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

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24th August - 4th November 1974

by dr. Joh.a Muller

DATA SAMPLING AUGUST AND SEPTEMBER 1974

I Haul "Pier" B, Scheveningen, one hour after high water.

Date: 26th August 1974.

Hauls	I "Pier" B, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	\pm 300 meter from the beach
3. Weather forecast	Most places dry, sunny periods, but in the western and northern parts of the country also some cloud-fields. Wind light to moderate, South-Western. Maximum temperature about 20° C. in the North-Western parts of the country about 24° C _x in the middle of the country
4. Weather, while hauling	Blue sky, light clouds, sunshine. Warm weather very close, Sea calmed light green, transparent Hazy, the horizon was not distinctly visible
5. Distance while hauling	\pm 144 meter by walking
6. Temperature	Air 25° C Water 19° C
7. Wind during hauling	Data Semaphore Direction S.B.W. Velocity 4m/sec
8. Tides	1st High Tide 9.22
9. Time of hauling	10.45 - 10.57
10. Lighthours a day	14 hours
11. Water Level	a. during hauling + 70cm b. before hauling - 52 cm + 1/8ger c. 1st H.W. (9.22) before hauling d. 2nd H.W. after hauling + 92 cm
12. Direction of streams	\pm 1 hour after High Tide
13. Direction of streams at Scheveningen	PO ₄ taken for P taken for N
14. Chemical analysis: taken for N PO ₄ taken for P.	Chloride in g/l + (NH ₄ and NO ₃) Ammonium N4 ⁺) 0.29 mgr/l Silicist mgr/l (eSi) 0.47 mgr/l Nitrate (NO ₃ ⁻) 0.35 mgr/l Chloride (Cl ⁻) 17.0 gr/l Phosphate (PO ₄) ortho - 0.0 mgr Ortho hydrolyseerbaarphosphate 0.07 mgr/l

DATA SAMPLING AUGUST AND SEPTEMBER 1974.

I Haul "Pier" B, Scheveningen ± one hour after High Tide

Date: 26th August 1974.

I Haul "Pier" B, Scheveningen	Total numbers of organisms in hauls
1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	500
" aurita	500
" mobiliensis	250
" sinensis	500
Cerataulina sp.	500
Chaetoceras sp	59750
Coscinodiscus concinnus	20250
" excentricus	21000
" granii	109250
Eucampia zoodiacus	500
Fragilaria sp.	250
Phaeocystis	not much present
Rhizosolenia sp.	6250
" alata	250
Skeletonema costatum	3500
Thalassiosira sp.	750
2. C o e l e n t e r a t a	
Phialidium hemisphericum	100
Sarsia sp.	50
3. P o l y c h a e t a	
Polychaeta sp.	100
" larva	800
Terebella "	50
4. N e m a t o d a	
Nematoda sp.	100
5. C r u s t a c e a	
C i r r i p e d i a	
Cypris larva Cir.sp.	50
Nauplius " " "	850
C o p e p o d a	
Acartia sp.	100
Nauplius larva Cop.sp.	50
I s o p o d a	
Isopoda sp.	50
A m p h i p o d a	
Amphipoda sp.	50
6. E c h i n o d e r m a t a	
Echinoplureus larva	50
7. C h a e t o n a t h a	
Sagitta sp	50
8. E g g s	
Evertebrata eggs	150

Sediment hardly measurable (pellets, vegetable rests, hardly any mud or sand).

Fishermen caught some mackerels

DATA SAMPLING AUGUST AND SEPTEMBER 1974.

II Haul "Pier" A, Scheveningen, one hour before high water

Date: 28th August 1974.

II "Pier" A, Scheveningen	II "Pier" A scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	± 300 meter from the beach
3. Weather forecast	Most places dry weather with sunny periods, but in the evening occasionally a shower. Minimum temperature 13°C near the sea, inland locally 8°C. Maximum temperature on the 28th of August 20°C.
4. Weather with hauling	At first not so warm, but later ± on very warm. Sunny weather. Blue Sky. At the distance near Katwijk dark clouds. Colour sea, nearby brown-greenish somewhat transparent. The day before strong wind on the day of hauling wind varying.
5. Distance while hauling	± 144 meter by walking
6. Temperature	Air 21°C Water 18°C.
7. Wind during hauling	Data semaphore Direction N.W. Velocity 3½ m/sec.
8. Tides	1st High Tide 12.15
9. Time of hauling	10.52 - 11.04
10. Lighthours a day	13.53 hours
11. Water Level	a. during hauling - 40 cm b. H.W. after hauling 44 cm c. L.W. before hauling -62 cm
12. Direction of streams	± 1 hour before high tide
13. Direction of streams at Scheveningen	
14. Chemical analysis	Ammonium (NH ₄ ⁺) absent
Chloride in g/l	Silicaat, mg/l (Si) 0.12 mgr/l
+ NH ₄ and NO ₃ taken for N	Nitrate (NO ₃) 0.52 mgr/l
PO ₄ taken for P	Chloride (Cl) 15,6 gr/l
	Phosphate (PO ₄ ⁻) ortho 0.05 mgr, Orthohydrolyseerbaar fosfaat 0.08 mgr/

DATA SAMPLING AUGUST AND SEPTEMBER 1974

Haul II "Pier A, Scheveningen, ± one hour before High Tide

Date: 28th August 1974

Haul II "Pier" A, Scheveningen	Total numbers of organism
1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	750
" aurita	600
" mobiliensis	450
" sinensis	4050
Chaetoceros sp.	12000
Coscinodiscus concinnus	29850
" excentricus	23550
" granii	232200
Eucampia zoodiacus	3000
Fragilaria sp.	150
Phaeocystis	present (not much)
Rhizosolenia sp.	1050
Skeletonema costatum	7650
Thalassiosira sp.	300
2. C o e l e n t e r a t a	
Phialidium hemispheridum	100
Sarsia sp.	50
3. P o l y c h a e t a	
Empty vase Terebella larva	50
Polychaeta larva	1650
Terebella larva	100
4. C r u s t a c e a	
Cirripedia	
Nauplius larva Cir. sp.	550
Cypris larva " "	150
Copepoda	
Acartia sp.	100
Centropages sp.	50
Harpacticoida	
Harpacticoida sp.	350
5. E c h i n o d e r m a t a	
Echinopluteus larva	100
6. C h a e t o g n a t h a	
Sagitta sp.	100
7. E g g s	
Evertebrata eggs	100

Sediment ± $\frac{1}{10}$ contents (pellets vegetable rests, mud and sand).

Fishermen caught not very much.

DATA SAMPLING AUGUST AND SEPTEMBER 1974.

III "Pier" A, Scheveningen, five hours before high water

Date: 2nd September 1974

<p>III Hauls</p> <p>1. Place of hauling</p> <p>2. Situation</p> <p>3. Weather forecast</p> <p>4. Weather while hauling</p> <p>5. Distance, while hauling</p> <p>6. Temperature</p> <p>7. Wind during hauling</p> <p>8. Tides</p> <p>9. Time of hauling</p> <p>10. Hightours a day</p> <p>11. Water Level</p> <p>12. Direction of streams</p> <p>13. Direction of streams at Scheveningen</p> <p>14. Chemical analysis</p>	<p>III "Pier" A, Scheveningen</p> <p>"Pier" Scheveningen</p> <p>± 300 meter from the beach</p> <p>At first rather sunny, later on there may be a shower or thunder-storm. Light wind between Northern and Eastern. Temperature between 22°C and 23°C.</p> <p>Warm weather, close. Blue sky sunny light clouds. Colour sea brown-green somewhat transparent, at the place of hauling; at the distance grey-blue. Sea calm, yet waves were comin pointing to a change of weather. Wind light variable. Visibility good</p> <p>± 144 meter by walking</p> <p>Air 21°C. Water 18°C</p> <p>Data semaphore Direction S.S.E. Velocity 6½m/sec.</p> <p>2 and high tide 15.47</p> <p>10.33 - 10.45</p> <p>13.34</p> <p>a. during hauling - 65 cm b. H.W. after hauling + 101cm c. L.W. before hauling - 66 cm.</p> <p>± 5 hours before H.Tide</p> <p>Ammonium (NH₄⁺) 0.18 mgr/l Silicaat Si⁴ 0.50 mgr/l Nitrate (NO₃⁻) 0.47 mgr/l Phosphate (PO₄⁻) ortho 0.04 mgr. Chloride (Cl) 16,4 mgr/l Ortho + hydrolyseerbaar fosfaat 0.08 mgr/l</p>
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DATA SAMPLING AUGUST AND SEPTEMBER 1974

Haul III "Pier" A, Scheveningen \pm 5 hours before High Tide

Date: 2 September 1974.

Haul III "Pier" A, Scheveningen	Total numbers of organisms in haul.
1. Bacillariophyceae	
Biddulphia alternans	300
" aurita	600
" mobiliensis	1200
" sinensis	600
Cerataulina sp.	1200
Chaetoceros sp.	1500
Coscinodiscus concinnus	36700
" excentricus	11100
" granii	151200
Eucampia zoodiacus	600
Fragilaria sp.	900
Halosphaera viridis	present
Lauderia sp.	600
Phaecocystis	present
Rhizosolenia sp.	600
Skeletonema costatum	600
2. Coelenterata	
Phialidium hemisphericum	150
3. Polychaeta	
Polychaeta larva	1500
4. Crustacea	
Cirripedia	
Nauplius larva Cir sp.	350
Harpacticoida	
Harpacticoida sp.	250
" " with eggs	50
Decapoda	
Zoea larva Crangon sp.	50
Amphipoda	
Amphipoda sp.	50
Cladocera	
Podon sp.	50
5. Mollusca	
Lamellibranchiata	
Cardium echinatum (0.3 mm)	50
Mytilis edulis (0.2 mm)	50
6. Echinodermata	
Echinodermata larva	50
7. Eggs	
Evertebrata egg	150

Sediment $\pm \frac{1}{10}$ contents (mud,
pellets, vegetable rests)

The fishermen caught not much
(small) flounders ondeel

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DATA SAMPLING AUGUST AND SEPTEMBER 1974.

IV "Pier" A, Scheveningen, two hours before high water

Date: 13rd September 1974.

Hauls	IV "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	± 300 meter from the beach
3. Weather forecast	Rather many clouds with locally a shower . wind mostly moderate, veering from South to South-West. Minimum temperature about 23° C. Maximum temperature about 19° C.
4. Weather while hauling	Grey sky, hazy and no sunshine, near place of hauling dark green-brown and somewhat transparent. Visibility not very good. Much wind, becoming stronger.
5. Distance, while hauling	± 144 meter by walking
6. Temperature	Air 18° C. Sea 16° C.
7. Wind during hauling	Data Semaphore Direction S.W. Velocity 10m/sec.
8. Tides	2nd H.T. 12.47
9. Time of hauling	11.12 - 11.24
10. Lighthours a day	12.57
11. Water Level	a. during hauling + 52 cm b. H.W. after hauling + 85 cm c. L.W. before hauling - 79 cm
12. Direction of streams	± 2 hours before high Tide.
13. Direction of streams at Scheveningen	
14. Chemical analysis	Ammonium (NH ₄ ⁺) 0.4 mgr/l Silicaat mg/l (Si) 0.5 mgr/l Nitrate (NO ₃ ⁻) 0.7 mgr/l Phosphate (PO ₄ ⁻) ortho 0.0.2 mgr/l Chloride (Cl ⁻) 15,1 gr/l Ortho + hydrolyseerbaar fosfaat 0.09 mgr/l

DATA SAMPLING AUGUST AND SEPTEMBER 1974.

Haul IV "Pier" A, Scheveningen, two hours before High Tide.

Date: 13 September 1974.

Haul IV "Pier" A, Scheveningen	Total numbers of organisms in haul
1. B a c i l l a r ŏ p h y c e a e	
Biddulphia mobiliensis	16400
" regia	13600
" sinensis	14520
Coscinodiscus concinnus	6300
" excentricus	11000
" granii	66000
la. P r o t o z o a Noctiluca miliaris	49600
2. C o e l e n t e r a t a	
Obelia sp.	250
Phialidium hemisphericum	500
Sarsia sp.	200
3. P o l y c h a e t a	
Polychaeta larva	2150
Terebella "	50
4. N e m a t o d a	
Nematoda sp.	50
5. C r u s t a c e a	
Copepoda	
Acartia sp.	350
Centropages sp.	700
" with parasites	50
Microcalanus pusillus	100
Nauplia Larva Cop sp.	300
Temora Longicornis	100
C i r r e p i d i a	
Cypris Larva Cir.sp.	200
Nauplius " " "	150
D e c a p o d a	
Megalopa larva Crangon sp.	50
Zoea larva Crangon sp.	250
H a r p a c t i c o i d a	
Harpacticoida sp.	32900
Harpacticoida sp. with eggs	1250
A m p h i p o d a	
Amphipoda sp.	50
6. M o l l u s c a	
G a s t r o p o d a	
Natica catena	150
L a m e l l i b r a n c h i a t a	
Mytilus edulis (0.2mm)	150
7. C h a e t o g n a t t h a	
Sagitta sp.	50
8. E c h i n o d e r m a t a	
Echinopluteus larva	50
9. E g g s	
Evertibrata	
E v e r t e b r e t a sp.	150
Packet with eggs	7500
possibly of a Harpacticoida sp.	
Sediment ± 1/9 contents (mud, sand, pellets, veg, rests)	
Fishermen caught some fish (mackerel, dab and a blenny)	

DATA SAMPLING SEPTEMBER AND OCTOBER 1974.

V "Pier" A, Scheveningen, 3 hours before High tide

Date: 16th September 1974.

Hauls	V "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	<u>±</u> 300 meter from the beach
3. Weather forecast	(Forecast of 16th September) During the night and morning mist at many places. To-morrow after noon, sunny periods. Light winds during the night. During the day wind light to moderate, South-Western.
4. Weather while hauling	A very thick mist. Everything was grey and from the "Pier", when walking I could not distinguish sands and water. Near the place of hauling the water was green-brown and when occasionally there was a glimpse of light, the sea appeared transparent. Sea calm, no visibility
5. Distance while hauling	<u>±</u> 144 meter by walking
6. Temperature	Air 21 ⁰ C Water 17 ⁰ C
7. Wind during hauling	Data Semaphore Direction NE-ENE Velocity 2m/sec.
8. Time of hauling	12.05 - 12.17
9. Lighthours	12.39
10. Tides	2nd high tide 15.23
11. Water Levels	a. during hauling - 48 cm b. L.W. before hauling - 62 cm c. H.W. after hauling + 120cm
12. Direction of streams	<u>±</u> 3 hours before high water
13. Direction of streams at Scheveningen	
14. Chemical analysis	Ammonium (NH ₄ ⁺) 0.3 mgr/l
Chloride mg/l	Silicaat Si 0.7 mgr/l
NH ₄ ⁺ en NO ₃ ⁻ als N	Nitraat (NO ₃ ⁻) 0.4 mgr/l
PO ₄ ⁻⁻ als P.	Chloride (Cl ⁻) 17,7 mgr/l
	Orthofosfaat (PO ₄ ⁻⁻⁻) 0.04 mgr/l
	Ortho + hydrolyseerbaar 0.12 mgr/l

DATA SAMPLING SEPTEMBER AND OCTOBER 1974

Haul V "Pier" A, Scheveningen, 3 hours before High Tide

Date: 16th September 1974.

Haul V "Pier" A Scheveningen	Total numbers of organisms in haul
1. B a c i l l a r i o p h y c e a e	
Biddulphia mobiliensis	7200
" Regia	19800
" sinensis	54000
Coscinodiscus concinnus	9900
" excentricus	2100
" granii	45600
Fragillaria	600
Lauderia borcalis	600
Lithodesmium undulatum	600
Phaeocystis undulatum	present
2. P r o t o c z o a	
Noctiluca miliaris	2900
3. P o l y c h a e t a	
Polychaeta larva	2150
Empty vase Terebella larva	50
Terebella larva	100
4. C o e l e n t e r a t o	
Obelia sp	100
Phialidium hemisphericum	100
5. C r u s t a c e a	
C o p e p o d a	
Acartia sp	100
Centropages sp	50
Microcalanus pusillus	150
Temora longicornis	50
C i r r i p e d i a	
Nauplius larva Cir sp.	150
Cypris larva	50
H a r p a c t i c o i d a	
Harpacticoida sp.	2150
Harpacticoida sp. with eggs	250
6. M o l l u s c a	
G a s t r o p o d a	
Natica catena	50
L a m e l l i b r a c h i a t a	
Modiolus modiolus (0.2mm)	50
7. E c h i n o d e r m a t a	
Young Echinodermata (0.5mm)	50
8. E c t o p r o c t a	
Membranipora membranacea	150
9. E g g s	
E v e r t e b r a t a	
Evertebrata sp.	50
Packet with eggs	100

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DATA SAMPLING SEPTEMBER AND OCTOBER 1974

VI "Pier" A, Scheveningen 4 hours before high tide

Date: 1st October 1974

Hauls	VI "Pier" A Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Locally some showers; locally thunderstorms or hail, but also periods with sun. Wind mostly moderate. Southern to South-Western. Near the coast veering to North-Western.
4. Weather while hauling	Weather dark cloudy with rain-showers but gradually the sky cleared and patches of blue where alternating with white and dark clouds. The sun came through. The colour of the sea was a mixture of green-grey and yellow patches, making it very beautiful. Visibility rather good. Sea-choppy, near place of hauling brown-green, not very transparent.
5. Distance while hauling	+ 144 meter by walking
6. Temperature	Air 11°C water 13°C
7. Wind during hauling	Data semaphore Direction N.W. velocity 4m/sec
8. Time of hauling	11.08 - 11.20
9. Lighthours	11.38
10. Tides	H.W. 15.15
11. Water Levels	a. during hauling -52 cm b. H.W. after hauling + 113 cm c. L.W. before hauling -54 cm
12. Direction of streams	+ 4 hours before H.W.
13. Direction of streams at Scheveningen	
14. Chemical analysis	Ammonium (NH ₄ ⁺) 0.4 mgr/l Silicaat (Si ⁴) 0.4 mgr/l Nitrate (NO ₃ ⁻) 0.6 mgr/l Chloride (Cl ⁻) 0.6 mgr/l 16.1 gr/l Phosphate (PO ₄ ⁻⁻⁻) 16.1 gr/l ortho 0.03 mgr/l Orthohydrolyseerbaar phosphate no data

DATA SAMPLING SEPTEMBER AND OCTOBER 1974

Haul VI "Pier" A, Scheveningen 4 hours before High Tide

Date: 1st October 1974

Haul VI "Pier" A, Scheveningen	Total numbers of organisms in haul
1. B a c i l l a r i o p h y c e a e	
Biddulphia sp.	1000
" alternans	250
" mobiliensis	8500
" regia	4750
" sinensis	38250
Coscinodiscus concinnus	9750
" excentricus	6000
" granii	59500
Ditylum brightwelli	750
Fragilaria sp.	200
2. P r o t o z o a	
Noctiluca miliaris	23250
3. C o e l e n t e r a t a	
Phialidium hemisphericum	50
4. P o l y c h a e t a	
Polycheta sp.	50
" larva	1850
Empty vase Terebella larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia sp.	650
Centropages sp.	500
Centropages sp with eggs	300
Microcalanus pusilius	200
Temora longicornis	350
C i r r i p e d i a	
Cypris larva Cir.sp.	50
Nauplius " " "	50
H a r p a c t i c o i d a	
Harpacticoida sp.	4250
" " with eggs	50
A m p h i p o d a	
Amphipoda sp.	150
M y s i d a c e a	
Mesopodopsis slabberi	300
6. E c h i n o d e r m a t a	
Echinodermata Echinopluteus larva	50
7. C h a e t o g n a t h a	
Sagitta sp.	200
8. E g g s	
E v e r t e b r a t a	
Evertebrata sp.	1900
Fish	50

Sediment $\pm \frac{1}{10}$ contents (sand, mud,
pellets, vegetable rests)

Hardly any fishing; no ~~inf~~ information

VII "Pier" A, Scheveningen, 5 hours before high tide

Date: 3rd October 1974

Hauls	VII "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	± 300 meter from the beach
3. Weather forecast	Clearing of the sky, but also some showers locally, especially near the coast. Maximum temperature about 12°C. Wind light to moderate from varying directions
4. Weather while hauling	Sky blue with white clouds. Hazy near horizon. Sea calm, grey and near place of hauling brown-green. A beautiful autumn-day with calm weather, through it already was cold
5. Distance when walking	± 144 meter by walking
6. Temperature	Air 16°C Water 13°C
7. Wind during hauling	Data semaphore Direction E.S.E. Velocity 3½ m/sec.
8. Time of hauling	11.15 - 11.27
9. Lighthours	11.36
10. Tides	1st H.W. 16.14
11. Water Levels	a. during hauling -64 cm b. H.W. after hauling + 117 cm c. L.W. after -68 cm
12. Direction of streams	± 5 hours before H.W.
13. Direction of streams at Scheveningen	
14. Chemical analysis	Ammonium (NH ₄ ⁺) 0.7 mgr/l Silicaat (Si ⁴) 1.0 mgr/l Nitrate (NO ₃ ⁻) 0.6 mgr/l Chloride (Cl ⁻) 17,4 gr/l Phosphate (PO ₄) ortho 0.11 mgr/l Orthohydrolyseerbaar phosphate 0.12 mgr/l

DATA SAMPLING SEPTEMBER AND OCTOBER 1974

Haul VII "Pier" A, Scheveningen, 5 hours before High Tide

Date: 3rd October 1974.

Haul VII "Pier" A, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia mobiliensis	14500
" regia	7250
" sinensis	93000
Coscinodiscus concinnus	10250
" excentricus	16000
" granii	94000
Ditylum brightwelli	500
Fragilaria sp.	750
2. P R o t o z o a	
Noctiluca miliaris	70400
3. C t e n o p h o r a	
Pleurobrachia pileus	100
4. C o e l e n t e r a t a	
Phialidium hemisphericum	100
5. P o l y c h a e t a	
Polychaeta larva	1450
Terebella "	50
6. C r u s t a c e a	
A m p h i p o d a	
Amphipoda sp.	50
C i r r i p e d i a	
Cypris larva Cir.sp.	250
C o p e p o d a	
Acartia sp.	350
Centropages sp.	250
" with eggs	50
" " " parasites	50
Microcalanus pusillus	100
Nauplius larva Cop.sp	50
Temora longicornis	50
H a r p a c t i o i d a	
Harpacticoida sp.	1450
Harpacticoida sp. with eggs	350
M y s i d a c e a	
Mesopodopsis slabberi	200
7. E c h i n o d e r m a t a	
Echinopluteus larva	100
Young Echinodermata	50
8. C h a e t o g n a t h a	
Sagitta sp.	200
9. S a l p i d a	
Oikopleura dioica	150
10. E g g s	
Evertebrata eggs	550

Sediment $\pm \frac{1}{12}$ contents
(mud, sand, pellets, vegetable
rests)
Hardly any fishing no information

DATA SAMPLING SEPTEMBER AND OCTOBER 1974

VIII "Pier" A, Scheveningen, 4 hours before high tide

Date: 18th October 1974.

Hauls	VIII "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Most places dry weather, occasionally sun and not much wind. During the night and morning fog in many places. Minimum temperature about freezing point; but quite near the sea about 5°C.
4. Weather while hauling	Blue sky with clouds; occasionally sunshine. Cold and after some days with hardly any wind and much mist, more wind was coming. Sea still rather calm, though getting choppy. Colour sea grey near place of hauling, light green-brown and transparent visibility not to bad.
5. Distance when walking	+ 144 meter by walking
6. Temperature	Air 8°C Water 10°C
7. Wind during hauling	Data semaphore Direction S.S.W. Velocity 6½ m/sec.
8. Time of hauling	12.13 - 12.25
9. Light hours	10.36
10. Tides	2nd H.W. 16.48
11. Water Levels	a. during hauling + 120 cm b. L.W. before hauling - 101 cm c. H.W. after " + 90 cm d. H.W. before " + 101 cm.
12. Direction of streams	+ 4 hours before H.W.
13. Direction of streams at Scheveningen	
14. Chemical analysis	Ammonium (NH ₄ ⁺) 0.7 mgr/l Silicaat mg (Si) 0.8 mgr/l Nitraat (NO ₃ ⁻) 0.8 mgr/l Chloride (Cl) 16.0 gr/l Phosphate (PO ₄ ⁺⁻) 0.10 mgr/l Ortho + hydrolyseerbaar phosphate 6,13 mgr/l

DATA SAMPLING SEPTEMBER AND OCTOBER 1974.

Haul VIII "Pier" A, Scheveningen, 4 hours before High Tide

Date: 18th October 1974.

Haul VIII "Pier" A, Scheveningen

1. B a c i l l a r i o p h y c e a e	
Biddulphia alternans	250
" mobiliensis	2500
" sinensis	13250
" regia	5000
Coscinodiscus concinnus	250
" excentricus	750
" granii	9000
Biddulphia sp.	2500
Rhizosolenia sp.	1000
2. P r o t o z o a	
Noctiluca miliaris	4750
3. C o e l e n t e r a t a	
Phialidium hemosphericum	50
4. P o l y c h a e t a	
Polychaeta larva	500
Empty vase Terebella larva	50
5. C r u s t a c e a	
C o p e p o d a	
Acartia sp.	800
Calanus sp.	100
Centropages sp.	450
Macrocalanus pusillus	50
Nauplius larva Cop.sp.	100
Temora longicornis	50
C i r r i p e d i a	
nauplius larva Cir.sp.	150
H a r p a c t i c o i d a	
Harpacticoida with eggs	50
Harpacticoida sp.	1450
6. E c h i n o d e r m a t a	
Young Asteria sp. (0.5mm)	100
7. C h a e t o g n a t h a	
* Sagitta sp.	300
8. M o l l u s c a	
Larva Littorina sp.	50
9. E c t o p r o c t a	
Membranipora membranacea	50
10. E g g s	
E v e r t e b r a t a	
Evertebrata sp.	350
Packet with eggs	450

DATA SAMPLING NOVEMBER 1974, JANUARY AND FEBRUARY 1975.

Haul IX "Pier" A, Scheveningen 6 hours before high water.

Date: 4th November 1974.

Hauls	IX "Pier" A, Scheveningen
1. Place of hauling	"Pier" Scheveningen
2. Situation	+ 300 meter from the beach
3. Weather forecast	Sunny periods and at most places dry weather. Wind light. Maximum temperature 8°C.
4. Weather, while hauling	Sky fully overcast; occasionally some vague light coming through. Hazy and rather cold. Wind getting Northern to North-Eastern. Visibility not too good. Sea calm and getting more choppy. Colour of the sea at the distance grey, near the horizon dark grey and near place of hauling brownish and not very transparent.
5. Distance, while hauling	+ 144 meter by walking
6. Temperature	Air 8°C Water 9°C.
7. Wind during hauling	Data Semaphore
8. Time of hauling	Direction N.E. Velocity 4m/sec 11.43 - 11.55
9. Tides	1st H.T. 5.22 2nd. H.T. 17.39
10. Lighthours a day	9.29
11. Water Levels	a. during hauling - 64 cm b. H.W. after hauling + 117 cm c. L.W. before hauling - 68 cm.
12. Direction of streams	+ 6 hours before H.T.
13. Direction of streams at Scheveningen	
14. Chemical analysis	
Chloride g/l	Ammonium (NH ₄ ⁺) 0.7 mgr/l
NH ₄ ⁺ en NO ₃ ⁻ als N	Silicaat Si 0.8 mgr/l
PO ₄ ⁻ als P	Nitraat (NO ₃ ⁻) 1.1 mgr/l
	Chloride } 14,3 gr/l
	Orthofosfaat (PO ₄ ⁻) 0.14 mgr/l
	Ortho + hydrolyseerbaar fosfaat 0.16 mg/l

DATA SAMPLING NOVEMBER 1974, JANUARY AND FEBRUARY 1975

Haul IX "Pier" A, Scheveningen, 6 hours before High Tide

Date: 4 November 1974.

Haul IX "Pier" A, Scheveningen	Total numbers or organisms in haul.
1. B a c i l l a r i o p h y c e a e	
Biddulphia sp.	800
" sinensis	60400
" mobiliensis	5600
Coscinodiscus concentricus	14200
" excentricus	4800
" granii	24600
Rhizosolenia sp.	400
2. P r o t o z o a	
Noctiluca miliaris	30200
3. C o e l e n t e r a t a	
Phialidium hemisphericum	100
4. P o l y c h a e t a	
Empty vase Terebella larva	50
Polychaeta larva	150
Terebella "	50
#5. N e m a t o d a	
Nematoda sp.	50
6. C r u s t a c e a	
C i r r i p e d i a	
Cypris larva Cir sp.	250
C o p e p o d a	
Acartia sp.	250
" " with eggs	50
" " with parasites	50
Centropages sp.	600
" " with eggs	50
Microcalanus pusillus	50
Nauplius larva Cop sp.	50
H a r p a c t i c o i d a	
Harpacticoida sp.	1250
M y s i d a c e a	
Mesopoc topon slabberi	50
d o p ' s i s	
7. C h a e t o g n a t h a	
Sagitta sp.	150
8. E g g s	
Evertabrata sp.	1600

