphonautes larva	50
Membranipora	
membranacea	
6. Mollusca	
Mactra corallina (0.2mm)	250
7. Echinodermata	
Bipinnaria larva	200

DATA SAMPLING

MARCH 1969

Station: "Pier" B, Scheveningen after high water (2 hours)

Date: 14th March 1969

Hauls	"Pier" B, Scheveningen
1. Place of hauling	"Pier", Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	In the North of the country very cloudy, with rain and temporarily milder. Wind strong to moderate, mainly Eastern. Elsewhere very cloudy with local rain. Also somewhere mist; little change of temperature.
4. Weather conditions, while hauling	Very misty, the fog-horn was heard and visibility poor. There also was a drizzle. Sea calmer than in the morning.
5. Distance, while hauling	+ 144 meter by walking
6. Time of hauling	By walking 14.15 - 14.27
7. Temperature	In the air 9°C In the water 12°C
8. Wind during hauling	Indication "Pier" "Semaphore" Direction: S.W. S.W. Force: 5m/sec. 3m/sec.
9. Light hours a day	11.45 a day
10. Tides size My Wx 12 14	1st H.W. 12.14
11. Direction of streams	Two hours after High water
12. Water Level, during hauling	a. + 24 cm N.A.P. b. H. Water level + 83 cm N.A.P. c. Low water before hauling - 86 cm

13. Chemical analysis

Chloride 13700 mg/l
 Phosphate 0.31 mg/l
 Nitrate 7 mg/l

SAMPLING DATA

MARCH 1969

Station: "Pier" A, Scheveningen, taken with the fine net
Date: 14th March 1969

I. Haul "Pier" A, Scheveningen

1. Bacillariophyceae

Biddulphia mobiliensis	1200
" regia	1000
" sinensis	4200
Chaetoceros sp	20100
Coscinodiscus concinnus	2000
" excentricus	700
" granii	4300
Eucampia zoodiacus	12800
Fragilaria sp.	100
Rhizosolenia sp.	1100
Thalassiosira sp.	100
Skeletonema sp.	200

2. Protozoa

Foraminifera sp	50
Noctiluca miliaris	7800

3. Nematoda

Nematoda sp.	50
--------------	----

4. Polychaeta

Polychaeta sp	50
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5. Chaetognatha

Sagitta setosa	50
----------------	----

6. Crustacea

Copepoda	
Acartia clausi	1250
Anomalocera sp.	50
Centropages hamatus	100
Microcalanus pusillus	150
Nauplius larve Copepoda sp.	100
Temora longicornis	650
Cyclopoidea	
Corycaeus anglicus	50
Cirripedia	
Cypris larva Cirripedia sp.	50
Nauplius " " "	100

7. Mollusca

Lamelli branchiati	
Mactra corallina (0.16 mm.)	150

8. Echinodermata

Bipinnaria larva	100
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DATA SAMPLING

MARCH 1969

Station: "Pier" A, Scheveningen, two hours before high waterDate: 28th March 1969.

Hauls	III. "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	± 300 meter from the beach
3. Weather forecast	Weather dry and sunny temporarily also cloudy. Wind light to moderate northern. During the night light frost.
4. Weather conditions while hauling	Clear sky with some light clouds. Near the horizon misty. Wind light. Sea rather calm, yet very brownish.
5. Distance, while hauling	± 144 meter by walking
6. Time of hauling	By walking 9.13 - 9.25
7. Temperature	In the air $2\frac{1}{2}^{\circ}\text{C}$ In the water -1°C
8. Wind during hauling	Indications: "Pier" "Semaphore" Direction: N.E. Force: $3\frac{1}{4}$ /m sec.
9. Lighthouse a day	12.44 a day
10. Tides	1st H.W. 11.13
11. Direction of streams	Two hours before high water
12. Water Level, during hauling	a. + 12 cm b. High water level + 44 cm N.A.P. c. Low water before hauling -77 cm.
13. Chemical analyses	Chloride: 16600 mg/l Phosphate: 1,1 mg/l Nitrate: 3 mg/l

Station: "Pier" A, Scheveningen, taken with the fine net

Date: 28th March 1969

III. Haul "Pier" A, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	1500
Biddulphia sinensis	6000
Cerataulina sp.	1000
Chaetoceros sp.	19000
Coscinodiscus concinnus	500
" excentricus	5000
" granii	11500
Eucampia zodiacus	189000
Leptocylindricus danicus	15500
Rhizosolenia sp	12750
Skeletonema costatum	2000
2. P r o t o z o a	
Noctiluca miliaris	58000
3. P o l y c h a e t a	
Polychaeta sp	300
Nectochaeta larva	150
Vase Terebella larva	100
4. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	3750
Acartia clausi with eggs	100
Centropages hamatus	1050
Nauplius larva Copepoda sp.	150
Temora longicornus	2100
Temora longicornis with eggs	50
C y c l o p o i d a	
Corycaeus anglicus	50
C i r r i p e d i a	
Nauplius larva Cirripedia sp	50
5. M o l l u s c a	
Mactra coraltine (0.2mm)	100
6. E c h i n o d e r m a t a	
Bipinnaria larva	50
Echinopluteus "	50
7. E g g s	
E v e r t e b r a t a	
Copepoda sp.	50

Station: "Pier" B, Scheveningen, two hours after high water

Date: 28th March 1969

Hauls	IV. "Pier" B Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Weather dry and sunny temporarily also cloudy. Wind light to moderate northern. During the night light frost.
4. Weather conditions, while hauling	Cloudy sky; occasionally the sun was to be seen yet shrouded ^{shrouded} . Still hazy near the horizon. Wind stronger than in the morning. Sea less calm than in the morning. Still brownish.
5. Distance, while hauling	+ 144 meter by walking
6. Time of hauling	By walking 13.13 - 13.25
7. Temperature	In the air: 6½° C In the water -1° C
8. Wind during hauling	Indication "Pier" "Semaphore" Direction: SE Force: 6m/sec 4m/sec.
9. Lighthouse a day	12.44 a day
10. Tides	1st H.W. 11.13
11. Direction of streams	Two hours after high water
12. Water Level during hauling	a. + 20 cm N.A.P. b. High water level + 44 cm N.A.P. c. Low water before hauling -77 cm
13. Chemical analyses	Chloride: 16400 mg/l Phosphate: 0.40 mg/l Nitrate: 3 mg/l

Station: "Pier" B, Scheveningen, taken with the fine net.
 Date: 28th March 1969

IV. Haul "Pier" B, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Bellarocha malleus	900
Biddulphia aurita	600
" mobiliensis	500
" sinensis	12900
Chaetoceros sp.	49800
Coscinodiscus excentricus	500
" granii	3900
Eucampia zodiacus	220500
Leptocylindricus danicus	900
Rhizosolenia sp	47700
Thalassiosira sp	250
2. P r o t o z o a	
Noctiluca miliaris	35400
3. P o l y c h a e t a	
Polychaeta larva	50
Polychaeta sp	50
Terebella larva	100
4. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	2950
" " with eggs	50
Anomalocera sp	850
Centropages hamatus	1350
Microcalanus pusillus	1300
Nauplius larva Copepoda sp	300
Temora longicornis	1450
C y c l o p o i d a	
Corycaeus anglicus	200
C i r r i p e d i a	
Nauplius larva Cirripedia sp	150
5. M o l l u s c a	
Mactra corallina (0.2mm)	250
6. E c h i n o d e r m a t a	
Bipinnaria larva	350
Echinopluteus larva	150
7. T u n i c a t a	
Larva Tunicata sp	50
8. E g g s	
E v e r t e b r a t a	
Copepoda egg	100

SAMPLING DATA

APRIL 1969

Station: "Pier" A, Scheveningen, two hours before high water
 Date: 11th April 1969

Hauls

- | | |
|---------------------------------|--|
| 1. Place of hauling | I. "Pier" A, Scheveningen
"Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Very cloudy and especially in the North of the country some rain. Wind mostly moderate between Western and South-western. In the afternoon temperature lower. |
| 4. Weather, while hauling | Sky grey with a few white spots. As the end of the hauling the sun just a moment was shining vaguely. Visibility, not very good. Near the horizon misty. Sea rather calm, though brownish. |
| 5. Distance, while hauling | + 144 meter by walking. |
| 6. Time of hauling | By walking 8.23 - 8.34 |
| 7. Temperature | In the air $8\frac{1}{2}^{\circ}\text{C}$
In the water 3°C |
| 8. Wind | "Semaphore"
Direction: S
Force: 2m/sec. |
| 9. Lighthours a day | 13.38 a day |
| 10. Tides | 1st H.W. 10.20 |
| 11. Direction of streams | Two hours before high water |
| 12. Water Level, during hauling | a. + 50 cm N.A.P.
b. Low water before hauling -66 cm
c. High water level + 102 cm. |
| 13. Chemical analysis | Chloride: 13000 mg/l
Phosphate: 0.70 mg/l
Nitrate: 7 mg/l |

SAMPLING DATA

APRIL 1969

Station: "Pier" A Scheveningen, taken with the fine net
 Date: 11 April 1969

I. Haul "Pier" A Scheveningen

1. B a c i l l a r i o p h y c e a e

Bellarocha malleus	5000
Biddulphia mobiliensis	3750
" sinensis	17750
Chaetoceros sp	78500
Coscinodiscus concinnus	500
" excentricus	1750
" granii	5500
Eucampia zoodiacus	21500
Leptocylindricus danicus	250
Rhizosolenia sp	16750
Skeletonema costatum	250

2. P r o t o z o a

Noctiluca larva miliaris	78000
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3. P o l y c h a e t a

Polychaeta larva	150
" sp	50
Tomopteris sp	100

4. C r u s t a c e a

C o p e p o d a	
Acartia clausi	1700
Acartia clausi with eggs	50
Ahomalocera sp	700
Centropages hamatus	500
Microcalanus pusillius	350
Temora longicornis	850
C y c l o p o i d a	
Corycaeus anglicus	100
C i r r i p e d i a	
Nauplius larva	50
Cirripedia sp	

5. E c h i n o d e r m a t a

Bipinnaria larva	300
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DATA SAMPLING

APRIL 1969

Station: "Pier" B, two hours after high water at the "Pier" Scheve
 ningen
 Date: 11th April 1969

Hauls

~~11.~~ "Pier" B, Scheveningen
 "Pier" Scheveningen.
 + 300 meter from the beach

1. Place of hauling
 2. Situation
 3. Weather forecast
 Very cloudy and especially in the North of the country some rain, Wind mostly moderate between Western and South-western. In the afternoon temperature lower.

4. Weather, while hauling
 One ~~grey~~^{ly} sky; the foghorn was heard and the visibility was very poor. A cold streaming rain came down and things were rather miserable. Sea less calm than in the morning.

5. Distance, while hauling
 + 144 meter by walking

6. Time of hauling
 By walking 12.13 - 12.25

7. Temperature
 In the air 10⁰⁰
 In the water 3⁰⁰

8. Wind
 "Semaphore"
 Direction: S.W.
 Force: 6,5m/sec.

9. Lighthours a day
 13.38 a day

10. Tides
 1st H.W. 10.20

~~11.~~ Direction of streams
 Two hours after high water

12. Water Level, during hauling
 a. + 64 cm. N.A.P.
 b. High water level + 102 cm.M.A.P.
 c. Low water before hauling +66 cm

13. Chemical analysis

Chloride: 13900 mg/l
 Phosphate: 0.45 mg/l
 Nitrate: 7 mg/l

SAMPLING DATA

APRIL 1969

Station: "Pier" B, Scheveningen, taken with the fine net

Date: 11th April 1969

II. Haul "Pier" B, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	5000
Biddulphia mobiliensis	1800
" sinensis	4000
Cerataulina pelagica	1000
Chaetoceros sp	40750
Coscinodiscus concinnus	500
" excentricus	750
" granii	1500
Eucampia zoodiacus	18250
Fragilaria sp	750
Rhizosolenia sp	9750
Skeletonema costatum	750
2. P r o t o z o a	
Noctiluca miliaris	2900
3. C o e l e n t e r a t a	
Steenstrupia mutons	100
4. C t e n o p h o r a	
Pleurobrachia pileus	50
5. P o l y c h a e t a	
Polychaeta larva	50
" sp	100
6. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	2850
Anomalocera sp	150
Centropages hamatus	1200
Microcalanus pusillus	150
Nauplius larva	150
Copepoda sp	
Temora longicornis	1100
C y c l o p o i d a	
Corycaeus anglicus	50
7. M o l l u s c a	
Mactra corallina (0.2 m.m)	50
ctr	
8. E c h i n o d e r m a t a	
Bipinnaria larva	400

DATA SAMPLING

APRIL 1969.

Station: "Pier" A, Scheveningen, two hours before high waterDate: 28th April 1969

Hauls	III. "Pier" A, Scheveningen
1. Place of hauling	"Pier", Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Very cloudy, occasionally rain. Wind light to moderate, mainly between East and South.
4. Weather, while hauling	Slightly cloudy. Sea calm. Occasional. ly the sun came through. Weather fresh and springlike.
5. Distance, while hauling	+ 144 meter by walking
6. Time of hauling	By walking 10.35 - 10.47
7. Temperature	In the air 10°C In the water 6½°C
8. Wind	"Semaphore" Direction: W.S.W. Force: 6 m/sec.
9. Lighthours a day	14.42 a day
10. Tides	2nd H.W. 12.37
11. Direction of streams	Two hours before high water
12. Water level, during hauling	a. + 20 cm N.A.P. b. High water level + 95 cm N.A.P. c. Low water before hauling - 74 cm
13. Chemical analysis	Chloride: 18500 mg/l Phosphate: 0.80 mg/l Nitrate: 7 mg/l

SAMPLING DATA APRIL 1969
Station: "Pier" A, Scheveningen taken with the fine net
Date: 28th April 1969

III. Haul "Pier" A, Scheveningen.

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	1800
Biddulphia aurita	2100
" mobiliensis	150
Cerataulina bergonii	150
Chaetoceros sp	12600
Coscinodiscus concinnus	900
" wxcentricus	600
" granii	1200
Eucampia zoodiacus	12350
Rhizosolenia sp	31050
Skeletonema costatum	2250
Thalassiosira sp	150
2. P r o t o z o a	
Noctiluca miliaris	2100
3. C o e l e n t e r a t a	
Cladonema radiatum	100
4. P o l y c h a e t a	
Polychaeta larva	50
" sp	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	350
" " with eggs	50
Ahomalocera sp	100
Microcalanus pusillus	300
Nauplius larva Copepoda sp	150
Temora longicornis	50
C y c l o p o i d a	
Corycaeus anglicus	100
C i r r i p e d i a	
Cypris larva Cirripedia sp	250
Nauplius " " "	50
Nauplius larva Verruca stroemia	100
6. M o l l u s c a	
Lamellibranchiata	
Mactra corallina (0.2 mm)	150
6. Mollusca	
7. E g g s	
Evertebrate Copepoda sp	100

+ 3/7 contents = vast quantities of slimy balls with Phaeocyclis and also dark, dead material

Vast quantities of slimy balls with Phaeocystis + dark, dead material
+ 3/7 contents.

DATA SAMPLING

APRIL 1969

Station: "Pier" B, Scheveningen two hours after high waterDate: 28th April 1969.

Hauls	IV. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Very cloudy, occasionally rain. Wind light to moderate, mainly between East and South
4. Weather, while hauling	Hardly any clouds, sunny. Visibility good. Sea less calm than in the morning.
5. Distance, while hauling	+ 144 meter by walking
6. Time of hauling	By walking 14.32 - 14.44
7. Temperature	In the air 12 ⁰ C In the water 6½ ⁰ C
8. Wind	"Semaphore" Direction: W.S.W. Force: 5 m/sec.
9. Lighthours a day	14.42 a day
10. Tides	2nd H.W. 12.37
11. Direction of streams	Two hours after high water
12. Water level, during hauling	a. + 52 cm. N.A.P. b. H.W. level + 95 cm N.A.P. c. L.W. before hauling - 74 cm.
13. Chemical analysis	Chloride: 12900 mg/l Phosphate: 1,1 mg/l Nitrate: 9 mg/l

SAMPLING DATA

APRIL 1969

Station: "Pier" B, Scheveningen, taken with the fine net.

Date: 28th April 1969

IV. Haul "Pier" B, Scheveningen.

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	900
Biddulphia auritis	1800
" mobiliensis	450
" sinensis	600
Chaetoceros sp	8400
Coscinodiscus concinnus	750
" excentricus	300
" granii	1500
Ditylum brightwellii	50
Eucampia zoodiacus	32850
Fragilaria sp.	750
Rhizosolenia sp	34800
Skeletonema costatum	3450
2. P r o t o z o a	
Noctiluca miliaris	1500
3. C o e l e n t e r a t a	
Cladonema radiatum	100
Obelia sp	50
4. P o l y c h a e t a	
Empty vase Terebella larva	50
Polychaeta larva	50
" sp	200
5. N e m a t e d a	
Nematoda sp	50
6. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	300
Anomalocera sp	2150
Centropages namatus	100
Nauplius larva Copepoda sp	150
Temora longicornis	100
C y c l o p o i d a	
Corycaeus anglicus	150
C i r r e p i d e a	
Cypris larva Cirripedia sp	100
Nauplius larva Verruca stroemia	150
M y s i d a c o a	
Mysid sp	50
7. M o l l u s c a	
Lamellibranchiata	
Mactra corallina (0.2 mm)	100
G a s t r o p o d a	
Gastropoda larva retracted	400
8. E c h i n o d e r m a t a	
Bipinnaria larva	50
Echinopluteus "	50
Ophiopluteus "	50
Post larva of E Ophiura albide	50
9. E g g s	
E v e r t e b r a t a	
Copepoda EGGS	300
F i s h	
Gadus minutus	400

Vast quantities of Phaeocystis
 + 2/5 contents.

SAMPLING DATA

MAY 1969

Station: ~~X~~ "Pier" A, Scheveningen two hours before high water

Date: 12th May 1969

Hauls

- | | |
|----------------------------|---|
| | X "Pier" A, Scheveningen |
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach. |
| 3. Weather forecast | Very cloudy; locally rain or drizzle.
On Sunday in the eastern part of the country clearing of the sky may occur
Wind moderate between South and South-Western. Temperature the same or higher. |
| 4. Weather, while hauling | Sunny weather, slightly cloudy. Visibility good, though the horizon only was vaguely visible. Sea calm. |
| 5. Time of hauling | 10.35 - 10.47 by walking |
| 6. Distance, while hauling | + 144 meter by walking |
| 7. Temperature | In the air 20°C
In the water 12°C |
| 8. Wind | Indications
"Semaphore"
Direction: S.W.
Force 6m/sec. |
| 9. Light hours a day | 15.28 a day |
| 10. Tides | 2nd H.W. 12.33 |
| 11. Water Levels | a. when hauling + 21 cm N.A.P.
b. when H.W. 110 cm (2nd H.W.)
c. when L.W. before hauling -86 cm |
| 12. Direction of streams | Two hours before high water |

13. Chemical analysis

Chloride: 12900 mg/l
Phosphate: 0.45 mg/l
Nitrate: 5 mg/l

SAMPLING DATA

MAY 1969

Station: X. Haul "Pier" A, Scheveningen, taken with the fine nets

Date: 12th May 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	900
Biddulphia aurita	1650
" mobiliensis	1350
" sinensis	1200
Chaetoceros sp.	2550
Coscinodiscus sp	139950
" concinnus	8100
" excentricus	1950
" granii	1050
Ditylum brightwelli	150
Eucampia zodiacus	76500
Fragilaria sp.	300
Rhizosolenia sp.	1050
Skeletonema sp.	1800
2. P r o t o z o a	
Noctiluca miliaris	300
3. C o e l e n t e r a t a	
Cladonema radiatum	150
4. P o l y c h a e t a	
Polychaeta larva	50
" sp	250
5. M o l l u s c a	
Lamellibranchiata	
Spisula solida (0.2 mm)	50
6. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	350
Centropages hamatus	100
Microcalanus pusillus	200
Nauplius larva	50
X Copepoda	
M y s i d a c e a	
Leptomysis gracilis with egg sac	50
C i r r i p e d i a	
Cypris larva Cirripedia sp	200
Nauplius " "	50
7. S a l p i d a	
Oikopleura dioica	100
8. E c h i n o d e r m a t a	
Bipinnaria larva	50
Echinopluteus "	100
9. E g g s	
F i s h	
Platichthys flesus (0.8 mm)	50
Gadus callaris (1.2mm)	100
E v e r t e b r a t a	
Gastropoda egg	100
Echinoidea egg	50
10. L a r v a F i s h	
Clupea pilchardus	50
newly hatched (2.5 m.m)	

SAMPLING DATA

MAY 1969

Station: ~~II~~ "Pier" B, Scheveningen two hours after high water

Date: 12th May 1969

Halls. II. "Pier" B, Scheveningen

1. Place of hauling "Pier" Scheveningen
2. Situation \pm 300 meter from the beach.
3. Weather forecast Very cloudy; locally rain or drizzle. On Sunday in the eastern part of the country clearing of the sky may occur. Wind moderate between South and South-Western. Temperature the same or higher.
4. Weather, while hauling Weather still sunny, though more hazy than on the morning. Visibility less good than in the morning. Sea calm.
5. Time of hauling 14.30 - 14.42 by walking
6. Distance, while hauling \pm 144 meter by walking
7. Temperature In the air 28°C
In the water $12\frac{1}{2}^{\circ}\text{C}$
8. Wind Indications
"Semaphore"
Direction: S.W.-N
Force: 2m/sec.
9. Light hours a day 15.28 a day
10. Tides 2nd H.W. 12.33
11. Water Levels a. when hauling + 70 cm N.A.P. -
b. when High water \pm 110 cm "
c. when Low water before hauling
- 86 cm
12. Direction of streams Two hours after high water

13. Chemical analysis

Chloride: 11500 mg/l
Phosphate: 0.70 mg/l
Nitrate: 9 mg/l

SAMPLING DATA

MAY 1969

Station: Fl. Haul "Pier" B, Scheveningen taken with the fine nets
Date: 12th May 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	1850
Biddulphia aurita	2100
" mobiliensis	350
" sinensis	1250
Cerataulina bergonii	100
Chaetoceros sp.	2600
Coscinodiscus sp.	11250
Coscinodiscus concinnus	8100
" excentricus	4000
" granii	1600
Eucampia zoodiacus	45900
Fragilaria sp.	1850
Rhizosolenia sp.	1250
Skeletonema sp.	1250
2. P r o t o z o a	
Noctiluca miliaris	500
Vase Tintinnid sp.	400
3. C o e l e n t e r a t a	
Cladonema radiatum	100
Obelia sp.	50
Phialidium hemisphericum	50
Steenstrupia nutans	50
4. N e m a t o d a	
Nematoda sp.	50
5. P o l y c h a e t a	
Polychaeta sp.	100
" larva	50
6. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	1250
Centropages hamatus	350
Microcelanus pusillus	150
Nauplius larva Copepoda sp.	50
Temora longicornis	150
H a r p a c t i c o i d a	
Harpacticoida sp.	250
C i r r i p e d e a	
Cypris larva Cirripedia sp.	50
Nauplius " " "	50
Nauplius " Verruca stroemia	100
7. E c h i n o d e r m a t a	
Echinopluteus larva	100
8. E g g s	
F i s h	
Gadus collaris	200

SAMPLING DATA

MAY 1969

Station: "Pier" A, Scheveningen, one hour before high water

Date: 28th May 1969

Hauls	III. "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Weather changeable. Clouds changing. Locally some showers. Wind light to moderate, South-Eastern. Temperature the same as yesterday or slightly lower.
4. Weather, while hauling	Sunny weather, slightly cloudy. Visibility good, though a mistbank was hanging near the horizon. Sea choppy.
5. Time of hauling	11.21 - 11.33 by walking
6. Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air 16°C In the water 11°C
8. Wind	Indications "Semaphore" Direction: S.W. Force: 7 m/sec.
9. Lighthours a day	16.15 a day
10. Tides	1st H.W. 12.27
11. Water Level	a. when hauling 80 cm N.A.P. b. when High water + 100 cm c. when Low water before hauling -80cm
12. Direction of streams	One hour before high water
13. Chemical analysis	Chloride: 13800 mg/l Phosphate: 0.90 mg/l Nitrate: 14. mg/l

SAMPLING DATA May 1969

Station: ~~111~~ Haul "Pier" A, Scheveningen with the fine nets
 Date: 28th May 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	1350
Biddulphia aurita	2000
" mobiliensis	150
" sinensis	350
Chaetoceros sp.	350
Coscinodiscus sp	2000
" concinnus	4100
" excentricus	2300
" granii	3650
Fragilaria sp.	250
Rhizosolenia sp.	50
2. P r o c t o z o a	
Noctiluca miliaris	3250
Toraminifera sp	50
Flagellata sp.	50
Vase Tintinnid sp.	150
3. N e m a t o d a	
Nematoda sp	50
4. P o l y c h a e t a	
Empty vase Terebella larva	200
Polychaeta larva	50
Polychaeta sp	50
5. C o e l e n t e r a t a	
Arachnactis larva	50
Sarsia tubulosa	50
6. C t e n o p h o r a	
Pleurobrachia pileus	150
7. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	1500
" " with eggs	50
Centropages hamatus	300
Microcalanus pusillus	200
Nauplius larva Copepoda sp	50
Temora longicornis	250
C l a d o c e r a	
Podon sp	150
C i r r i p e d i a	
Cypris larva Cirripedia sp	250
Nauplius " " "	50
D e c a p o d a	
Postal larva Crangon vulgaris	50
8. M o l l u s c a	
Larva Mytilus edulis(0.2mm)	150
9. E c h i n o d e r m a t a	
Bipinnaria larva	50
Echinopluteus larva	50
10. E c t o p r o c t a	
Cyphonautes larva	
Membranipora membranacea	150
11. E g g s F i s h	
Gadus callarias	50
Pleuronectes platessa	50
E v e r t e b r a t a	
C o p e p o d a e g g s	150
12. F i s h L a r v a	
Clupea pilchardus (0.5mm)	50
Pleuronectes platessa (6 mm)	50

SAMPLING DATA

MAY 1969

Station: ~~IV.~~ "Pier" B, Scheveningen, two hours after high water
Date: 28th May 1969

Hauls	IV. "Pier" B, Scheveningen
1. Hauls (Place of hauling)	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Weather changeable. Clouds changing. Locally some showers. Wind light to moderate. South_Eastern. Temperature the same as yesterday or slightly lower.
4. Weather, while hauling	More cloudy than in the morning. Sun less sharp than in the morning, coming through the clouds. Near the horizon bank of clouds. Sea a little choppy.
5. Time of hauling	14.21 - 14.33 by walking
6. Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air 19°C In the water 12°C
8. Wind	Indications "Semaphore" Direction: W.S.W. Force: 3½ m/sec.
9. Lighthours a day	16.15
10. xxxxxxx Tides	1st H.W. 12.27
11. Water Level	a. when hauling + 67 cm N.A.P. b. when H:W. + 100 cm c. when L.W. before hauling - 80cm
12. Direction of streams	Two hours after high water

13. Chemical analyses	Chloride: 13500 mg/l Phosphate: 0.90 mg/l Nitrate: 13 mg/l
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Station: IV. Haul "Pier" B, Scheveningen taken with the fine nets

Date: 28th May 1969

1. Bacillariophyceae	
Bellarocha malleus	1100
Biddulphia aurita	900
" mobiliensis	2500
" regia	500
" sinensis	2200
Chaetoceros sp.	300
Coscinodiscus sp.	100
" concinnus	2700
" excentricus	2100
" granii	2800
Ditylum brightwelli	200
Leptocylindricus danicus	100
Skeletonema costatum	100
2. Protozoa	
Noctiluca miliaris	2300
3. Polychaeta	
Polychaeta sp	50
Terebella larva	50
4. Coelenterata	
Steenstrupia mutans	50
5. Ctenophora	
Beroë cucumis Pleurobrachia	50
Pleurobrachia cucumis pileas	50
6. Crustacea	
Copepoda	
Acartia clausi	900
Centropages hamatus	130
Temora longicornis	50
Cirripedia	
Cypris larva Cirripedia sp	100
Nauplius " " "	150
Decapoda	
Megalopa larva	
Pagurus bernhardus	50
Zoea larva	
Carcinus maenas	150
Cladocera	
Podon sp	50
7. Mollusca	
Mytilus edulis	850
8. Echinodermata	
Asterias sp (0.6 mm)	50
Bipinnaria larva	50
Echinopluteus "	50
9. Ectoprocta	
Cyphonotes larva	
Membranipora membranacea	50
10. Fish Larvae	
Clupea harengus (8 mm)	50

DATA SAMPLING

JUNE 1969

Station: "Pier" A, Scheveninge n, two hours before high
 Date: 9th June 1969 water

Hauls	1. "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Most places clearing dry weather with clearing of the sky. Especially inland temperature higher. Wind mainly moderate between North-East and North-West.
4. Weather, while hauling	Blue sky, no clouds Visibility good. Water rather calm, brownish
5. Time of hauling	8.45 - 8.57 by walking
6. Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air - 14°C In the water - 9°C
8. Wind, while hauling	Indications "Semaphore" Direction: E.N.E. Force: 5½ m.
9. Lighthours a day	16.36 a day
10. Tides	1st H.W. 10.42
11. Water Levels	a. when hauling: - 4 cm N.A.P. b. when H.W. (1st): + 85 cm c. when L.W. (before hauling): -104cm
12. Direction of streams	Two hours before H.W.

13. Crechemical analysis

Chloride: 17300 mg/l
 Phosphate: 0.95 mg/l
 Nitrate: 2 ⅓ mg/l

SAMPLING DATA

JUNE 1969

Station: "Pier" A, Scheveningen, taken with the fine net

Date: 9th June 1969

I. Haul A "Pier" Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia aurits	100
Coscinodiscus concinnus	3500
" excentricus	1350
" granii	1250
Rhizosolenia sp.	250
Skeletonema costatum	1228100
2. P r o t o z o a	
Noctiluca miliaris	35850
Foraminifera sp.	100
3. N e m a t o d a	
Nematoda sp.	100
4. P o l y c h a e t a	
Empty vase Pectinaria larva	5700
Empty vase Terebella larva	23200
Pectinaria larva	850
Polychaeta sp	1600
Polychaeta larva	7250
Terebella larva	850
5. C o e l e n t e r a t a	
Bougainvillia ramosa	100
Phialidium hemisphericum	750
Sarsia tubulosa	250
Steenstrupia nutans	100
6. C t e n o p h o r a	
Beroë cucumis	100
Pleurobrachia pileus	250
7. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	100
Temora longicornis	100
C i r r i p e d i a	
Cyprus larva Cirripedia sp.	100
E a p h a u s i c o a	
Euphausiacea sp	250
8. M o l l u s c a	
G a s t r o p o d a	
Young Gastropoda sp.(0.25 mm)	100
Lamellibranchiata	
Cardium sp (0.27 mm)	250
Mytilus edulis (0.2mm)	8500
9. E c h i n o d e r m a t a	
Bipinnaria larva	250
10. T u n i c a t a	
Tunicata egg	100
11. E g g s	
F i s h	
Gadusmerlangus (1.35mm)	1100

Station: "Pier" B, Scheveningen two hours ~~before~~^{after} high water
 Date: 9th June 1969

Hauls	I. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Most places have dry weather with clearing of the sky. Especially inland temperature higher. Wind mainly moderate between North-East and North-West.
4. Weather while hauling	Blue sky, no clouds Visibility good. Water calm less brownish than in the morning
5. Time of hauling	12.35 - 12.47 by walking
6. Time Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air -21°C In the water -14°C
8. Wind, while hauling	Indications "Semaphore" Direction: N.E. Force: 6m/sec.
9. Lighthouse a day	16.36 a day
10. Tides	1st H.W. 10.42
11. Water Levels	a. when hauling: + 55 cm N.A.P. b. when H.W. (1st): + 85 cm " c. when L.W. (before hauling) -104cm
12. Direction of streams	Two hours before ^{after} H.W.

13. Chemical analysis

Chloride: 17300 mg/l
 Phosphate: 1.2 mg/l
 Nitrate: 1 mg/l

SAMPLING DATA

JUNE 1969

Station: "Pier" B, Scheveningen, taken with the fine nets

Date: 9th June 1969

1. Bacillariophyceae	
Bellarochea malleus	50
Chaetoceros sp.	100
Coscinodiscus concinnus	550
" excentricus	550
" granii	1000
Eucampia zoodiacus	1050
Leptocylindricus danicus	350
Skeletonema costatum	25180
2. Protozoa	
Noctiluca miliaris	57000
3. Polychaeta	
Empty vase Pectinaria larva	15300
Pectinaria larva	45900
Polychaeta sp	50
Terebella larva	500
Polychaeta larva	5550
4. Coelenterata	
Bougainvillia ramosa	50
Sarsia tubulosa	50
Steenstrupia nutans	50
Rathkea octopunctata	50
5. Ctenophora	
Beroë eucumis	50
Bolinopsis sp	50
Pleurobrachia pileus	16
6. Crustacea	
Copepoda	
Acartia clausi	100
Centropages hamatus	50
Microcalanus pusillus	50
Cirripedia	
Nauplius larva Cirripedia sp.	50
Harpacticoida	
Harpacticoida sp.	50
7. Mollusca	
Lamellibranchiata	
Mytilus edulis (0.2 mm)	300
8. Echinodermata	
Bipinnaria larva	50
Echinopluteus "	450
9. Eggs	
Fish	
Gadus merlangus	50
10. Tunicata	
Oikopleura dioica	100

SAMPLING DATA

JUNE 1969

Station: "Pier" A, Scheveningen two hours before high water, water poisoned by Rhine-water
Date: 26th June 1969

Hauls	III. "Pier" A Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Wind light. Clearing of the sky. Most places have dry weather. Wind mostly light. The same temperature or somewhat higher
4. Weather, while hauling	Blue sky; many clouds. The sun occasionally came through. The wind was coldish. The visibility good. The sea rather quiet and Brownish
5. Time of hauling	9.38 - 9.50 by walking
6. Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air - 16°C In the water: 13°C
8. Wind, while hauling	Indications "Semaphore" Direction: N.W. Force: 7m/sec
9. Lighthours a day	16.43 a day
10. Tides	1st H.W. 11.38
11. Water Levels	a. when hauling: + 24 cm N.A.P. b. when H.W. (1st): + 98 cm c. when L.W. (before hauling) - 66 cm
12. Direction of streams	two hours before H.W.

13. Chemical analysis

Chloride: _____
Phosphate: 0.55 mg/l
Nitrate 3mg/l

SAMPLING DATA

JUNE 1969

Station: III. "Pier" A, Scheveningen, taken with the fine net
seawater poisoned by Rhine-water

Date: 26th June 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	500
Biddulphia aurita	850
Coscinodiscus concinnus	9100
" excentricus	600
" granii	2100
Eucampia zoodiacus	6850
Rhizosolenia sp.	100
2. P r o t o z o a	
Foraminifera sp.	100
Noctiluca miliaris	3500
Tintinnid sp	100
3. P o l y c h e a t a	
Empty vase Terebella larva	35400
Polychaeta sp	750
" larva	250
Terebella larva	850
4. C o e l e n t e r a t a	
Obelia sp	1100
5. C r u s t a c e a	
C o p e p o d a	
Acartia sp	100
C i r r i p e d i a	
Cypris Larva Cirripedia sp	500
C l a d o c e r a	
Evadna nordmanni	250
D e c a p o d a	
Megalopo larva	250
Cancer sp	
6. M o l l u s c a	
Lamellibranchiata	
Cardium edule(1.6mm)	100
" echinatum (0.2 mm - 0.4mm)	100
Mya arenaria (0.3 mm)	250
Mytilus edulis (0.7 mm)	4350
G a s t r o p o d a	
Natica catena (0.25mm)	100
Aphorrhaidae sp (2.8mm)	250
7. E c h i n o d e r m a t a	
Brachiolaria larva	3350
Echinopluteus "	250
8. E g g s	
E v e r t e b r a t a	
Gastropoda eggs (pocket)	500

SAMPLING DATA

JUNE 1969

Station: "Pier" B, Scheveningen, two hours after high water,
water poisoned by Rhine-water

Date: 26th June 1969

Hauls

~~IV.~~ "Pier" B Scheveningen

1. Place of hauling

"Pier" Scheveningen

2. Situation

+ 300 meter from the beach

3. Weather forecast

Wind light. Clearing of the sky.
Most places have dry weather. Wind
mostly light. The same temperature
or somewhat higher.

4. Weather, while hauling

Less cloudy than in the morning.
Sun all the time. Sea quieter than
in the morning, yet still somewhat
brownish.

5. Time of hauling

13.32 - 13.44 by walking

6. Distance, while hauling

+ 144 meter by walking

7. Temperature

In the air -23°C
In the water - 14°C

8. Wind, while hauling

Indications
"Semaphore"
Direction: N.W.
Force: 3½ m/sec

9. Light hours a day

16.43 a day

10. Tides

1st H.W. 11.38

11. Water Levels

a. when hauling: +55 cm N.A.P.
b. when H.W. (1st) + 98 cm
c. when L.W. (before hauling): -66 cm

12. Direction of streams

Two hours after H.W.

13. Chemical analysis

Chloride: —
Phosphate: 0.75 mg/l
Nitrate: 3 mg/l

SAMPLING DATA

JUNE 1969

Station: IV. "Pier" B, Scheveningem, taken with the fine nets
seawater poisoned by Rhine-wat

Date: 26th June 1969

<hr/>	
1. B a c i l l a r i o p h y c e a e	
Bellarochæa malleus	50
Biddulphia aurita	150
" mobiliensis	150
" sinensis	150
Coscinodiscus concinnus	2150
" excentricus	450
" granii	600
Eucampia zoodiacus	44450
Leptocylindricus danicus	150
Rhizosolenia sp.	50
Skeletonema costatum	25900
Thalassiosira sp	700
2. P r o t o z o a	
Noctiluca miliaris	1100
3. C o e l e n t e r a t a	
Obelia sp.	700
4. P o l y c h a e t a	
Empty vase Terebella larva	350
Polychaeta larva	500
Polychaeta sp.	350
Terebella larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	50
Centropages hamatus	150
Microcalanus pusillus	150
Nauplius larva Cop.sp.	50
Temora longicornis	50
C i r r i p e d i a	
Cypris larva Cirripectia sp	150
Nauplius " "	50
E u p h a u s i a c e a " "	
Euphausiacea sp	100
6. M o l l u s c a	
Lamellibranchiata	
Cardium echinatum(0.25mm)	100
Mytilus edulis(o.2mm)	650
Patella larva (0.4 mm)	50
7. E c h i n o d e r m a t a	
Brachiolaria larva	50
Echinopluteus "	250
8. S a l p i d a	
Oikopleura dioica	50
9. E g g s	
E v e r t e b r a t a	
Gastropoda egg	50
10. F i s h	
Larva Clupea pilchardus	50

Station: "Pier" A, Scheveningen two hours before
high water
Date: 10th July 1969

Hauls

1. Place of hauling
2. Situation
3. Weather forecast

4. Weather, while hauling

5. Time of hauling

6. Distance, while hauling

7. Temperature

Wind, while hauling

9. Lighthouse a day

10. Tides

11. Water Levels

12. Direction of streams

1. "Pier" A Scheveningen

"Pier" Scheveningen

+ 300 meter from the beach

Changing clouds; occasionally a shower. Wind light to moderate between West and North. Temperature the same or somewhat higher. Blue patches with clouds. Sun sometimes visible. Visibility very good, as at a long distance the coast could be seen. Sea a little choppy.
10.16 - 10.28 by walking

+ 144 meter by walking

In the air 18°C

In the water 13½°C

Indications

"Semaphore"

Direction: N.W.

Force: 6m/sec

16.26 a day

1st H.W. 12.09

a. when hauling + 15 cm N.A.P.

b. when H.W.(1st) + 74 cm "

c. when L.W. before hauling -74 c,

Two hours before H.W.

13. Chemical analysis

Chloride: 15600 mg/l

Phosphate: 0.70 mg/l

Nitrate: 3 mg/l

SAMPLING DATA

JULY 1969.

Station: ~~7~~ Pier "A", Scheveningen, taken with the fine nets

Date: 10th July 1969

1. B a c i l l a r i o p h y c e a e	
Coscinodiscus concinnus	450
" granii	200
Leptocylindricus danicus	50
Rhizosolenia sp.	50
Skeletonema sp.	150
2. P r o t o z o a	
Noctiluca miliaris	23050
Tintinnid vase	50
3. C o e l e n t e r a t a	
Margelopsis haeckeli (medusa)	100
Margelopsis (hydroid)	50
Margelopsis haeckeli developing eggs(young hydroid)	200
4. P o l y c h a e t a	
Empty vase Terebella Larva	4150
Polychaeta larva	150
Terebella larva	50
Polychaeta sp.	√200
5. N e m a t o d a	
Nematoda sp.	50
6. C r u s t a c e a	
C o p e p o d a	
Acartia sp.	100
Centropages hamatus	50
Microcalanus pusillus	50
Nauplius larva Cop sp.	100
C i r r i p e d i a	
Cypris larva Cirripedia sp.	200
Nauplius " "	150
D e c a p o d a	
Megalopa larva Cancer sp.	800
A m p h i p o d a	
Amphipoda sp.	200
C l a d o c e r a	
Evadna sp.	50
7. M o l l u s c a	
Lamelli branchiata	xx50
Mytilus edulis (0.2m.m)	50
8. E c h i n o d e r m a t a	
Young Echinodermata sp.	50
Brachiolaria larva	150
9. E g g s	
E v e r t e b r a t a	
Coelenterata egg.	500
Copepoda "	50

Station: "Pier" B Scheveningen, two hours after high water
 Date: 10th July 1969

Hauls	II. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Changing clouds; occasionally a shower. Wind light to moderate between West and North. Temperature the same or somewhat higher
4. Weather, while hauling	Sky fully overcast. Some dark clouds. No sunshine. Visibility still rather good. Sea a little choppy
5. Time of hauling	14.04 - 14.16 by walking
6. Distance while hauling	+ 144 meter by walking
7. Temperature	In the air $21\frac{1}{2}^{\circ}\text{C}$ In the water $14\frac{1}{2}^{\circ}\text{C}$
8. Wind, while hauling	Indications "Semaphore" Direction: W. Force: $5\frac{1}{2}$ m/sec
9. Lighthours a day	16.26 a day
10. Tides	1st H.W. 12.09
11. Water Levels	a. when hauling : 35 cm N.A.P. b. when H.W. (1st) + 74 cm c. when L.W. before hauling -74 cm
12. Direction of streams	Two hours after H.W.

13. Chemical analysis

Chloride: 15300 mg/l
 Phosphate: 0.80 mg/l
 Nitrate: 3 mg/l

SAMPLING DATA

JULY 1969

Station: "Pier"B, Scheveningen, taken with the fine nets

Date: 10th July 1969

1. B a c i l l a r i o p h y c e a e	
Biddulphia aurita	50
" mobiliensis	50
" sinensis	50
Chaetoceras sp	50
Coscinodiscus concinnus	1000
" excentricus	350
" granii	1350
Leptocylindricus danicus	50
Skeletonema castatum	400
2. P r o t o z o a	
Empty vase Tintinnid sp	250
Foraminifera sp	100
Noctiluca miliaris	33050
3. P o l y c h a e t a	
Empty vase Terebella larva	300
Polychaeta larva	150
Polychaeta sp	50
4. C r u s t a c e a	
C o p e p o d a	
Acartia sp	50
Centropages hamatus	50
Microcalanus pusillus	100
Nauplius larva Copepoda sp	50
C i r r i p e d i a	
Cypris larva Cirripedia sp	650
Nauplius	1400
D e c a p o d a	
Megalopa larva Cancer sp	100
5. M o l l u s c a	
Lamelli branchiata	
Cardium edule(0.4 m.m)	50
Mytilus edulis (0.2 m.m)	500
Petricola pheladiformis	150
6. E c h i n o d e r m a t a	
Young Echinodermata (0.4 m.m)	50
7. E g g s	
E v e r t e b r a t a	
Egg medusa	50

DATA SAMPLING

JULY 1969

Station: "Pier" A, Scheveningen, two hours before high water
Date: 28th July 1969

- | | |
|----------------------------|--|
| Hauls | III. "Pier" A, Scheveningen |
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Warm and mostly sunny weather. There is a chance for local thunder. Wind mostly light |
| 4. Weather, while hauling | Sunny, yet hazy and visibility not very good |
| 5. Time of hauling | 12.25 - 12.37 by walking |
| 6. Distance, while hauling | + 144 meter by walking |
| 7. Temperature | In the air 31°C
In the water 21½°C |
| 8. Wind, while hauling | Indications
"Semaphore"
Direction: E.S.E-E.N.E.
Force: 5½ m/sec |
| 9. Lighthours a day | 15.48 a day |
| 10. Tides | 2nd H.W. 12.14.25 |
| 11. Water Levels | a. when hauling - 22 cm N.A.P.
b. when H.W. (2nd) + 9 cm "
c. when L.W. before hauling - 45 cm |
| 12. Direction of streams | Two hours before H.W. |

13. Chemical analysis

Chloride: 15800 mg/l
Phosphate: 1.1 mg/l
Nitrate: 3 mg/l

SAMPLING DATA

JULY 1969

Station: ~~111~~ Haul A "Pier" Scheveningen, with the fine nets
 Date: 28th July 1969

1. B a c i l l a r i o p h y c e a e	
Bellarocha malleus	250
Biddulphia aurita	750
" mobiliensis	6250
" sinensis	2250
Cerataulina sp.	13000
Chaetoceros sp.	25250
Coscinodiscus excentricus	750
" granii	2000
Ditylum brightwelli	250
Eucampia zoodiacus	3000
Lauderia borealis	250
Leptocylindricus danicus	10000
Rhizosolenia sp.	668250
Skeletonema costatum	187250
Thalassiosira sp.	250
2. P r o t o z o a	
Foraminifera sp.	100
Noctiluca miliaris	55000
3. C o e l e n t e r a t a	
Obelia sp.	50
Phialidium sp.	300
Sarsia sp.	50
4. C t e n o p h o r a	
Pleurobrachia pileus	50
5. C h a e t o g n a t h a	
Sagitta elegans	50
6. P o l y c h a e t a	
Polychaeta larva sp.	150
sp	100
Terebella larva	50
7. C r u s t a c e a	
A m p h i p o d a	
Amphipoda sp.	100
C o p e p o d a	
Acartia clausi	100
Anomalocera sp.	50
Calanus finmarchicus	50
Centropages hamatus	1550
Microcalanus pusillus	500
Nauplius larva Copepoda sp	50
Temora longicornis	300
C i r r i p e d i a	
Cypris larva Copepoda sp.	150
Nauplius " " "	250
H a r p a c t i c o i d a	
Harpacticoida sp	200
8. M o l l u s c a	
G a s t r o p o d a	
Spiratella helicorna(0.3 mm)	50
Lamelli branchiata	
Cardium edule (0.3mm)	150
Mytilus edulis (0.2mm)	100
9. T u n i c a t a	
Oikopleura dioica	900
10. E g g s	
Evertebrata	300
Gastropoda	250

DATA SAMPLING

JULY 1969

Station: "Pier" B, Scheveningen, two hours after high waterDate: 28th July 1969

Hauls

1. Place of hauling

2. Situation

3. Weather forecast

4. Weather, while hauling

5. Time of hauling

6. Distance while hauling

7. Temperature

8. Wind while hauling

9. Lighthours a day

10. Tides

11. Water Levels

12. Direction of streams

IV. "Pier" B Scheveningen

"Pier" Scheveningen

± 300 meter from the beach

Warm and mostly sunny weather.
There is a chance for local
thunder. Wind mostly lightWeather close; sunny and some
patches of blue.

Visibility not very good, hazy

15.56 - 16.08 by walking

± 144 meter by walking

On the air $35\frac{1}{2}^{\circ}\text{C}$ In the water 21°C

Indications

"Semaphore"

Direction E.S.E.-S.E.

Force: $5\frac{1}{2}$ m/sec.

15.48 a day

2nd H.W. 14.25

a. when hauling + 58cm N.A.P.

b. when H.W. 2nd + 9 cm

c. when L.W. when hauling -75 cm

Two hours after H.W.

13. Chemical analysis

Chloride: 16700 mg/l

Phosphate: 0.95 mg/l

Nitrate: 3 mg/l

SAMPLING DATA

JULY 1969.

Station: ~~W~~ Haul B "Pier" Scheveningen, with the fine nets

Date: 28th July 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	200
Biddulphia mobiliensis	8000
" sinensis	200
Cerataulina sp.	16200
Chaetoceros sp.	20600
Coscinodiscus concinnus	1000
" excentricus	2400
" granii	1800
Ditylum brightwelli	500
Eucampia zoodiacus	1600
P etoculindricus danicus	43200
Rhizosolenia sp.	592000
Skeletonema costatum	66200
2. P r o t o z o a	
Noctiluca miliaris	12200
3. C o e l e n t e r a t a	
Obelia sp.	50
4. P o l y c h a e t a	
Larva Polychaeta sp	150
Polychaeta sp	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	250
Centropages hamatus	750
Microcalanus Copepodaxs pusillus	300
Nauplius larva Copepoda sp	300
C i r r i p e d i a	
Nauplius larva Cirripedia sp	100
D e c a p o d a	
Zoea larva Carcinus maenas	50
6. M o l l u s c a	
Lamelli branchiata	
Mytilus edulis (0.2 m.m)	100
7. E c h i n o d e r m a t a	
Bipinnaria larva	50
8. T u n i c a t a	
Oikopleura dioica	800
9. E g g s	
Gastropoda egg	100
Evertebrata "	200

SAMPLING DATA

AUGUST 1969

Station: "Pier A" two hours before high water

Date: 8th August 1969

- | | |
|---|---|
| 1. Hauls | ✓ "Pier" A, Scheveningen |
| 2. Place of hauling | "Pier" Scheveningen |
| 3. Situation | + 300 meter from the beach |
| 3. Weather forecast | During the night and early morning
dry weather with sunny periods
Temperature locally mist.
In the morning dry weather with
sunny periods. Temperature a little
higher. |
| 4. Weather conditions,
while hauling | Sunny, no clouds. Yet somewhat hazy.
Visibility rather good. Sea calm,
brownish. |
| 5. Time of hauling | 9.28 - 9.40 by walking |
| 6. Distance, while hauling | + 144 meter by walking |
| 7. Temperature | In the air 21 ⁰ C
In the water 24 ¹ / ₂ ⁰ C |
| 8. Wind | "Semophore"
Direction: E.N - E.S.E.
Force: 3 ¹ / ₂ m/sec |
| 9. Light hours a day | 15.06 a day |
| 10. Tides | 1st H.W. 11.25 |
| 11. Water-Levels | a. when hauling + 8 cm N.A.P.
b. when H.W.(1st) + 53 cm
c. when L.W.before hauling - 68 cm |
| 12. Direction of streams | Two hours before H.W. |
| 13. Chemical analysis | Chloride: 1.7400 mg/l
Phosphate: 0.40 mg/l
Nitrate 2 mg/l |

SAMPLING DATA

AUGUST 1969

Station: "Pier" A Scheveningen taken with the fine net

Date: 8st August 1969

TYPES	ABUNDANCE
1. B a c i l l a r i o p h y c e a e	
Biddulphia aurita	500
" mobiliensis	3000
" sinensis	2000
Cerataulina bergonii	1250
Chaetoceros sp	162000
Coscinodiscus concinnus	250
" excentricus	1250
" granii	1250
Eucampia zodiacus	12250
Leptocylindricus danicus	750
Rhizosolenia sp	629500
Skeletonema costatum	82250
Thalassiosira sp	250
2. P r o t o z o a	
Noctiluca miliaris	750
3. C o e l e n t e r a t a	
Young Sarsia tubulosa (2mm)	50
" Margelopsis haekeli (2mm)	50
Phialidium hemisphericum	450
4. P o l y c h a e t a	
Polychaeta sp	500
5. C r u s t a c e a	
Copepoda	
Acartia clausi	150
Centropages hamatus	300
Cirripedia	
Cypris larva Cirripedia sp	100
6. T u n i c a t a	
Oikopleura dioica	50
7. E g g s	
Evertebrata egg	50

SAMPLING DATA

AUGUST 1969

Station: "Pier" B two hours after high waterDate: 8th August 1969

Hauls	H. "Pier" B Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	During the night and early morning locally mist. In the morning dry weather with sunny periods. Temperature a little higher,
4. Weather conditions while hauling	Still sunny, yet more cloudy than in the morning. Weather close hazy. Visibility rather good. Sea rather calm, brownish
5. Time of hauling	14.12 - 14.25 by walking
6. Distance while hauling	+ 144 meter by walking
7. Temperature	In the air 30°C In the water 20½°C
8. Wind	"Semaphore" Direction: E - S.E. Force: 5½ m/sec
9. Lighthouse a day	15.06 a day
10. Tides	1st H.W. 11.25
11. Water-Levels	a. when hauling + 16 cm N.A.P. b. when H.W.(1st) + 53 cm " c. when L.W. before hauling -68cm
12. Direction of streams	Two hours after H.W.
13. Chemical analyses	Chloride: 17000 mg/l Phosphate: 0.40 mg/l Nitrate : 1 mg/l

SAMPLING DATA

AUGUST 1969

Station: Haul "Pier" B Scheveningen taken with the fine
Date: 8th August 1969 net

1. Bacillariophyceae	
Biddulphia aurita	500
" mobiliensis	1500
" sinensis	6000
Chaetoceros sp	11200
Coscinodiscus concinnus	2000
" excentricus	1000
" granii	2500
Eucampia zoodiacus	15000
Rhizosolenia sp	721500
Skeletonema costatum	160000
Thalassiosira sp	2500
2. Protozoa	
Noctiluca miliaris	500
3. Coelenterata	
Phialidium hemisphericum	600
4. Ctenophora	
Pleurobrachia pileus	300
5. Polychaeta	
Polychaeta sp	100
6. Crustacea	
Copepoda	
Acartia clausi	100
Centropages hamatus	150
Microcalanus pusillus	50
Temora longicornis	50
Cirripedia	
Cypris larva Cirripedia sp	50
7. Tunicata	
Oikopleura dioica	50

SAMPLING DATA

AUGUST 1969

Station: "Pier" A two hours before high water

Date: 22nd August 1969

Hauls	III. "Pier" A Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Fresh weather, occasionally showers. Wind moderate to fresh, between West and North.
4. Weather conditions while hauling	Cloudy with patches of blue Rainclouds too. Visibility good.
5.	Sea choppy.
5. Time of hauling	7.05 - 7.17 by walking
6. Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air 17°C In the water 16°C
8. Wind	Semaphore Direction W.N.W. Force: 10m/sec.
9. Light hours a day	14.15 a day
10. Tides	1st H.W. 8.57
11. Water-Levels	a. when hauling + 52 cm N.A.P. b. when H.W. (1st) + 105 cm c. when L.W. before hauling 35 cm -35 cm
12. Direction of streams	Two hours before H.W.

13. Chemical analysis

Chloride: 15100 mg/l
Phosphate: ~~3 mg/l~~ 7.5 mg/l
Nitrate: 3 mg/l

Station: "Pier" A, Scheveningen, taken with the fine net

Date: 22nd August 1969

1. Bacillariophyceae	
Biddulphia alternans	150
" aurita	1200
" mobiliensis	18450
" regia	150
" sinensis	18000
Coscinodiscus concinnus	600
" excentricus	2400
" granii	34650
Ditylum brightwelli	900
Rhizosolenia sp	150
Skeletonema costatum	3300
Thalassiosira sp	750
2. Protozoa	
Empty vase Tintinnid sp	150
Foraminifera sp	750
Noctiluca miliaris	1950
3. Coelenterata	
Sarsia prolifera	50
4. Polychaeta	
Empty vase Terebella larva	200
Polychaeta sp	50
Spionid larva	150
5. Crustacea	
Copepoda	
Acartia clausi	1300
Microcalanus pusillus	900
Nauplius larva Co. sp	350
Temora longicornis	400
Cirripedia	
Cypris larva Cirripedia sp	250
Nauplius " " "	150
Harpacticoida	
Harpacticoida sp	200
Cladocera	
Cladocera sp	100
6. Mollusca	
Cardium sp(0.15 m.m.)	100
Mytilis edulis (0.15 m.m.)	150
Spisula sp (0.15 m.m)	200
Tellina sp (0.2 m.m)	500
7. Echinodermata	
Echimopluteus larva	50
8. Eggs	
Evertebrata	
Gastropoda sp	150
9. Fish	
Gadus minutus(10 m.m)	50

SAMPLING DATA

AUGUST 1969

Station: "Pier" B two hours after hig water

Date: 22nd August 1969

Hauls	IV "Pier" B Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Fresh weather, occasionally showers. Wind moderate to fresh, between West and North.
4. Weather conditions while hauling	More sunny than during the first haul. Sea less choppy. Visibility good.
5. Time of hauling	11.07 - 11.19 by walking
6. Distance, while hauling	+ 144 meter by walking
7. Temperature	In the air 18½°C In the water 15°C
8. Wind	Semaphore Direction: S.W. - W Force: 6½ cm/sec
9. Light hours a day	14.15 a day
10. Tides	1st H.W. 8.57
11. Water-Levels	a. when hauling + 68 cm N.A.P. b. when H.W. (1st) + 105 cm c. when L.W. before hauling - 35 cm
12. Direction of streams	Two hours after H.W.

13. Chemical analysis

Chloride: 14900 mg/l
Phosphate: 1.3 mg/l
Nitrate: ~~1.5~~ 3 mg/l

SAMPLING DATA

AUGUST 1969

Station: Hauls "Pier" B, Scheveningen, taken with the fine net
 Date: 22nd August 1969

1. Bacillariophyceae	
Bellarochea malleus	100
Biddulphia alternana	250
" mobiliensis	12100
" sinensis	103600
Coscinodiscus concinnus	850
" excentricus	3600
" granii	6100
Ditylum brightwelli	350
Chaetoceros sp	100
Skeletonema costatum	1250
Thalassiosira sp	1350
2. Protozoa	
Noctiluca miliaris	750
3. Coelenterata	
Sarsia prolifera	300
4. Polychaeta	
Polychaeta sp	150
5. Nematoda	
Nematoda sp	100
6. Crustacea	
Copepoda	
Acartia clausi	800
Centropages hamatus	100
Microcalanus pusillus	1800
Nauplius larva Cop sp.	2400
Temora Temora longicornis	200
Cirripedia	
Cypris larva Cirripedia sp	500
Nauplius " " "	1550
Harpaeticoida	
Harpaeticoida sp	100
Amphipoda	
Amphipoda sp.	50
Mysidacea	
Leptomysis gracilus	100
Decapoda	
Megalopa larva Carcinus maenas	100
7. Mollusca	
Cardium sp(0.32 mm)	150
Glycymeris glycymeris	150
Spisula (0.2 mm)	600
Mytilus edulis (0.2 mm)	850
8. Echinodermata	
Echinopluteus larva	200
9. Ectoprapta	
Cyphonautes larva	50
Membranipora membranacea	100
10. Eggs	
Gastropoda sp	
11. Fish	
Entelurus aequoreus	50
	50

4.3

DATA SAMPLING 1 SEPTEMBER 1969

at the "Pier" Scheveningen

Date: 5th September 1969

"Pier" A, two hours before high water

- | | |
|--------------------------------------|--|
| I. Hauls | I. "Pier" A, Scheveningen |
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Weather mainly dry, with clouds and occasionally sunny. Wind mostly light, between West and North. Little change in temperature. |
| 4. Weather conditions, while hauling | Blue sky. Near the horizon bank of clouds, misty. Visibility rather good. Sea calm light brown. |
| 5. Time of hauling | 7.17 - 7.29 by walking |
| 6. Distance while hauling | + 144 meter by walking |
| 7. Temperature | In the air 12°C
In the water 12°C |
| 8. Wind | Semaphore
Force: 3½ m/sec
Direction: E. |
| 9. Lighthours a day | 13.21 a day |
| 10. Tides | 1st H.W. 9.17 |
| 11. Waterlevels | a. when hauling + 14 cm
b. when High water(1st) + 50 cm.
c. when Lowwater before hauling - 65 cm. |
| 12. Direction of streams | Two hours before H.W. |

13. Chemical analyses

Chloride: 174
Phosphate: 2.1
Nitrate: trace

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Quantitative Lists Hauls Scheveningen "Pier" 1969
Taken with the fine net.

I. Haul "Pier" A, Scheveningen
5th September 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	4200
Biddulphia aurita	900
" mobiliensis	196200
" sinensis	172200
Chaetoceros sp.	1200
Cāscinodiscus concinnus	40800
" excentricus	157800
" granii	400200
Ditylum brightwelli	900
Eucampia zoodiacus	10500
Fragilaria sp.	2100
Leptocylindricus danicus	4800
Rhizosolenia sp.	180600
Skeletonema costatum	11700
Thalassiosira sp	300
2. P r o t o z o a	
Noctiluca miliaris	2100
3. C o e l e n t e r a t a	
Phialidium hemisphericum	300
4. P o l y c h a e t a	
polychaeta larva	1400
Polychaeta sp	1000
Terebella larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	400
Microcalanus pusillus	350
Temora longicornis	100
Nauplius larva Cop.sp	50
I s o p o d a	
Euridice pulchra	100
A m p h i p o d a	
Amphipoda sp	50
D e c a p o d a	
Zoea larva Carcinus maenas	50
C i r r i p e d i a	
Cypris larva Cirripedia sp	200
Nauplius " " "	200
H a r p a c t i c o i d a sp	150
6. S a l p i d a	
Akopleura dioica	50

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DATA SAMPLING SEPTEMBER 1969
at the "Pier" Scheveningen

II. "Pier" B, two hours after high water
5th September 1969

I. Hauls	II. "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	± 300 meter from the beach
3. Weather forecast	Weather mainly dry, with clouds and occasionally sunny. Wind mostly light, between West and North. Little change in temperature
4. Weather conditions, while hauling	More cloudy than during A. Blue patches in the sky and the sun shining through the clouds. More mist at the horizon and visibility less than in the morning. Sea still calm, yet more wind than in the morning. Colour of the sea light brown.
5. Time of hauling	11.22 - 11.34 by walking
6. Distance while hauling	± 144 meter by walking
7. Temperature	In the air 18°C In the water 15°C
8. Wind	Semaphore Force: 4 Direction: N.N.E.
9. Lighthouse a day	13.21 a day
10. Tides	1st H.W. 9.17
11. Waterlevels	a. when hauling + 11 cm. b. when High water(1st) + 50 cm. c. when Low water before hauling - 65 cm.
12. Direction of streams	Two hours after H.W.
13. Chemical analyses	Chloride: 17,2 Phosphate : 2,1 Nitrate : /

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* Quantitative Lists Hauls Scheveningen "Pier" 1969
Taken with the fine net.

II. Haul "Pier" B, Scheveningen
5th September 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochia malleus	5750
Biddulphia mobiliensis	424250
" regia	2500
" sinensis	31800
Chaetoceros sp	750
Coscinodiscus concinnus	42750
" excentricus	150750
" granii	385500
Ditylum brightwelli	750
Eucampia zodiacus	13000
Fragilaria sp	4000
Lauderia borealis	250
Leptocylindricus danicus	7000
Rhizosolenia sp	
Skeletonema costatum	15150
Thalassiosira sp	50
2. P r o t o z o a	
Noctiluca miliaris	22500
3. C o e l e n t e r a t a	
Phialidium sp	100
4. P o l y c h a e t a	
Empty vase Terebella larva	50
Polychaeta sp	600
Polychaeta larva	3100
Terebella larva	50
5. C r u s t a c e a	
Copepoda	
Acartia clausi	400
Microcalanus pusillus	1050
Nauplius larva Cop. sp.	3350
Cirripedia	
Cypris larva Cirripedia sp	100
Nauplius " " "	3250
Cladocera	
Podon sp.	50
Decapoda	
Zoea larva Carcinus maenas	50
6. M o l l u s c a	
Lamelli branchiata	
Mytilus edulis (0.2 mm)	200
7. S a l p i d a	
Oikopleura dioica	50
8. E c t o p r o c t a	
Cyphonautes larva	
Membranipora membranacea	100
9. E c h i n o d e r m a t a	
Young Echinodermata sp. (0.5 mm)	50

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DATA SAMPLING SEPTEMBER 1969
at the "Pier" Scheveningen

III. ~~XXX~~. "Pier" A, two hours before high water,
22nd September 1969

III. "Pier" A, Scheveningen

- | | |
|--------------------------------------|--|
| 1. Place of hauling | "Pier" Scheveningen. |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Cold night, clearing of the sky. Wind light and in the South-Eastern part of the country night frost. In the morning gradually more cloudy, but dry weather at most places of the country. |
| 4. Weather conditions, while hauling | At the beginning no sunshine, sky overcast with a few blue patches. During hauling the sun came through. Visibility rather good. Sea light-brown, choppy. |
| 5. Time of hauling | 10.07 - 10.17 by walking |
| 6. Distance while hauling | + 144 meter by walking |
| 7. Temperature | In the air 18°C
In the water 15°C |
| 8. Wind | Semaphore
Force:
Direction: |
| 9. Lighthours a day | 12.17 a day |
| 10. Tides | 1st H.W. 12.13 |
| 11. Waterlevels | a. when hauling + 12 cm
b. when High water(1st) + 120 cm
c. when Low water - 54 cm
before hauling |
| 12. Direction of streams | Two hours before hauling |

13. Chemical analyses

Chloride: 1.58
Phosphate: 0.30
Nitrate: 2

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Quantitative Lists Hauls Scheveningen "Pier" 1969
Taken with the fine net

III. Hauls "Pier" A Scheveningen
22nd September 1969

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	150
" mobiliensis	3 480
" regia	450
" sinensis	60750
Coscinodiscus concinnus	17200
" excentricus	12750
" granii	12000
Ditylum brightwelli	450
Rhizosolenia sp	2300
2. P r o t o z o a	
Noctiluca miliaris	1350
Foraminifera sp.	300
3. C o e l e n t e r a t a	
Phialidium hemisphericum	350
Sarsia sp (o.2 mm)	200
4. P o l y c h a e t a	
Polychaeta larva	50
" sp.	50
Polynoid larva	50
Lepidonotus sp	
Terebella larva	50
Vase(empty) Terebella larva	300
5. C r u s t a c e a	
C o p o p e d a	
Acartia clausi	13200
Anomalocera patersoni	100
Centropages hamatus	7150
Microcalanus pusillus	11900
Nauplius larva	50
Copepoda sp	
Temora longicornis	850
C i r r i p e d i a	
Cypris larva Cirripedia sp	250
Nauplius " " "	100
H a r p a c t i c o i d a	
Harpacticoida sp	3800
6. M o l l u s c a	
L a m e l l i b r a n c h i a t a	
Cardium sp (o.22 mm)	100
Mactra corallina (o.25 mm)	50
Mytilus edulis (0.2 mm)	50
Glycymeris glycymeris (o.3mm)	200
Venus sp (o.2 mm)	100
7. E c t o p r o c t a	
Cyphonautes larva	50
Membranipora membranacea	
8. E g g s	
W E v e r t e b r a t a	
Gastropoda sp	50

IV. "Pier" B, Scheveningen two hours after high water
22nd September 1969

- | | |
|---|--|
| I. Hauls | IV. "Pier" B Scheveningen |
| 1. Place of hauling | "Pier" Scheveningen |
| 2. Situation | + 300 meter from the beach |
| 3. Weather forecast | Cold night, clearing of the sky.
Wind light and in the South-Eastern
part of the country night frost.
In the morning gradually more cloud
but dry weather at most places of
the country. |
| 4. Weather conditions,
while hauling | Cloudy but also blue patches.
Visibility good. Sea brownish
green, but less than during hauling
the sun came through. Visinility
rather good. Sea-light-brown choppy
<i>in the morning</i> |
| 5. Time of hauling | 14 - 14.10 by walking |
| 6. Distance, while hauling | + 144 meter by walking. |
| 7. Temperature | In the air 23°C
In the water 16°C |
| 8. Wind | Semaphore
Force:
Direction: |
| 9. Lighthours a day | 12.17 a day |
| 10. Tides | 1st H.W. 12.13 |
| 11. Waterlevels | a. when hauling + 109 cm
b. when High water(1st) + 120 cm
c. when Low water before hauling
- 54 cm |
| 12. Direction of streams | Two hours after hauling |

13. Chemical analyses

Chloride: 13.0
Phosphate: 0.90
Nitrate: 6.

Quantitative Lists Hauls Scheveningen "Pier" B.
taken with the fine net.

IV. Haul "Pier" B, Scheveningen
22nd September 1969

1. B a c i l l a r i o p h y c e a e	
Bellarochea malleus	750
Biddulphia alternans	250
" ^M Mobilienensis	34250
" regia	2000
" sinensis	242750
Coscinodiscus concinnus	67750
" excentricus	48500
" granii	55750
Ditylum brightwelli	750
Fragilaria sp	250
Rhizosolenia sp	3250
2. P r o t o z o a	
Noctiluca miliaris	13500
Foraminifera sp	50
3. C o e l e n t e r a t a	
Phialidium hemisphericum	1250
Sarsia sp.	700
4. P o l y c h a e t a	
Polychaeta sp	50
Polychaeta larva	50
Empty vase Terebella larva	200
5. C r u s t a c e a	
C o p e p o d a	
Acartia clausi	9400
Anomalocera patersoni	50
Centropages hamatus	2050
Microcalanus pusillus	8200
Nauplius larva Copepoda sp	300
Temora longicornis	800
C i r r i p e d i a	
Cypris larva Cirripedia sp.	150
Nauplius larva " "	650
H a r p a c t i c o i d a	
Harpacticoida sp,	400
6. M o l l u s c a	
L a m e l l i b r a n c h i a t a	
Mactra corallina (o.25 mm)	100
Venus sp (o.2 mm)	50
7. E g g s	
E v e r t e b r a t a	
Gastropoda egg	50

