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## Relationship between the Chesapeake Bay blue crab and its climatological environment : oceanographic and atmospheric data

Robert E. Harris Jr.  
*Virginia Institute of Marine Science*

Willard A. Van Engel  
*Virginia Institute of Marine Science*

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Relationship Between the Chesapeake  
Bay Blue Crab and its Climatological  
Environment:

Oceanographic and Atmospheric Data

Robert E. Harris, Jr.

and

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Data Report Number 15

Virginia Institute of Marine Science

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## Acknowledgements

We thank Dr. Merton Ingham, Director, Atlantic Environmental Group, Narragansett, RI, for furnishing much of the raw data used in this report. We also thank Mr. David Reed of the Computer Center of the College of William and Mary for his computer programming assistance, Miss Helena Galvao for data transcription and verification and Miss Brenda Norcross for assistance in usage of the interactive TSO system.

This report resulted from work funded by the Northeast Fisheries Center, (National Marine Fisheries Service, NOAA, U.S. Department of Commerce) and the Virginia Institute of Marine Science.

## Abstract

Monthly and annual means of 38 oceanographic and atmospheric variables, for the calendar years 1958 through 1975, are presented in tables.

## Introduction

The data presented in this Report were collected and summarized for a study of the relationship between the blue crab (Callinectes sapidus) of the Chesapeake Bay and its climatological environment. We believe that climate variation and its effects on blue crab life history stages are major factors in determining yearclass strength. Because of an increased interest in fluctuations in fisheries populations in the Chesapeake Bay region, we have received numerous requests for our compilations of data.

The tables are summarizations of oceanographic and atmospheric data collected primarily in the mid-Atlantic region of the United States for the calendar years 1958 through 1975. Monthly and annual means of 38 variables were calculated if not originally available. Missing data are noted by dots. The original data are on file in the Crustaceology Department at the Virginia Institute of Marine Science.

For ease in identification of the variables, we assigned code names to each variable using abbreviations of the collection site and of the type of data (subject). The letter A preceding most code names denotes that the variable was included in the first series compiled.

Table 1

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN AIR TEMPERATURE, IN DEGREES F, CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS, NORFOLK, VA AIRPORT  
 SOURCE: NATIONAL CLIMATIC CENTER (NCC), ASHEVILLE, NC, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AAT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	38.30	36.80	44.20	57.80	66.50	72.00	81.00	78.70	71.60	62.30	55.80	39.20	58.70
1959	41.10	44.20	49.40	59.80	72.20	79.10	80.90	82.30	76.60	67.10	54.20	44.10	62.58
1960	40.10	40.20	37.40	59.80	66.00	76.90	76.30	80.40	75.30	64.10	54.60	39.20	59.19
1961	39.30	44.00	52.50	57.00	64.90	73.80	79.40	77.30	75.10	62.70	55.90	41.80	60.31
1962	40.00	41.00	45.00	58.40	69.10	73.50	75.50	77.30	71.20	62.00	48.40	36.70	58.17
1963	35.90	34.30	52.30	57.50	62.00	73.20	77.90	77.70	68.80	62.00	51.30	36.30	57.43
1964	42.10	40.30	50.00	55.80	56.20	74.30	75.80	75.00	72.50	59.30	56.20	48.10	59.63
1965	41.70	43.30	47.20	56.50	72.00	72.60	76.80	76.10	74.00	60.30	53.60	45.00	59.92
1966	36.60	39.70	49.00	55.10	62.80	72.30	79.40	76.20	72.00	61.30	52.20	42.40	58.25
1967	45.00	41.00	49.30	60.00	61.70	71.70	76.40	75.20	68.10	60.20	48.10	45.60	58.52
1968	37.50	37.70	51.40	56.70	65.30	75.50	78.50	80.80	72.70	64.50	53.90	41.60	59.67
1969	38.60	39.70	44.20	59.50	69.00	77.10	78.20	75.50	70.90	62.80	50.50	42.50	59.07
1970	35.30	40.70	44.80	56.00	68.50	75.00	77.90	80.60	75.40	64.60	52.90	46.30	59.83
1971	38.10	44.10	46.10	56.10	64.10	75.80	79.20	78.00	74.50	68.20	54.10	53.40	60.97
1972	47.20	43.20	50.40	58.20	65.60	72.20	79.10	77.50	73.00	60.80	52.00	49.00	60.68
1973	42.20	40.40	52.50	57.50	64.60	77.30	79.20	79.80	75.00	65.00	54.20	45.30	61.08
1974	47.90	43.90	51.70	59.80	66.00	73.20	78.60	74.90	69.70	56.80	49.90	46.30	59.89
1975	46.40	45.90	48.50	54.50	68.80	77.70	79.20	81.60	73.50	65.10	56.50	44.40	61.84
MEAN	40.74	41.15	48.11	57.56	66.41	74.62	78.29	78.07	72.78	62.73	53.02	43.73	59.77

Table 2

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SALINITY, IN PARTS PER THOUSAND, BALTIMORE HARBOR, MD  
 SOURCE: U.S. COAST AND GEODETIC SURVEY AND NATIONAL OCEAN SURVEY, ROCKVILLE, MD  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ABHSAL

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	11.60	12.00	9.40	5.00	3.00	3.90	5.50	6.60	8.80	9.40	12.40	10.80	8.20
1959	.	.	.	.	.	.	.	.	.	.	.	.	.
1960	7.90	8.60	10.30	5.40	4.70	4.80	5.50	6.80	8.10	9.40	9.80	11.20	7.71
1961	11.50	10.60	5.60	7.20	4.70	4.70	5.50	7.20	8.90	12.30	11.90	11.50	8.47
1962	10.70	9.30	9.40	6.00	5.20	6.80	8.40	9.60	10.50	11.50	11.40	11.10	9.16
1963	11.60	12.20	9.60	7.20	7.20	7.20	9.60	10.80	11.80	13.60	15.30	13.90	10.83
1964	11.80	11.10	6.60	4.20	4.80	7.10	7.60	8.80	10.80	13.50	14.40	14.00	9.56
1965	12.90	11.90	11.00	7.90	7.20	8.10	8.90	9.60	10.60	12.30	13.50	13.30	10.60
1966	14.10	13.10	8.80	9.80	6.70	6.60	9.20	10.80	13.60	.	13.10	12.00	.
1967	11.00	11.20	7.30	7.30	7.10	7.50	8.10	7.30	10.20	11.00	9.40	7.90	8.77
1968	8.90	11.20	10.20	6.20	8.40	6.40	6.60	8.80	11.40	12.60	12.00	9.80	9.37
1969	10.50	12.60	14.50	9.40	7.20	7.70	.	9.40	10.50	12.40	12.30	12.80	.
1970	12.20	11.00	10.10	7.10	5.40	6.60	6.80	8.00	10.80	11.20	10.70	.	.
1971	9.90	8.90	7.90	8.10	7.60	7.20	.	.	10.70	8.60	9.90	.	.
1972	.	.	.	.	.	.	.	.	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.	.	.	.
MEAN	11.12	11.05	9.28	6.98	6.09	6.51	7.43	8.64	10.52	11.48	12.01	11.66	9.40

Table 3

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN WATER TEMPERATURE, IN DEGREES F, BALTIMORE HARBOR, MD  
 SOURCE: U.S. COAST AND GEODETIC SURVEY AND NATIONAL OCEAN SURVEY, ROCKVILLE, MD  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ABHWT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	37.90	34.70	39.90	53.40	64.40	71.90	79.10	78.50	74.20	64.40	54.90	40.20	57.79
1959	34.20	36.00	42.90	55.10	67.40	74.40	80.10	81.40	78.30	69.30	52.90	43.10	59.59
1960	39.10	38.80	38.50	56.20	64.90	73.80	78.30	80.30	76.20	66.80	54.40	41.80	59.09
1961	34.80	36.20	44.80	51.30	62.30	73.80	79.00	79.80	79.00	66.80	56.50	43.60	58.99
1962	37.20	35.90	42.50	54.40	67.20	75.10	77.10	78.60	74.10	66.10	51.60	41.50	53.44
1963	34.20	33.10	42.20	54.60	64.80	73.80	80.50	78.20	72.00	66.00	55.50	41.70	58.05
1964	35.80	36.40	44.60	52.80	64.20	72.80	80.20	77.70	73.90	62.80	57.10	47.90	58.85
1965	39.10	37.90	42.20	57.70	67.40	74.40	77.50	79.40	75.60	64.20	54.30	45.40	59.59
1966	38.60	34.90	44.30	49.50	61.70	76.20	80.70	79.00	72.40	52.80	54.60	43.00	58.14
1967	39.70	37.70	42.30	53.30	58.80	75.70	79.80	79.20	73.40	64.90	51.30	44.50	58.38
1968	35.70	36.50	44.00	57.20	62.00	74.90	81.40	82.20	77.10	67.90	53.90	43.90	59.72
1969	36.70	37.00	43.30	57.40	68.20	77.00	.	80.50	75.90	66.90	54.80	43.70	.
1970	34.70	37.90	41.40	51.90	66.50	74.90	79.60	80.80	77.70	69.60	55.80	.	.
1971	33.10	38.60	44.30	53.50	62.60	78.70	.	.	76.10	69.20	59.30	.	.
1972	43.20	40.10	45.30	.	.	70.50	77.50	.	75.10	54.10	54.40	44.90	.
1973	41.60	38.70	47.50	52.00	61.10	74.70	79.10	.	75.30	67.50	54.30	46.60	.
1974	40.20	40.30	46.10	52.60	.	.	.	.	.	64.10	56.00	43.80	.
1975	40.00	39.50	42.40	48.00	65.40	74.00	77.50	79.30	72.20	65.60	58.80	45.30	59.00
MEAN	37.54	37.23	43.25	53.58	64.31	74.51	79.16	79.64	75.21	66.06	55.02	43.81	59.11

Table 4

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN STREAMFLOW, IN CUBIC FEET PER SECOND X 100, CUMULATIVE INFLOW TO MOUTH OF CHESAPEAKE BAY (SECTION E)  
 SOURCE: U.S. GEOLOGICAL SURVEY, TOWSON, MD  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ACBTSF

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	891.00	729.00	1609.00	2163.00	1544.00	515.00	430.00	434.00	249.00	254.00	374.00	375.00	794.75
1959	728.00	719.00	967.00	1382.00	698.00	461.00	206.00	189.00	191.00	554.00	705.00	1177.00	664.75
1960	955.00	1181.00	840.00	2307.00	1457.00	929.00	321.00	261.00	425.00	221.00	243.00	201.00	778.50
1961	300.00	1443.00	1814.00	2029.00	1110.00	557.00	317.00	292.00	232.00	380.00	315.00	638.00	785.58
1962	785.00	718.00	2072.00	1953.00	610.00	388.00	219.00	168.00	137.00	315.00	605.00	417.00	698.92
1963	658.00	432.00	2286.00	864.00	557.00	406.00	172.00	122.00	106.00	86.00	188.00	382.00	521.58
1964	1034.00	806.00	2227.00	1273.00	887.00	236.00	163.00	114.00	78.00	130.00	140.00	332.00	618.33
1965	652.00	1103.00	1180.00	1129.00	593.00	239.00	130.00	120.00	117.00	213.00	205.00	255.00	494.67
1966	296.00	1102.00	1301.00	665.00	1058.00	307.00	105.00	93.00	235.00	350.00	305.00	614.00	536.00
1967	610.00	670.00	2051.00	1013.00	1209.00	387.00	306.00	478.00	275.00	510.00	670.00	1046.00	768.75
1968	628.00	866.00	1291.00	648.00	812.00	860.00	315.00	169.00	237.00	197.00	679.00	526.00	602.33
1969	469.00	588.00	993.00	931.00	573.00	391.00	362.00	807.00	238.00	173.00	443.00	522.00	549.17
1970	662.00	1320.00	958.00	2185.00	735.00	382.00	391.00	244.00	173.00	290.00	1118.00	802.00	771.67
1971	741.00	1630.00	1674.00	733.00	1045.00	680.00	229.00	324.00	324.00	545.00	473.00	1088.00	790.50
1972	823.00	1077.00	1835.00	1596.00	1453.00	3250.00	1171.00	424.00	199.00	586.00	1318.00	2090.00	1318.50
1973	1084.00	1448.00	1385.00	1747.00	1270.00	764.00	449.00	345.00	301.00	346.00	523.00	1760.00	951.83
1974	1539.00	886.00	1090.00	1560.00	810.00	587.00	401.00	274.00	468.00	252.00	385.00	994.00	770.50
1975	976.00	1556.00	1850.00	967.00	1218.00	777.00	561.00	302.00	1551.00	1180.00	774.00	660.00	1031.00
MEAN	768.39	1015.22	1523.50	1396.94	979.94	673.11	347.11	285.00	307.67	365.67	525.72	776.61	747.07

Table 5

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN AIR TEMPERATURE, IN DEGREES F, CHESAPEAKE LIGHT TOWER, VA  
 SOURCE: NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ACLAT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	.	.	.	.	.	.	.	.	.	.	.	.	.
1959	.	.	.	.	.	.	.	.	.	.	.	.	.
1960	.	.	.	.	.	.	.	.	.	.	.	.	.
1961	.	.	.	.	.	.	.	.	.	.	.	.	.
1962	.	.	.	.	.	.	.	.	.	.	.	.	.
1963	.	.	.	.	.	.	.	.	.	.	.	.	.
1964	.	.	.	.	.	.	.	.	.	.	.	.	.
1965	.	.	.	.	.	.	.	.	.	.	.	.	.
1966	.	.	.	.	.	.	.	.	.	.	.	.	.
1967	.	.	.	.	.	.	.	.	.	.	.	.	.
1968	.	.	.	.	.	.	.	.	.	.	.	.	.
1969	.	.	.	.	.	.	.	.	.	.	.	.	.
1970	.	.	.	.	.	.	.	.	.	.	.	.	.
1971	.	.	.	.	.	.	.	.	.	.	.	.	.
1972	.	.	.	.	.	.	.	.	.	.	.	.	.
1973	41.00	39.20	48.20	54.20	61.90	72.10	75.70	76.80	71.20	65.30	55.20	47.80	59.05
1974	47.30	42.30	49.00	56.50	63.10	69.80	76.30	75.60	71.50	61.00	53.50	48.90	59.57
1975	45.60	43.90	45.90	50.20	62.30	73.40	75.50	78.90	72.00	64.90	57.70	46.30	59.72
MEAN	44.63	41.80	47.70	53.63	62.43	71.77	75.83	77.10	71.57	63.73	55.47	47.67	59.44



Table 6

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SALINITY, IN PARTS PER THOUSAND, CHESAPEAKE LIGHT TOWER, VA  
 SOURCES: U.S. FISH AND WILDLIFE SERVICE AND U.S. COAST GUARD AND NATIONAL OCEAN SURVEY, ROCKVILLE, MD  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ACLSAL

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	32.66	30.58	31.71	30.10	28.09	27.04	28.39	29.64	29.99	31.43	29.85	31.35	30.07
1959	30.60	30.92	30.57	29.82	27.75	29.86	28.73	30.30	31.14	30.85	31.32	31.13	30.25
1960	31.15	29.72	30.67	28.03	29.59	26.46	29.26	29.79	29.57	29.61	.	31.41	.
1961	32.41	.	.	.	.	.	.	.	.	.	.	.	.
1962	.	.	.	.	.	.	.	.	.	.	.	.	.
1963	.	.	.	.	.	.	.	.	.	.	.	.	.
1964	31.69	31.98	30.29	29.51	28.57	27.81	.	30.90	30.79	.	31.34	31.58	.
1965	.	.	.	.	.	.	.	.	.	.	.	.	.
1966	32.32	31.70	29.94	30.66	29.40	29.61	28.93	29.99	.	31.08	31.65	31.82	.
1967	.	31.51	31.37	.	30.03	29.62	28.69	29.01	30.11	30.58	31.16	30.48	.
1968	31.72	29.66	30.01	30.96	29.88	27.09	27.94	29.17	30.78	30.86	30.92	32.00	30.08
1969	31.98	31.63	32.57	31.13	31.60	31.64	30.59	30.48	30.19	30.98	29.67	31.41	31.16
1970	30.76	31.12	31.24	30.13	27.85	28.81	29.62	28.76	31.32	31.97	30.71	30.70	30.25
1971	.	29.79	31.14	30.24	28.93	26.09	28.47	30.31	30.17	30.29	30.49	29.18	.
1972	29.50	30.73	30.23	29.00	27.47	26.22	21.94	26.80	28.49	31.02	30.80	29.11	28.44
1973	.	.	.	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.	.	.	.
MEAN	31.48	30.85	30.89	29.96	29.01	28.20	28.26	29.56	30.25	30.87	30.79	30.92	30.09

Table 7

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SOLAR RADIATION, IN LANGLEYS, STERLING, VA OR WASHINGTON, DC  
 SOURCE: NATIONAL SUMMARY, CLIMATOLOGICAL DATA, U.S. ENVIRONMENTAL DATA SERVICE, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ADCSR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	191.00	281.00	284.00	435.00	497.00	553.00	495.00	456.00	429.00	308.00	211.00	175.00	359.58
1959	191.00	270.00	385.00	430.00	531.00	556.00	466.00	466.00	427.00	284.00	190.00	154.00	362.50
1960	159.00	272.00	392.00	506.00	444.00	570.00	519.00	475.00	366.00	270.00	209.00	201.00	365.25
1961	225.00	222.00	324.00	432.00	507.00	554.00	550.00	474.00	421.00	307.00	197.00	162.00	364.58
1962	178.00	217.00	407.00	453.00	512.00	547.00	512.00	486.00	349.00	329.00	197.00	179.00	363.83
1963	213.00	277.00	359.00	497.00	559.00	581.00	583.00	520.00	402.00	362.00	202.00	153.00	392.33
1964	188.00	271.00	356.00	347.00	564.00	571.00	.	428.00	391.00	295.00	209.00	148.00	.
1965	204.00	267.00	327.00	382.00	504.00	521.00	509.00	472.00	382.00	337.00	221.00	157.00	356.92
1966	197.00	261.00	379.00	319.00	550.00	593.00	556.00	456.00	330.00	345.00	218.00	176.00	365.00
1967	206.00	281.00	325.00	446.00	453.00	577.00	483.00	431.00	446.00	292.00	239.00	171.00	362.50
1968	197.00	308.00	378.00	470.00	445.00	589.00	546.00	501.00	412.00	242.00	151.00	148.00	365.58
1969	167.00	224.00	346.00	395.00	511.00	454.00	384.00	.	388.00	298.00	178.00	146.00	.
1970	187.00	243.00	269.00	.	501.00	511.00	479.00	463.00	405.00	233.00	145.00	145.00	.
1971	179.00	224.00	365.00	528.00	467.00	532.00	547.00	544.00	364.00	217.00	198.00	138.00	358.58
1972	178.00	279.00	353.00	442.00	503.00	464.00	518.00	495.00	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.	.	.	.
MEAN	190.67	259.80	349.93	434.43	503.20	544.87	510.50	476.21	393.71	294.21	197.50	160.93	359.66

Table 8

BLUE CRAB AND ENVIRONMENTAL DATA  
CALENDAR YEARS 1958 THROUGH 1975

MONTHLY INDEX OF MERIDIONAL EKMAN TRANSPORT, IN METRIC TONS PER SECOND PER KILOMETER X 10  
COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, DELAWARE BAY 39 DEG N, 75 DEG W  
POSITIVE VALUE INDICATES NET NORTHWARD MOVEMENT, NEGATIVE VALUE INDICATES NET SOUTHWARD MOVEMENT  
SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ADMET

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-18.00	-63.00	3.00	0.00	-1.00	-8.00	-26.00	-1.00	-4.00	4.00	-23.00	-2.00	-11.58
1959	-45.00	-12.00	-8.00	-4.00	-11.00	-13.00	-5.00	-4.00	4.00	0.00	-7.00	-6.00	-9.25
1960	-21.00	-33.00	-20.00	-17.00	-2.00	-3.00	-3.00	0.00	11.00	-1.00	-44.00	-39.00	-14.33
1961	-32.00	-2.00	-2.00	-32.00	-9.00	-15.00	-14.00	0.00	9.00	-7.00	-19.00	-19.00	-11.83
1962	-13.00	4.00	15.00	-23.00	0.00	0.00	-3.00	3.00	0.00	-3.00	23.00	-10.00	-0.58
1963	-7.00	-9.00	-21.00	-37.00	-4.00	-7.00	-9.00	-6.00	25.00	10.00	-31.00	-31.00	-10.58
1964	-37.00	-36.00	-22.00	-1.00	-2.00	-6.00	-5.00	-1.00	14.00	3.00	-8.00	-6.00	-8.92
1965	-9.00	-12.00	-2.00	-2.00	-9.00	-5.00	-4.00	-7.00	2.00	-12.00	-21.00	-18.00	-8.25
1966	-28.00	-5.00	-10.00	0.00	0.00	-6.00	-5.00	-7.00	3.00	-6.00	-1.00	-20.00	-7.08
1967	-18.00	-13.00	0.00	-17.00	-2.00	0.00	-5.00	-2.00	13.00	-2.00	-32.00	-2.00	-6.67
1968	4.00	-40.00	-22.00	-4.00	-1.00	-10.00	-2.00	-5.00	1.00	-7.00	-15.00	-50.00	-12.58
1969	-16.00	-4.00	-26.00	-14.00	-10.00	-3.00	0.00	-5.00	3.00	3.00	-11.00	-33.00	-9.67
1970	-48.00	-15.00	-2.00	-2.00	-4.00	-5.00	-4.00	-3.00	-4.00	18.00	1.00	-24.00	-7.67
1971	-30.00	-15.00	-33.00	-18.00	-5.00	0.00	-6.00	-2.00	10.00	23.00	-15.00	-11.00	-8.50
1972	-13.00	-10.00	-6.00	-7.00	3.00	-11.00	-9.00	-2.00	2.00	7.00	-1.00	-9.00	-4.67
1973	-34.00	7.00	1.00	-21.00	-10.00	-10.00	-8.00	-1.00	1.00	1.00	-57.00	-2.00	-11.08
1974	-3.00	-8.00	-8.00	-40.00	-4.00	1.00	-13.00	-1.00	0.00	-6.00	-30.00	-8.00	-10.00
1975	-18.00	-8.00	-10.00	-37.00	0.00	-1.00	-5.00	-4.00	1.00	0.00	-13.00	-2.00	-8.08
MEAN	-21.44	-15.22	-9.61	-15.33	-3.94	-5.67	-7.00	-2.67	5.06	1.39	-16.89	-16.22	-8.96

Table 9

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY INDEX OF MERIDIONAL WIND STRESS, IN DYNES PER SQUARE CENTIMETER  
 COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, DELAWARE BAY 39 DEG N, 75 DEG W  
 POSITIVE VALUE INDICATES NET NORTHWARD MOVEMENT, NEGATIVE VALUE INDICATES NET SOUTHWARD MOVEMENT  
 SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ADMNS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-569.00	-884.00	-842.00	-45.00	4.00	0.00	113.00	-10.00	-19.00	-181.00	-84.00	-392.00	-242.42
1959	-145.00	-129.00	-41.00	-1.00	16.00	-102.00	64.00	-14.00	-9.00	0.00	-56.00	-87.00	-42.00
1960	-270.00	-296.00	-602.00	-3.00	24.00	-29.00	-25.00	-26.00	-85.00	-223.00	-135.00	-468.00	-178.17
1961	-467.00	-109.00	-65.00	-158.00	-50.00	43.00	-31.00	-6.00	-406.00	-500.00	-426.00	-155.00	-194.17
1962	-76.00	-67.00	-534.00	7.00	-1.00	-3.00	-11.00	-52.00	-29.00	-98.00	-667.00	-451.00	-165.17
1963	-161.00	-169.00	-20.00	-359.00	12.00	-34.00	-48.00	-41.00	-306.00	-548.00	-153.00	-390.00	-184.75
1964	-210.00	-404.00	2.00	123.00	-17.00	-12.00	40.00	9.00	-141.00	-225.00	-44.00	-23.00	-75.17
1965	-257.00	1.00	-55.00	-34.00	24.00	-8.00	11.00	54.00	1.00	-54.00	-72.00	-82.00	-39.25
1966	-738.00	-51.00	86.00	9.00	2.00	-46.00	-26.00	-35.00	-85.00	-168.00	-4.00	-420.00	-123.00
1967	-62.00	-94.00	-52.00	-158.00	-36.00	38.00	113.00	76.00	-256.00	-23.00	-202.00	-125.00	-55.08
1968	-182.00	-373.00	-76.00	17.00	7.00	27.00	-11.00	-45.00	-24.00	-24.00	-24.00	-193.00	-75.08
1969	-357.00	-1362.00	-339.00	149.00	85.00	55.00	1.00	-16.00	-90.00	-151.00	-178.00	-593.00	-233.00
1970	-571.00	-89.00	-42.00	-7.00	5.00	27.00	12.00	-75.00	-17.00	-26.00	-32.00	-215.00	-85.83
1971	-207.00	76.00	-235.00	-222.00	-28.00	-2.00	14.00	-26.00	14.00	-56.00	-176.00	-31.00	-73.25
1972	-25.00	-145.00	4.00	-39.00	24.00	69.00	-13.00	-3.00	-129.00	-204.00	-146.00	-81.00	-57.33
1973	-316.00	-399.00	-12.00	18.00	82.00	105.00	27.00	-7.00	-14.00	-10.00	-111.00	-10.00	-53.92
1974	-2.00	-143.00	-32.00	3.00	11.00	1.00	-51.00	7.00	-25.00	-118.00	-211.00	-41.00	-50.08
1975	-34.00	-2.00	-88.00	-388.00	18.00	6.00	27.00	-53.00	-3.00	-71.00	-36.00	-54.00	-55.50
MEAN	-258.28	-257.72	-163.50	-60.44	10.11	7.50	11.44	-14.61	-90.17	-148.89	-153.17	-211.72	-110.79

Table 10

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975

MONTHLY INDEX OF ZONAL EKMAN TRANSPORT, IN METRIC TONS PER SECOND PER KILOMETER X 10

COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, DELAWARE BAY 39 DEG N, 75 DEG W

POSITIVE VALUE INDICATES NET EASTWARD MOVEMENT, NEGATIVE VALUE INDICATES NET WESTWARD MOVEMENT

SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI

DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ADZET

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-62.00	-97.00	-92.00	-5.00	0.00	0.00	12.00	-1.00	-2.00	-20.00	-9.00	-43.00	-26.58
1959	-16.00	-14.00	-5.00	0.00	2.00	-11.00	7.00	-2.00	-1.00	0.00	-6.00	-10.00	-4.67
1960	-30.00	-32.00	-66.00	0.00	3.00	-3.00	-3.00	-3.00	-9.00	-24.00	-15.00	-51.00	-19.42
1961	-51.00	-12.00	-7.00	-17.00	-5.00	5.00	-3.00	-1.00	-44.00	-55.00	-47.00	-17.00	-21.17
1962	-8.00	-7.00	-58.00	1.00	0.00	0.00	-1.00	-6.00	-3.00	-11.00	-73.00	-49.00	-17.92
1963	-18.00	-18.00	-2.00	-39.00	1.00	-4.00	-5.00	-4.00	-33.00	-60.00	-17.00	-43.00	-20.17
1964	-23.00	-44.00	0.00	13.00	-2.00	-1.00	4.00	1.00	-15.00	-25.00	-5.00	-3.00	-8.33
1965	-28.00	0.00	-6.00	-4.00	3.00	-1.00	1.00	6.00	0.00	-6.00	-8.00	-9.00	-4.33
1966	-81.00	-6.00	9.00	1.00	0.00	-5.00	-3.00	-4.00	-9.00	-18.00	0.00	-46.00	-13.50
1967	-7.00	-10.00	-6.00	-17.00	-4.00	4.00	12.00	8.00	-28.00	-2.00	-22.00	-14.00	-7.17
1968	-20.00	-41.00	-8.00	2.00	1.00	3.00	-1.00	-5.00	-3.00	-3.00	-3.00	-21.00	-8.25
1969	-39.00	-149.00	-37.00	16.00	9.00	6.00	0.00	-2.00	-10.00	-17.00	-19.00	-65.00	-25.58
1970	-62.00	-10.00	-5.00	-1.00	1.00	3.00	1.00	-8.00	-2.00	-3.00	-3.00	-24.00	-9.42
1971	-23.00	8.00	-26.00	-24.00	-3.00	0.00	1.00	-3.00	2.00	-6.00	-19.00	-3.00	-8.00
1972	-3.00	-16.00	0.00	-4.00	3.00	7.00	-1.00	0.00	-14.00	-22.00	-15.00	-9.00	-5.25
1973	-35.00	-44.00	-1.00	2.00	9.00	11.00	3.00	-1.00	-1.00	-1.00	-12.00	-1.00	-5.92
1974	0.00	-16.00	-4.00	0.00	1.00	0.00	-6.00	1.00	-3.00	-13.00	-23.00	-5.00	-5.67
1975	-4.00	0.00	-10.00	-42.00	2.00	1.00	3.00	-6.00	0.00	-8.00	-4.00	-5.00	-6.17
MEAN	-28.33	-28.22	-18.00	-6.56	1.17	0.83	1.17	-1.67	-9.72	-16.33	-16.72	-23.28	-12.14

Table 11

BLUE CRAB AND ENVIRONMENTAL DATA  
CALENDAR YEARS 1958 THROUGH 1975

MONTHLY INDEX OF ZONAL WIND STRESS, IN DYNES PER SQUARE CENTIMETER

COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, DELAWARE BAY 39 DEG N, 75 DEG W

POSITIVE VALUE INDICATES NET EASTWARD MOVEMENT, NEGATIVE VALUE INDICATES NET WESTWARD MOVEMENT

SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI

DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ADZWS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	167.00	576.00	-24.00	-4.00	13.00	73.00	238.00	7.00	33.00	-34.00	213.00	21.00	106.58
1959	416.00	109.00	69.00	40.00	97.00	115.00	46.00	35.00	-35.00	0.00	65.00	54.00	84.25
1960	193.00	302.00	186.00	154.00	16.00	23.00	30.00	-1.00	-100.00	13.00	431.00	358.00	131.25
1961	289.00	18.00	22.00	295.00	80.00	137.00	126.00	2.00	-85.00	55.00	178.00	176.00	108.50
1962	115.00	-37.00	-133.00	214.00	0.00	0.00	27.00	-24.00	2.00	30.00	-209.00	93.00	6.50
1963	62.00	78.00	189.00	334.00	33.00	63.00	81.00	55.00	-231.00	-95.00	282.00	283.00	94.50
1964	337.00	329.00	198.00	13.00	16.00	58.00	43.00	12.00	-124.00	-28.00	71.00	59.00	82.00
1965	80.00	112.00	23.00	21.00	81.00	49.00	40.00	65.00	-15.00	113.00	190.00	164.00	76.92
1966	259.00	45.00	95.00	-1.00	3.00	53.00	43.00	60.00	-24.00	50.00	5.00	182.00	54.17
1967	166.00	117.00	4.00	152.00	18.00	-2.00	47.00	16.00	-119.00	18.00	295.00	14.00	60.50
1968	-41.00	366.00	203.00	36.00	14.00	88.00	22.00	42.00	-10.00	62.00	138.00	454.00	114.50
1969	151.00	41.00	242.00	129.00	94.00	28.00	0.00	44.00	-28.00	-24.00	102.00	300.00	89.92
1970	436.00	135.00	15.00	14.00	41.00	47.00	34.00	27.00	41.00	-165.00	-6.00	219.00	69.83
1971	273.00	134.00	303.00	166.00	45.00	4.00	56.00	16.00	-92.00	-207.00	133.00	100.00	77.58
1972	115.00	91.00	57.00	66.00	-26.00	98.00	81.00	17.00	-17.00	-66.00	12.00	82.00	42.50
1973	307.00	-62.00	-7.00	196.00	95.00	92.00	70.00	11.00	-7.00	-7.00	520.00	20.00	102.33
1974	29.00	73.00	72.00	368.00	34.00	-5.00	118.00	8.00	-4.00	52.00	273.00	75.00	91.08
1975	167.00	76.00	93.00	342.00	-2.00	6.00	48.00	41.00	-13.00	0.00	115.00	19.00	74.33
MEAN	195.61	139.06	89.28	140.83	36.22	51.50	63.89	24.06	-46.06	-12.39	154.33	148.50	82.07

Table 12

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SALINITY, IN PARTS PER THOUSAND, VIMS PIER, GLOUCESTER POINT, VA  
 SOURCES: U.S. COAST AND GEODETIC SURVEY AND NATIONAL OCEAN SURVEY, ROCKVILLE, MD  
 AND DEPARTMENT OF GEOLOGICAL OCEANOGRAPHY, VIMS, GLOUCESTER POINT, VA  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AGPSAL

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	19.60	18.20	16.50	14.10	13.90	16.10	19.20	19.30	20.30	20.40	20.50	20.50	19.22
1959	.	.	.	.	.	.	.	.	.	.	.	.	.
1960	18.80	18.20	17.10	14.80	15.40	15.30	18.80	18.00	18.70	17.90	19.20	20.10	17.69
1961	20.00	18.80	16.10	15.80	14.90	17.80	18.60	21.20	21.60	21.00	20.50	21.20	18.96
1962	19.20	19.50	16.50	17.00	17.50	18.20	19.20	21.20	21.70	22.50	22.10	21.20	19.65
1963	20.80	20.30	18.80	19.00	19.90	17.80	21.40	23.40	23.50	23.40	23.10	22.40	21.15
1964	22.00	20.30	.	18.60	16.20	18.70	21.70	22.10	21.40	21.30	22.50	21.40	.
1965	21.30	20.00	18.20	17.60	18.40	20.30	20.80	22.50	23.00	23.30	23.30	23.10	20.98
1966	22.90	21.60	20.40	22.00	19.60	19.90	21.80	22.90	23.80	22.10	22.00	23.10	21.84
1967	21.60	21.20	19.60	19.00	20.30	19.20	20.80	22.10	20.90	21.40	21.40	20.30	20.65
1968	18.20	19.10	19.50	18.60	20.00	19.50	20.00	21.70	21.70	21.80	22.20	21.70	20.33
1969	21.90	20.90	20.40	19.90	21.50	21.80	22.20	18.90	.	.	21.70	21.90	.
1970	.	18.50	19.20	.	15.50	.	.	20.20	22.50	23.20	.	.	.
1971	.	18.50	17.60	18.20	18.30	16.30	19.20	21.70	20.90	19.50	18.60	18.60	.
1972	18.10	.	16.60	.	.	.	.	.	.	17.50	17.80	17.30	.
1973	15.50	14.90	14.90	15.30	15.40	16.40	18.10	19.80	19.10	19.00	20.90	19.90	17.43
1974	15.70	16.20	17.40	16.30	17.30	17.50	19.70	19.90	18.70	20.20	22.60	23.20	18.72
1975	20.00	18.50	16.40	16.20	15.60	17.50	.	19.30	18.50	15.90	16.70	18.30	.
MEAN	19.71	19.04	17.82	17.49	17.48	18.15	20.11	20.89	21.09	20.65	20.94	20.89	19.52

Table 13

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SOLAR RADIATION, IN LANGLEYS, GREENSBORO, NC  
 SOURCE: NATIONAL SUMMARY, CLIMATOLOGICAL DATA, U.S. ENVIRONMENTAL DATA SERVICE, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AGSR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	208.00	292.00	278.00	405.00	492.00	552.00	504.00	473.00	469.00	348.00	243.00	220.00	373.67
1959	251.00	286.00	424.00	437.00	506.00	596.00	520.00	511.00	401.00	289.00	236.00	115.00	381.00
1960	192.00	313.00	431.00	538.00	585.00	591.00	519.00	504.00	395.00	306.00	274.00	238.00	407.17
1961	254.00	241.00	353.00	466.00	551.00	546.00	512.00	383.00	467.00	405.00	244.00	192.00	384.50
1962	179.00	254.00	373.00	528.00	571.00	519.00	558.00	546.00	407.00	358.00	236.00	208.00	394.75
1963	248.00	.	402.00	503.00	528.00	519.00	537.00	514.00	435.00	400.00	252.00	212.00	.
1964	230.00	303.00	413.00	393.00	562.00	574.00	505.00	631.00	440.00	335.00	273.00	174.00	402.75
1965	237.00	290.00	353.00	461.00	570.00	487.00	486.00	503.00	406.00	368.00	243.00	211.00	384.58
1966	234.00	249.00	417.00	382.00	474.00	573.00	532.00	442.00	368.00	318.00	235.00	185.00	367.42
1967	215.00	.	420.00	471.00	446.00	.	456.00	412.00	415.00	309.00	246.00	161.00	.
1968	187.00	320.00	419.00	417.00	482.00	526.00	479.00	490.00	427.00	292.00	201.00	182.00	368.50
1969	183.00	264.00	420.00	433.00	527.00	484.00	475.00	435.00	343.00	301.00	224.00	183.00	356.00
1970	209.00	269.00	312.00	411.00	495.00	483.00	416.00	374.00	362.00	234.00	227.00	198.00	332.50
1971	179.00	270.00	402.00	525.00	488.00	499.00	472.00	454.00	347.00	252.00	249.00	165.00	358.50
1972	183.00	274.00	366.00	461.00	489.00	566.00	518.00	491.00	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.	.	.	.
MEAN	212.60	278.85	385.53	455.40	517.73	536.79	499.27	477.53	405.86	322.50	241.64	188.86	375.88



Table 14

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975

MONTHLY INDEX OF MERIDIONAL EKMAN TRANSPORT, IN METRIC TONS PER SECOND PER KILOMETER X 10  
 COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, OFF NC COAST, 36 DEG N, 75 DEG W  
 POSITIVE VALUE INDICATES NET NORTHWARD MOVEMENT, NEGATIVE VALUE INDICATES NET SOUTHWARD MOVEMENT  
 SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AHMET

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-21.00	-74.00	-7.00	0.00	-1.00	-9.00	-43.00	0.00	5.00	27.00	-8.00	21.00	-9.17
1959	-33.00	-6.00	-12.00	-13.00	-7.00	-8.00	0.00	-4.00	40.00	3.00	6.00	0.00	-2.83
1960	-21.00	-22.00	-19.00	-22.00	0.00	-1.00	-2.00	-2.00	14.00	4.00	-16.00	-14.00	-8.42
1961	-19.00	-11.00	-3.00	-54.00	0.00	-6.00	-23.00	0.00	18.00	12.00	-5.00	-13.00	-8.67
1962	2.00	1.00	15.00	-16.00	1.00	0.00	-3.00	4.00	4.00	6.00	39.00	5.00	4.83
1963	3.00	13.00	-34.00	-32.00	0.00	-9.00	-13.00	-2.00	45.00	66.00	-22.00	-12.00	3.25
1964	-29.00	-34.00	-20.00	-2.00	1.00	-3.00	-15.00	-1.00	29.00	24.00	0.00	-2.00	-4.33
1965	-5.00	-3.00	0.00	-3.00	-13.00	-5.00	-13.00	-9.00	11.00	4.00	-4.00	-6.00	-3.83
1966	-12.00	3.00	-1.00	0.00	0.00	-3.00	-6.00	-4.00	0.00	16.00	21.00	2.00	1.33
1967	-9.00	-17.00	-5.00	-21.00	-3.00	18.00	-18.00	3.00	25.00	8.00	-15.00	1.00	-2.92
1968	32.00	-12.00	-53.00	1.00	-13.00	-17.00	-8.00	-6.00	10.00	0.00	-42.00	-43.00	-12.58
1969	-15.00	-31.00	-19.00	-6.00	-2.00	-2.00	-6.00	0.00	21.00	59.00	-4.00	-45.00	-4.17
1970	-34.00	-10.00	0.00	-4.00	-1.00	-1.00	-2.00	0.00	0.00	64.00	2.00	-21.00	-0.58
1971	-18.00	-10.00	-33.00	-16.00	-6.00	0.00	-15.00	0.00	45.00	32.00	-9.00	-5.00	-2.92
1972	-3.00	-11.00	-7.00	-13.00	13.00	-13.00	-18.00	-1.00	0.00	22.00	-3.00	-15.00	-4.08
1973	-13.00	8.00	-2.00	-32.00	-23.00	-12.00	-3.00	-4.00	5.00	15.00	-30.00	-2.00	-7.75
1974	-3.00	-15.00	-11.00	-45.00	-3.00	0.00	-17.00	0.00	7.00	14.00	-23.00	-15.00	-9.25
1975	-13.00	-2.00	-16.00	-30.00	1.00	0.00	-10.00	-8.00	8.00	5.00	-4.00	-2.00	-5.92
MEAN	-11.72	-12.94	-12.61	-17.11	-3.11	-3.94	-11.94	-2.06	16.00	21.17	-6.50	-9.22	-4.50

Table 15

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY INDEX OF MERIDIONAL WIND STRESS, IN DYNES PER SQUARE CENTIMETER  
 COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, OFF NC COAST, 36 DEG N, 75 DEG W  
 POSITIVE VALUE INDICATES NET NORTHWARD MOVEMENT, NEGATIVE VALUE INDICATES NET SOUTHWARD MOVEMENT  
 SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AHWS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-537.00	-605.00	-498.00	-38.00	13.00	24.00	226.00	-1.00	-41.00	-494.00	-59.00	-573.00	-215.25
1959	-108.00	-115.00	-6.00	30.00	60.00	-22.00	104.00	4.00	-122.00	-22.00	-173.00	-204.00	-47.83
1960	-312.00	-170.00	-496.00	-15.00	1.00	-4.00	8.00	-16.00	-184.00	-319.00	-251.00	-531.00	-199.08
1961	-364.00	-142.00	-58.00	-139.00	-6.00	74.00	16.00	5.00	-393.00	-626.00	-423.00	-101.00	-179.75
1962	-132.00	-82.00	-609.00	33.00	-10.00	4.00	12.00	-43.00	-54.00	-200.00	-766.00	-657.00	-208.42
1963	-362.00	-305.00	6.00	-155.00	0.00	21.00	36.00	-3.00	-456.00	-920.00	-102.00	-459.00	-224.92
1964	-163.00	-206.00	8.00	58.00	-23.00	21.00	201.00	48.00	-344.00	-233.00	-19.00	-44.00	-58.00
1965	-264.00	-22.00	-9.00	-21.00	96.00	30.00	128.00	80.00	-58.00	-82.00	-142.00	-206.00	-39.17
1966	-503.00	-67.00	9.00	0.00	48.00	8.00	56.00	33.00	-8.00	-219.00	-342.00	-447.00	-119.33
1967	-90.00	-174.00	-74.00	-118.00	-8.00	-7.00	342.00	120.00	-287.00	-141.00	-193.00	-119.00	-62.42
1968	-417.00	-521.00	11.00	-23.00	81.00	201.00	50.00	-9.00	-74.00	0.00	-14.00	-234.00	-79.08
1969	-680.00	-1288.00	-207.00	87.00	36.00	72.00	56.00	7.00	-266.00	-630.00	-262.00	-389.00	-288.67
1970	-665.00	-95.00	-9.00	-9.00	4.00	46.00	61.00	1.00	-13.00	-367.00	-114.00	-173.00	-111.08
1971	-238.00	27.00	-203.00	-74.00	12.00	3.00	118.00	-1.00	-132.00	-67.00	-243.00	-54.00	-71.00
1972	-29.00	-215.00	10.00	-42.00	33.00	122.00	80.00	2.00	-120.00	-308.00	-185.00	-117.00	-54.08
1973	-250.00	-480.00	-58.00	105.00	166.00	149.00	25.00	15.00	-31.00	-186.00	-108.00	-7.00	-55.00
1974	-5.00	-132.00	-27.00	105.00	10.00	2.00	24.00	21.00	-62.00	-282.00	-201.00	-42.00	-49.08
1975	-16.00	-5.00	-44.00	-145.00	0.00	4.00	67.00	-7.00	16.00	-95.00	-42.00	-107.00	-31.17
MEAN	-285.28	-255.39	-125.22	-20.06	28.50	41.56	89.44	14.39	-146.06	-288.39	-202.17	-253.56	-116.85

Table 16

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SOLAR RADIATION, IN LANGLEYS, CAPE HATTERAS, NC  
 SOURCE: NATIONAL SUMMARY, CLIMATOLOGICAL DATA, U.S. ENVIRONMENTAL DATA SERVICE, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AHSR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	289.00	357.00	396.00	543.00	643.00	581.00	711.00	565.00	536.00	372.00	281.00	248.00	460.17
1959	273.00	267.00	437.00	570.00	736.00	775.00	607.00	577.00	548.00	326.00	281.00	100.00	458.08
1960	256.00	352.00	455.00	586.00	655.00	648.00	589.00	549.00	501.00	352.00	303.00	254.00	460.00
1961	298.00	317.00	479.00	593.00	630.00	585.00	669.00	548.00	485.00	400.00	302.00	237.00	461.92
1962	.	285.00	352.00	596.00	627.00	584.00	657.00	571.00	451.00	346.00	207.00	203.00	.
1963	222.00	269.00	421.00	504.00	498.00	521.00	545.00	498.00	368.00	362.00	271.00	212.00	390.92
1964	229.00	298.00	401.00	467.00	568.00	587.00	516.00	448.00	431.00	291.00	270.00	176.00	390.17
1965	217.00	286.00	347.00	480.00	577.00	559.00	543.00	510.00	436.00	337.00	255.00	216.00	396.92
1966	203.00	289.00	426.00	472.00	441.00	542.00	540.00	446.00	448.00	336.00	275.00	194.00	383.50
1967	199.00	273.00	425.00	503.00	479.00	507.00	494.00	.	387.00	383.00	277.00	200.00	.
1968	207.00	324.00	443.00	495.00	553.00	578.00	493.00	506.00	467.00	344.00	254.00	210.00	406.17
1969	233.00	277.00	447.00	496.00	560.00	557.00	523.00	512.00	399.00	324.00	253.00	219.00	400.00
1970	226.00	308.00	289.00	468.00	572.00	565.00	529.00	425.00	441.00	310.00	285.00	222.00	386.67
1971	168.00	326.00	425.00	540.00	557.00	569.00	485.00	475.00	405.00	260.00	259.00	192.00	388.42
1972	176.00	300.00	395.00	479.00	453.00	611.00	491.00	491.00	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.	.	.	.
MEAN	228.29	302.53	409.20	519.47	569.93	584.60	559.47	508.64	450.21	339.50	269.50	205.21	412.21

Table 17

BLUE CRAB AND ENVIRONMENTAL DATA  
CALENDAR YEARS 1958 THROUGH 1975

MONTHLY INDEX OF ZONAL EKMAN TRANSPORT, IN METRIC TONS PER SECOND PER KILOMETER X 10  
COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, OFF NC COAST, 36 DEG N, 75 DEG W  
POSITIVE VALUE INDICATES NET EASTWARD MOVEMENT, NEGATIVE VALUE INDICATES NET WESTWARD MOVEMENT  
SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AHZET

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-63.00	-71.00	-58.00	-4.00	2.00	3.00	26.00	0.00	-5.00	-58.00	-7.00	-67.00	-25.17
1959	-13.00	-13.00	-1.00	3.00	7.00	-3.00	12.00	0.00	-14.00	-3.00	-20.00	-24.00	-5.75
1960	-37.00	-20.00	-58.00	-2.00	0.00	0.00	1.00	-2.00	-22.00	-37.00	-29.00	-74.00	-23.33
1961	-43.00	-17.00	-7.00	-16.00	-1.00	9.00	2.00	1.00	-46.00	-73.00	-49.00	-12.00	-21.00
1962	-15.00	-10.00	-71.00	4.00	-1.00	0.00	1.00	-5.00	-6.00	-23.00	-90.00	-77.00	-24.42
1963	-42.00	-36.00	1.00	-18.00	0.00	2.00	4.00	0.00	-53.00	-108.00	-12.00	-54.00	-26.33
1964	-19.00	-24.00	1.00	7.00	-3.00	3.00	24.00	6.00	-40.00	-27.00	-2.00	-5.00	-6.58
1965	-31.00	-3.00	-1.00	-2.00	11.00	4.00	15.00	9.00	-7.00	-10.00	-17.00	-24.00	-4.67
1966	-59.00	-8.00	1.00	0.00	6.00	1.00	7.00	4.00	-1.00	-26.00	-40.00	-52.00	-13.92
1967	-10.00	-20.00	-9.00	-14.00	-1.00	-1.00	40.00	14.00	-34.00	-16.00	-23.00	-14.00	-7.33
1968	-49.00	-61.00	1.00	-3.00	9.00	24.00	6.00	-1.00	-9.00	0.00	-2.00	-27.00	-9.33
1969	-79.00	-151.00	-24.00	10.00	4.00	8.00	7.00	1.00	-31.00	-74.00	-31.00	-46.00	-33.83
1970	-78.00	-11.00	-1.00	-1.00	0.00	5.00	7.00	0.00	-2.00	-43.00	-13.00	-20.00	-13.08
1971	-28.00	3.00	-24.00	-9.00	1.00	0.00	14.00	0.00	-15.00	-8.00	-28.00	-6.00	-8.33
1972	-3.00	-25.00	1.00	-5.00	4.00	14.00	9.00	0.00	-14.00	-36.00	-22.00	-14.00	-7.58
1973	-29.00	-56.00	-7.00	12.00	19.00	17.00	3.00	2.00	-4.00	-22.00	-13.00	-1.00	-5.58
1974	-1.00	-15.00	-3.00	12.00	1.00	0.00	3.00	3.00	-7.00	-33.00	-24.00	-5.00	-5.75
1975	-2.00	-1.00	-5.00	-17.00	0.00	0.00	8.00	-1.00	2.00	-11.00	-5.00	-12.00	-3.67
MEAN	-33.39	-29.94	-14.67	-2.39	3.22	4.78	10.50	1.72	-17.11	-33.78	-23.72	-29.67	-13.70

Table 18

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY INDEX OF ZONAL WIND STRESS, IN DYNES PER SQUARE CENTIMETER  
 COMPUTED BY PACIFIC ENVIRONMENTAL GROUP FROM MONTHLY MEAN ATMOSPHERIC PRESSURE FIELDS, OFF NC COAST, 36 DEG N, 75 DEG W  
 POSITIVE VALUE INDICATES NET EASTWARD MOVEMENT, NEGATIVE VALUE INDICATES NET WESTWARD MOVEMENT  
 SOURCE: DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AHZWS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	176.00	633.00	57.00	3.00	10.00	74.00	372.00	2.00	-41.00	-234.00	72.00	-181.00	78.58
1959	282.00	52.00	100.00	112.00	60.00	65.00	-3.00	32.00	-344.00	-28.00	-51.00	1.00	23.17
1960	179.00	190.00	163.00	192.00	2.00	11.00	19.00	15.00	-121.00	-38.00	136.00	119.00	72.25
1961	163.00	91.00	25.00	466.00	4.00	54.00	195.00	-4.00	-156.00	-102.00	47.00	112.00	74.58
1962	-19.00	-9.00	-131.00	136.00	-9.00	-1.00	26.00	-34.00	-33.00	-49.00	-331.00	-39.00	-41.08
1963	-23.00	-109.00	288.00	278.00	2.00	78.00	108.00	17.00	-385.00	-566.00	186.00	100.00	-2.25
1964	247.00	295.00	169.00	14.00	-12.00	24.00	131.00	4.00	-250.00	-205.00	1.00	20.00	36.50
1965	45.00	25.00	3.00	27.00	109.00	47.00	109.00	77.00	-93.00	-34.00	34.00	54.00	33.58
1966	106.00	-23.00	5.00	1.00	4.00	26.00	48.00	32.00	-4.00	-133.00	-182.00	-19.00	-11.58
1967	73.00	149.00	41.00	177.00	28.00	-155.00	151.00	-3.00	-218.00	-68.00	128.00	-8.00	24.58
1968	-269.00	102.00	454.00	-5.00	108.00	148.00	67.00	52.00	-82.00	0.00	355.00	368.00	108.17
1969	130.00	269.00	160.00	54.00	21.00	20.00	49.00	3.00	-180.00	-505.00	33.00	389.00	36.92
1970	287.00	82.00	-2.00	38.00	5.00	11.00	21.00	4.00	-3.00	-547.00	-18.00	182.00	5.00
1971	158.00	83.00	285.00	136.00	54.00	2.00	132.00	-1.00	-388.00	-270.00	79.00	42.00	26.00
1972	26.00	92.00	56.00	107.00	-108.00	110.00	156.00	8.00	-3.00	-191.00	23.00	132.00	34.00
1973	112.00	-69.00	21.00	276.00	196.00	107.00	30.00	37.00	-39.00	-131.00	260.00	19.00	68.25
1974	27.00	132.00	92.00	385.00	27.00	2.00	144.00	4.00	-62.00	-121.00	200.00	126.00	79.67
1975	110.00	16.00	136.00	255.00	-5.00	1.00	82.00	68.00	-72.00	-42.00	-32.00	17.00	44.50
MEAN	100.56	111.17	106.78	147.33	27.56	34.67	102.06	17.39	-137.50	-181.33	52.22	79.67	38.38

Table 19

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN RIVER DISCHARGE, IN CUBIC FEET PER SECOND, JAMES RIVER AT CARTERSVILLE, VA  
 SOURCE: U.S. GEOLOGICAL SURVEY, TOWSON, MD, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AJRDC

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	10660.00	9930.00	13940.00	19280.00	14560.00	3941.00	3278.00	3858.00	1693.00	1541.00	1624.00	3304.00	7300.75
1959	5159.00	3617.00	6471.00	12920.00	4426.00	6500.00	2249.00	2314.00	2202.00	9629.00	5218.00	8203.00	5742.33
1960	7275.00	15700.00	12330.00	18920.00	11260.00	5589.00	2073.00	1969.00	3133.00	1635.00	1627.00	1625.00	6928.00
1961	3045.00	13680.00	11260.00	14840.00	9905.00	4841.00	2911.00	2953.00	2580.00	9697.00	5427.00	13980.00	7926.58
1962	11180.00	9406.00	23540.00	14730.00	6468.00	6398.00	4033.00	2480.00	1684.00	1782.00	5673.00	3573.00	7578.92
1963	9402.00	5091.00	23270.00	4569.00	3229.00	2278.00	1151.00	821.00	763.00	842.00	1739.00	2597.00	4646.00
1964	10440.00	11150.00	12050.00	7070.00	4261.00	1620.00	1285.00	758.00	859.00	1859.00	2324.00	4938.00	4884.50
1965	8723.00	13640.00	13580.00	8660.00	5047.00	2177.00	1528.00	1094.00	952.00	1711.00	1189.00	1054.00	4946.25
1966	1420.00	10590.00	7963.00	3350.00	7361.00	1967.00	605.00	790.00	2833.00	6506.00	3509.00	5125.00	4334.92
1967	8602.00	6479.00	18120.00	4241.00	6893.00	2956.00	1816.00	4962.00	1734.00	3019.00	2249.00	10570.00	5970.08
1968	8830.00	7878.00	10480.00	4824.00	5395.00	3849.00	1823.00	1494.00	880.00	2385.00	3981.00	2548.00	4530.58
1969	4711.00	5669.00	8380.00	4869.00	3831.00	3783.00	4807.00	20490.00	2811.00	1986.00	2169.00	5327.00	5736.08
1970	10490.00	10980.00	6075.00	9691.00	5029.00	1705.00	1707.00	1704.00	816.00	1254.00	9158.00	4711.00	5276.67
1971	7147.00	17030.00	9366.00	8396.00	13260.00	11960.00	2875.00	2424.00	2965.00	9626.00	5683.00	7217.00	8162.42
1972	6099.00	16930.00	9478.00	9608.00	12500.00	30330.00	10930.00	6757.00	2063.00	15010.00	18150.00	13670.00	13043.75
1973	11490.00	18640.00	18440.00	20780.00	12650.00	7059.00	3787.00	3019.00	1793.00	3392.00	3629.00	18990.00	10305.75
1974	15900.00	7922.00	9601.00	9899.00	8732.00	5859.00	2924.00	4044.00	6782.00	2261.00	2310.00	7171.00	6950.42
1975	8999.00	12950.00	24610.00	8456.00	12160.00	6298.00	8399.00	4150.00	11270.00	7355.00	5617.00	4953.00	9601.42
MEAN	8309.56	10960.11	13275.22	10283.50	8164.83	6061.67	3232.28	3671.17	2656.28	4527.22	4515.33	6919.78	6881.41

Table 20

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SALINITY, IN PARTS PER THOUSAND, KIPTOPEKE BEACH, VA  
 SOURCE: U.S. COAST AND GEODETIC SURVEY AND NATIONAL OCEAN SURVEY, ROCKVILLE, MD  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AKBSAL

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	28.60	25.80	26.70	23.40	22.40	25.50	24.30	26.00	27.70	27.80	26.80	27.70	26.06
1959	.	.	.	.	.	.	.	.	.	.	.	.	.
1960	25.00	.	25.40	23.80	25.00	24.30	26.30	27.30	27.30	26.40	.	26.50	.
1961	27.20	27.20	25.40	22.50	23.80	25.20	24.40	26.30	27.60	27.10	27.10	27.10	25.91
1962	25.70	28.20	26.00	23.70	24.80	26.70	27.10	28.00	28.10	27.20	28.00	26.90	26.78
1963	26.30	27.20	25.80	25.40	26.50	25.40	27.30	28.90	29.30	29.30	28.00	27.10	27.21
1964	27.70	25.50	24.40	24.20	22.70	25.10	27.10	28.60	29.40	28.40	27.70	27.80	26.55
1965	28.10	27.10	26.00	25.90	26.30	27.10	26.40	28.10	28.60	28.90	28.40	27.70	27.38
1966	28.20	28.00	25.90	26.80	26.70	26.80	27.50	28.10	28.60	27.10	28.40	28.00	27.52
1967	26.50	26.90	26.50	25.60	25.40	25.80	25.80	25.80	26.90	26.10	25.40	26.10	26.07
1968	25.40	23.80	23.90	25.80	25.90	24.70	25.50	26.70	27.10	27.60	26.10	25.60	25.67
1969	26.10	26.90	26.80	26.50	28.10	28.20	28.10	27.20	26.80	27.70	27.60	26.30	27.19
1970	26.00	24.70	25.80	23.10	22.90	25.40	25.80	26.40	27.20	29.30	26.70	25.80	25.76
1971	23.70	24.40	22.90	24.20	23.10	23.50	24.60	25.50	26.40	26.40	23.90	24.40	24.42
1972	.	.	.	.	.	.	.	.	.	.	.	.	.
1973	.	.	.	.	.	.	.	.	.	.	.	.	.
1974	.	.	.	.	.	.	.	.	.	.	.	.	.
1975	.	.	.	.	.	.	.	.	.	.	.	.	.
MEAN	26.58	26.31	25.50	24.68	24.89	25.67	26.18	27.15	27.77	27.64	27.01	25.69	25.34

Table 21

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN WATER TEMPERATURE, IN DEGREES C, KIPTOPEKE BEACH, VA  
 SOURCES: MARMAP, NMFS, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 AND U.S. COAST AND GEODETIC SURVEY AND NATIONAL OCEAN SURVEY, ROCKVILLE, MD  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AKBWT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	3.40	2.10	6.00	10.70	17.30	22.40	25.70	24.20	23.30	17.60	13.30	6.10	14.34
1959	4.30	.	8.00	12.60	20.00	22.90	25.80	25.60	24.10	19.60	12.30	7.30	.
1960	5.40	4.80	3.30	11.60	17.60	23.00	24.50	24.80	23.60	19.10	.	4.90	.
1961	2.80	3.00	7.90	11.00	14.20	18.10	23.70	25.10	23.80	18.00	12.80	6.80	13.93
1962	3.70	3.40	5.30	11.50	18.00	22.60	24.20	24.50	22.40	17.60	10.60	4.10	13.99
1963	1.30	1.40	5.60	12.10	16.10	21.60	24.10	24.10	20.70	17.40	12.20	4.80	13.45
1964	3.20	3.60	6.80	11.20	17.60	22.10	23.40	24.30	22.70	16.40	13.10	7.30	14.31
1965	4.60	3.20	5.90	10.40	17.90	20.40	24.40	24.40	23.80	17.40	11.90	7.60	14.32
1966	3.80	2.30	6.80	10.90	15.70	20.40	24.90	24.00	22.60	17.20	11.80	6.20	13.88
1967	5.10	3.80	6.20	10.90	15.00	20.80	24.30	24.20	21.00	17.60	10.90	6.80	13.83
1968	2.10	1.90	5.30	11.90	17.10	22.60	25.00	25.20	22.90	19.10	11.90	5.50	14.21
1969	3.00	2.50	4.70	11.80	16.80	22.90	25.80	24.90	23.00	18.00	11.20	5.30	14.16
1970	0.80	2.90	5.60	10.80	17.30	21.80	23.30	25.60	24.10	18.70	12.70	7.40	14.25
1971	2.80	2.50	6.50	10.70	16.10	21.60	25.10	24.40	23.70	19.80	13.50	7.80	14.54
1972	6.80	4.60	7.20	10.60	16.00	19.60	24.20	24.90	22.60	16.60	11.80	8.10	14.42
1973	4.50	3.60	7.20	11.40	16.80	22.00	24.30	25.10	24.40	19.70	12.50	4.70	14.68
1974	6.70	5.60	8.40	12.20	17.60	21.70	24.80	25.00	22.90	16.20	12.20	6.80	15.01
1975	5.90	5.70	6.70	9.80	17.10	22.50	24.70	26.60	23.10	19.50	14.00	7.60	15.27
MEAN	3.90	3.35	6.30	11.23	16.90	21.61	24.57	24.83	23.04	18.08	12.28	6.39	14.37



Table 22

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY AVERAGE AIR TEMPERATURE, IN DEGREES F, CALCULATED FROM DAILY MAXIMA AND MINIMA, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, ANNUAL SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANAT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	37.30	36.40	43.60	57.80	66.70	71.80	81.70	77.80	70.70	61.40	55.60	37.20	58.17
1959	39.70	43.70	49.40	60.20	69.70	76.40	78.70	79.40	73.50	64.70	51.10	44.80	63.95
1960	41.70	41.40	39.20	63.70	68.30	75.50	77.80	80.00	72.80	61.80	52.70	36.50	59.28
1961	35.00	43.60	53.10	55.50	63.60	72.40	80.60	77.70	75.30	60.60	53.20	41.50	59.34
1962	38.90	41.00	43.70	56.40	68.00	73.40	75.20	76.00	69.10	61.80	49.80	37.20	57.54
1963	37.10	35.70	53.40	60.30	64.60	73.20	77.00	76.70	66.70	60.10	52.00	35.20	57.67
1964	42.30	39.90	49.50	55.20	66.40	74.50	77.30	74.40	70.80	57.70	54.60	46.50	59.09
1965	39.70	41.00	44.40	54.50	69.70	72.80	76.70	77.10	73.50	59.00	51.60	43.50	58.63
1966	35.80	38.60	47.90	54.50	63.60	71.60	78.00	74.90	69.90	59.30	50.50	41.40	57.17
1967	45.70	39.90	47.70	58.00	61.20	71.20	76.30	75.20	66.50	58.70	45.90	44.00	57.52
1968	34.80	34.00	50.00	55.10	64.60	74.90	78.00	80.50	71.50	63.10	52.90	41.40	58.40
1969	38.50	39.80	44.70	59.80	67.40	77.10	79.20	76.20	71.10	62.20	49.10	40.90	58.83
1970	33.90	39.30	44.70	56.70	67.50	74.90	76.90	78.00	74.70	63.70	51.70	47.00	59.08
1971	38.60	44.70	46.90	55.90	65.00	76.00	77.20	75.70	73.20	66.70	52.40	52.30	60.38
1972	46.40	43.20	49.00	56.40	63.50	70.50	77.60	75.80	71.90	59.20	51.60	49.20	59.52
1973	40.50	39.70	52.30	58.50	66.90	76.90	78.30	78.50	75.00	54.20	53.50	46.20	63.87
1974	48.60	43.40	53.10	60.80	66.80	72.80	78.30	77.40	71.40	58.70	53.50	46.00	60.90
1975	46.00	45.40	47.40	52.70	68.30	77.00	78.60	79.60	72.30	63.40	55.70	43.20	50.80
MEAN	40.03	40.59	47.78	57.33	66.21	74.05	77.97	77.27	71.67	61.46	52.08	43.00	59.12

Table 23

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY TOTAL COOLING DEGREE DAYS, BASE 65 DEGREES F, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, ANNUAL SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANCD0

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	0.00	0.00	0.00	33.00	104.00	220.00	526.00	405.00	185.00	27.00	7.00	0.00	125.58
1959	0.00	0.00	1.00	45.00	190.00	350.00	434.00	454.00	274.00	132.00	12.00	0.00	157.67
1960	0.00	0.00	2.00	119.00	146.00	323.00	400.00	474.00	244.00	46.00	2.00	0.00	146.33
1961	0.00	0.00	22.00	38.00	72.00	244.00	490.00	402.00	321.00	25.00	0.00	0.00	134.50
1962	0.00	0.00	2.00	34.00	146.00	272.00	324.00	346.00	168.00	55.00	0.00	0.00	112.25
1963	0.00	0.00	4.00	68.00	102.00	254.00	382.00	370.00	101.00	11.00	0.00	0.00	107.67
1964	0.00	0.00	8.00	14.00	156.00	973.00	385.00	298.00	183.00	15.00	6.00	6.00	170.33
1965	0.00	0.00	0.00	9.00	183.00	239.00	369.00	372.00	238.00	18.00	0.00	0.00	119.00
1966	0.00	0.00	6.00	18.00	86.00	224.00	410.00	313.00	175.00	19.00	7.00	0.00	104.83
1967	0.00	0.00	2.00	40.00	47.00	211.00	356.00	323.00	88.00	25.00	0.00	0.00	91.00
1968	0.00	0.00	10.00	2.00	85.00	304.00	412.00	489.00	202.00	71.00	2.00	0.00	131.42
1969	0.00	0.00	0.00	42.00	125.00	359.00	446.00	357.00	199.00	49.00	0.00	0.00	132.25
1970	1.00	0.00	0.00	19.00	140.00	303.00	374.00	412.00	311.00	60.00	0.00	0.00	135.00
1971	0.00	3.00	0.00	3.00	76.00	335.00	383.00	343.00	259.00	87.00	23.00	5.00	126.50
1972	0.00	0.00	8.00	20.00	40.00	183.00	398.00	343.00	217.00	22.00	10.00	2.00	103.58
1973	0.00	0.00	16.00	27.00	112.00	363.00	420.00	424.00	307.00	64.00	17.00	1.00	145.92
1974	3.00	0.00	16.00	64.00	124.00	244.00	419.00	390.00	213.00	26.00	32.00	0.00	127.58
1975	2.00	3.00	0.00	22.00	157.00	366.00	429.00	460.00	233.00	55.00	17.00	0.00	145.33
MEAN	0.33	0.33	5.39	34.28	116.17	321.00	408.72	387.50	217.67	44.83	7.50	0.78	128.71

Table 24

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY TOTAL HEATING DEGREE DAYS, BASE 65 DEGREES F, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, ANNUAL SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANHDD

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	852.00	795.00	655.00	242.00	44.00	7.00	0.00	0.00	7.00	132.00	282.00	855.00	322.58
1959	778.00	591.00	478.00	180.00	37.00	4.00	0.00	0.00	10.00	132.00	424.00	621.00	271.25
1960	714.00	679.00	796.00	152.00	37.00	1.00	0.00	0.00	0.00	139.00	368.00	877.00	313.58
1961	921.00	595.00	385.00	318.00	110.00	16.00	0.00	0.00	7.00	155.00	368.00	722.00	299.75
1962	800.00	668.00	655.00	288.00	50.00	0.00	0.00	0.00	37.00	148.00	449.00	854.00	329.08
1963	859.00	815.00	357.00	202.00	108.00	0.00	0.00	0.00	44.00	156.00	384.00	920.00	320.42
1964	697.00	719.00	482.00	303.00	108.00	4.00	0.00	0.00	4.00	232.00	312.00	575.00	286.33
1965	780.00	667.00	635.00	320.00	29.00	15.00	0.00	6.00	1.00	195.00	398.00	657.00	308.58
1966	897.00	734.00	527.00	330.00	121.00	21.00	0.00	0.00	22.00	191.00	437.00	725.00	333.75
1967	588.00	699.00	533.00	244.00	157.00	21.00	0.00	0.00	36.00	211.00	566.00	644.00	308.25
1968	928.00	895.00	471.00	294.00	88.00	0.00	0.00	0.00	0.00	124.00	361.00	726.00	323.92
1969	814.00	697.00	624.00	192.00	44.00	0.00	0.00	0.00	8.00	131.00	469.00	741.00	310.00
1970	960.00	714.00	622.00	263.00	57.00	0.00	0.00	0.00	16.00	93.00	393.00	552.00	305.83
1971	812.00	567.00	555.00	269.00	69.00	0.00	0.00	0.00	3.00	27.00	391.00	390.00	256.92
1972	572.00	628.00	494.00	272.00	81.00	11.00	0.00	0.00	4.00	197.00	406.00	486.00	262.58
1973	752.00	703.00	403.00	217.00	47.00	0.00	0.00	0.00	0.00	63.00	353.00	575.00	261.08
1974	504.00	599.00	377.00	183.00	63.00	0.00	0.00	0.00	16.00	213.00	371.00	584.00	242.50
1975	584.00	547.00	541.00	382.00	47.00	0.00	0.00	0.00	6.00	98.00	290.00	671.00	263.83
MEAN	767.33	684.00	532.78	253.39	72.06	5.56	0.00	0.33	12.28	147.61	390.11	676.39	295.57

Table 25

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY TOTAL PRECIPITATION, IN INCHES, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, ANNUAL SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANPR

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	4.16	3.55	6.41	3.28	6.23	4.99	6.27	10.48	0.36	4.88	3.07	4.10	4.81
1959	1.52	1.84	3.96	5.03	1.98	2.49	7.49	2.81	13.73	8.78	1.85	2.65	4.26
1960	3.85	3.57	2.54	1.40	4.43	2.57	4.78	6.49	5.88	2.76	1.10	2.37	3.48
1961	3.52	4.56	3.59	2.74	7.77	6.70	1.69	7.42	1.62	4.12	1.20	3.74	4.06
1962	5.56	2.50	4.32	4.49	3.68	3.03	9.05	4.09	3.07	4.48	4.06	3.80	4.34
1963	3.36	3.75	2.98	1.29	1.55	9.72	2.01	2.40	6.84	1.21	5.31	2.85	3.61
1964	4.56	4.56	2.26	2.38	1.56	2.58	7.33	10.58	12.26	5.55	1.14	2.95	4.81
1965	2.73	2.53	2.83	2.24	1.48	4.69	3.46	3.08	0.77	1.29	0.49	1.08	2.22
1966	4.86	3.83	1.50	1.68	5.95	1.82	4.26	5.24	3.39	1.25	1.05	3.13	3.16
1967	5.44	3.56	1.34	1.31	3.25	1.37	7.21	11.19	3.02	0.93	1.75	4.84	3.77
1968	3.62	2.01	4.76	3.17	2.16	3.07	4.23	2.04	1.51	4.44	3.56	3.14	3.14
1969	2.26	2.16	4.88	2.07	2.05	4.13	12.70	5.28	2.72	3.18	2.97	3.93	4.03
1970	2.27	3.97	3.37	3.19	2.58	4.10	5.33	2.04	1.72	1.30	2.34	3.01	2.93
1971	4.03	3.59	3.88	2.18	4.46	2.16	4.81	4.63	5.46	10.12	0.97	1.44	3.98
1972	2.94	3.50	2.55	2.15	3.35	4.93	4.65	1.60	6.91	4.09	5.44	4.12	3.85
1973	2.54	3.21	4.69	3.44	3.62	5.93	4.19	7.92	0.86	1.37	1.90	5.83	3.79
1974	3.52	2.98	5.16	3.34	3.74	4.76	5.47	8.33	4.40	1.23	1.22	3.81	4.00
1975	4.18	4.18	5.72	4.19	3.37	1.16	13.73	0.74	4.82	3.19	1.63	3.62	4.21
MEAN	3.61	3.32	3.71	2.75	3.51	3.90	6.04	5.35	4.24	3.56	2.28	3.36	3.80

Table 26

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SKY COVER, ON SCALE OF 0.0 TO 10.0, SUNRISE TO SUNSET, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, MONTHLY SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANSCTE

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	5.60	5.50	7.00	6.40	6.90	5.70	6.20	6.30	4.90	5.40	5.90	5.50	5.94
1959	5.60	7.50	5.40	6.50	6.40	4.40	8.10	5.50	6.10	6.60	6.10	6.20	6.20
1960	6.00	5.40	5.70	5.10	5.50	6.00	5.30	7.10	5.10	5.80	5.50	4.50	5.67
1961	4.50	6.70	6.30	5.40	5.70	6.50	5.20	6.20	4.60	4.10	5.20	6.80	5.60
1962	7.00	7.20	6.10	5.00	5.70	6.70	5.90	5.30	6.00	4.90	6.90	5.50	6.02
1963	5.70	6.00	5.70	5.20	6.70	6.30	5.70	5.60	5.80	3.80	5.20	5.20	5.57
1964	4.50	5.40	5.60	7.40	6.30	5.60	7.30	6.70	5.20	5.20	4.30	6.70	5.85
1965	5.80	6.20	6.50	6.50	5.60	6.10	6.80	5.10	5.50	3.80	4.70	6.60	5.77
1966	5.20	7.10	5.10	6.70	7.00	5.70	5.60	7.10	6.20	5.20	5.20	6.60	6.14
1967	6.30	6.00	5.80	6.20	7.00	5.40	7.70	7.40	5.50	3.90	4.70	6.10	5.00
1968	5.90	4.50	5.60	6.20	6.80	5.20	5.70	5.10	5.00	5.20	6.50	5.70	5.62
1969	6.20	7.10	4.90	5.60	4.60	6.60	6.20	5.50	6.40	6.10	5.60	5.50	5.86
1970	5.60	5.40	6.60	6.70	4.80	5.90	6.50	5.50	5.00	6.40	6.00	5.50	5.82
1971	8.10	5.50	5.30	3.80	5.80	6.50	7.20	5.50	5.90	7.90	4.60	5.70	6.07
1972	6.80	6.20	6.20	6.20	7.60	5.40	5.80	5.50	6.70	6.30	6.20	6.70	6.30
1973	6.40	5.50	7.70	6.10	6.40	6.90	5.10	5.00	4.80	4.20	4.10	6.10	5.69
1974	8.20	6.00	6.80	5.40	5.80	7.00	5.10	7.60	6.00	4.20	4.10	6.40	5.05
1975	6.60	7.40	6.10	5.50	6.50	4.70	6.40	4.60	6.60	6.30	5.10	6.10	5.99
MEAN	6.17	6.14	5.02	5.88	6.17	5.92	6.21	5.92	5.68	5.29	5.33	5.02	5.90

Table 27

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY PERCENT OF POSSIBLE SUNSHINE HOURS, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, ANNUAL SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANSHP

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	70.00	61.00	49.00	51.00	54.00	57.00	50.00	50.00	83.00	59.00	61.00	59.00	58.67
1959	61.00	48.00	68.00	69.00	78.00	80.00	59.00	73.00	60.00	40.00	53.00	59.00	52.33
1960	52.00	69.00	64.00	74.00	63.00	60.00	65.00	47.00	59.00	60.00	71.00	72.00	63.00
1961	73.00	51.00	68.00	68.00	66.00	57.00	73.00	60.00	65.00	69.00	70.00	56.00	64.67
1962	45.00	39.00	59.00	67.00	.	51.00	62.00	70.00	58.00	62.00	40.00	56.00	.
1963	54.00	56.00	61.00	67.00	60.00	51.00	54.00	67.00	59.00	68.00	70.00	70.00	62.25
1964	65.00	64.00	58.00	.	70.00	69.00	50.00	55.00	61.00	58.00	66.00	31.00	.
1965	55.00	50.00	62.00	54.00	67.00	60.00	52.00	64.00	70.00	67.00	54.00	49.00	59.50
1966	46.00	41.00	71.00	52.00	56.00	67.00	75.00	53.00	60.00	65.00	61.00	56.00	58.58
1967	68.00	75.00	80.00	72.00	63.00	76.00	66.00	64.00	73.00	79.00	68.00	54.00	59.83
1968	56.00	72.00	74.00	72.00	74.00	82.00	76.00	82.00	83.00	63.00	49.00	64.00	70.58
1969	61.00	55.00	79.00	69.00	74.00	62.00	57.00	67.00	54.00	49.00	51.00	58.00	61.33
1970	61.00	69.00	45.00	63.00	82.00	82.00	71.00	82.00	73.00	69.00	62.00	56.00	67.92
1971	33.00	61.00	63.00	82.00	71.00	73.00	66.00	68.00	66.00	28.00	60.00	54.00	60.42
1972	55.00	61.00	62.00	66.00	57.00	75.00	65.00	70.00	57.00	53.00	51.00	44.00	59.67
1973	61.00	65.00	41.00	59.00	59.00	53.00	61.00	63.00	66.00	70.00	79.00	.	.
1974	.	58.00	60.00	73.00	.	.	63.00	46.00	58.00	.	.	.	.
1975	.	.	.	.	58.00	.	.	.	.	51.00	59.00	50.00	.
MEAN	57.25	58.53	62.59	66.13	65.75	65.94	63.24	63.59	65.00	59.41	60.88	55.50	61.98

Table 28

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY TOTAL SUNSHINE HOURS, NORFOLK, VA AIRPORT  
 SOURCE: LOCAL CLIMATOLOGICAL DATA, MONTHLY SUMMARY, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ANSHTO

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	215.00	185.00	182.00	203.00	235.00	250.00	222.00	210.00	308.00	204.00	189.00	178.00	215.08
1959	187.00	145.00	253.00	271.00	343.00	353.00	265.00	306.00	224.00	141.00	161.00	177.00	235.50
1960	160.00	216.00	239.00	292.00	276.00	262.00	259.00	195.00	220.00	210.00	218.00	217.00	230.33
1961	225.00	154.00	251.00	267.00	291.00	251.00	327.00	252.00	244.00	240.00	216.00	168.00	240.50
1962	140.00	119.00	218.00	264.00	.	223.00	279.00	293.00	217.00	215.00	121.00	172.00	.
1963	168.00	170.00	228.00	265.00	265.00	224.00	285.00	281.00	220.00	235.00	214.00	210.00	230.42
1964	202.00	203.00	217.00	.	307.00	302.00	223.00	232.00	228.00	203.00	202.00	94.00	.
1965	169.00	152.00	230.00	214.00	295.00	264.00	234.00	270.00	261.00	232.00	196.00	146.00	221.92
1966	141.00	123.00	265.00	206.00	246.00	294.00	335.00	223.00	223.00	227.00	188.00	168.00	219.92
1967	211.00	227.00	297.00	283.00	278.00	334.00	296.00	270.00	273.00	275.00	208.00	162.00	259.50
1968	172.00	226.00	275.00	284.00	324.00	359.00	340.00	342.00	310.00	221.00	152.00	191.00	266.33
1969	187.00	168.00	295.00	273.00	324.00	273.00	254.00	280.00	261.00	172.00	156.00	174.00	229.75
1970	183.00	210.00	166.00	248.00	360.00	359.00	318.00	345.00	273.00	239.00	190.00	169.00	255.42
1971	103.00	186.00	232.00	323.00	311.00	321.00	297.00	287.00	247.00	97.00	183.00	161.00	229.00
1972	170.00	194.00	231.00	261.00	251.00	329.00	288.00	294.00	212.00	184.00	156.00	131.00	225.08
1973	188.00	199.00	151.00	234.00	257.00	233.00	272.00	263.00	245.00	245.00	242.00	.	.
1974	.	177.00	224.00	289.00	.	.	283.00	194.00	217.00	.	.	.	.
1975	.	.	.	.	256.00	.	.	.	.	179.00	182.00	149.00	.
MEAN	176.63	179.65	232.59	261.06	288.69	289.44	281.00	266.88	242.53	207.00	186.71	166.69	231.57

Table 29

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN RIVER DISCHARGE, IN CUBIC FEET PER SECOND, POTOMAC RIVER NEAR WASHINGTON, DC  
 SOURCE: U.S. GEOLOGICAL SURVEY, TOWSON, MD, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE APRDDC

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	14190.00	11750.00	28960.00	29460.00	25980.00	6233.00	6485.00	6872.00	2441.00	1813.00	2018.00	2239.00	11535.75
1959	5361.00	6810.00	8949.00	12890.00	10830.00	9066.00	2138.00	2233.00	1323.00	6228.00	3762.00	8716.00	6525.50
1960	12270.00	15740.00	16230.00	32940.00	21820.00	13960.00	4048.00	3508.00	3945.00	2163.00	2236.00	1777.00	10886.50
1961	4948.00	31150.00	30210.00	34270.00	16470.00	7517.00	3550.00	2666.00	2386.00	2554.00	3010.00	7483.00	12184.50
1962	10130.00	12210.00	45900.00	23750.00	9891.00	6627.00	2911.00	1709.00	1402.00	1630.00	6609.00	4183.00	10579.33
1963	10450.00	5703.00	45060.00	8432.00	4982.00	7015.00	1990.00	1335.00	1090.00	908.00	2773.00	4513.00	7854.25
1964	18480.00	12390.00	30660.00	18270.00	15630.00	2915.00	2310.00	1199.00	791.00	2372.00	1995.00	5671.00	9390.33
1965	14900.00	19480.00	28430.00	16820.00	7914.00	2587.00	1425.00	1127.00	1018.00	1586.00	1097.00	1033.00	8118.50
1966	1712.00	13570.00	12460.00	11790.00	13990.00	2571.00	695.00	538.00	5712.00	6575.00	3828.00	7979.00	6785.00
1967	9685.00	10840.00	35920.00	9116.00	17270.00	4614.00	4484.00	7364.00	2813.00	5529.00	4296.00	18030.00	10830.08
1968	13270.00	16150.00	24130.00	8289.00	12680.00	11270.00	2738.00	1932.00	2086.00	1657.00	5972.00	4279.00	8704.42
1969	3956.00	6703.00	8385.00	7058.00	3921.00	2216.00	2451.00	8003.00	4372.00	2327.00	3626.00	7952.00	5080.83
1970	11740.00	21390.00	16100.00	34590.00	9215.00	6204.00	8627.00	3606.00	1631.00	1922.00	16330.00	15520.00	12239.58
1971	18130.00	34480.00	21410.00	10760.00	15340.00	15210.00	3072.00	5752.00	7220.00	12960.00	3519.00	16870.00	14143.58
1972	9532.00	25920.00	17300.00	24800.00	25010.00	46630.00	17160.00	6019.00	2791.00	10930.00	20120.00	35690.00	20158.50
1973	16540.00	24290.00	17300.00	35140.00	18940.00	12490.00	5428.00	5401.00	3920.00	5508.00	7039.00	23490.00	14623.83
1974	25130.00	10930.00	11200.00	20990.00	10050.00	13420.00	4494.00	2518.00	3595.00	1955.00	2159.00	15530.00	10161.75
1975	14430.00	20600.00	30130.00	15170.00	19750.00	11130.00	8647.00	4500.00	25310.00	18210.00	11090.00	7955.00	15576.83
MEAN	11936.33	16672.56	23818.56	19696.39	14426.83	10093.06	4591.83	3682.33	4102.61	4823.72	5915.56	10493.61	10854.45



Table 30

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN RIVER DISCHARGE, IN CUBIC FEET PER SECOND, RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA  
 SOURCE: U.S. GEOLOGICAL SURVEY, TOWSON, MD, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE ARRDF

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	2984.00	2284.00	3871.00	3583.00	2473.00	1339.00	1258.00	1071.00	405.00	417.00	438.00	594.00	1725.50
1959	1122.00	888.00	1381.00	2149.00	910.00	1569.00	352.00	254.00	264.00	1269.00	727.00	1350.00	1019.58
1960	1495.00	3521.00	2274.00	3853.00	2753.00	1583.00	453.00	581.00	1437.00	469.00	388.00	375.00	1598.50
1961	978.00	5148.00	2727.00	4166.00	2502.00	1167.00	657.00	1105.00	651.00	424.00	489.00	1383.00	1783.08
1962	1936.00	1727.00	5090.00	2971.00	1668.00	1527.00	642.00	372.00	259.00	255.00	1370.00	878.00	1557.92
1963	2106.00	1302.00	4673.00	1031.00	570.00	904.00	171.00	64.00	64.00	79.00	549.00	576.00	1007.42
1964	3146.00	2557.00	1955.00	2378.00	1559.00	381.00	340.00	159.00	96.00	483.00	583.00	1099.00	1228.00
1965	1927.00	3715.00	3347.00	1285.00	880.00	405.00	261.00	192.00	156.00	277.00	204.00	205.00	1071.17
1966	268.00	2461.00	1611.00	1168.00	2049.00	508.00	141.00	76.00	1965.00	1835.00	840.00	1369.00	1190.92
1967	1746.00	1572.00	4002.00	944.00	1089.00	481.00	358.00	1567.00	457.00	811.00	532.00	3072.00	1385.92
1968	3502.00	1393.00	2300.00	878.00	1134.00	1690.00	735.00	384.00	218.00	256.00	1032.00	630.00	1180.17
1969	1057.00	1166.00	1596.00	863.00	608.00	692.00	1132.00	1245.00	540.00	511.00	714.00	1850.00	997.83
1970	2485.00	3058.00	1637.00	2922.00	1382.00	521.00	774.00	421.00	171.00	315.00	3303.00	1654.00	1553.58
1971	2086.00	4325.00	2138.00	1854.00	3598.00	2585.00	704.00	750.00	504.00	3506.00	1730.00	1748.00	2128.17
1972	1229.00	4542.00	2422.00	2268.00	2841.00	7112.00	1948.00	877.00	338.00	2863.00	4538.00	4947.00	2993.75
1973	3376.00	4370.00	2954.00	4396.00	2885.00	1755.00	950.00	2235.00	746.00	1139.00	869.00	4304.00	2498.25
1974	3379.00	1595.00	1552.00	1952.00	1554.00	1498.00	399.00	559.00	1401.00	428.00	426.00	3209.00	1496.00
1975	1967.00	2633.00	5768.00	1537.00	1810.00	1376.00	2608.00	978.00	5157.00	2031.00	1522.00	1474.00	2405.08
MEAN	2043.83	2680.94	2849.89	2233.22	1792.50	1505.17	771.28	716.67	823.89	965.44	1125.22	1706.50	1501.21

Table 31

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN WATER TEMPERATURE, IN DEGREES C, VIMS PIER, GLOUCESTER POINT, VA  
 SOURCE: DEPARTMENT OF ESTUARINE PROCESSES AND CHEMICAL OCEANOGRAPHY, VIMS, GLOUCESTER POINT, VA  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AVAWT

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	3.40	1.80	5.30	11.50	18.40	22.30	25.70	26.30	23.50	17.70	13.60	5.70	14.60
1959	3.30	5.30	8.40	14.10	20.50	24.80	27.30	27.90	25.90	21.40	12.90	7.00	16.57
1960	5.30	4.60	3.60	13.10	19.30	24.30	26.10	26.40	24.50	19.20	12.40	5.50	15.36
1961	2.80	3.30	8.90	11.40	18.20	22.80	25.80	26.70	25.60	19.30	14.00	7.10	15.49
1962	3.90	3.90	6.50	12.50	20.30	23.40	25.30	25.80	23.10	19.50	.	5.23	.
1963	2.50	2.20	7.10	13.50	18.10	23.10	26.30	26.40	22.60	18.90	13.30	5.90	14.99
1964	3.10	4.00	7.80	.	.	.	.	25.20	23.70	.	14.00	8.40	.
1965	4.90	3.80	6.40	11.20	19.20	21.90	25.30	25.90	24.30	18.00	12.20	7.70	15.07
1966	4.30	2.60	7.70	11.80	17.60	21.70	26.30	25.20	22.70	17.50	12.30	6.60	14.69
1967	4.80	4.60	6.90	12.30	15.90	22.60	25.00	25.30	22.00	18.10	11.10	7.30	14.66
1968	2.70	3.10	6.90	.	.	23.60	26.00	26.80	23.40	19.70	12.10	5.60	.
1969	2.90	3.30	5.30	13.30	18.70	24.10	26.70	25.80	23.10	18.40	12.30	5.20	14.92
1970	1.90	3.40	6.60	12.00	18.70	23.80	25.50	26.50	25.40	19.70	13.20	8.20	15.41
1971	4.40	4.60	8.50	13.10	18.90	24.10	26.70	27.10	25.90	21.10	15.10	8.10	16.47
1972	6.70	4.40	8.00	12.20	17.90	21.30	.	.	.	18.40	12.80	8.40	.
1973	5.50	5.10	8.70	12.80	18.30	24.10	26.70	27.40	26.20	20.70	13.30	8.90	16.47
1974	7.80	7.40	9.80	14.10	19.50	23.80	25.90	26.60	24.50	17.30	13.90	8.50	16.59
1975	8.00	7.50	8.10	11.60	19.90	24.80	26.40	28.20	24.00	20.30	15.00	7.40	16.77
MEAN	4.34	4.16	7.25	12.53	18.71	23.32	26.06	26.44	24.14	19.13	13.15	7.04	15.52

Table 32

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975

MONTHLY RESULTANT WIND VECTOR DIRECTION, IN DEGREES, CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS, NORFOLK, VA AIRPORT  
 SOURCE: NATIONAL CLIMATIC CENTER (NCC), ASHEVILLE, NC, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AWD

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	307.00	293.00	355.00	145.00	194.00	194.00	226.00	90.00	27.00	15.00	275.00	353.00	235.17
1959	279.00	311.00	268.00	208.00	207.00	279.00	189.00	194.00	77.00	281.00	338.00	333.00	247.00
1960	329.00	292.00	326.00	225.00	121.00	164.00	178.00	221.00	69.00	10.00	291.00	330.00	212.25
1961	319.00	329.00	291.00	273.00	212.00	207.00	229.00	185.00	31.00	341.00	338.00	300.00	254.58
1962	319.00	10.00	23.00	241.00	91.00	153.00	206.00	54.00	57.00	360.00	1.00	326.00	154.25
1963	321.00	355.00	255.00	280.00	178.00	220.00	223.00	204.00	37.00	11.00	276.00	309.00	222.42
1964	259.00	288.00	245.00	134.00	41.00	178.00	185.00	152.00	20.00	7.00	290.00	261.00	171.57
1965	320.00	273.00	331.00	354.00	157.00	180.00	190.00	193.00	109.00	322.00	289.00	281.00	249.92
1966	322.00	350.00	242.00	236.00	134.00	215.00	164.00	185.00	311.00	6.00	299.00	314.00	231.50
1967	253.00	289.00	325.00	274.00	315.00	101.00	181.00	160.00	12.00	42.00	281.00	343.00	214.67
1968	350.00	305.00	255.00	61.00	204.00	214.00	169.00	274.00	50.00	332.00	272.00	273.00	229.92
1969	323.00	336.00	317.00	187.00	171.00	163.00	198.00	206.00	36.00	22.00	307.00	303.00	214.08
1970	303.00	310.00	3.00	306.00	0.00	181.00	182.00	112.00	192.00	52.00	296.00	279.00	184.67
1971	296.00	241.00	291.00	303.00	231.00	128.00	200.00	115.00	67.00	45.00	302.00	280.00	208.25
1972	303.00	303.00	278.00	236.00	86.00	211.00	206.00	107.00	6.00	22.00	341.00	279.00	198.17
1973	322.00	358.00	339.00	251.00	214.00	200.00	192.00	189.00	77.00	29.00	272.00	332.00	231.25
1974	327.00	313.00	301.00	227.00	171.00	17.00	224.00	165.00	2.00	344.00	278.00	260.00	219.08
1975	288.00	307.00	286.00	289.00	95.00	116.00	192.00	254.00	70.00	338.00	286.00	331.00	237.67
MEAN	307.78	292.39	262.83	235.00	156.78	173.39	196.33	170.56	68.94	143.28	279.56	304.83	215.97

Table 33

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975

MONTHLY RESULTANT WIND VECTOR MAGNITUDE, IN KNOTS, CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS, NORFOLK, VA AIRPORT  
 SOURCE: NATIONAL CLIMATIC CENTER (NCC), ASHEVILLE, NC, VIA DIRECTOR, ATLANTIC ENVIRONMENTAL GROUP, NARRAGANSETT, RI  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AWV

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	3.80	5.50	4.30	0.10	1.30	1.10	5.30	0.40	1.00	3.50	1.50	3.50	2.62
1959	3.60	1.30	2.30	1.70	2.70	0.80	2.60	2.00	2.30	0.40	2.30	2.40	2.03
1960	2.70	3.00	4.00	2.50	0.70	1.50	1.40	0.50	1.90	2.50	2.10	3.20	2.17
1961	2.70	1.30	0.90	4.00	0.50	2.50	3.20	1.20	2.40	1.80	2.70	2.40	2.13
1962	1.80	2.20	3.40	2.80	0.90	1.30	1.40	1.00	0.50	1.20	4.40	4.70	2.13
1963	2.50	3.20	2.30	1.40	0.80	1.50	1.30	0.90	3.70	4.20	2.70	3.30	2.32
1964	3.50	3.80	3.00	1.20	0.70	1.20	2.20	1.20	2.70	3.40	0.90	1.40	2.10
1965	2.70	1.80	1.00	0.60	1.20	1.30	2.20	1.80	1.30	1.10	1.40	2.00	1.53
1966	4.60	1.60	2.10	1.20	1.10	1.30	0.90	1.40	0.80	1.90	0.70	3.00	1.72
1967	2.00	3.60	0.90	1.90	0.20	2.60	3.20	1.50	3.20	1.20	2.70	1.70	2.06
1968	3.40	4.40	3.90	1.00	1.00	1.90	0.80	0.50	2.20	0.60	3.10	4.00	2.23
1969	3.50	7.50	2.90	2.40	2.50	2.30	2.10	1.20	2.20	3.90	2.20	4.50	3.10
1970	2.60	1.90	1.10	0.40	0.00	2.50	2.10	0.80	2.00	4.10	1.20	3.60	1.86
1971	3.50	2.80	3.40	1.40	1.20	1.10	2.20	0.30	3.00	3.30	3.20	1.20	2.22
1972	1.50	3.30	1.50	0.90	1.30	2.80	2.20	0.70	2.50	3.90	2.80	2.50	2.16
1973	2.70	4.20	1.70	2.90	2.80	3.20	1.80	0.60	1.20	1.60	2.90	1.00	2.22
1974	0.90	2.50	1.50	3.00	0.60	1.10	1.60	1.20	1.30	2.20	2.40	2.50	1.73
1975	1.60	1.10	2.10	2.60	0.80	0.90	2.10	1.20	1.00	1.80	1.10	2.40	1.56
MEAN	2.76	3.06	2.35	1.78	1.13	1.72	2.14	1.02	1.96	2.37	2.24	2.74	2.10

Table 34

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MONTHLY MEAN SUNSPOT RELATIVE NUMBERS, ZURICH, SWITZERLAND  
 SOURCE: WORLD DATA CENTER A FOR SOLAR-TERRESTRIAL PHYSICS, ENVIRONMENTAL DATA SERVICE, NOAA, BOULDER, CO  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE AZSWSS

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	199.00	200.90	201.30	196.80	191.40	186.80	185.20	184.90	183.80	182.20	180.70	180.50	189.46
1959	178.60	176.90	174.50	169.20	165.10	161.40	155.80	151.30	146.30	141.10	137.20	132.50	157.49
1960	128.90	125.00	121.60	119.60	117.00	113.90	108.40	101.90	97.20	92.60	87.20	82.90	108.02
1961	57.90	46.10	53.00	61.40	51.00	77.40	70.20	55.90	63.60	37.70	32.60	40.00	53.90
1962	38.70	50.30	45.60	46.40	43.70	42.00	21.80	21.80	51.30	39.50	26.90	23.20	37.60
1963	19.80	24.40	17.10	29.30	43.00	35.90	19.60	33.20	38.80	35.30	23.40	14.90	27.89
1964	15.30	17.70	16.50	8.60	9.50	9.10	3.10	9.30	4.70	6.10	7.40	15.10	10.20
1965	17.50	14.20	11.70	6.80	24.10	15.90	11.90	8.90	16.80	20.10	15.80	17.00	15.05
1966	28.20	24.40	25.30	48.70	45.30	47.70	56.70	51.20	50.20	57.20	57.20	70.40	45.87
1967	110.90	93.60	111.80	69.50	86.50	67.30	91.50	107.20	76.80	88.20	94.30	126.40	93.67
1968	121.80	111.90	92.20	81.20	127.20	110.30	96.10	109.30	117.20	107.70	86.00	109.80	105.89
1969	104.40	120.50	135.80	106.80	120.00	106.00	96.80	98.00	91.30	95.70	93.50	97.90	105.56
1970	111.50	127.80	102.90	109.50	127.50	106.80	112.50	93.00	99.50	86.60	95.20	83.50	104.59
1971	91.30	79.00	60.70	71.80	57.50	49.80	81.00	61.40	50.20	51.70	63.20	82.20	56.65
1972	61.50	88.40	80.10	63.20	80.50	88.00	76.50	76.80	64.00	61.30	41.60	45.30	68.93
1973	43.40	42.90	46.00	57.70	42.40	39.50	23.10	25.60	59.30	30.70	23.90	23.30	38.15
1974	27.60	26.00	21.30	40.30	39.50	36.00	55.80	33.60	40.20	47.10	25.00	20.50	34.41
1975	18.90	11.50	11.50	5.10	9.00	11.40	28.20	39.70	13.90	9.10	19.40	7.80	15.46
MEAN	76.40	76.75	73.83	71.77	76.68	72.51	71.90	70.17	70.28	66.11	61.69	65.18	71.11

Table 35

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 EAST-WEST COMPONENT OF MONTHLY WIND VECTOR RESULTANT, MAGNITUDE IN KNOTS, NORFOLK, VA AIRPORT  
 CALCULATED BY DEPARTMENT OF CRUSTACEOLOGY, VIMS, FROM WIND VECTOR DATA CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS  
 POSITIVE VALUE INDICATES NET EASTWARD MOVEMENT, NEGATIVE VALUE INDICATES NET WESTWARD MOVEMENT  
 SOURCE: DEPARTMENT OF CRUSTACEOLOGY, VIMS, GLOUCESTER POINT, VA  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE EWCOMP

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-3.0348	-5.0628	-0.3748	0.0574	-0.3145	-0.2661	-3.8125	0.4000	0.4540	0.9059	-1.5939	-0.4265	-1.0891
1959	-3.5557	-0.9811	-2.2986	-0.7981	-1.2258	-0.7902	-0.4067	-0.4838	2.2410	-0.3927	-0.8616	-1.0896	-0.8869
1960	-1.3906	-2.7815	-2.2368	-1.7678	0.6000	0.4135	0.0489	-0.3280	1.5454	0.4341	-1.9605	-1.6000	-0.7436
1961	-1.7714	-0.6695	-0.8402	-3.9945	-0.2650	-1.1350	-2.4151	-0.1046	1.2361	-0.5860	-1.0114	-2.0785	-1.1363
1962	-1.1809	0.3620	1.3285	-2.4489	0.8999	0.5902	-0.6137	0.8988	0.4193	0.0000	0.0768	-2.6282	-0.1897
1963	-1.5733	-0.2789	-2.2216	-1.3787	0.0279	-0.9642	-0.8866	-0.3661	2.2267	0.8014	-2.6852	-2.5646	-0.8219
1964	-3.4357	-3.6140	-2.7189	0.8632	0.4592	0.0419	-0.1917	0.5634	0.9235	0.4144	-0.8457	-1.3828	-0.7436
1965	-1.7255	-1.7975	-0.4848	-0.0627	0.4669	-0.0000	-0.3820	-0.4049	1.2292	-0.6772	-1.3237	-1.9533	-0.5945
1966	-2.8320	-0.2778	-1.8542	-0.9948	0.7913	-0.7456	0.2481	-0.1220	-0.6038	0.1986	-0.5122	-2.1580	-0.7469
1967	-1.9126	-3.4039	-0.5162	-1.8954	-0.1414	2.5522	-0.0558	0.5130	0.6653	0.8030	-2.6504	-0.4970	-0.5449
1968	-0.5904	-3.6043	-3.7671	0.8746	-0.4067	-1.0625	0.1526	-0.4988	1.6853	-0.2817	-3.0981	-3.9945	-1.2150
1969	-2.1063	-3.0505	-1.9778	-0.2925	0.3911	0.6725	-0.6489	-0.5260	1.2931	1.4610	-1.7570	-3.7740	-0.8396
1970	-2.1805	-1.4555	0.0576	-0.3236	0.0000	-0.0435	-0.0733	0.7417	-0.4158	3.2309	-1.0736	-3.5557	-0.4247
1971	-3.1453	-2.4489	-3.1742	-1.1741	-0.9326	0.8668	-0.7524	0.2719	2.7615	2.3335	-2.7137	-1.1818	-0.7742
1972	-1.2580	-2.7676	-1.4854	-0.7461	1.2968	-1.4421	-0.9644	0.6694	0.2613	1.4610	-0.9116	-2.4592	-0.5963
1973	-1.6623	-0.1466	-0.6092	-2.7420	-1.5657	-1.0945	-0.3742	-0.0939	1.1692	0.7757	-2.8982	-0.4695	-0.8093
1974	-0.4902	-1.8284	-1.2857	-2.1941	0.0939	0.3216	-1.1115	0.3106	0.0454	-0.6064	-2.3766	-2.4620	-0.9553
1975	-1.5217	-0.8785	-2.0186	-2.4583	0.7970	0.8089	-0.4366	-1.1535	0.9397	-0.6743	-1.0574	-1.1635	-0.7347
MEAN	-1.9654	-1.9259	-1.4710	-1.1931	0.0541	-0.0709	-0.7042	0.0160	1.0098	0.5334	-1.6311	-1.9699	-0.7765

Table 36

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MODIFIED EAST-WEST COMPONENT OF MONTHLY WIND VECTOR RESULTANT, MAGNITUDE IN KNOTS, NORFOLK, VA AIRPORT  
 COMPONENTS MODIFIED BY TAKING 3/4 OF MAGNITUDE AND ADDING 15 DEGREES TO THE DIRECTION  
 CALCULATED BY DEPARTMENT OF CRUSTACEOLOGY, VIMS, FROM WIND VECTOR DATA CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS  
 POSITIVE VALUE INDICATES NET EASTWARD MOVEMENT, NEGATIVE VALUE INDICATES NET WESTWARD MOVEMENT  
 SOURCE: DEPARTMENT OF CRUSTACEOLOGY, VIMS, GLOUCESTER POINT, VA  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE MEWCMP

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	-0.0702	-0.1300	0.0224	0.0010	-0.0169	-0.0150	-0.1391	0.0116	0.0201	0.0525	-0.0451	0.0145	-0.0248
1959	-0.0987	-0.0218	-0.0672	-0.0343	-0.0542	-0.0219	-0.0317	-0.0291	0.0690	-0.0108	-0.0084	-0.0150	-0.0271
1960	-0.0223	-0.0719	-0.0391	-0.0850	0.0146	0.0008	-0.0094	-0.0124	0.0551	0.0317	-0.0510	-0.0248	-0.0161
1961	-0.0355	-0.0107	-0.0218	-0.1141	-0.0110	-0.0502	-0.0865	-0.0123	0.0518	-0.0038	-0.0099	-0.0509	-0.0296
1962	-0.0237	0.0279	0.0228	-0.0815	0.0250	0.0081	-0.0276	0.0294	0.0143	0.0093	0.0364	-0.0459	0.0030
1963	-0.0305	0.0167	-0.0690	-0.0381	-0.0054	-0.0369	-0.0331	-0.0170	0.0875	0.0552	-0.0756	-0.0582	-0.0170
1964	-0.1047	-0.0956	-0.0838	0.0185	0.0174	-0.0081	-0.0226	0.0081	0.0465	0.0382	-0.0221	-0.0413	-0.0212
1965	-0.0342	-0.0514	-0.0075	0.0023	0.0350	-0.0101	-0.0279	-0.0254	0.0323	-0.0129	-0.0348	-0.0539	-0.0181
1966	-0.0539	0.0042	-0.0614	-0.0340	0.0170	-0.0299	0.0005	-0.0144	-0.0134	0.0204	-0.0151	-0.0464	-0.0189
1967	-0.0630	-0.0895	-0.0092	-0.0339	-0.0030	0.0701	-0.0265	0.0039	0.0436	0.0302	-0.0728	-0.0018	-0.0141
1968	0.0089	-0.0848	-0.1170	0.0291	-0.0189	-0.0430	-0.0017	-0.0142	0.0598	-0.0040	-0.0889	-0.1141	-0.0324
1969	-0.0393	-0.0252	-0.0408	-0.0278	-0.0076	0.0024	-0.0343	-0.0236	0.0513	0.0704	-0.0406	-0.0903	-0.0179
1970	-0.0522	-0.0327	0.0102	-0.0075	0.0000	-0.0207	-0.0184	0.0192	-0.0272	0.1132	-0.0272	-0.0987	-0.0118
1971	-0.0792	-0.0815	-0.0825	-0.0281	-0.0329	0.0199	-0.0379	0.0069	0.0891	0.0857	-0.0655	-0.0326	-0.0199
1972	-0.0301	-0.0562	-0.0414	-0.0255	0.0383	-0.0604	-0.0433	0.0178	0.0269	0.0704	-0.0059	-0.0685	-0.0157
1973	-0.0316	0.0203	-0.0055	-0.0688	-0.0634	-0.0551	-0.0245	-0.0073	0.0360	0.0333	-0.0832	-0.0057	-0.0222
1974	-0.0083	-0.0397	-0.0312	-0.0795	-0.0019	0.0175	-0.0411	-0.0000	0.0114	-0.0012	-0.0663	-0.0747	-0.0263
1975	-0.0403	-0.0203	-0.0540	-0.0647	0.0225	0.0204	-0.0286	-0.0360	0.0299	-0.0066	-0.0283	-0.0174	-0.0185
MEAN	-0.0448	-0.0419	-0.0356	-0.0385	-0.0043	-0.0118	-0.0352	-0.0053	0.0380	0.0317	-0.0391	-0.0460	-0.0194

Table 37

BLUE CRAB AND ENVIRONMENTAL DATA  
 CALENDAR YEARS 1958 THROUGH 1975  
 MODIFIED NORTH-SOUTH COMPONENT OF MONTHLY WIND VECTOR RESULTANT, MAGNITUDE IN KNOTS, NORFOLK, VA AIRPORT  
 COMPONENTS MODIFIED BY TAKING 32 OF MAGNITUDE AND ADDING 15 DEGREES TO THE DIRECTION  
 CALCULATED BY DEPARTMENT OF CRUSTACEOLOGY, VIMS, FROM WIND VECTOR DATA CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS  
 POSITIVE VALUE INDICATES NET NORTHWARD MOVEMENT, NEGATIVE VALUE INDICATES NET SOUTHWARD MOVEMENT  
 SOURCE: DEPARTMENT OF CRUSTACEOLOGY, VIMS, GLOUCESTER POINT, VA  
 DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE MNSCOMP

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	0.0898	0.1016	0.1270	-0.0028	-0.0341	-0.0289	-0.0771	-0.0031	0.0223	0.0909	0.0164	0.1040	0.0338
1959	0.0439	0.0323	0.0155	-0.0373	-0.0602	0.0098	-0.0713	-0.0525	-0.0024	0.0053	0.0685	0.0704	0.0018
1960	0.0779	0.0542	0.1135	-0.0375	-0.0151	-0.0450	-0.0409	-0.0084	0.0148	0.0680	0.0370	0.0927	0.0259
1961	0.0728	0.0375	0.0159	0.0371	-0.0102	-0.0557	-0.0421	-0.0338	0.0500	0.0539	0.0804	0.0509	0.0214
1962	0.0485	0.0598	0.0804	-0.0203	-0.0074	-0.0381	-0.0317	0.0057	0.0046	0.0348	0.1269	0.1333	0.0330
1963	0.0685	0.0545	0.0000	0.0178	-0.0234	-0.0258	-0.0207	-0.0210	0.0683	0.1132	0.0290	0.0801	0.0317
1964	0.0073	0.0621	-0.0156	-0.0309	0.0117	-0.0351	-0.0620	-0.0351	0.0664	0.0946	0.0155	0.0044	0.0069
1965	0.0734	0.0167	0.0291	0.0178	-0.0356	-0.0377	-0.0596	-0.0477	-0.0218	0.0304	0.0235	0.0263	0.0012
1966	0.1270	0.0478	-0.0142	-0.0117	-0.0283	-0.0251	-0.0270	-0.0395	0.0199	0.0532	0.0146	0.0771	0.0162
1967	-0.0021	0.0604	0.0254	0.0186	0.0052	-0.0342	-0.0923	-0.0448	0.0355	0.0195	0.0355	0.0510	0.0106
1968	0.1016	0.1011	0.0300	0.0073	-0.0233	-0.0374	-0.0239	0.0049	0.0279	0.0175	0.0272	0.0371	0.0200
1969	0.0974	0.2222	0.0768	-0.0668	-0.0746	-0.0690	-0.0528	-0.0272	0.0415	0.0934	0.0520	0.1003	0.0328
1970	0.0580	0.0467	0.0314	0.0093	0.0000	-0.0721	-0.0602	-0.0144	-0.0535	0.0481	0.0236	0.0439	0.0051
1971	0.0689	-0.0203	0.0600	0.0312	-0.0146	-0.0264	-0.0541	-0.0058	0.0125	0.0495	0.0702	0.0152	0.0155
1972	0.0334	0.0736	0.0173	-0.0068	-0.0074	-0.0584	-0.0498	-0.0111	0.0700	0.0934	0.0838	0.0305	0.0222
1973	0.0746	0.1228	0.0507	-0.0061	-0.0551	-0.0786	-0.0421	-0.0194	-0.0013	0.0345	0.0254	0.0292	0.0110
1974	0.0257	0.0826	0.0324	-0.0423	-0.0179	0.0280	-0.0247	-0.0360	0.0373	0.0660	0.0281	0.0065	0.0139
1975	0.0261	0.0260	0.0324	0.0436	-0.0062	-0.0177	-0.0561	-0.0006	0.0026	0.0536	0.0170	0.0699	0.0157
MEAN	0.0637	0.0668	0.0377	-0.0045	-0.0221	-0.0360	-0.0497	-0.0215	0.0247	0.0567	0.0430	0.0568	0.0177



Table 38

BLUE CRAB AND ENVIRONMENTAL DATA  
CALENDAR YEARS 1958 THROUGH 1975

NORTH-SOUTH COMPONENT OF MONTHLY WIND VECTOR RESULTANT, MAGNITUDE IN KNOTS, NORFOLK, VA AIRPORT  
CALCULATED BY DEPARTMENT OF CRUSTACEOLOGY, VIMS, FROM WIND VECTOR DATA CALCULATED BY NCC FROM 3-HOURLY OBSERVATIONS  
POSITIVE VALUE INDICATES NET NORTHWARD MOVEMENT, NEGATIVE VALUE INDICATES NET SOUTHWARD MOVEMENT

SOURCE: DEPARTMENT OF CRUSTACEOLOGY, VIMS, GLOUCESTER POINT, VA  
DATA ON FILE IN CRUSTACEOLOGY DEPARTMENT, VIMS, VARIABLE CODE NSCOMP

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
1958	2.2869	2.1450	4.2836	-0.0819	-1.2614	-1.0673	-3.6817	0.0000	0.8910	3.3807	0.1395	3.4739	0.8760
1959	0.5632	0.8529	-0.0803	-1.5010	-2.4057	0.1251	-2.5680	-1.9406	0.5174	0.0763	2.1325	2.1384	-0.1741
1960	2.3144	1.1238	3.3162	-1.7678	-0.3605	-1.4419	-1.3991	-0.3774	0.9500	2.4620	0.7526	2.7713	0.8953
1961	2.0377	1.1143	0.3225	0.2093	-0.4240	-2.2275	-2.0994	-1.1954	2.0572	1.7019	2.5034	1.2000	0.4333
1962	1.3585	2.1666	3.1297	-1.3575	-0.0157	-1.1583	-1.2583	0.4384	0.2723	1.2000	4.3993	3.8965	1.0893
1963	1.9429	3.1878	-0.5953	0.2431	-0.7995	-1.1491	-0.9508	-0.8222	2.9549	4.1228	0.2822	2.0768	0.8745
1964	-0.6678	1.1743	-1.2679	-0.8536	0.5235	-1.1993	-2.1916	-1.0595	2.5372	3.3747	0.3078	-0.2190	0.0403
1965	2.0683	0.0842	0.3748	0.5937	-1.1046	-1.3000	-2.1666	-1.7539	-0.4232	0.3668	0.4558	0.3816	-0.1175
1966	3.6249	1.5757	-0.9859	-0.6710	-0.7641	-1.0649	-0.8651	-1.3947	0.5246	1.8896	0.3394	2.0840	0.3577
1967	-0.5847	1.1720	0.7372	0.1325	0.1414	-0.4961	-3.1995	-1.4095	3.1301	0.8913	0.5152	1.6257	0.2213
1968	3.3483	2.5237	-1.0094	0.4840	-0.9135	-1.5752	-0.7853	0.0349	1.4141	0.5293	0.1082	0.2093	0.3642
1969	2.7952	6.8516	2.1209	-2.3821	-2.4592	-2.1995	-1.5972	-1.0786	1.7798	3.6160	1.3240	2.4509	0.9010
1970	1.4161	1.2215	1.0985	0.2551	0.0000	-2.4996	-2.0987	-0.2997	-1.9563	2.5242	0.5250	0.5632	0.0608
1971	1.5343	-1.3575	1.2185	0.7625	-0.7552	-0.6772	-2.0673	-0.1268	1.1722	2.3335	1.6957	0.2084	0.3284
1972	0.8170	1.7973	0.2088	-0.5033	0.0907	-2.4001	-1.9773	-0.2047	2.4863	3.6160	2.6475	0.3911	0.5308
1973	2.1276	4.1974	1.5871	-0.9441	-2.3213	-3.0070	-1.7607	-0.5926	0.2699	1.5994	0.1012	0.8829	0.1517
1974	0.7548	1.7050	0.7726	-2.0460	-0.5926	1.0519	-1.1509	-1.1591	1.2992	2.1148	0.3340	-0.4341	0.2208
1975	0.4944	0.6620	0.5783	0.8465	-0.0647	-0.3945	-2.0541	-0.3308	0.3420	1.6689	0.3032	2.0991	0.3455
MEAN	1.5684	1.7895	0.9061	-0.4765	-0.7498	-1.2600	-1.9040	-0.7373	1.1233	2.0983	1.0482	1.4333	0.4033

Subject Index

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