LABORATORY REFERENCE DOCUMENT NO. 82-28

PARTICULATE ORGANIC CARBON/NITROGEN CONCENTRATIONS AND PARTICLE SIZE DISTRIBUTIONS ON GEORGES BANK IN OCTOBER 1978 AND FEBRUARY 1979*

DATA REPORT

by

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☐ APPROVED FOR DISTRIBUTION
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(APPROVING OFFICIAL)
16 Sept 1982
(DATE)

National Marine Fisheries Service
Northeast Fisheries Center
Woods Hole, Massachusetts 02543

August 1982

*This report is MARMAP Contribution MED/NEFC 82-58

Particulate organic carbon and nitrogen concentrations were found from seawater samples collected on Georges Bank during October 1978 and February 1979 as part of an NEFC investigation into processes controlling zooplankton abundance in this region (Davis, 1982). In addition, particle concentrations and size frequency distributions were found using a Coulter Counter.

In October 1978 (ALBATROSS IV 78-13), a total of 30 stations were sampled along the northern flank of Georges Bank and offshore of Nauset Beach, Cape Cod (Figure 1, Lough, 1979). In February 1979 (MT. MITCHELL 79-02), samples were collected at two stations on the northern flank and one on the southern flank of the bank (Figure 1). Station locations and sampling times are given in Table 1.

At each station, samples were taken at 10 m intervals from surface to bottom with 1.7 liter Niskin bottles. Samples were strained through a 0.053 mm mesh nitex screen to remove larger plankton. One half liter was filtered onto precombusted glass fiber filters (pore size 1.0 μm), dryed overnight in an oven at 60°C, and placed in a dessicator until the end of the cruise. Particulate carbon and nitrogen were found by combustion in an HCN analyzer.

Particle concentration and size distributions in each sampler (undiluted) were found using a Coulter Counter (Model ZB).

Carbon and nitrogen concentrations at each station are given in Table 2. Particle size distributions are given in Tables 3 and 4.

Literature Cited

Davis, C. S. 1982. Processes controlling zooplankton abundance on Georges Bank. Ph.D. Thesis, Boston University Marine Program. NEFC, Woods Hole, MA 198 pp.

Lough, G. 1979. Larval herring patch study. ICNAF Research Document 79-VI-116. 4 pp.

TABLE 1

Cruise	STD Station	Latitude	Longitude	Date (EST)	Time (EST)
ALBATROSS IV 78-13	1	4158	6713	17 Oct 78	0935
ALBATROSS IV 78-13	2	4158	6712	18 Oct 78	0308
ALBATROSS IV 78-13	4	4205	6712	18 Oct 78	2211
ALBATROSS IV 78-13	5	4205	6713	19 Oct 78	0339
ALBATROSS IV 78-13	6	4203	6720	19 Oct 78	1208
ALBATROSS IV 78-13	7	4205	6720	19 Oct 78	2130
ALBATROSS IV 78-13	8	4204	6720	20 Oct 78	0610
ALBATROSS IV 78-13	10	4208	6712	21 Oct 78	0330
ALBATROSS IV 78-13	11	4210	6712	21 Oct 78	0838
ALBATROSS IV 78-13	13	4209	6712	21 Oct 78	2040
ALBATROSS IV 78-13	14	4209	6713	22 Oct 78	0316
ALBATROSS IV 78-13	15	4209	6712	22 Oct 78	0943
ALBATROSS IV 78-13	16	4210	6714	22 Oct 78	1521
ALBATROSS IV 78-13	17	4147	6652	23 Oct 78	2327
ALBATROSS IV 78-13	18	4158	6635	31 Oct 78	0347
ALBATROSS IV 78-13	19	4200	6638	31 Oct 78	0703
ALBATROSS IV 78-13	20	4205	6638	31 Oct 78	0927
ALBATROSS IV 78-13	22	4157	6630	31 Oct 78	1525
ALBATROSS IV 78-13	23	4200	6630	31 Oct 78	1856
ALBATROSS IV 78-13	24	4203	6632	31 Oct 78	2136
ALBATROSS IV 78-13	25	4204	6624	1 Nov 78	0030
ALBATROSS IV 78-13	26	4200	6619	1 Nov 78	0320
ALBATROSS IV 78-13	27	4158	6622	1 Nov 78	0623
ALBATROSS IV 78-13	29	4152	6947	5 Nov 78	0900
ALBATROSS IV 78-13	31	4152	6945	5 Nov 78	1815
ALBATROSS IV 78-13	131	4152	6947	6 Nov 78	1720
ALBATROSS IV 78-13	32	4153	6950	7 Nov 78	1315
ALBATROSS IV 78-13	133	4149	6947	7 Nov 78	1620
ALBATROSS IV 78-13	33	4153	6951	8 Nov 78	1831
ALBATROSS IV 78-13	34	4154	6952	9 Nov 78	1610
MT. MITCHELL 79-02	63 1/	4150	6758	22 Feb 79	0902
MT. MITCHELL 79-02	76 1/	4044	6730	23 Feb 79	0741
MT. MITCHELL 79-02	84 1/	4200	6700	22 Feb 79	1428

1/ ICNAF Stations

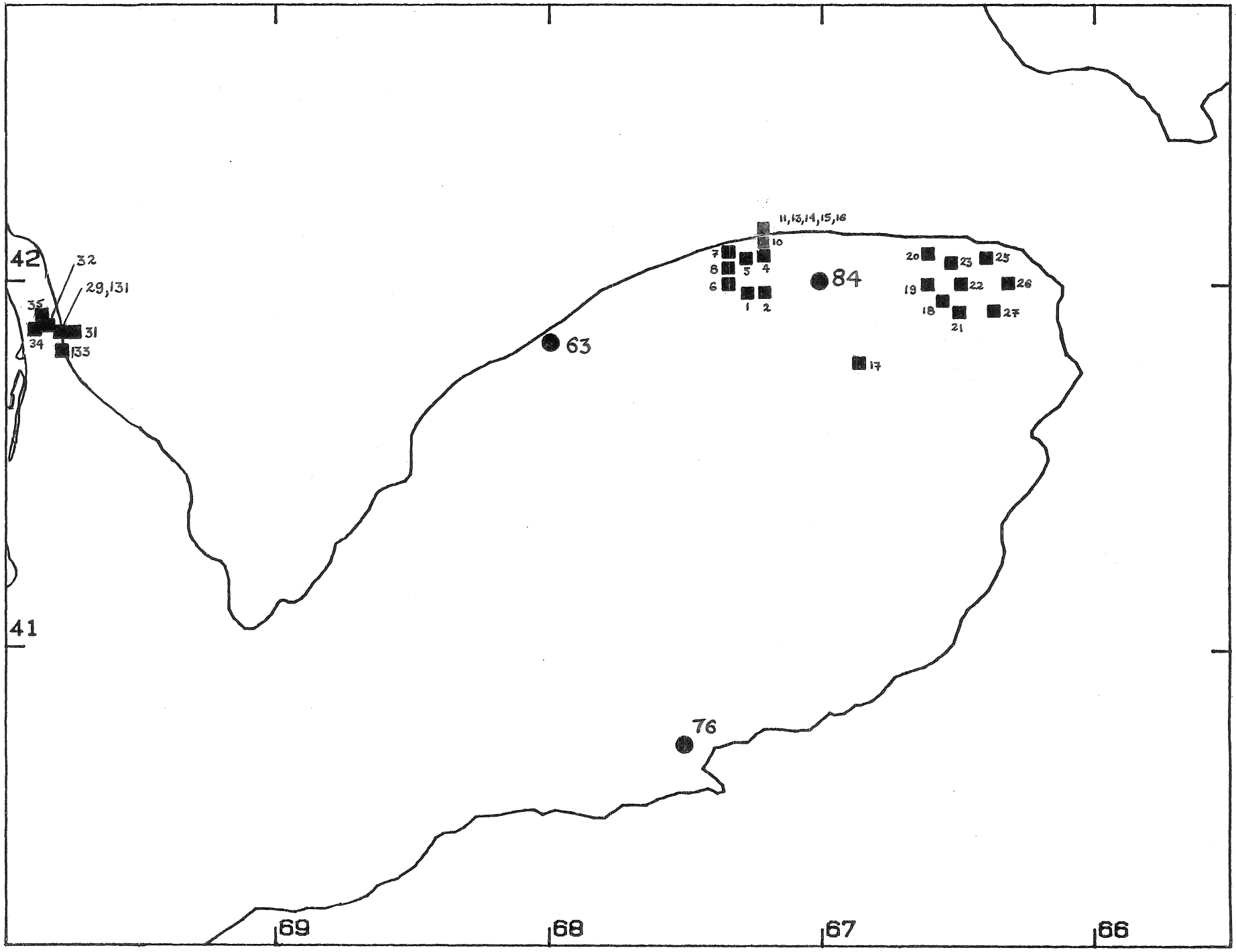
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FIGURE 1

TABLE 2

Cruise	STD Station	Bottom Depth (m)	Sample Depth (m)	Temperature (°C)	Salinity (°/oo)	POC ($\mu g \ell^{-1}$)	PON ($\mu g \ell^{-1}$)	C/N
ALBATROSS IV 78-13	1	53	2	13.07	32.22	130.2	16.8	7.8
			10	13.07	32.22	136.8	18.2	7.5
			20	13.07	32.22	177.8	19.0	9.4
			30	13.07	32.22	166.2	22.4	7.4
			41	13.05	32.22	196.6	18.4	10.7
ALBATROSS IV 78-13	2	55	3	13.05	32.22	159.8	18.2	8.8
			10	13.10	32.22	202.0	21.2	9.5
			19	13.11	32.21	212.0	23.8	8.9
			30	13.12	32.21	198.4	22.0	9.0
			38	13.13	32.21	186.8	16.4	11.4
ALBATROSS IV 78-13	4	54	2	12.66	32.23	116.8	17.4	6.4
			10	12.66	32.24	139.8	18.2	7.7
			20	12.46	32.25	149.6	20.2	7.4
			31	12.22	32.27	126.4	16.8	7.5
			40	12.00	32.27	180.4	14.6	12.4
ALBATROSS IV 78-13	5	50	3	12.71	32.24	154.4	17.8	8.8
			10	12.70	32.24	143.4	23.0	6.2
			20	12.61	32.22	171.6	18.4	9.3
			31	12.49	32.25	183.2	16.4	11.2
			39	12.19	32.26	236.0	21.0	11.2
ALBATROSS IV 78-13	6	49	3	13.13	32.22	150.0	21.2	7.1
			10	13.13	32.22	160.2	19.8	8.1
			20	13.10	32.22	156.2	18.8	8.3
			29	13.07	32.21	140.8	17.8	7.9
			40	13.08	32.22	176.0	21.0	8.4
ALBATROSS IV 78-13	7	51	2	12.49	32.26	117.6	14.8	7.4
			11	12.49	32.26	122.2	13.2	9.3
			20	12.38	32.27	137.0	23.2	5.9
			31	12.28	32.26	151.2	16.4	9.2
			40	11.90	32.29	138.4	14.8	9.4

Table 2 (Continued)

Cruise	STD Station	Bottom Depth (m)	Sample Depth (m)	Temperature (°C)	Salinity (°/oo)	POC ($\mu g \ell^{-1}$)	PON ($\mu g \ell^{-1}$)	C/N
ALBATROSS IV 78-13	8	49	2	12.13	32.22	140.0	17.8	7.9
			10	12.09	32.23	87.8	15.2	5.8
			20	11.99	32.27	83.6	16.2	5.2
			30	11.44	32.30	143.2	11.4	12.6
			40	10.76	32.37	70.2	10.4	6.8
	10	95	2	12.44	32.21	133.2	22.6	5.9
			11	12.39	32.22	133.8	24.6	5.4
			19	12.29	32.25	97.0	15.6	6.2
			29	12.08	32.25	106.8	16.8	6.4
			40	11.45	32.30	108.8	12.0	9.1
ALBATROSS IV 78-13	11	123	10	12.27	32.09	191.0	37.8	5.1
			20	11.85	32.06	101.2	16.6	6.1
			30	10.64	32.26	60.4	7.8	7.7
			40	9.65	32.32	60.0	10.4	5.8
			50	8.16	32.34	84.0	11.8	7.1
			75	6.19	32.58	37.2	5.8	6.4
			100	5.86	32.78	36.6	5.2	7.0
			110a	5.72	32.85	18.4	5.0	3.7
			110b	5.72	32.85	49.4	8.2	6.0
ALBATROSS IV 78-13	13	91	2	12.44	32.07	160.8	28.0	16.9
			10	12.45	32.06	137.6	21.2	5.4
			20	11.84	32.18	103.4	10.6	14.6
			30	9.64	32.32	56.4	8.4	6.7
			40	8.47	32.40	93.2	6.4	9.8
			63	6.81	32.53	37.0	6.8	6.5
			78	6.29	32.68	91.0	5.4	5.7
ALBATROSS IV 78-13	14	115	3	12.40	32.15	173.2	23.4	7.4
			10	12.39	32.16	112.2	18.2	6.2
			19	12.27	32.22	105.2	19.4	5.4
			30	11.95	32.25	90.6	16.0	5.7
			41	11.60	32.26	78.8	16.2	4.9
			77	9.70	32.37	43.2	5.4	8.0

Table 2 (Continued)

Cruise	STD Station	Bottom Depth (m)	Sample Depth (m)	Temperature (°C)	Salinity (°/oo)	POC ($\mu g \ell^{-1}$)	PON ($\mu g \ell^{-1}$)	C/N
ALBATROSS IV 78-13	15	95	2	12.46	32.15	224.0	32.8	6.8
			9	12.47	32.14	185.6	32.2	5.8
			20	12.30	32.26	81.4	17.4	4.7
			29	11.66	32.18	133.6	8.4	15.9
			41	8.62	32.36	53.2	7.0	7.6
			84	6.01	32.79	45.2	9.4	4.8
ALBATROSS IV 78-13	16	122	2	12.54	32.14	197.6	31.2	6.3
			10	12.31	32.19	232.0	30.2	7.7
			19	12.29	32.25	210.0	30.0	7.0
			29	11.95	32.29	130.6	12.0	10.8
			40	11.52	32.31	70.8	10.4	6.8
			75	8.99	32.42	34.8	9.2	3.8
			100	6.15	32.63	66.0	7.6	8.7
ALBATROSS IV 78-13	17	62	2	12.98	32.21	178.4	23.0	7.8
			10	12.98	32.21	152.2	19.4	7.9
			20	12.98	32.21	144.7	19.4	7.4
			28	12.99	32.21	142.8	20.6	6.9
			40	13.00	32.21	167.6	21.4	7.8
			50	13.00	32.20	180.0	24.0	7.5
ALBATROSS IV 78-13	18	53	2	-----	-----	148.4	24.0	6.18
			9	-----	-----	154.6	22.8	6.78
			20	-----	-----	158.0	22.6	6.99
			30	-----	-----	158.0	23.6	6.69
			41	-----	-----	130.8	25.4	5.15
ALBATROSS IV 78-13	19	73	2	11.55	32.23	202.0	28.2	7.16
			10	11.54	32.23	134.4	17.8	7.55
			20	11.48	32.24	130.6	21.6	6.04
			29	11.42	32.24	117.2	18.6	6.30
			40	11.34	32.24	129.0	20.6	6.26
			54	11.16	32.25	173.6	23.6	7.36
			70	11.03	32.27	157.2	19.6	8.02

Table 2 (Continued)

Cruise	STD Station	Bottom Depth (m)	Sample Depth (m)	Temperature (°C)	Salinity (°/oo)	POC ($\mu g \ell^{-1}$)	PON ($\mu g \ell^{-1}$)	C/N
ALBATROSS IV 78-13	20	73	2	11.61	32.24	127.6	19.2	6.65
			10	11.60	32.24	137.2	17.2	7.98
			20	11.48	32.24	131.8	19.4	6.79
			28	11.36	32.23	128.2	17.2	7.45
			41	11.11	32.26	139.4	19.4	7.19
			54	10.60	32.31	147.2	23.6	6.24
			71	10.45	32.33	156.8	27.4	5.72
ALBATROSS IV 78-13	22	80	3	11.87	32.24	188.2	27.4	6.87
			9	11.87	32.24	145.2	20.0	7.26
			21	11.79	32.25	199.2	24.8	8.03
			27	11.76	32.25	204.0	28.8	7.08
			43	11.40	32.25	135.2	18.6	7.27
ALBATROSS IV 78-13	23	85	29	11.01	32.27	124.8	22.6	5.52
			38	11.00	32.28	162.6	25.4	6.40
			82	10.76	32.29	158.0	27.0	5.85
ALBATROSS IV 78-13	24	62	2	11.31	32.23	184.6	22.6	8.17
			10	11.32	32.22	208.0	30.4	6.84
			19	11.32	32.22	220.0	33.2	6.63
			29	11.13	32.23	222.0	32.4	6.85
			38	10.87	32.28	183.0	29.0	6.31
ALBATROSS IV 78-13	25	80	2	11.46	32.23	152.0	21.6	7.03
			7	11.46	32.23	108.0	15.0	7.20
			19	11.36	32.23	167.4	29.8	5.62
			28	11.25	32.26	113.0	20.0	5.65
			40	11.11	32.26	134.8	21.6	6.24
ALBATROSS IV 78-13	26	75	2	11.58	32.24	186.0	24.6	7.56
			17	11.57	32.24	164.6	23.0	7.16
			27	11.36	32.26	135.0	18.4	7.33
			38	10.58	32.32	130.2	16.0	8.14
			62	9.74	32.44	78.2	10.4	7.52

Table 2 (Continued)

Cruise	STD Station	Bottom Depth (m)	Sample Depth (m)	Temperature (°C)	Salinity (°/oo)	POC ($\mu g \ell^{-1}$)	PON ($\mu g \ell^{-1}$)	C/N
ALBATROSS IV 78-13	29	119	2	10.87	32.10	338.0	56.6	5.97
			10	10.87	32.10	340.0	57.0	5.94
			20	10.80	32.14	178.8	23.4	7.64
			29	10.65	32.16	134.4	26.4	5.09
			40	9.67	32.31	71.6	15.0	4.77
			114	6.23	33.03	112.4	24.0	4.68
ALBATROSS IV 78-13	31	122	2	10.80	32.09	320.0	52.6	6.08
			10	10.80	32.10	274.0	47.6	5.76
			20a	10.80	32.10	260.0	44.6	5.83
			20b	10.80	32.10	240.0	42.8	5.61
ALBATROSS IV 78-13	131	---	0	10.80	32.10	304.0	44.0	6.91
ALBATROSS IV 78-13	32	61	2	11.00	32.14	292.0	49.6	5.89
			9	11.00	32.14	246.0	39.8	6.2
			20	10.94	32.14	576.0	42.0	13.7
ALBATROSS IV 78-13	133	---	0	-----	-----	428.0	57.6	7.43
			10	-----	-----	274.0	43.4	6.31
			20	-----	-----	234.0	40.6	5.76
ALBATROSS IV 78-13	33	55	2	10.25	32.13	274.0	53.4	5.13
			10	10.25	32.13	232.0	52.2	4.44
			20	10.22	32.14	230.0	42.0	5.48
			29	9.65	32.23	139.0	25.0	5.56
			40	9.62	32.24	202.0	28.0	7.21
	34	40	0	10.32	32.12	314.0	66.8	4.70
			10	10.29	32.11	316.0	50.6	6.24
			20	10.06	32.15	-----	50.8	----
			30	10.03	32.16	222.0	45.0	4.93
			40	9.85	32.30	170.0	28.0	6.07

Table 2 (Continued)

Cruise	STD Station	Bottom Depth (m)	Sample Depth (m)	Temperature (°C)	Salinity (°/oo)	POC ($\mu g \ell^{-1}$)	PON ($\mu g \ell^{-1}$)	C/N
MT. MITCHELL 79-02	63*	62	1	5.2	33.46	137.4	12.8	10.73
			3	---	-----	252.0	16.6	15.18
			10	---	-----	151.8	16.2	9.37
			22	---	-----	136.8	10.4	13.15
MT. MITCHELL 79-02	76*	82	1	5.0	-----	68.4	6.0	11.40
			9	---	-----	54.6	4.6	11.87
			25	---	-----	62.6	7.8	8.03
			48	---	-----	127.8	11.0	11.62
MT. MITCHELL 79-02	84*	62	1	4.0	32.96	184.0	12.2	15.08
			4	---	-----	108.4	10.8	10.04
			15	---	-----	308.0	15.0	20.53
			33	---	-----	122.0	20.6	5.92

*ICNAF Station numbers.

TABLE 3

PARTICLE CONCENTRATION (PPB)

STATION	SAMPLE DEPTH(M)	SIZE CLASS (UM) 4-5.7	5.7-8	8-1.3	11.3-16	16-22.6	22.6-32	32-42.3
4	2	66.63	83.94	77.34	74.83	73.85	73.87	36.02
4	10	68.36	87.57	71.15	57.00	75.65	112.09	86.46
4	20	67.56	90.55	87.59	64.32	72.05	53.49	43.23
4	31		96.20	81.84	64.32	66.65	91.71	36.02
4	41	74.58	90.55	79.71	72.92	67.55	45.85	57.64
5	3	80.25	108.42	129.69	66.87	72.95	99.35	50.43
5	10	77.55	101.98	118.89	62.09	77.45	84.06	79.26
5	20	81.51	114.24	135.66	73.55	81.06	94.25	50.43
5	31	84.76	108.62	130.03	78.97	106.28	163.04	50.43
5	39	84.72	107.59	128.01	94.25	63.94	109.54	21.61
6	3	78.99	82.99	67.66	58.27	71.15	86.61	64.84
6	10	68.28	91.27	68.56	71.64	76.55	84.06	57.64
6	20	75.86	85.93	81.84	65.59	69.35	33.11	43.23
6	29	72.57	92.74	125.98	63.05	60.34	142.66	43.23
6	40	82.72	90.35	78.24	98.07	69.35	94.25	50.43
7	2	76.88	98.91	151.99	45.85	68.45	104.44	57.64
7	11	66.14	88.24	64.51	44.90	71.15	76.42	72.05
7	20	81.41	104.84	160.54	67.82	128.79	160.49	151.31
7	31	67.74	91.23	64.51	43.94	64.84	53.49	86.46
7	40	64.41	81.16	116.41	52.22	65.75	99.35	21.61
8	2	64.44	101.06	62.48	68.78	65.75	61.14	57.64
8	10	66.36	90.31	112.69	68.46	67.55	96.80	21.61
8	20	58.61	78.21	74.08	50.31	62.14	137.56	43.23
8	30	45.13	79.17	68.56	47.76	36.92	56.04	28.82
8	40	48.91	62.45	44.58	43.94	48.63	53.49	43.23
10	2	74.53	103.81	88.37	62.09	62.14	86.61	21.61
10	11	80.34	105.48	105.60	72.60	67.55	129.92	36.02
10	19	72.22	101.18	93.89	63.36	80.16	68.78	28.82
10	29		92.98		67.82		137.56	
10	40	48.49	55.52	65.41	43.30	43.23	33.11	14.41
11	10	140.15	202.36	199.27	132.78	70.25	61.14	64.84
11	20	79.71	124.82	99.86	96.16	75.65	40.76	43.23
11	30	44.56	43.26	42.10	39.48	28.82	17.83	.00
11	40	48.21	43.30	50.66	54.13	40.53	58.59	28.82
11	50	49.14	51.06	55.73	41.07	38.72	12.73	7.20
11	75	35.74	31.24	36.14	23.24	16.21	17.83	.00
11	100	31.45	32.64	26.34	34.07	18.01	15.28	7.20
11	110	31.25	28.97	31.74	27.06	33.32	22.92	21.61
11	110	36.88	36.62	34.78	28.97	22.51	12.73	7.20
13	2	178.01	288.50	247.12	197.75	74.75	30.57	28.82
13	10	179.99	237.15	292.27	205.07	86.46	22.92	7.20
13	20	48.28	48.12	63.49	68.14	45.93	22.92	36.02
13	30	44.64	47.56	45.70	49.67	32.42	58.21	21.61
13	40	40.05	37.61	39.85	35.98	26.11	28.02	28.82
13	63	37.77	32.32	38.27	25.79	10.80		21.61
13	78	41.16	43.90	35.80	35.02	16.21	28.02	7.20

TABLE 3 (Continued)

PARTICLE CONCENTRATION (PPB)

STATION	SAMPLE DEPTH(M)	SIZE CLASS (UM) 4-5.7	5.7-8	8-1.3	11.3-16	16-22.6	22.6-32	32-42.3
14	3	138.14	211.76	201.52	158.58	90.96	48.40	14.41
14	10	122.45	174.10	184.75	111.13	81.06	91.71	36.02
14	19	77.81	129.68	102.00	78.33	65.75	63.68	36.02
14	30	63.63	75.23	95.36	52.54	52.23	45.85	21.61
14	41	43.45	45.89	60.79	47.76	49.53	10.19	21.61
14	77	25.76	24.67	23.30	22.60	19.81	20.38	7.20
15	2	199.95	331.53	279.32	230.55	116.18	40.76	21.61
15	9	204.73	286.47	348.67	177.69	78.35	45.85	28.82
15	20	82.55	133.86	188.13	80.88	76.55	45.85	36.02
15	29	40.09	41.99	46.04	33.75	39.63	17.83	7.20
15	41	37.87	37.01	43.00	35.02	27.92	12.73	.00
15	84	34.02	33.63	29.38	28.34	18.01	7.64	.00
16	2	193.59	305.98	333.14	198.07	131.50	81.52	64.84
16	10	191.76	338.50	385.04	272.90	121.59	63.68	122.49
16	19	162.46	251.17	306.79	185.33	110.78	58.59	50.43
16	29	50.52	70.53	84.66	76.42	46.83	33.11	36.02
16	40	42.17	50.63	59.89	37.25	33.32	40.76	43.23
16	75	40.99	41.71	53.36	34.71	32.42	20.38	.00
16	100	42.38	45.25	45.03	52.54	26.11	17.83	14.41
17	2	67.41	85.66	105.15	67.50	91.87	224.18	144.11
17	10	53.57	63.68	95.58	55.72	53.14	66.23	43.23
17	20	50.70	61.33	82.86	30.57	34.22	84.06	50.43
17	28	55.46	69.26	93.89	84.70	67.55	94.25	93.67
17	40	54.42	68.42	96.93	51.90	49.53	91.71	28.82
17	50	49.20	62.69	99.52	49.67	66.65	91.71	43.23
18	2	72.47	101.30	123.16	110.18	83.76	114.63	57.64
18	9	70.80	110.49	111.12	116.86	84.66	56.04	28.82
18	20	81.01	108.98	146.36	126.10	102.67	102.28	86.46
18	30	78.66	111.05	111.23	115.91	108.98	81.52	43.23
18	41	71.92	99.19	93.44	121.32	102.67	91.71	64.84
19	2	80.03	196.79	125.64	120.37	79.26	63.11	21.61
19	10	77.33	106.39	141.97	100.62	73.85	68.78	64.84
19	20	72.08	118.46	115.96	136.92	99.07	68.78	72.05
19	29	72.73	101.10	117.20	118.77	79.26	63.68	122.49
19	40	72.18	115.55	112.81	136.92	97.27	91.71	72.05
19	54	72.74	91.15	117.87	132.47	106.28	112.09	57.64
19	70	69.36	100.70	123.39	140.11	81.96	.00	14.41
20	2	65.20	85.81	95.92	120.05	69.35	86.61	50.43
20	10	51.11	65.55	74.30	59.23	52.23	25.47	14.41
20	20	69.45	105.68	107.06	104.13	118.89	84.06	72.05
20	28	71.08	111.09	152.55	117.18	85.56	53.49	36.02
20	41	83.72	95.61	109.43	108.90	70.25	109.54	57.64
20	54	70.66	102.65	107.63	117.50	90.06	81.52	7.20
20	71	70.21	96.72	121.02	114.95	115.28	96.80	28.82

TABLE 3 (Continued)

PARTICLE CONCENTRATION (PPB)

STATION	SAMPLE DEPTH(M)	SIZE CLASS (UM) 4-5.7	5.7-8	8-1.3	11.3-16	16-22.6	22.6-32	32-42.3
22	3	74.01	113.48	150.30	134.70	124.29	40.76	64.84
22	9	75.01	107.87	151.42	102.21	108.98	91.71	50.43
22	21	66.46	95.33	89.39	108.58	100.87	96.80	86.46
22	27	87.94	125.30	160.99	121.96	112.58	137.56	72.05
22	43	61.13	93.94	117.87	114.63	90.06	78.97	28.82
23	29	64.72	89.68	92.65	129.28	91.87	89.16	21.61
23	38	82.27	114.79	119.56	153.17	129.69	81.52	50.43
23	82	81.66	99.23	115.17	132.15	105.38	104.44	7.20
24	2	93.26	142.10	176.30	183.10	138.70	63.68	43.23
24	10	93.85	160.49	187.00	240.74	153.11	78.97	64.84
24	19	95.33	147.04	206.14	213.99	162.12	104.44	72.05
24	29	95.69	149.58	183.17	229.91	174.73	68.78	21.61
24	38	66.51	84.78	82.07	136.29	132.40	132.47	86.46
24	60	69.40	89.56	93.10	121.32	116.18	89.16	36.02
25	2	83.36	135.41	141.40	170.04	121.59	61.14	50.43
25	7	77.41	115.51	156.04	165.27	118.89	66.23	43.23
25	19	85.77	141.30	166.73	215.58	128.79	58.59	28.82
25	28	71.82	86.69	114.61	109.54	72.05	73.87	43.23
25	40	59.22	86.57	88.71	101.58	72.95	76.42	43.23
26	10	70.18	108.19	131.16	139.47	70.25	99.35	57.64
26	17	77.89	112.48	174.84	174.18	91.87	38.21	21.61
26	27	70.33	76.62	114.04	91.07	92.77	76.42	7.20
26	38	48.76	69.49	65.29	76.42	59.44	53.49	28.82
26	62	43.95	51.26	60.68	62.41	32.42	35.66	21.61
29	2	178.70	312.82	639.93	404.73	279.21	147.75	38.82
29	10	174.29	349.25	521.83	584.97	237.78	71.33	136.90
29	20	107.66	117.38	154.35	85.34	66.65	68.78	7.20
29	29	99.63	109.54	143.09	80.24	85.56	40.76	28.82
29	40	48.22	39.60	53.25	42.98	35.12	43.30	7.20
29	115	117.63	128.96	137.80	97.76	69.35	15.28	14.41
31	2	187.96	324.17	447.30	316.53	145.91	53.49	100.87
31	10	183.19	310.48	597.83	280.54	166.62	85.61	21.61
31	20	184.83	327.67	477.36	334.36	135.10	30.57	64.84
131	1	183.17	335.15	642.41	287.87	158.52	38.21	28.82
32	2	171.11	266.41	511.14	268.12	199.05	109.54	14.41
32	20	145.03	249.57	255.00	272.90	92.77	28.02	36.02
133	2	263.32	419.86	517.44	383.40	153.11	43.30	100.87
133	10	201.13	314.50	631.71	194.88	120.69	58.59	.00
133	20	181.22	296.34	339.89	271.94	83.76	10.19	14.41
33	2	137.03	221.91	323.79	370.98	191.84	68.78	100.87
33	10	129.22	211.96	318.84	369.39	256.69	73.87	57.64
33	20	120.29	186.44	348.22	250.29	193.64	68.78	21.61
33	40	117.25	114.08	145.57	116.86	94.57	71.33	14.41
34	2	146.43	224.26	550.88	469.70	372.88	119.73	14.41
34	10	133.02	218.29	439.76	456.96	310.73	99.35	28.82
34	20	138.48	194.16	425.01	333.72	273.80	127.37	28.82
34	30	120.21	138.68	172.25	214.31	158.52	96.80	108.08
34	40	81.16	82.23	106.28	118.46	87.36	58.59	7.20

TABLE 4

MT. MITCHELL 79-02 (Feb. 1979) PARTICLE CONCENTRATIONS (PPB)

Station	Sample Depth (m)	Channel (size class μm)							
		1	2	3	4	5	6	7	8
		2.83-3.36	3.36-4.00	4.00-4.76	4.76-5.66	5.66-6.73	6.73-8.00	8.00-9.51	9.51-11.31
63	1	39.3	37.1	30.9	40.2	42.2	57.5	68.8	91.2
	3	17.9	24.9	24.8	23.3	66.4	50.0	52.1	55.0
	10	18.6	19.2	22.5	23.5	24.5	41.1	55.9	45.0
	22	15.3	14.5	16.6	18.6	18.2	26.3	33.0	31.6
76	1	19.3	20.0	19.8	25.3	28.0	38.2	40.0	42.7
	9	16.7	14.8	15.1	22.1	29.4	45.5	39.6	35.1
	25	16.5	15.1	16.8	21.6	29.4	37.6	47.6	41.5
	48	18.1	17.6	18.7	26.8	40.4	46.7	51.8	63.1
84	1	58.1	60.7	70.4	82.9	83.8	94.3	82.0	77.1
	4	21.0	25.8	31.3	41.4	45.4	65.3	63.6	60.8
	15	23.7	30.7	49.5	38.7	35.3	51.9	54.2	50.3
	33	34.4	36.8	45.8	56.8	61.6	73.8	82.4	92.3

TABLE 4 (Continued)

MT. MITCHELL 79-02 (Feb. 1979) PARTICLE CONCENTRATIONS (PPB)

Station	Sample Depth (m)	Channel (size class μm)						
		9	10	11	12	13	14	15
		11.31-13.45	13.45-16.00	16.00-19.03	19.03-22.63	22.63-26.91	26.91-32.00	32.00-38.05
63	1	169.1	84.3	208.6	102.9	39.3	0	0
	3	45.2	67.8	36.1	9.5	0	0	0
	10	25.6	29.7	25.0	4.7	0	0	0
	22	23.6	36.4	50.1	28.1	0	0	0
76	1	22.6	36.4	36.2	18.7	0	0	0
	9	27.5	29.8	25.0	28.1	0	0	0
	25	27.5	28.1	19.5	14.0	2	0	0
	48	42.2	44.7	47.3	37.4	0	0	0
84	1	57.0	----	----	----	----	----	----
	4	41.3	33.1	22.2	28.1	47.2	0	0
	15	40.3	52.9	38.9	28.1	31.5	0	0
	33	62.9	81.0	75.1	93.5	110.1	52.9	0