FISHERIES AND ENVIRONMENT CANADA
ENVIRONMENTAL PROTECTION SERVICE
ENVIRONMENTAL PROTECTION BRANCH
PACIFIC REGION

DATA RECORD

DENSITY AND DIVERSITY OF PHYTOPLANKTON POPULATIONS IN NEROUTSOS INLET, BRITISH COLUMBIA

by: D.L. Sullivan

Data
Regional ~~Program~~ Report: 77-5

February 1978

77-5 Density and Diversity of phytoplankton pop. in Neroutsos Inlet, B.C.

Sullivan, D.L.

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Date Due

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ABSTRACT

The Environmental Protection Service conducted a series of studies to determine the impact of discharges from the pulp mill at Port Alice, B.C., on the marine communities and water quality in Neroutsos Inlet. Phytoplankton density and diversity was studied during August and October, 1972 and May, 1973. This report presents the standing crop enumerations and identifications, and calculated diversity indices obtained during these surveys.

RÉSUMÉ

Le Service de la protection de l'environnement a fait une série d'études pour déterminer l'effet sur le phytoplancton marin et sur la qualité de l'eau de l'inlet Neroutsos des effluents de l'usine de pâte de Port Alice, C.-B. La densité et la diversité du phytoplancton ont fait l'objet d'une étude en août et octobre 1972 ainsi qu'en mai 1973. Le présent rapport établit la liste des espèces phytoplanctoniques recueillies au cours de ces études et en donne les taux de diversité qu'on a pu établir.

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SUMMARY OF RESULTS

Diatoms dominated the phytoplankton communities in Neroutsos Inlet and Quatsino Sound during the surveys conducted in 1972-1973. Although they are generally not a good indication of the total diversity of phytoplankton (Margalef, 1968), the total number of diatoms and the total number of diatom genera per station were used to compare differences between stations.

In August and October, 1972, decreases in both total numbers and numbers of genera were recorded as one approached the head of the inlet (Tables 1 to 4). The same pattern of decreasing total numbers was not observed in May, 1973; however, there were fewer genera at the stations nearest the pulp mill (Tables 5 and 6).

The determinations of species diversity of phytoplankton are presented in Tables 7, 8, and 9. Certain discrepancies in the indices can be attributed to large fractions of nannoplankton which were included in the calculations of the total diversity. In Table 9, a decrease in values of mean diversity can be observed as one nears the head of the inlet. It should be noted that these values are not exact computations of species diversity because of limitations of the identification and enumeration procedure (Utermohl's sedimentation); however, the method is a scientifically accepted technique. Figures 3 to 20 show evenness of phytoplankton distribution and diversity indices over depth.

1 INTRODUCTION

Numerous studies have been conducted to assess the effect of effluent discharges from the ammonia base sulphite pulp mill located at Port Alice, B.C., on the ecology of the receiving waters. The major area of concern has been dissolved oxygen levels in Neroutsos Inlet, particularly near the pulp mill. Waldichuk (1958) noted oxygen depletion in the surface waters of the inlet. The results of further studies (Waldichuk et al, 1968) indicated the continued degeneration of water quality in the area. The Environmental Protection Service inititated a series of studies to determine the impact of the pulp mill discharges on the marine communities and water quality in Neroutsos Inlet. A study of phytoplankton standing crop in Neroutsos Inlet and Quatsino Sound was undertaken to record the effect of pulp mill effluent on phytoplankton density and diversity. This report presents the results of phytoplankton surveys conducted in August and October of 1972 and May of 1973.

2 DESCRIPTION OF STUDY AREA

Quatsino Sound, located on the northwest side of Vancouver Island, leads into three major inlets. Rupert and Holberg Inlets are located to the north and Neroutsos Inlet to the south (Figure 1). Rupert and Holberg Inlets are connected to Quatsino Sound by Quatsino Narrows.

The oceanographic characteristics of Neroutsos Inlet have been described by Pickard, (1956) and Waldichuk, (1958). The Inlet, which forms the southeast arm of Quatsino Sound, is 20.8 km long with a mean width of 1.3 km and a mean depth of 88 meters. The Inlet is long and narrow with steep mountainous sides. Near Port Alice it becomes narrow and shallower, continuing in this manner to the head of the Inlet.

The major fresh water input to Neroutsos Inlet is Cayeghle Creek which discharges into the southern end of the Inlet. The flow rate is significantly increased in winter when heavy rains give rise to large runoff. Several smaller streams entering the system contribute relatively small volumes of fresh water.

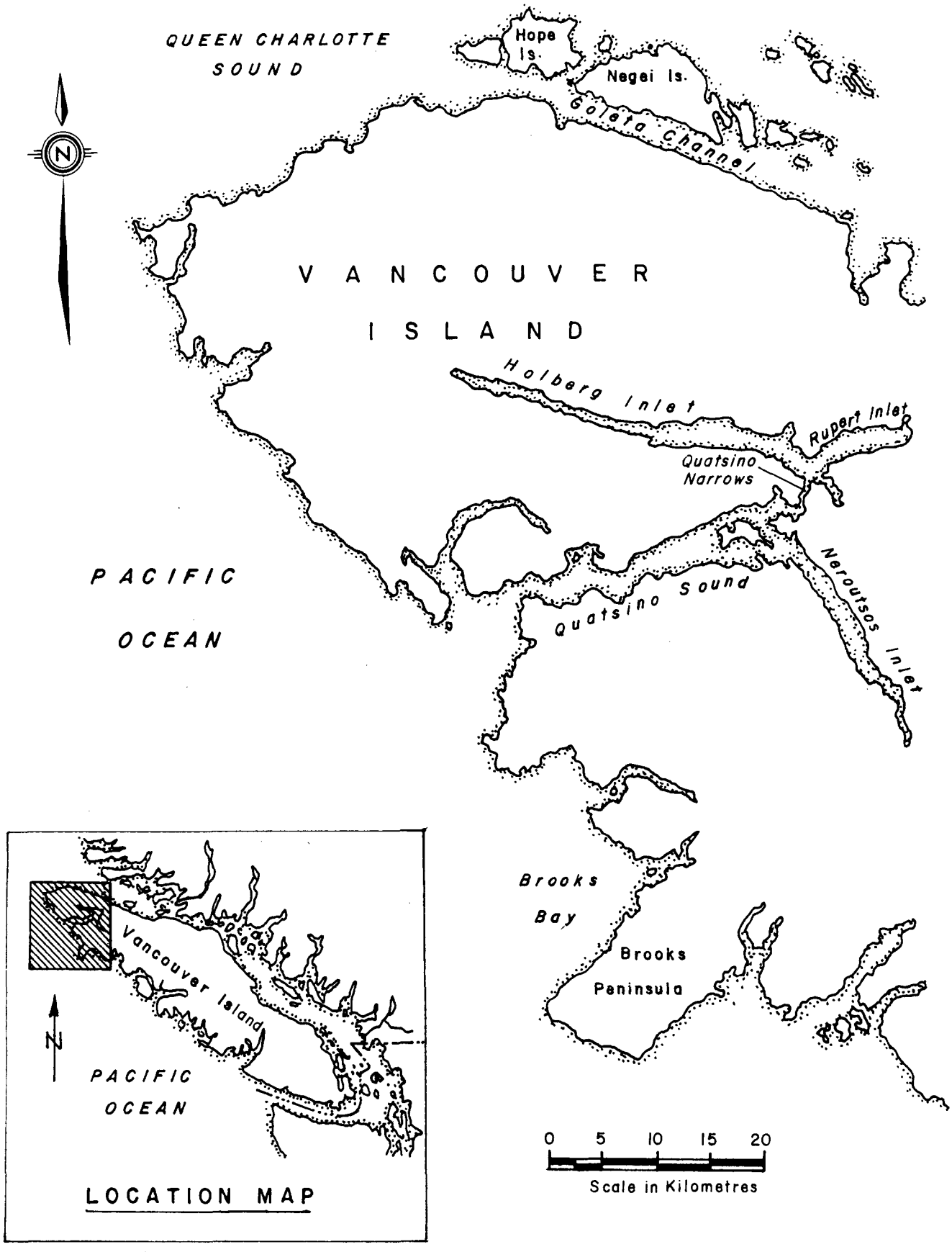


FIGURE 1 NORTHERN VANCOUVER ISLAND

3 MATERIALS AND METHODS

3.1 Station Locations

The study area included the monitoring of 11 permanent sampling stations established during the baseline studies of 1972-1973. The locations of the sampling stations are shown in Figure 2.

3.2 Phytoplankton Standing Crop

Phytoplankton standing crop samples were collected with a 6 litre polyethylene Van Dorne water sampler, stored in 100 ml amber jars and preserved with Lugol's Solution. Enumeration and identification were completed using Utermohl's sedimentation method. If the sample contained a large number of zooplankton, 2% Formalin was added to ensure preservation. In each 10 ml subsample, the total field was examined at 150x, and a 195 strip across the diameter of the chamber at 600X. The results are expressed as total number of cells/100ml.

3.3 Species Diversity Index

Diversity indices were calculated from all counts and total number of species on a Hewlett-Packard Model 9830A computer using the equation of Wilhm and Dorris (1968):

$$\bar{d} = - \sum_{i=1}^{s} \frac{ni}{n} \log_2 \frac{ni}{n}$$

where ni = total number of individuals per taxon
n = total number of individuals per sample
s = total number of taxa

Values for evenness of distribution (J) were calculated according to the equation by Pielou (1966).

$$J = - \Sigma \frac{\frac{ni}{n} \log_2 \frac{ni}{n}}{\log_2 a}$$

where ni = total number of individuals per taxon
n = total number of individuals per sample
s = total number of taxa
a = total number of species sampled

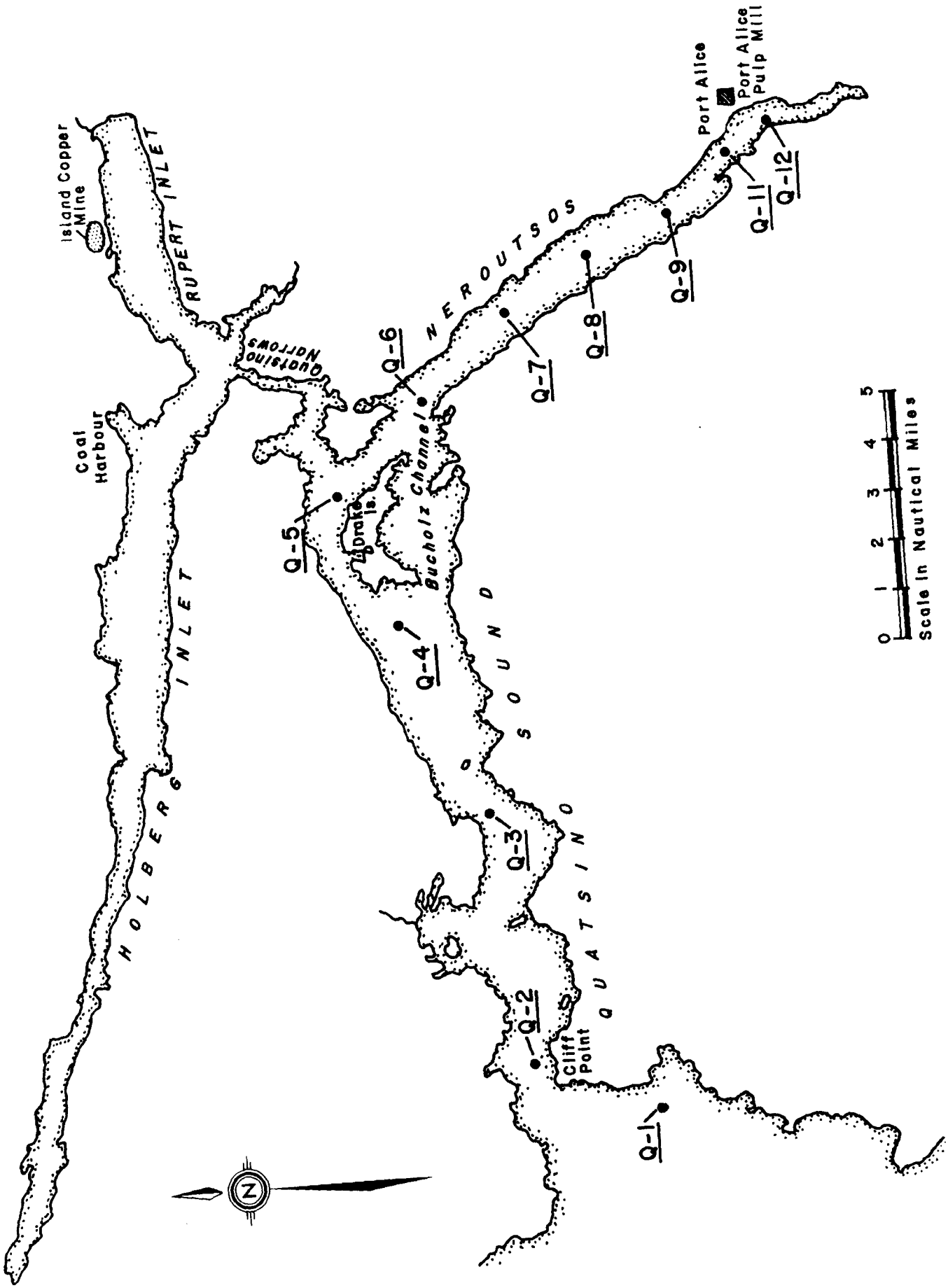


FIGURE 2 PHYTOPLANKTON WATER SAMPLING STATIONS - 1972 - 73

4 RESULTS

4.1 DIATOM DENSITY AND DIVERSITY

TABLES 1 - 6

TABLE 1 TOTAL NUMBERS OF DIATOMS (Bacillariophyceae)/100 ml
NEROUTSOS INLET, 12 August, 1972

Station	Depth					
	0m	4m	10m	20m	30m	50m
Station Q-2	270020	143180	321780	367550	86400	29820
Station Q-5	72900	121800	148500	86400	113400	10800
Station Q-16	-	-	21870	2700	2700	-
Station Q-19	280	20	-	-	270	10

TABLE 2 TOTAL NUMBER OF GENERA/STATION (Bacillariophyceae)
NEROUTSOS INLET, 12 August, 1972

Station Q-2	13
Station Q-5	8
Station Q-16	3
Station Q-19	2

TABLE 3 TOTAL NUMBERS OF DIATOMS (Bacillariophyceae)/100 ml
NEROUTSOS INLET, 19 October, 1972

	Depth						
Station	0m	2m	4m	6m	10m	15m	20m
Station Q-2	5600	2840	3260	25260	230	780	720
Station Q-3	50	110	220	110	270	250	650
Station Q-4	190	250	160	1130	110	130	130
Station Q-5	200	60	250	200	130	250	560
Station Q-15	-	90	80	230	140	140	20
Station Q-16	N.S.	20	80	120	40	40	10
Station Q-17	-	30	40	50	20	-	-
Station Q-18	-	30	60	40	30	140	20
Station Q-19	-	20	10	10	2710	20	80
Station Q-20	-	50	-	40	60	-	60

N.S. - no sample

TABLE 4 TOTAL NUMBER OF GENERA/STATION (Bacillariophyceae)
NEROUTSOS INLET, 19 October, 1972

Station Q-2	16
Station Q-3	15
Station Q-4	12
Station Q-5	12
Station Q-15	9
Station Q-16	7
Station Q-17	6
Station Q-18	8
Station Q-19	6
Station Q-20	8

TABLE 5 TOTAL NUMBERS OF DIATOMS (Bacillariophyceae)/100 ml
NEROUTSOS INLET, 4 May, 1973

	Depth					
Station	0m	2m	4m	6m	10m	20m
Station Q-1	28830	28400	42520	38850	54720	68970
Station Q-2	21310	23520	20560	18890	36430	33120
Station Q-3	430	1110	210	80	170	410
Station Q-4	190	330	300	360	200	200
Station Q-5	210	240	380	200	160	90
Station Q-6	310	540	360	150	200	100
Station Q-7	530	560	630	770	290	190
Station Q-8	1920	760	1300	1090	520	30
Station Q-9	1680	1380	1310	880	70	110
Station Q-11	1370	1590	890	740	190	360
Station Q-12	1320	1020	1340	840	190	80

TABLE 6 TOTAL NUMBER OF GENERA/STATION (Bacillariophyceae)
NEROUTSOS INLET, 4 May, 1973

Station Q-1	24
Station Q-2	22
Station Q-3	14
Station Q-4	12
Station Q-5	7
Station Q-6	9
Station Q-7	12
Station Q-8	9
Station Q-9	10
Station Q-11	9
Station Q-12	7

4.2 DIVERSITY INDICES AND MEANS

TABLES 7, 8 and 9

TABLE 7 DIVERSITY INDICES AND MEAN DIVERSITY, NEROUTSOS INLET AND QUATSINO SOUND, 12 August, 1972

Station	0m	4m	10m	20m	30m	50m	$\bar{X}$
12 August, 1972							
Q-2	2.679	2.848	2.543	2.515	2.371	2.997	2.542
Q-5	1.692	1.994	2.167	2.009	2.158	1.229	1.875

TABLE 8 DIVERSITY INDICES AND MEAN DIVERSITY, NEROUTSOS INLET AND QUATSINO SOUND, 19 October, 1972

Station	0m	2m	4m	6m	10m	15m	20m	$\bar{X}$
19 October, 1972								
Q-2	0.079	1.290	1.583	1.537	0.328	0.619	3.467	1.400
Q-3	0.906	1.677	1.362	2.126	2.650	2.931	2.783	2.062
Q-4	2.022	2.303	2.281	0.684	2.413	1.921	2.325	1.993
Q-5	0.066	0.019	0.175	0.045	0.109	0.131	0.155	0.100
Q-15	-	1.764	1.961	1.666	2.547	2.149	1.585	1.945

TABLE 9 DIVERSITY INDICES AND MEAN DIVERSITY, NEROUTSOS INLET AND QUATSINO SOUND, 4 May, 1973

Station	0m	2m	4m	6m	10m	20m	$\bar{X}$
May, 1973							
Q-1	2.157	2.002	2.047	2.385	2.035	2.126	2.125
Q-2	2.000	1.910	1.935	1.990	2.133	2.450	2.070
Q-3	2.700	1.760	1.379	1.500	2.131	2.491	1.993
Q-4	2.437	2.697	2.558	1.872	2.527	1.920	2.335
Q-5	2.338	2.401	2.056	1.920	2.258	1.753	2.121
Q-6	2.325	2.368	1.188	1.907	2.309	2.171	2.045
Q-7	0.013	0.023	0.028	0.057	2.669	2.061	0.809
Q-8	0.030	2.309	1.877	1.417	1.949	1.500	1.514
Q-9	1.934	1.554	2.187	2.057	2.355	1.896	1.675
Q-11	1.224	1.391	1.504	1.445	1.510	1.665	1.457
Q-12	1.028	0.763	1.214	1.403	0.748	2.451	1.268

4.3 DIVERSITY INDICES AND EVENNESS
(Calculated from data in Appendix II)

FIGURES 3 - 20

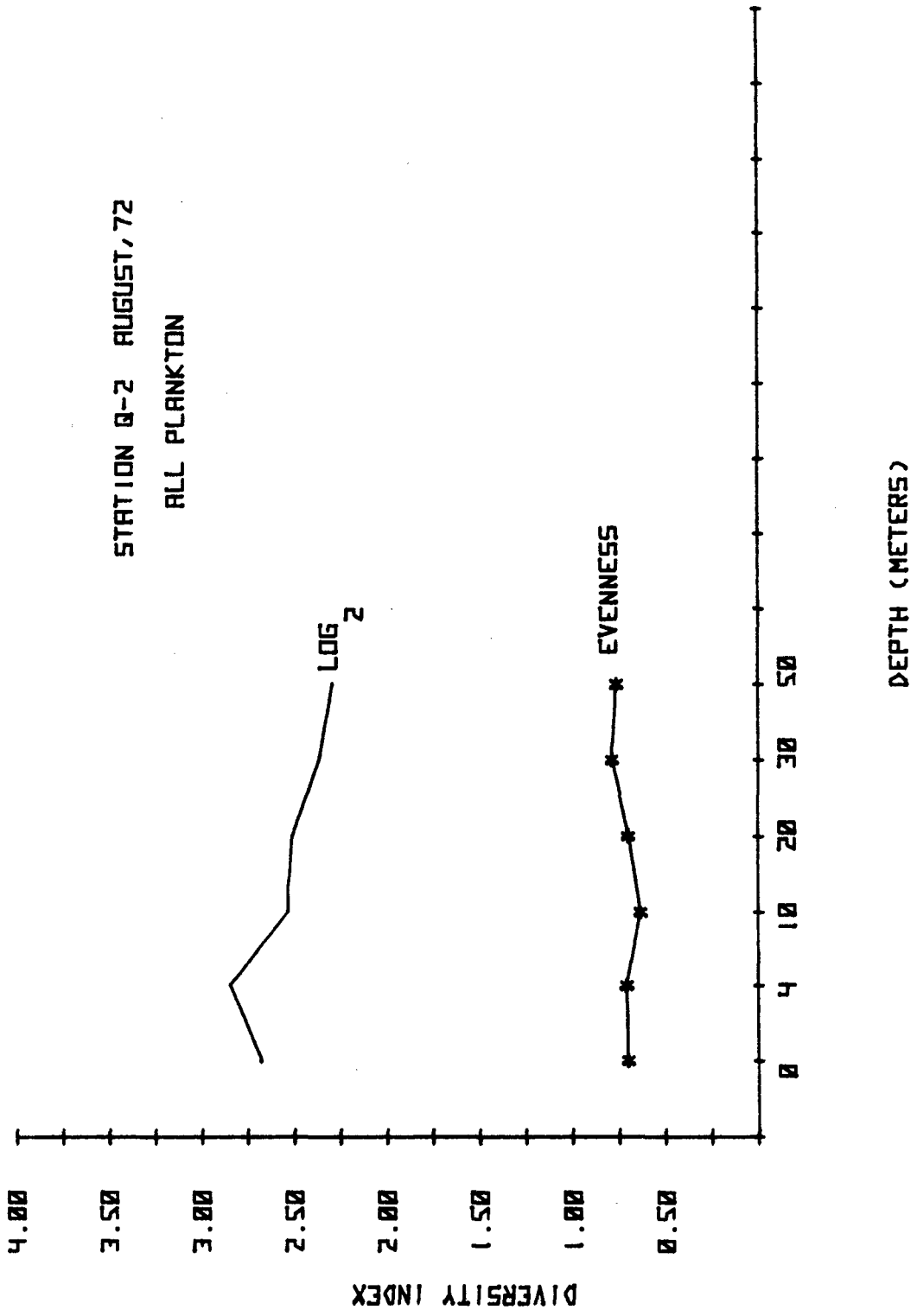
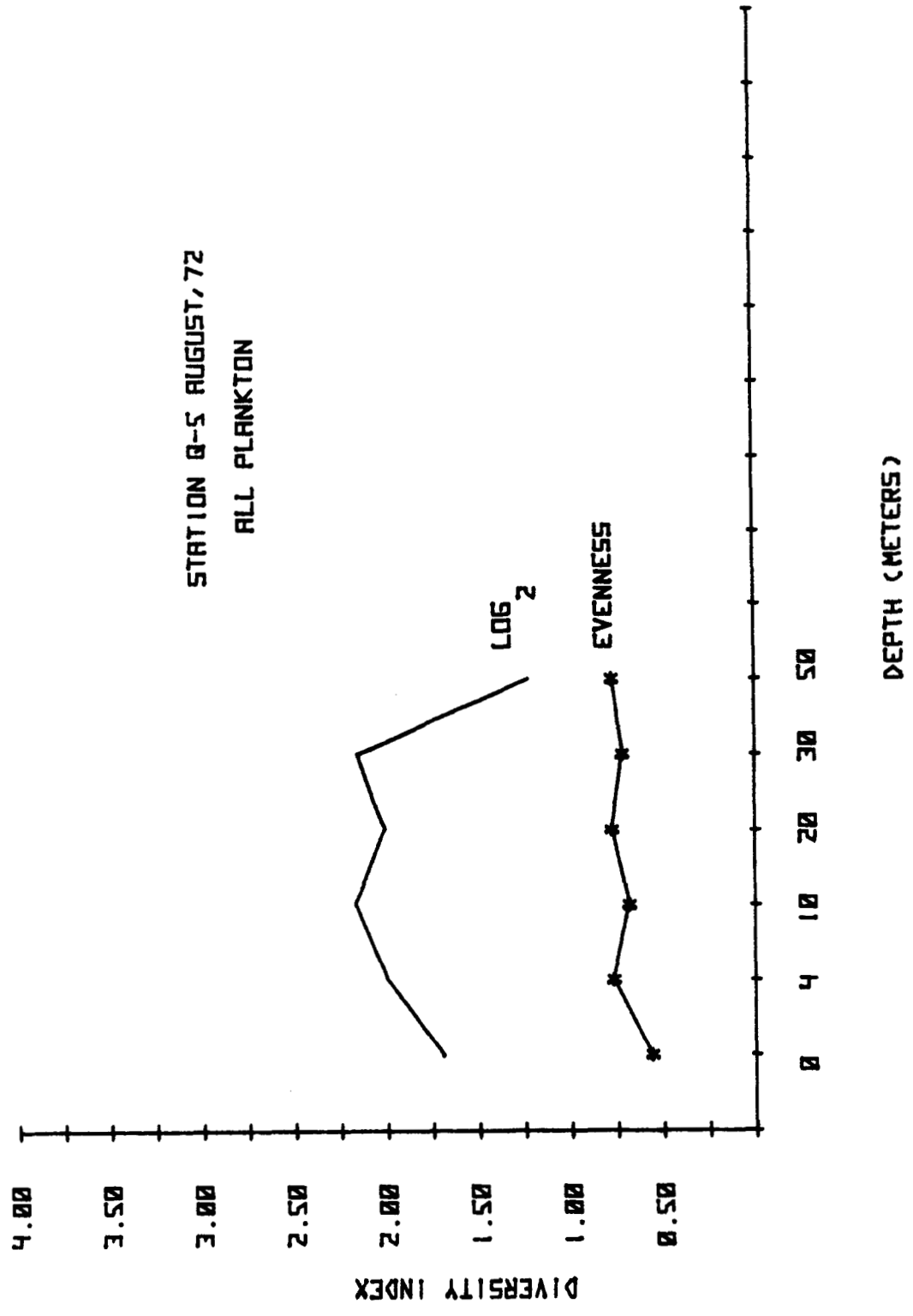

STATION Q-2 AUGUST, 72
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
4
10
20
30
50
DEPTH (METERS)

FIGURE 3


STATION 8-5 AUGUST, 72
ALL PLANKTON
LOG_2
EVENNESS
DIVERSITY INDEX
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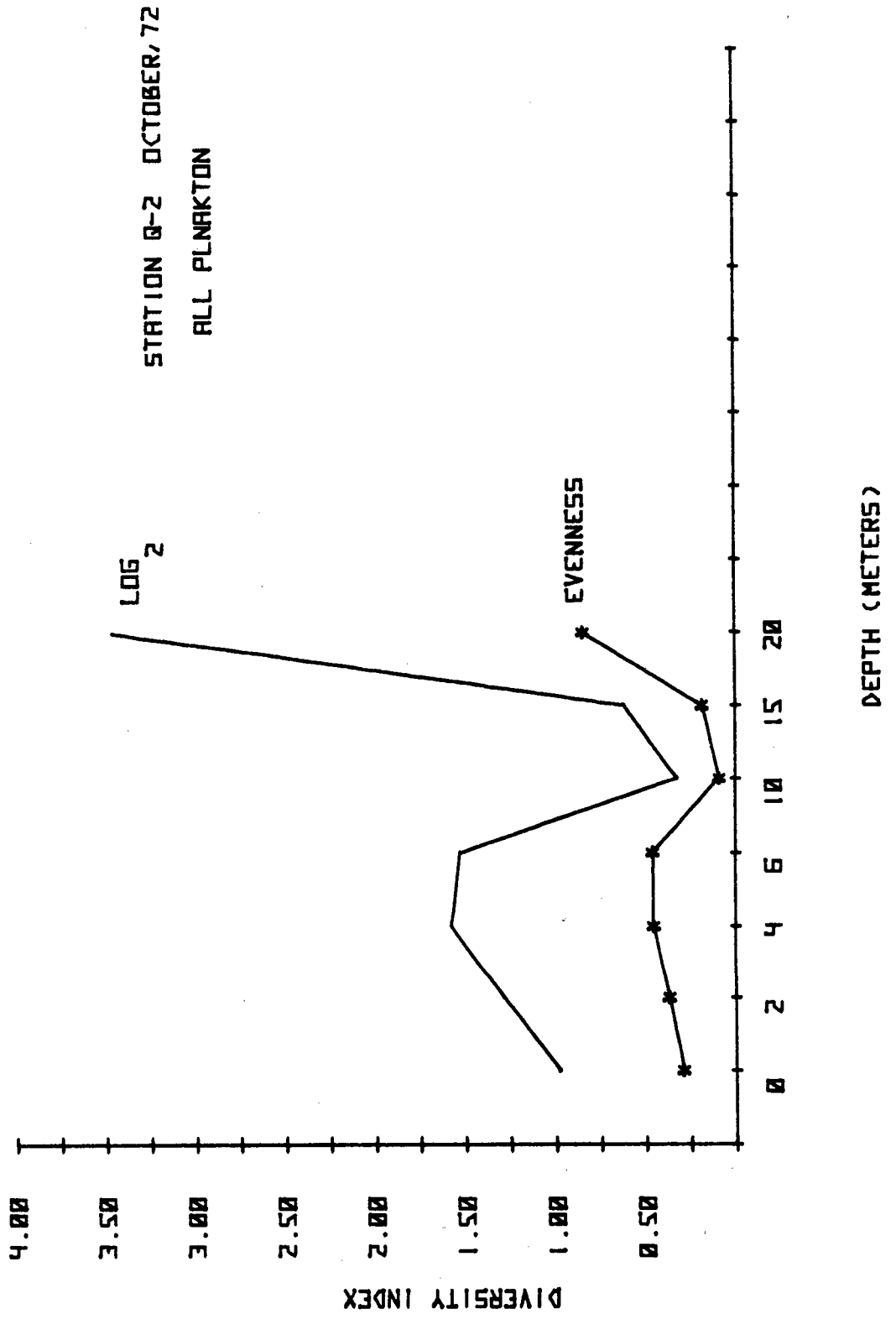
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
4
10
20
30
50
DEPTH (METERS)

FIGURE 4


STATION Q-2 OCTOBER, 72
ALL PLNAKTON
LOG 2
EVENNESS
DIVERSITY INDEX
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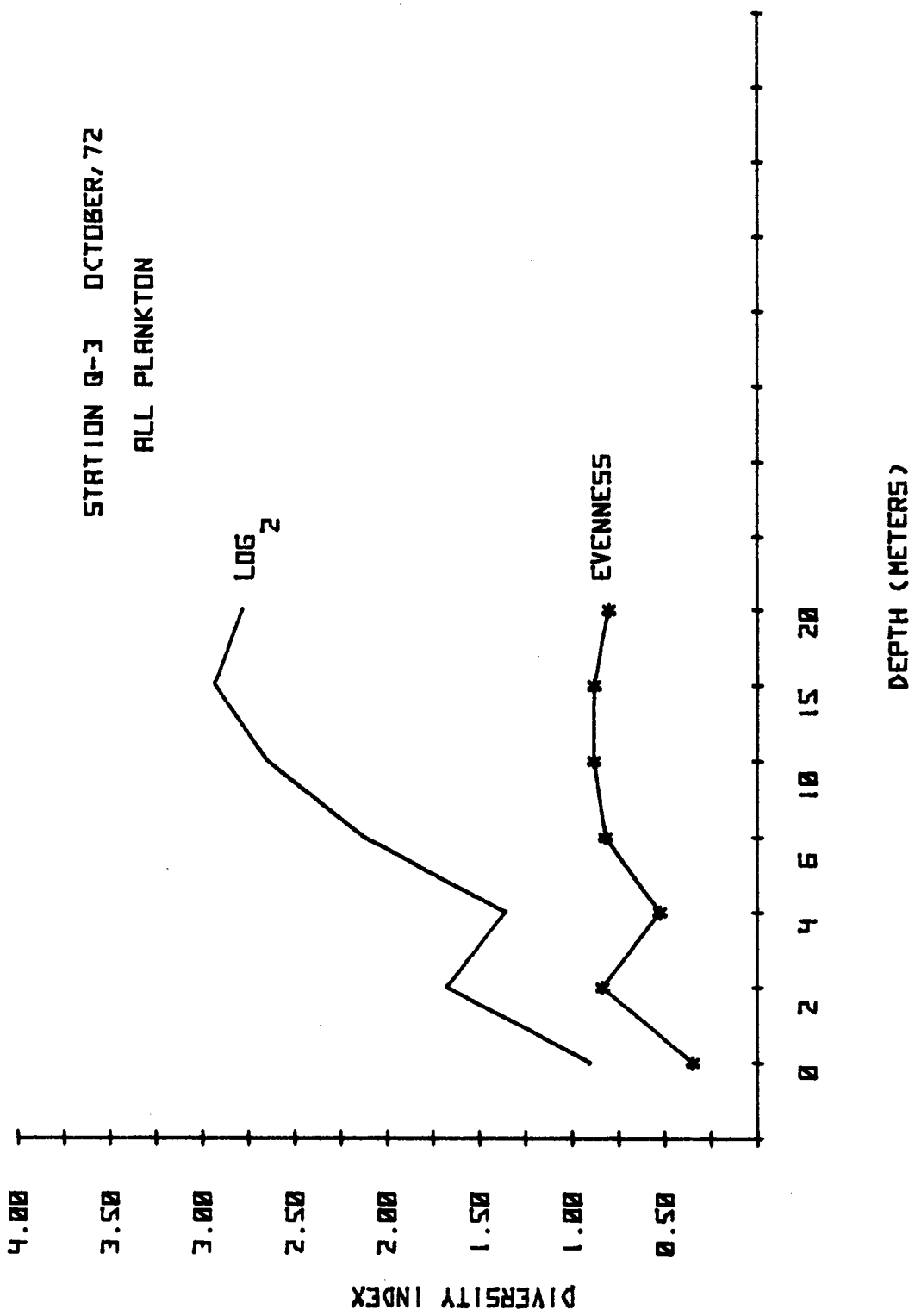
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
15
20
DEPTH (METERS)

FIGURE 5


STATION Q-3 OCTOBER, 72
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
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1.50
1.00
0.50
0
2
4
6
10
15
20
DEPTH (METERS)

FIGURE 6

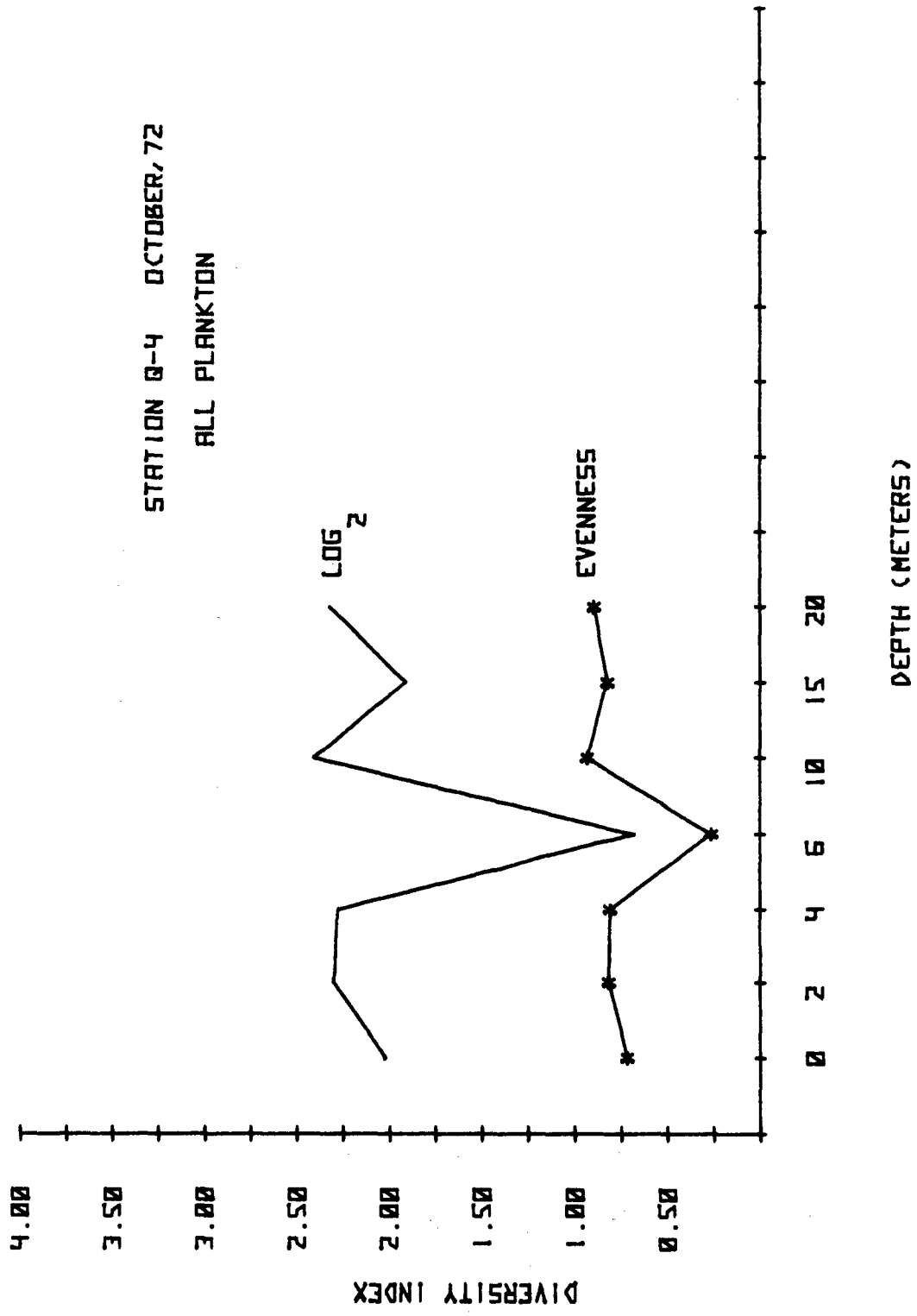
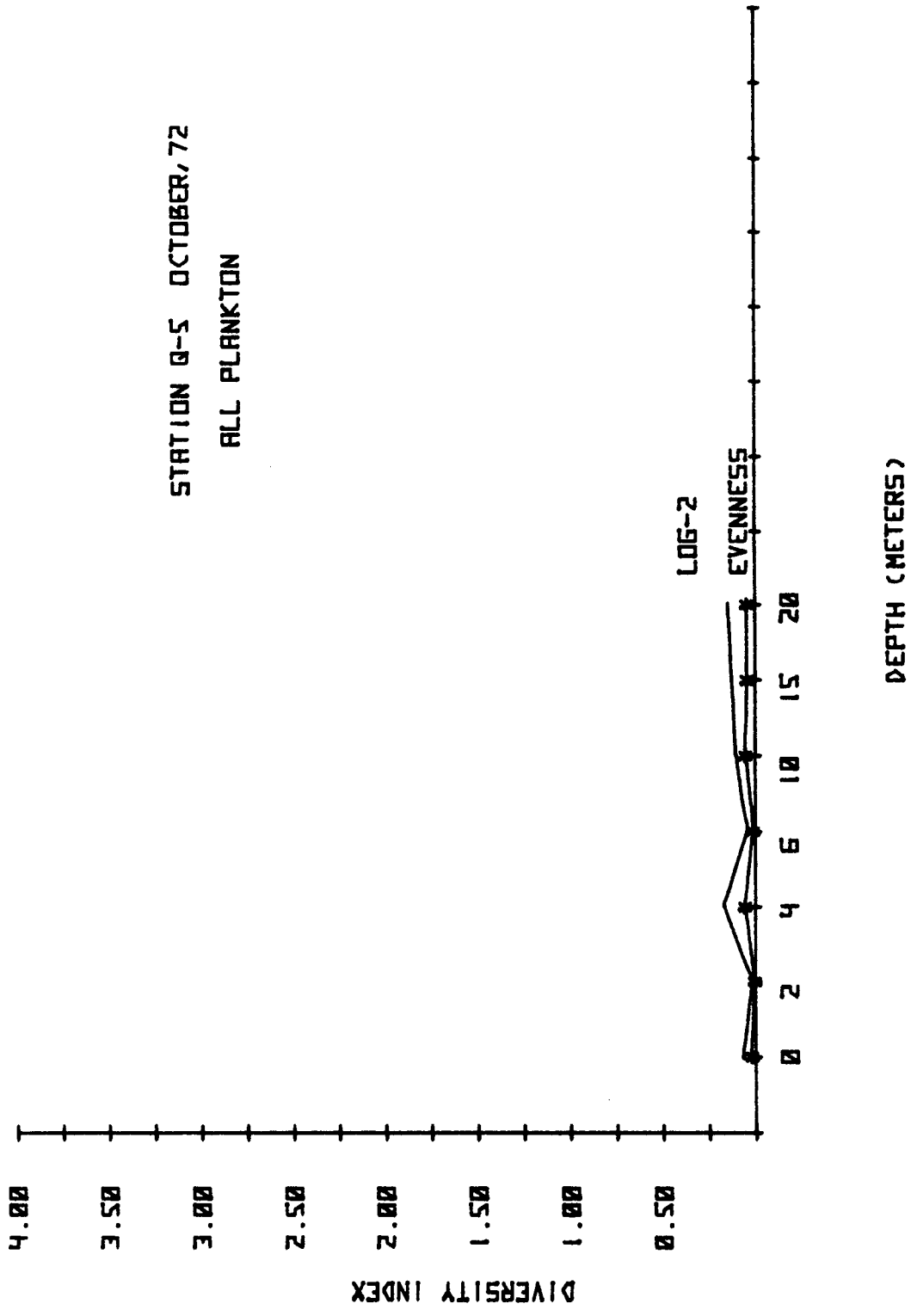

STATION Q-4 OCTOBER, 72
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
15
20
DEPTH (METERS)

FIGURE 7


STATION Q-5 OCTOBER, 72
ALL PLANKTON
LOG-2 EVENNESS
DIVERSITY INDEX
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3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
5
10
15
20
DEPTH (METERS)

FIGURE 8

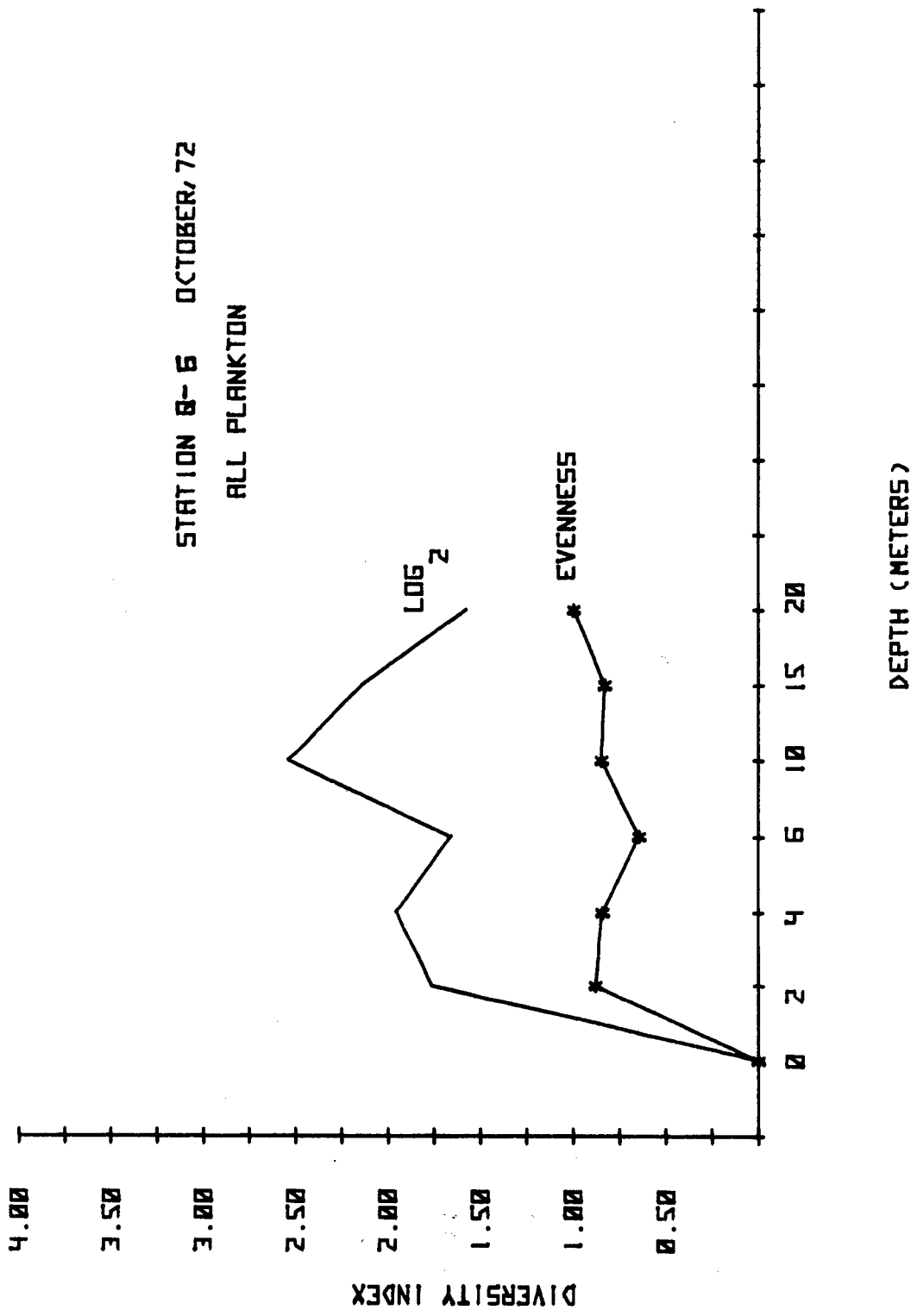

STATION B-6 OCTOBER, 72
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
15
20
DEPTH (METERS)

FIGURE 9

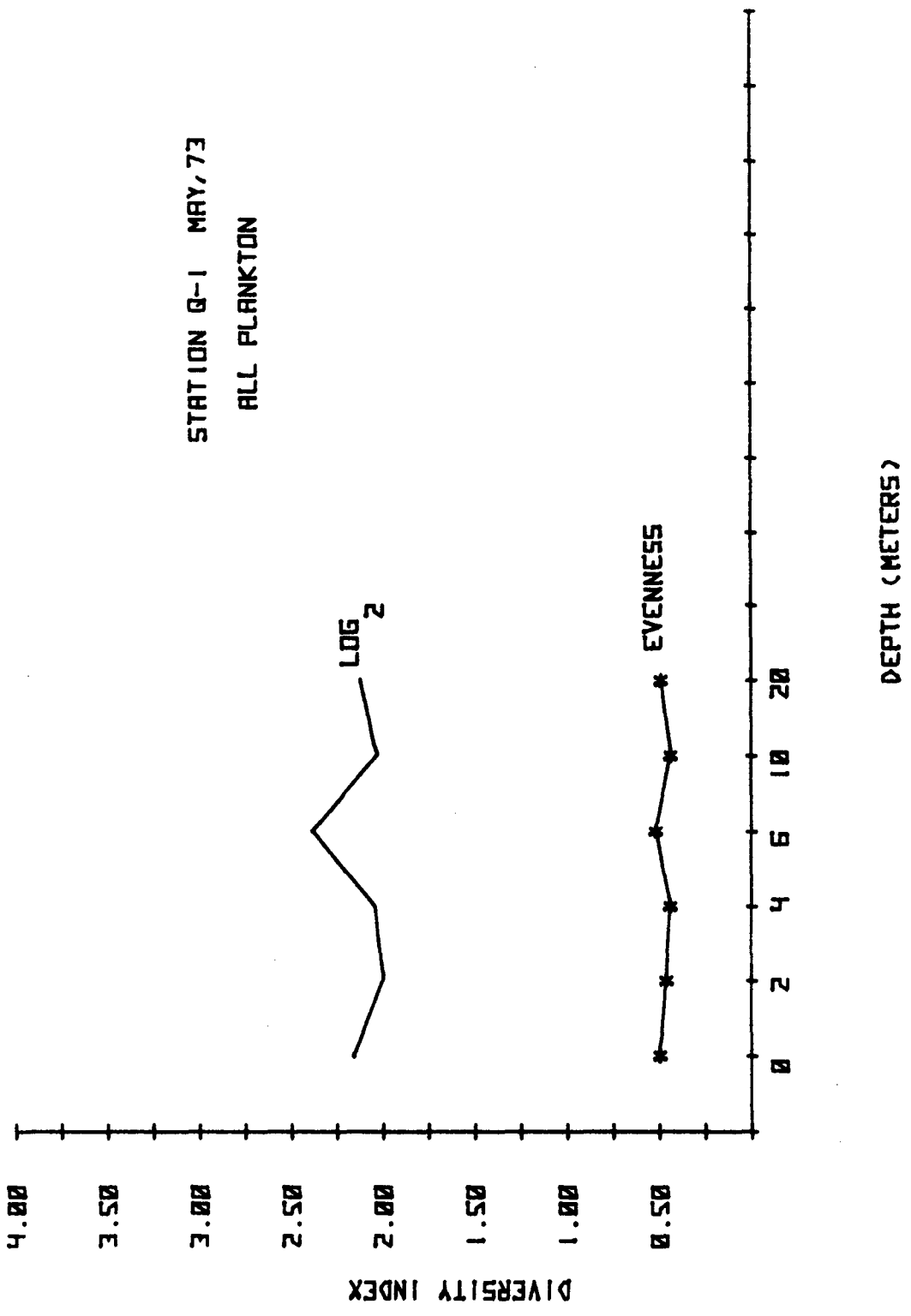
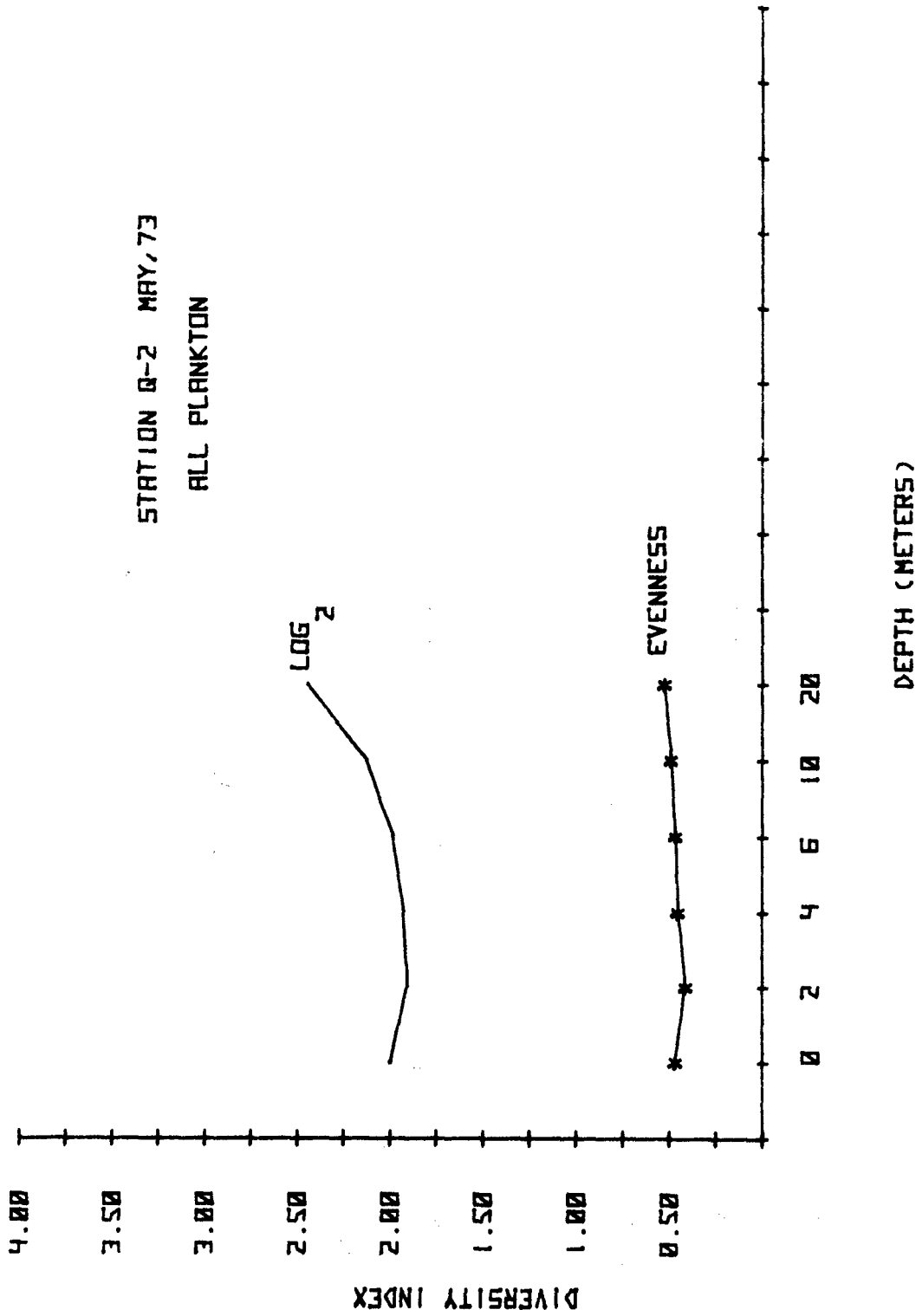

STATION Q-1 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 10


STATION Q-2 MAY, 73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
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3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 11

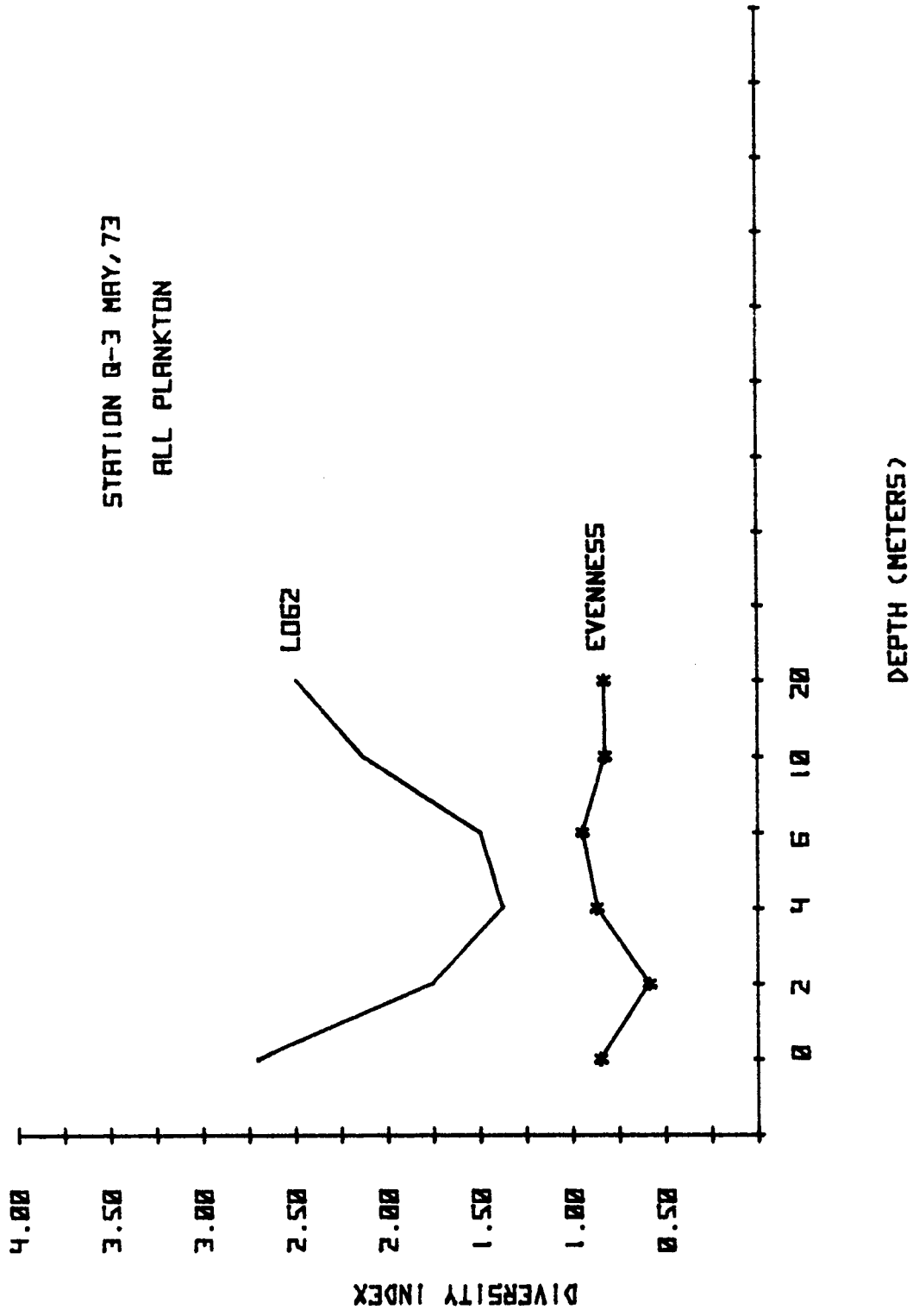
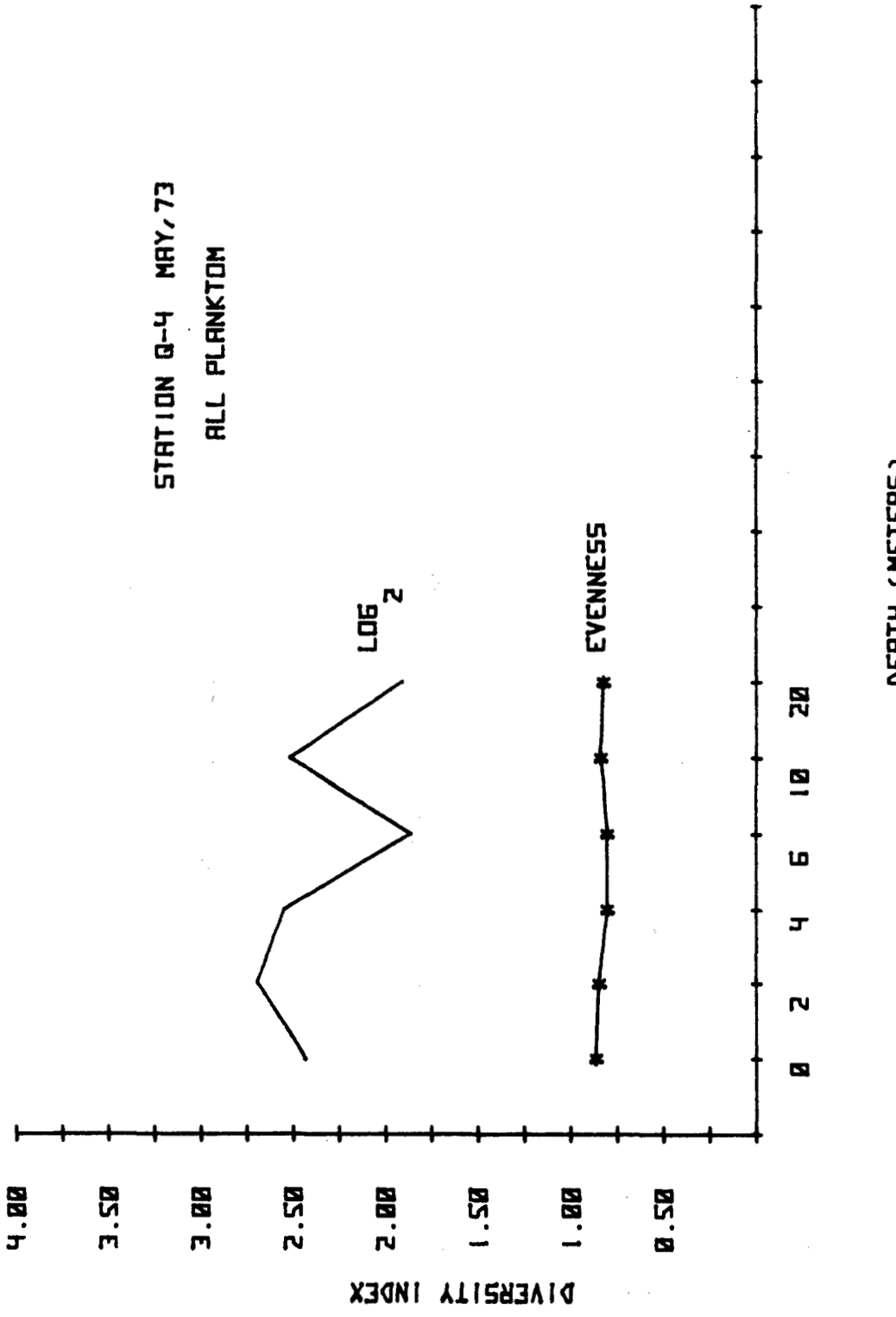

STATION Q-3 MAY,73
ALL PLANKTON
LOG2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 12


STATION Q-4 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
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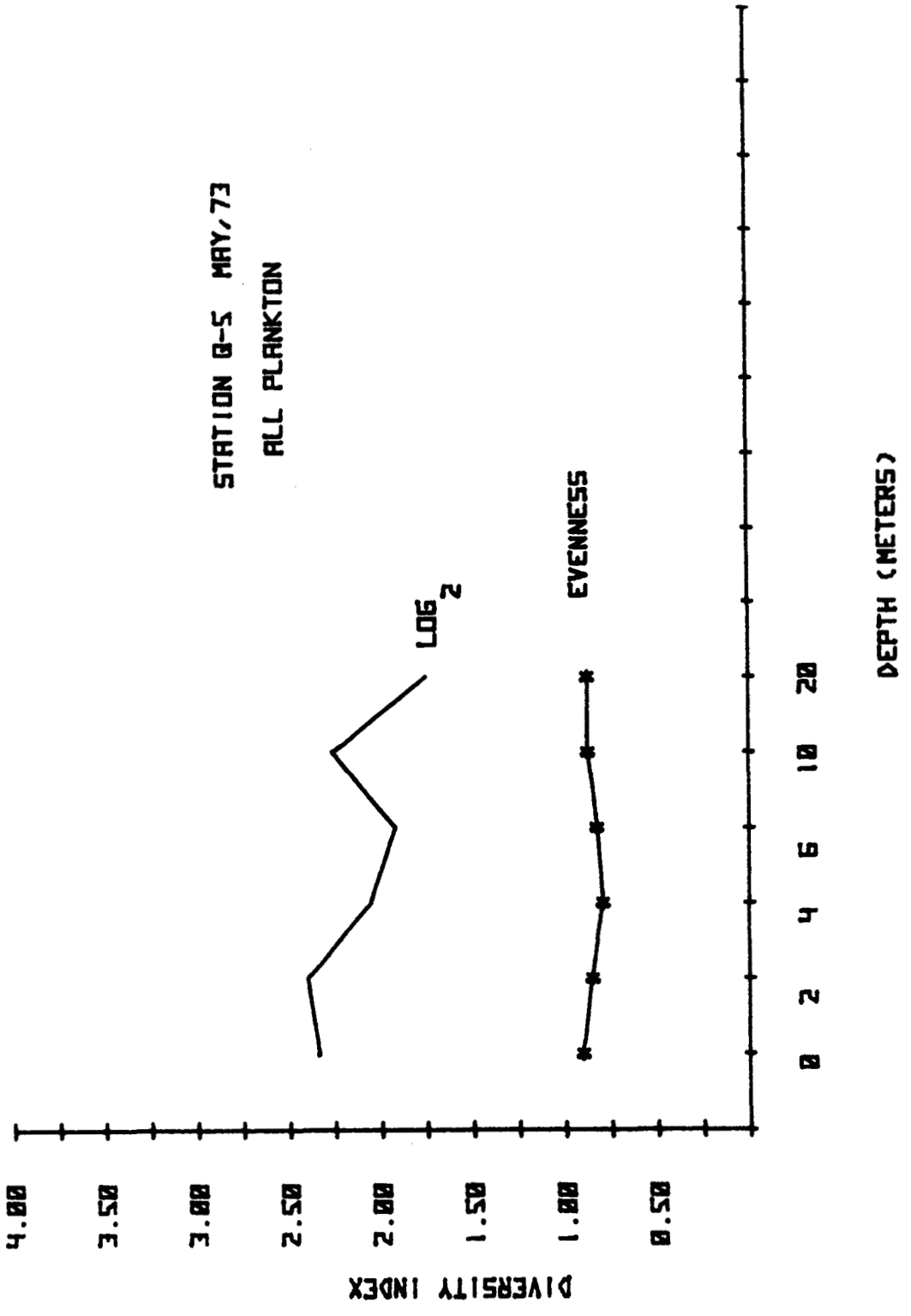
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 13


STATION 0-5 MAY,73
ALL PLANKTON
LOG2
EVENNESS
DIVERSITY INDEX
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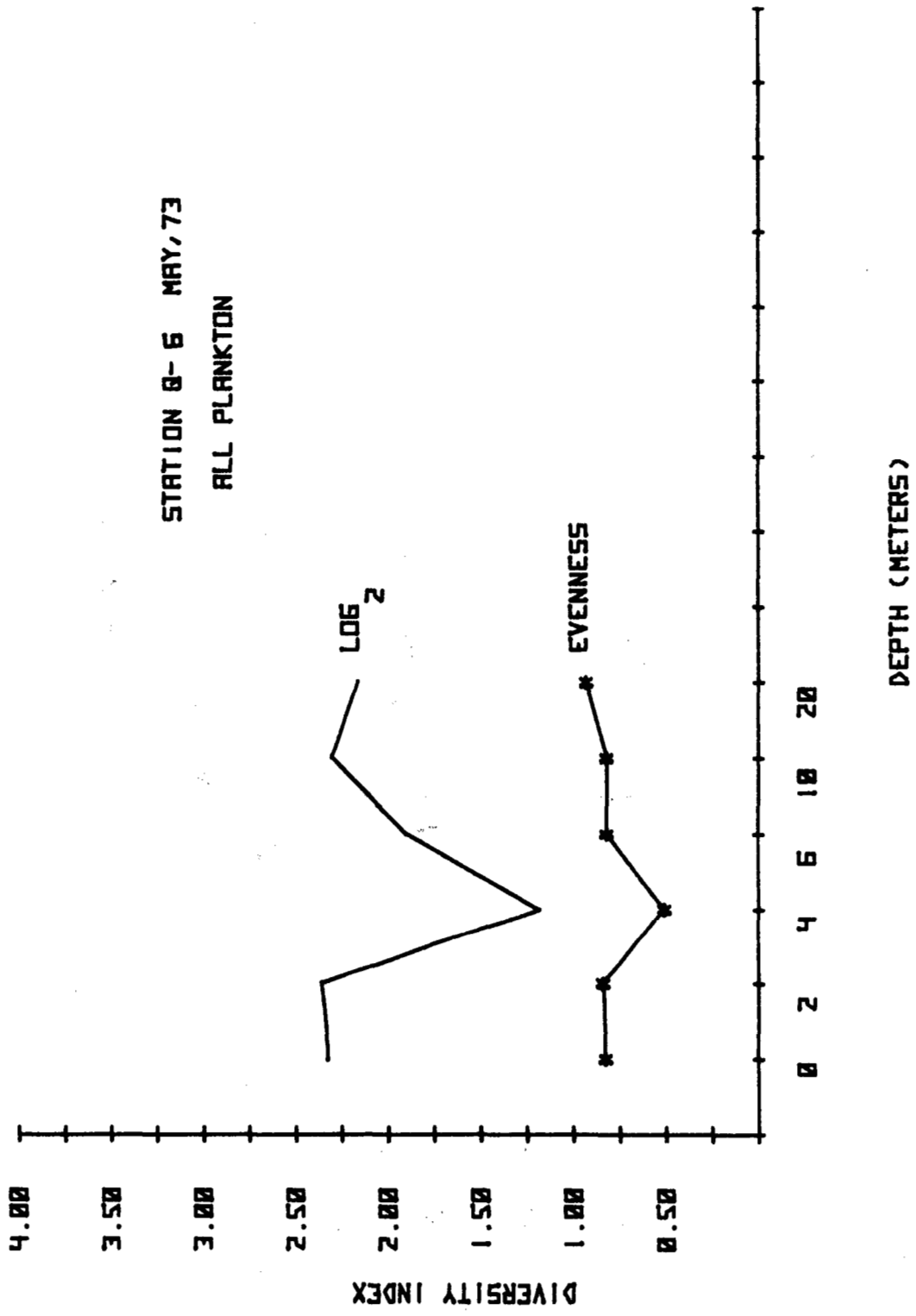
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 14


STATION 8-6 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
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3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 15

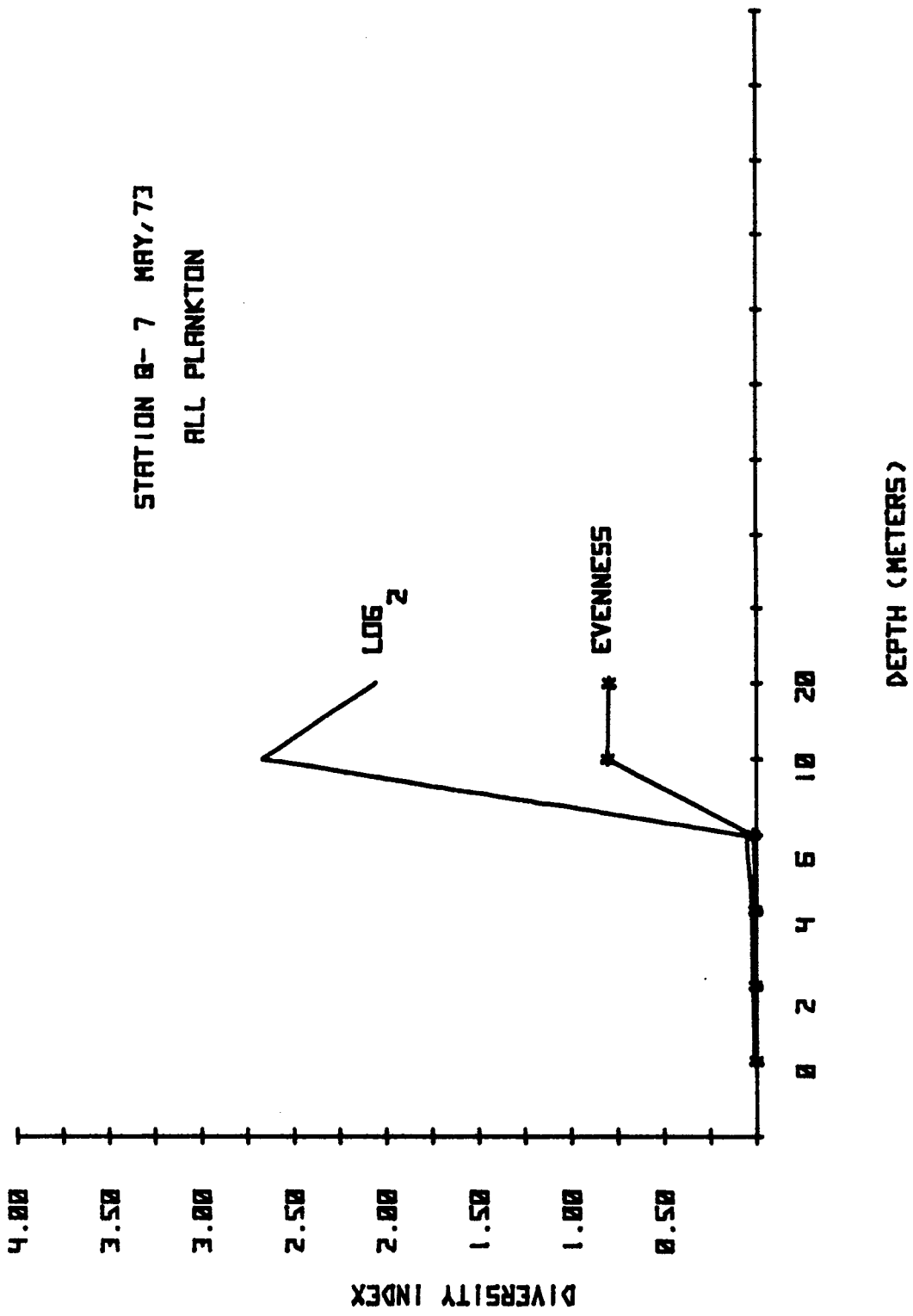

STATION B- 7 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 16

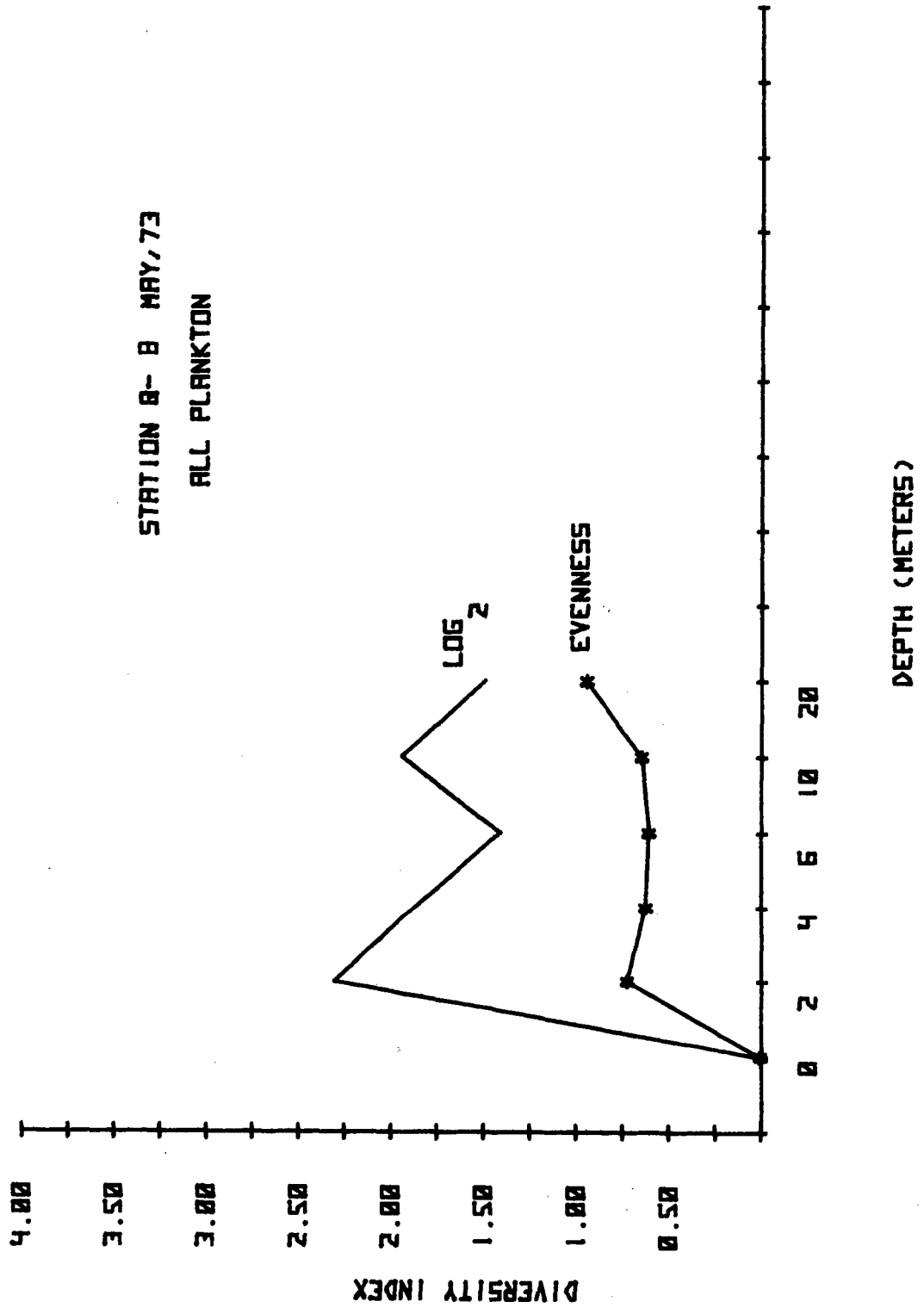
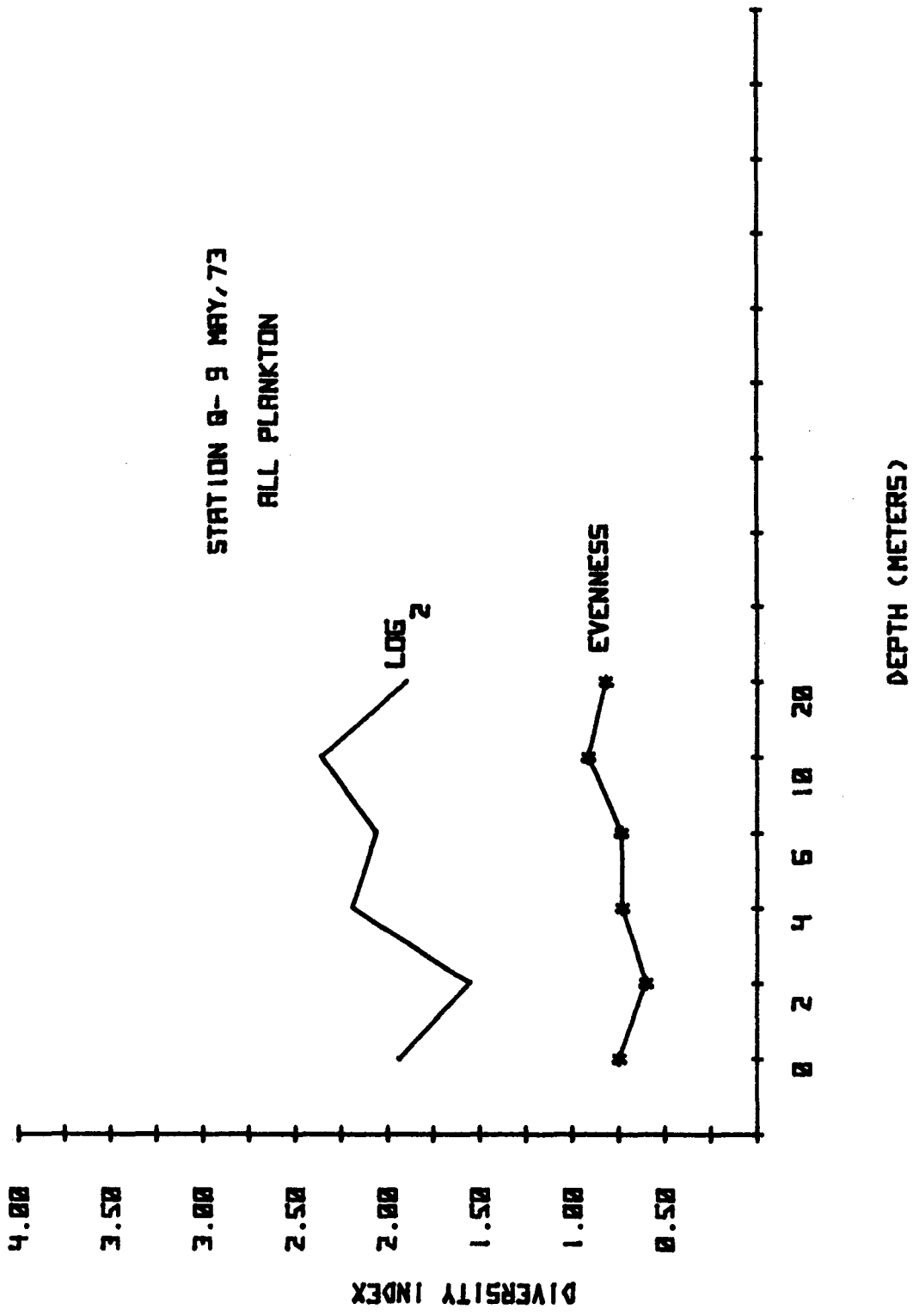

STATION 8- 8 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 17


STATION 8- 9 MAY, 73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
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3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 18

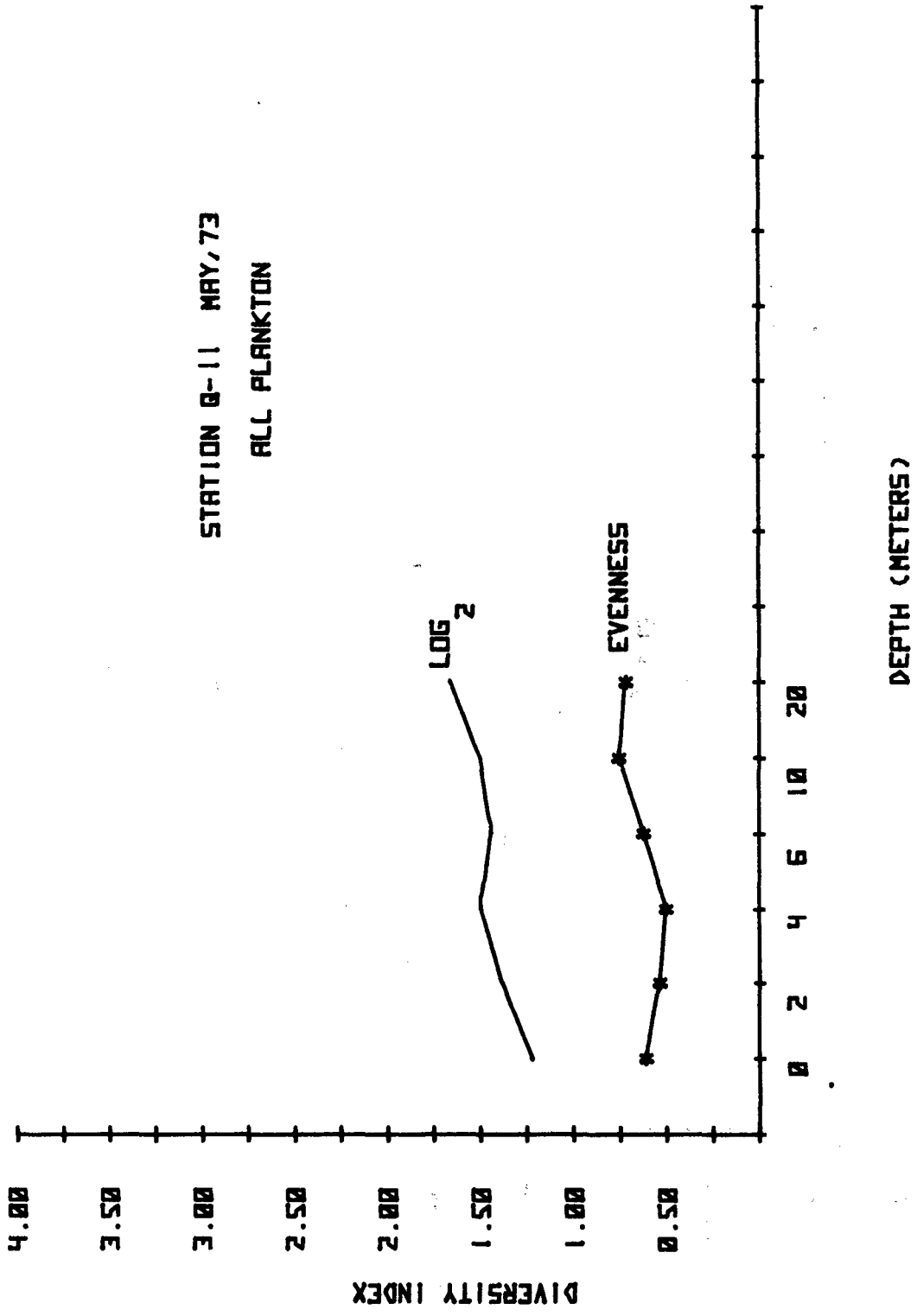
STATION B-11 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
6
10
20
DEPTH (METERS)

FIGURE 19

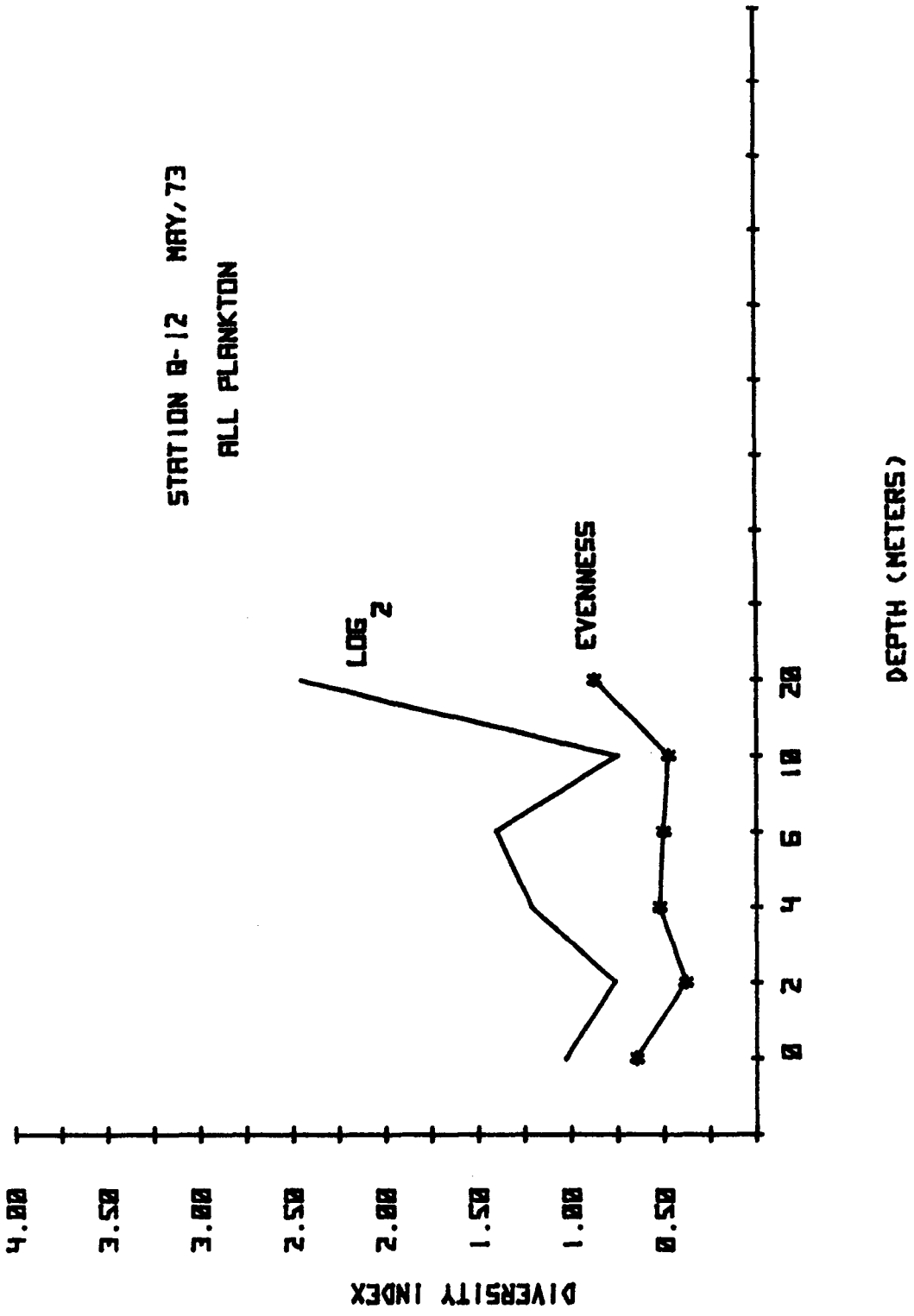
STATION B-12 MAY,73
ALL PLANKTON
LOG 2
EVENNESS
DIVERSITY INDEX
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0
2
4
5
10
20
DEPTH (METERS)

FIGURE 20

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Pickard, G.L., Physical features of British Columbia inlets. Trans. Roy. Soc. Can (III) 50, pp. 47-58 (1956).

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APPENDIX I

PHYTOPLANKTON & PROTOZOAN SYSTEMATICS

ALGAE

DIVISION *PYRROPHYTA (Scagel)*

CLASS *DINOPHYCEAE*

FAMILY *NOCTILUCIDAE*

Noctiluca

FAMILY *GYMNODINIIDAE*

Amphora
Gymnodinium
Gyrodinium
Cochlodinium

FAMILY *DINOPHYSIDAE*

Pseudophalacroma
Phalacroma
Dinophysis

FAMILY *GLENODINIIDAE*

Glenodinium

FAMILY *PERIDINIIDAE*

Peridinium
Minuscula
Oxytoxum
Ceratium

CLASS *CRYPTOPHYCEAE*

DIVISION *CHRYSOPHYTA*

CLASS *CHRYSOPHYCEAE*

CLASS *BACILLARIOPHYCEAE*

FAMILY *COSCINODISCACEAE*

Coscinodiscus
Coscinosira
Cyclotella
Melosira
Skeletonema
Stephanodiscus
Stephanopyxis
Thalassiosira

FAMILY *BIDDULPHIACEAE*

Biddulphia
Ditylum
Eucampia
Isthmia
Triceratium

FAMILY *CHAETOCERACEAE*

Chaetoceros

FAMILY *LEPTOCYLINDRACEAE*

Lauderia
Leptocylindrus
Schroderella

FAMILY *CORETHRONACEAE*

Corethron

FAMILY *RHIZOSOLENIACEAE*

Rhizosolenia

FAMILY *FRAGILARIACEAE*

Fragilaria
Grammatophora
Licmorpha
Striatella
Synedra
Thalassionema
Thalassiothrix

FAMILY *ACHNANTHINEAE*

Achnanthes
Cocconeis

FAMILY *NAVICULACEAE*

Gyrosigma
Navicula
Pleurosigma

FAMILY *CYMBELLACEAE*

Amphora

FAMILY *BACILLARIACEAE*

Nitzschia

FAMILY *SURIRELLINEAE*

Surirella

DIVISION *EUGLENOPHYTA*

CLASS *EUGLENOPHYCEAE*

DIVISION *CHLOROPHYTA*

CLASS *CHLOROPHYCEAE*

PHYLUM PROTOZOA

SUBPHYLUM *PLASMODROMA*

CLASS *MASTIGOPHORA*

ORDER *CHRYSOMONADINA*

FAMILY *SILICOFLAGELLIDAE*

Dictyocha
Distephanus

CLASS *SARCODINA*

ORDER *FORAMINIFERA*

ORDER *RADIOLARIA*

SUBPHYLUM *CILIOPHORA*

CLASS *CILIATA*

ORDER *HOLOTRICHIDA*

FAMILY *ENCHELINIDAE*

Mesodinium

ORDER *HETEROTRICHIDA*

FAMILY *HALTERIIDAE*

Strombidium

FAMILY *CODONELLIDAE*

Tintinnopsis

FAMILY *CODONELLOPSIDAE*

Stenosmella

FAMILY *CYTTAROCYLIDAE*
Parafavella

FAMILY *PTYCHOCYLIDAE*
Ptychocylis

FAMILY *XYSTONELLIDAE*
Parundella

CLASS *SUCTORIA*

FAMILY *TRICHOPHRYIDAE*
Trochiscia

APPENDIX II

PHYTOPLANKTON STANDING CROP DATA

NEROUTSOS INLET PHYTOPLANKTON ANALYSIS

12 August, 1972

ENVIRONMENTAL PROTECTION SERVICE

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 ml. — 12 August 1972

	0m	4m	10m	20m	30m	50m
Chrysophyta						
Bacillariophyceae						
Biddulphia sp.	20					20
Chaetoceros externum						
Chaetoceros spp.	45900	29700	148500	89100	13500	
Cocconeis sp.		2700			2700	5400
Coscinodiscus sp.	2700	2700				
Ditylum sp.	5400	10800	10800	8100	8100	
Eucampia sp.	2700	2700	19300	350		
Fragillaria arcus	21600	8100	10800	13500	10800	
Navicula spp.	81000	8100	24300	8100	2700	2700
Nitzschia closterium	2700	2700	5400			2800
Nitzschia longissima						
Nitzschia sp.	18900	29700	45900	56700	43200	13500
Rhizsolenia sp. (styliformis)		80	10	29700		
Skeletonema costatum	89100	45900	54000	153900	5400	5400
Synedra sp.			2700	8100		
Thalassiothrix sp.			70			
Dinophyceae						
Gonyaulax sp.		10				
Dinophysis sp.		20	10			
Oxytoxum sp.						10
Peridinium sp.	2700	140	40	10		

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 m. — 12 August 1972

	0m	4m	10m	20m	30m	50m
..continued						
Peridinium decipens	540	30				
P. micrapium	270					
Minuscula sp.			10			
Prorocentrum sp.		70	50	20		
Chrysophyceae	61200	10800	18900	37800	5400	2700
Cryptophyceae	2700					
Euglenophyceae						
Euglena sp.	100	30	10			
Tintinnidae						
Stenosmella sp.	100	20	20			
Desmid	1					
Radiolaria	10					
Ciliata						
Parundella sp.	10	20				
Strombidium sp.		20				
Miscellaneous sp.	10	230				
Nauplii	1					

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-5

Data Expressed as Total Count/100 ml. — 12 August 1972

	0m	4m	10m	20m	30m	50m
Chrysophyta						
Bacillariophyceae						
Chaetoceros spp.	2700	8100	21600		13500	
Cocconeis sp.	2700				2700	
Ditylum sp.	5400	24600	27000	21600	13500	
Navicula sp.		8100	5400			5400
Nitzschia sp.	5400	8100	21600	24300	5400	5400
N. closterium	2700					
Skeletonema costatum	51300	72900	72900	37800	64800	
Synedra sp.	2700			2700	13500	
Dinophyceae						
Amphidinium sp.			50			
A. (near) ovoideum			10			
Peridinium asperum			10			
P. micrapium				10		
P. leonis					10	
Chrysophyceae	94500	78300	89100	10800	10800	5400
Euglenophyceae	2700					
Chlorophyta		2700		5400		
Silicoflagellata			10			
Flagellata	2700					

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-7

Data Expressed as Total Count/100 ml. — 12 August 1972

	0m*	4m	10m	20m	30m	50m
Chrysophyta						
Bacillariophyceae						
Navicula sp.			270		2700	
Nitzschia sp.				2700		
Skeletonema costatum			21600			
Chrysophyceae	13500	70200	10800			
Euglenophyceae	270					
Ciliata				5400		

* Bacteria prominent in sample. Activity observed.

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-11

Data Expressed as Total Count/100 ml. — 12 August 1972

	0m**	4m	10m	20m	30m	50m*
Chrysophyta						
Bacillariophyceae						
Cocconeis pinnata	*10*	*10*				*10*
Navicula sp.	*270*	*10*			*270*	
Chrysophyceae		*2700*				
Flagellate (unknown)					*10*	

* Sample not preserved.

** Sample appeared contaminated.
Large numbers of bacteria, motile cells observed; fungi.

NEROUTSOS INLET PHYTOPLANKTON ANALYSIS

19 October, 1972

ENVIRONMENTAL PROTECTION SERVICE

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Achnanthes sp.							60
Amphora sp.						10	
Biddulphia aurita		10	20	150			20
Chaetoceros spp.	20	40	60	10		50	10
Cocconeis sp.	10	2700	2800		20	10	10
Coscinodiscus sp.			60		10	20	100
Cyclotella sp.							10
Ditylum spp.	10				20		40
Fragilaria sp.							70
Licmorpha sp.					10		
Melosira sp.			40	30	20		10
Navicula spp.	10	10	110	11030	40	540	130
N. grevilleana				500			
Nitzschia spp.	5400		140	10	70	70	170
Nitzschia longissma		10					
Pinnularia sp.				20	10		
Rhizosolenia sp.		30					10
Synedra sp.	150	40	30	13510	30	80	80
Chrysophyceae	13500	2700	2700	2700	8100	8100	
Dinophyceae							
Ceratium hirundinella						20	10
Dinophysis sp.		10	10	10			

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Dinophyceae (continued)							
Glenodinium sp.	20						
Gymnodinium sp.							30
Gyrodinium sp.	20						10
Peridinium spp.	10	40	50		30	30	40
P. decipens					30		
Prorocentrum sp.		10					
Chlorophyta							
Unicellular	450	470	510	80	260	300	350
Filamentous			30				
Ciliata							
Strombidium sp.	40		10				20
Miscellaneous	110	160	280		150	130	20
Tintinnidae							
Stenosmella sp.	20		10			10	
Euglenophyceae			50	50		10	
Silicoflagellata							
Distephanus sp.	10		10	10	10	40	20
Protozoans							
Unidentified Flagellates	21600	5400	2700	800	8100	2700	

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-3

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Amphora sp.	10			20	10	40	10
Asterionella sp.							40
Biddulphia aurita						10	
Chaetoceros sp.							80
Cocconeis sp.	10			10		10	
Coscinodiscus sp.		10	10				50
Ditylum brightwelli		10	10		40	20	
Licmorpha sp.							10
Melosira spp.			20		40		
Navicula spp.	30	50	120	10	60	90	130
Nitzschia spp.		40	60	10	10	20	230
Striatella sp.					90	40	
Synedra spp.					20	20	20
Thalassiosira sp.							60
Thalassiothrix sp.				60			20
Dinophyceae							
Amphidinuim sp.						10	10
Dinophysis sp.	20						
Glenodinuim sp.	20						
Gymnodinium sp.						20	
Gyrodinuim sp.				10	20		
Chrysophyceae	540		540				

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-3

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
..continued							
Chlorophyta							
Unicellular sp.	50						
Filamentous sp.			40				
Ciliata				10			20
Strombidium sp.	460	150	40	130	90	100	
Tintinnidae		40	60	30			
Parundella sp.						10	
Stenosmella sp.	170				20	30	
Tintinnopsis sp.					10		
Euglenophyceae					10		
Silicoflagellata							
Distephanus sp.	10	10				10	
Dictyocha sp.					10		
Unknown Protozoans							1080

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-4

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Achnanthes sp.							10
Amphora sp.				10			
Biddulphia aurita	10						
Chaetoceros sp.		50					
Cocconeis spp.	30	60	10	20	30	20	10
Licmorpha sp.		10			10		
Navicula spp.	120	100	80	70	30	70	40
Nitzschia spp.	20	10	40	30	10	30	40
N. longissima			10				
Rhizosolenia hebatata	10					10	
Skeletonema sp.				1200			
Synedra sp.		20			20		
Thalassiosira sp.			20				30
Dinophyceae							
Amphidinium sp.	10						10
Dinophysis sp.			10	10			
Glenodinium sp.	10				10	10	
Gyrodinium sp.			10				
Oxytoxum diploconus		10					
Ciliata	10			60			
Strombidium spp.	130	30	140	100	50	10	30

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-4

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
..continued							
Tintinnidae							
Stenosmella sp.				*10*	*10*	*10*	
Tintinnopsis sp.			*10*	*20*			
Euglenophyceae			*10*				
Silicoflagellata							
Distephanus sp.	*10*						*10*
Radiolaria	*10*	*10*					*10*
Unidentified Protozoans							

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-5

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Amphora sp.			10				
Biddulphia aurita				10			
Chaetoceros sp.	40					20	
Cocconeis sp.	20	10		20		40	10
Coscinodiscus sp.		10					20
Licmorpha sp.			30	10			
Melosira sp.	30			10			10
Navicula spp.	60	20	140	110	80	70	380
Nitzschia spp.	50	20	10	30	30	50	20
N. closterium						10	10
Skeletonema costatum						60	60
Synedra spp.			40		20		
Tabellaria sp.			20	10			20
Dinophyceae							
Peridinium sp.	10		10				
Dinophysis sp.	10						
Oxytoxum sp.				10			
Chrysophyceae	37800	40500	13500	54000	10800	18900	29700
Chlorophyta							
Unicellular sp.	20	40					
Filamentous sp.		10					

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-5

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
..continued							
Ciliata							
Strombidium sp.		*10*		*10*			
Miscellaneous	*500*	*420*	*270*	*130*	*40*	*100*	*160*
Tintinnidae							
Miscellaneous				*250*	*50*	*140*	*20*
Stenosmella sp.	*30*						
Euglenophyceae	*10*						*10*
Radiolaria		*10*					
Unidentified Protozoans		*270*					*2970*

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-6

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Achnanthes sp.				10			
Amphora sp.							10
Cocconeis spp.			10	20		10	
Cyclotella sp.				10			
Navicula spp.		70	10		30	50	
Nitzschia sp.					10	10	
Skeletonema costatum		20	50	180	80	50	
Synedra sp.			10	10		10	
Thalassiosira sp.					20	10	10
Dinophyceae							
Amphidinium sp.		20					
Glenodinium sp.			20				
Gyrodinium spp.		70		60	40		
Oxytoxum sp.					10		
Peridinium sp.					10		
Prorocentrum sp.					10		
Pseudophalacroma sp.							10
Ciliata			200				
Strombidium sp.		190	90	30	60	20	10
Tintinnidae					10		
Stenosmella spp.				50	10		
Tintinnopsis spp.						20	20

Not Scored: Bacteria Extensive

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-6

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
..continued							
Radiolaria						*10*	
Unidentified Cysts		*40*					

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-7

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m*	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Amphora sp.			10				
Biddulphia aurita						10	
Cocconeis sp.			10		10		
Coscinodiscus sp.					10		
Navicula sp.		10	40	110	10	20	10
Nitzschia sp.			10		10	10	
N. closterium		10					
Synedra sp.			10	10			
Chrysophyceae		9990	29700				
Dinophyceae							
Peridinium sp.			10				
Prorocentrum sp.				10			
Ciliata							
Strombidium sp.			10				
Miscellaneous		1310	280	20		20	
Tintinnidae		310	210	50	20	10	20
Copepoda		1					
Unidentified Protozoans			100				

* Sample improperly preserved. Bacteria predominant. Not scored.

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-8

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta	Not Scored - Bacteria extensive						
Bacillariophyceae							
Achnanthes sp.				10			
Cocconeis sp.				10			
Grammatophora sp.			20				
Navicula spp.		30	20	30	20		
Skeletonema costatum							
Synedra sp.				10			
Dinophyceae							
Amphidinium sp.				10	20		
Cochlodinium sp.				10			
Gymnodinium sp.			50				10
Pseudophalacroma sp.					10		
Unidentified Dinophyceae 1				10			
Unidentified Dinophyceae 2			10				
Chrysophyceae		4860					
Ciliata		2620					
Strombidium sp.		80	10	10	10		

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-9

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta	Not Scored						
Bacillariophyceae							
Achnanthes sp.				10			
Amphora sp.			10			10	
Cocconeis spp.				10		10	10
Melosira sp.			10				
Navicula spp.		30	20	10	30	30	10
Nitzschia sp.				10			
Striatella sp.						80	
Synedra sp.			20			10	
Dinophyceae							
Gyrodinium sp.			30				
Noctiluca sp.			10		10		
Peridinium sp.		20					
Chrysophyceae		6210					
Ciliata		8370	20	10			
Strombidium spp.		130		30	20	10	10
Tintinnidae					10		
Parundella sp.					10		
Silicoflagellata							
Distephanus sp.							10

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-9

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Radiolaria							*10*
Unidentified Cysts							*30*

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-11

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m*	2m*	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Cocconeis sp.		10					
Coscinodiscus sp.							10
Navicula sp.		10	10		2700	10	50
Nitzschia sp.							20
Synedra sp.				10	10		
Triceratium sp.						10	
Chrysophyceae	5400	89100	24300	2700	5400	2700	2700
Chlorophyta							
Unicellular sp.							
Filamentous sp.				110			
Tintinnidae				40	30	70	
Silicoflagellata				10			
Distephanus sp.				10			
Ciliata	2430						80
Euglenophyceae							10
Copopoda					10		
Larval Polychaete					10		

* Bacteria abundant.

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-12

Data Expressed as Total Count/100 ml. — 19 October 1972

	0m	2m	4m	6m	10m	15m	20m
Chrysophyta							
Bacillariophyceae							
Amphora spp.		10					10
Cocconeis sp.				10			
Ditylum sp.		10					
Flagilaria sp.		10					
Licmorpha sp.					10		
Melosira sp.					10		
Navicula spp.				30	20		50
Synedra spp.		30			20		
Dinophyceae							
Dino sp. 1				10			
Chlorophyta							
Filamentous (Urospora)				70		90	
Ciliata		3640					130
Strombidium sp.		30		40	30	10	20
Tintinnidae							
Stenosmella sp.		10					

Not Scored

NEROUTSOS INLET PHYTOPLANKTON ANALYSIS

4 May, 1973

ENVIRONMENTAL PROTECTION SERVICE

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-1

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.			10	20	10	
Amphora sp.				10		
Bacteriastrum sp.	260	100	350	120	140	80
Biddulphia aurita	10	20			10	30
Chaetoceros spp.	16280	16530	26990	19360	35410	30800
Cocconeis sp.		30	40	20	20	
Coscinodiscus sp.	190	50	30			30
Ditylum brightwelli	40	10	30	20	40	70
Eucampia sp.			20		50	30
Isthmia nervosa				10		
Lauderia sp.				1020	1410	150
Leptocylindius sp.	720	750	1280	1140	1320	460
Licmorpha sp.		40	30	20	30	
Melosira sp.	230		20	320		
Navicula spp.	370	450	360	630	570	530
Nitzschia spp.	2540	2210	1770	4520	3420	5180
N. longissima	510	350	200	370	410	550
N. pungens			350	390	720	610
Pleurosigma sp.			10			20
Rhizosolenia sp.	50	20	30	30	40	
Schroderella sp.	120	10	200	80	320	
Skeletonema costatum	3770	3660	5490	5870	5190	10360
Stephanopyxis sp.					10	160

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-1

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Synedra sp.	30					
Thalassionema sp.	120	50	240	240	330	910
Thalassiosira sp.	3590	4120	5070	4660	4270	19000
Dinophyceae						
Amphidinium sp.						60
Ceratium lineatum			10			
Dinophysis sp.	20	10		10	20	
Glenodinium sp.	20	60	90	80	80	20
Minuscula sp.	10	60	70	60	30	
Peridinuim spp.	60	60	70	70	100	90
Chrysophyceae			1500		750	
Strombidium sp.	50	70	20		40	170
Tintinnidae	20					
Tintinnopsis sp.	140	100	50		60	
Stenosmella sp.	20					
Parundella sp.	10	20	10	30		20
Parafavella sp.			20			
Ptychocylis sp.		10		10		
Silicoflagellata						
Distephanus sp.		10	20	20	10	10
Radiolaria				10		10

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-1

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Troschiscia		*20*	*40*		*40*	*30*
Unidentified biflagellate	*750*					
Chaetoceros resting spores						*100*

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.	10	10				10
Amphora sp.		10		10	10	10
Bacteriastrum sp.	40	40	90	30	90	60
Biddulphia aurita	10					
Chaetoceros spp.	12980	15330	12840	11510	18700	15160
Chaetoceros resting spores		20	10	20		50
Cocconeis sp.	130	60	130	70	50	10
Coscinodiscus sp.	20	10		10		20
Coscinosira sp.		40				190
Ditylum brightwelli		20	20		10	20
Eucampia spp.		10	10	60	110	90
Leptocylindrus sp.	780	190	390	470	880	1230
Licmorpha sp.	60	20	20	10	20	
Melosira sp.			20		50	
Navicula spp.	190	400	150	440	300	320
Nitzschia spp.	1390	1470	1500	1930	3660	3400
N. closterium						10
N. longissima	120	160	70	80	220	410
Pleurosigma sp.	10		20		10	
Rhizosolenia sp.	30	330				170
Schroderella sp.	360	390	200	300	530	1600
Skeletonema costatum	2940	2050	2160	1630	6230	4730
Stephanopyxis sp.			20	40		

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Thalassionema sp.	*140*	*310*	*350*	*90*	*120*	*230*
Thalassiosira sp.	*2100*	*2650*	*2560*	*2190*	*5440*	*5400*
Dinophyceae						
Ceratium sp.					*10*	
Dinophysis sp.		*10*				*10*
Glenodinium sp.	*30*	*10*		*10*	*40*	*30*
Gyrodinium sp.						*10*
Minuscula sp.		*30*				*10*
Peridinium spp.	*60*	*10*	*70*	*10*	*50*	*30*
Chrysophyceae						
Ciliata						
Strombidium sp.	*350*	*470*	*580*	*330*	*240*	*230*
Tintinnidae						
Tintinnopsis sp.	*20*	*30*	*60*	*50*	*80*	*10*
Stenosmella sp.	*10*	*30*			*10*	
Parundella sp.		*30*				
Ptychocylis sp.		*20*		*10*		*10*
Silicoflagellata						
Unknown		*20*				
Distephanus sp.					*10*	

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-2

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Euglenophyceae	*20*	*20*	*30*	*20*		
Radiolaria			*10*			
Resting Spores	*30*					

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-3

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.	10				10	
Amphora sp.		10				
Biddulphia sp.		40				
Chaetoceros spp.	70					100
Cocconeis sp.	60	110	60	40	50	10
Coscinodiscus sp.						10
Ditylum sp.						10
Leptocylindrus sp.						40
Licmorpha sp.		10				
Melosira sp.	40	90				
Navicula spp.	100	110	30	20	70	30
Nitzschia spp.	120	720	120		10	90
N. closterium	10					
N. longissima		20		20		
Skeletonema costatum	20				20	
Thalassiosira sp.						120
Dinophyceae						
Glenodinium sp.					10	
Peridinium sp.	10					
Chrysophyceae						
Ciliata						
Strombidium sp.	1060	480	440	370	270	40

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-3

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Tintinnidae						
Tintinnopsis sp.	20		40	10	50	
Stenosmella sp.	140	40	10	20		
Silicoflagellata						
Distephanus sp.	20	10	10	10	20	
Euglenophyceae		50	40	10	10	
Trochiscia	10			10		

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-4

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.	10		20			
Cocconeis sp.	30	30	20	50	10	10
Fragilaria sp.		10				
Grammatophora sp.		30				
Licmorpha sp.	20		10			
Melosira sp.	10					
Navicula sp.	70	90	130	30	70	60
Nitzschia sp.	40	20	30	70	10	20
N. longissima	10	40	10		20	20
Pleurosigma sp.			10			
Skeletonema costatum		100	50	190	60	90
Thalassionema sp.					20	
Thalassiosira sp.		10	20	20	10	
Dinophyceae						
Glenodinium sp.		10				
Peridinium sp.					10	
Chrysophyceae						
Ciliata						
Strombidium sp.	470	760	540	390	130	130
Tintinnidae						
Tintinnopsis sp.		20				

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-4

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Stenosmella sp.	*10*		*10*		*10*	
Parundella sp.	*10*					
Silicoflagellata						
Distephanus sp.	*20*	*60*	*10*	*10*		
Euglenophyceae	*100*	*140*	*120*	*50*	*90*	*40*
Trochiscia		*50*	*20*	*20*		

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-5

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.			10			
Cocconeis sp.	20	30	30	10	40	10
Licmorpha sp.		10				
Navicula spp.	70	20	120	90	30	10
Nitzschia spp.	60	70	30	60	70	30
N. longissimma	30		30	20	20	
Skeletonema costatum	30	80	160	20		40
Thalassiosira sp.		10				
Dinophyceae						
Glenodinium sp.	10	20			10	
Peridinium sp.					10	
Chrysophyceae						
Ciliata						
Strombidium sp.	190	680	480	210	160	20
Tintinnidae						
Tintinnopsis sp.	10	30	20	30	10	
Stenosmella sp.	10			10		10
Euglenophyceae	110	160	100	20	90	
Silicoflagellata						
Distephanus sp.	10		10			
Trochiscia		30	30		20	

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-6

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Amphora sp.					10	
Cocconeis sp.	20	50	20	20	70	20
Leptocylindrus sp.		80				
Melosira sp.						10
Navicula spp.	100	40	20		40	10
Nitzschia spp.	90	130	30	20	70	30
N. longissima	20	30	10	20	10	
Pleurosigma sp.		10				
Skeletonema costatum	80	20	280	80		30
Thalassiosira sp.				10		
Dinophyceae						
Gyrodinium sp.	10					
Gymnodinium cyst	10					
Minuscula sp.					10	
Glenodinium sp.					10	
Chrysophyceae						
Ciliata						
Strombidium sp.	250	440	470	220	170	70
Tintinnidae						
Tintinnopsis sp.	20	30	20	10	40	30
Stenosmella sp.	10	10	20			10
Euglenophyceae	120	50	40	20	10	
Trochiscia	10	60	70	20	100	

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-7

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.	20					
Amphora sp.			10	20		
Chaetoceros sp.						20
Cocconeis sp.	20	30	40		20	
Grammatophora sp.					10	
Licmorpha sp.	10	20	10			
Melosira sp.	20		10	40		
Navicula sp.	290	160	160	200	130	40
Nitzschia spp.	120	200	150	80	80	20
N. longissima	30		10	10	10	10
Pleurosigma sp.	10					
Skeletonema costatum		150	240	420	40	100
Thalassionema sp.	10					
Dinophyceae						
Amphidinuim sp.			10	20	10	
Dinophysis sp.					10	10
Glenodinium sp.	10	10	20	10		
Gyrodinium sp.	40	80	40	110	80	
Peridinium spp.				10	10	
Chrysophyceae	636750	362250	31800	184500		
Cryptophyceae		3000				

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-7

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Ciliata						
Strombidium sp.	660	670	940	1040	580	40
Coleps sp.		20				
Tintinnidae						
Stenosmella sp.	80	110				
Tintinnopsis sp.		10	20	70	110	
Euglenophyceae	330	240	70	10		
Silicoflagellata						
Distephanus sp.					10	
Radiolaria		20				
Trochiscia	390	680	290	340	60	10

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-8

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Amphora sp.			10		10	
Achnanthes sp.		10	10			
Cocconeis sp.	20	10	30		10	
Licmorpha sp.		10				
Melosira spp.	130	30				
Navicula spp.	520	140	380	150	110	20
Nitzschia spp.	370	320	260	160	300	10
N. longissima	10	10	20	40	30	
Skeletonema costatum	870	130	590	740	60	
Thalassiothrix sp.		100				
Dinophyceae						
Amphidinium sp.						10
Cochlodinium sp.					10	
Glenodinium sp.	20		10	10		
Gyrodinium sp.	10					
Peridinium micrapium					10	
Chrysophyceae	770250					
Ciliata						
Strombidium spp.	590	680	770	740	240	80
Tintinnidae						
Unid sp.	10					
Tintinnopsis sp.	10			20	100	10

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-8

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Euglenophyceae	*100*	*180*	*150*	*10*	*30*	*10*
Silicoflagellata				*10*		
Radiolaria	*10*					
Trochiscia	*220*	*520*	*320*	*40*	*10*	*10*
Unk. Resting spore	*120*	*10*				

NEROUTSOS INLET PLYTOPLANKTON SAMPLES — Station Q-9

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.		10				
Cocconeis sp.	20	20	10			10
Licmorpha sp.			10			
Melosira sp.	90	270	70	100	40	
Navicula spp.	290	160	270	80		30
Nitzschia spp.	730	870	620	470	20	60
N. longissima sp.	50	50	70	50		
Schroderella sp.					10	
Skeletonema costatum	500		170	150		
Striatella sp.			90			
Thalassiosira sp.				30		10
Dinophyceae						
Amphidinium sp.					30	10
Glenodinium sp.				10	10	
Gyrodinium sp.					10	
Chrysophyceae						
Ciliata						
Unknown	10		30		10	
Strombidium sp.	190	230	380	500	180	70
Tintinnidae						
Stenosmella sp.	10			10		
Tintinnopsis sp.				30	40	
Euglenophyceae	130	180	80	10		

continued..

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-9

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m	4m	6m	10m	20m
..continued						
Resting Spores	*250*					
Trochiscia	*10*	*80*	*70*	*50*	*60*	

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-11

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m*	2m	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.		10				
Amphora sp.				10		
Cocconeis sp.		40	20			
Licmorpha sp.					10	
Melosira spp.	110	250	80	40		20
Navicula spp.	330	150	110	20		220
Nitzschia spp.	920	1110	710	250	120	60
N. longissima	10	30	30			
Skeletonema costatum			20	430	60	60
Thalassiosira sp.			10			
Dinophyceae						
Amphidinium sp.					20	10
Gymnodinium sp.			10			
Chrysophyceae						
Ciliata						
Strombidium sp.	50	150	650	530	180	100
Unknown	20	10				
Tintinnidae						
Tintinnopsis spp.			30	20	20	
Euglenophyceae	270	290	10		10	
Resting spores				20		
Trochiscia	230	100	150	90	10	40

* *Bacteria*

NEROUTSOS INLET PHYTOPLANKTON SAMPLES — Station Q-12

Data Expressed as Total Count/100 ml. — 4 May 1973

	0m	2m*	4m	6m	10m	20m
Chrysophyta						
Bacillariophyceae						
Achnanthes sp.		10				
Amphora sp.						10
Cocconeis sp.				10		
Melosira sp.			40	20		10
Navicula spp.	330	130	210	90	20	
Nitzschia spp.	940	860	1000	610	170	50
N. longissima	50	20	50	10		10
Skeletonema costatum			40	100		
Dinophyceae						
Amphidinium sp.					10	20
Phalacroma sp.						10
Peridinium sp.				10		
Unknown						10
Chrysophyceae						
Ciliata						
Strombidium sp.	10	20	450	980	730	150
Unknown				10		
Tintinnidae						
Tintinnopsis sp.			10		30	
Euglenophyceae	290	150	40	20		
Trochiscia			50	20	50	100

* *Bacteria*