Appendix E

Length Frequency Distribution

APPENDIX E

LIST OF TABLES

Number	Title
E-1	Length frequency distribution of larval and young-of-year striped bass in Hudson River estuary determined from Long River Survey, 2000.
E-2	Length frequency distribution of young-of-year striped bass in Hudson River estuary determined from Fall Shoals Survey, 2000.
E-3	Length frequency distribution of young-of-year striped bass in Hudson River estuary determined from Beach Seine Survey, 2000.
E-4	Length frequency distribution of larval and young-of-year white perch in Hudson River estuary determined from Long River Survey, 2000.
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E-10	Length frequency distribution of larval and young-of-year bay anchovy in Hudson River estuary determined from Long River Survey, 2000.
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APPENDIX E

LIST OF TABLES (CONTINUED)

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E-24	Length frequency distribution of young-of-year weakfish in Hudson River estuary determined from Fall Shoals Survey, 2000.
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TABLE E-1 LENGTH FREQUENCY DISTRIBUTION OF LARVAL AND YOUNG-OF-YEAR STRIPED BASS IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2000

DATES	0.0-1.9	2.0-3.9	4.0-5.9	6.0-7.9	8.0-9.9	10.0-11.9	12.0-13.9	14.0-15.9	16.0-17.9	18.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03APR-06APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10APR-13APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17APR-20APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24APR-27APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08MAY-12MAY	0	157	314	3	0	0	0	0	0	0	0	0	0	0	0	0
15MAY-19MAY	0	219	1396	644	0	0	0	0	0	0	0	0	0	0	0	0
22MAY-26MAY	0	22	1214	1779	2	0	0	0	0	0	0	0	0	0	0	0
30MAY-02JUN	0	385	899	1309	358	3	0	0	0	0	0	0	0	0	0	0
05JUN-08JUN	0	276	1495	953	560	39	1	0	0	0	0	0	0	0	0	0
12JUN-15JUN	0	162	933	1028	269	282	59	12	1	1	0	0	0	0	0	0
19JUN-22JUN	0	12	642	1031	382	367	214	18	0	1	0	0	0	0	0	0
26JUN-29JUN	0	8	271	864	373	323	276	139	69	20	7	1	0	0	0	0
11JUL-13JUL	0	0	13	53	220	440	384	150	37	8	9	26	16	8	3	0
25JUL-27JUL	0	0	0	1	7	34	39	33	32	17	32	12	26	19	9	4
07AUG-10AUG	0	0	0	0	0	1	1	1	0	0	2	5	8	13	10	6
22AUG-24AUG	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
19SEP-21SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	1241	7177	7665	2171	1489	974	353	139	47	50	44	51	40	24	14

DATES	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9+	N	MEAN	MIN	MED	MAX	SD
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
03APR-06APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10APR-13APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
17APR-20APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24APR-27APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
08MAY-12MAY	0	0	0	0	0	0	0	0	0	474	4.3	2.5	4.3	6.2	0.7
15MAY-19MAY	0	0	0	0	0	0	0	0	0	2259	5.3	2.5	5.3	7.7	0.9
22MAY-26MAY	0	0	0	0	0	0	0	0	0	3017	5.9	2.9	6.1	8.2	0.7
30MAY-02JUN	0	0	0	0	0	0	0	0	0	2954	6.0	2.2	6.2	10.7	1.6
05JUN-08JUN	0	0	0	0	0	0	0	0	0	3324	6.1	2.4	5.8	12.6	1.7
12JUN-15JUN	0	0	0	0	0	0	0	0	0	2747	6.8	2.4	6.2	18.6	2.3
19JUN-22JUN	0	0	0	0	0	0	0	0	0	2667	7.8	2.3	6.8	18.2	2.5
26JUN-29JUN	0	0	0	0	0	0	0	0	0	2351	9.2	2.7	8.0	25.3	3.3
11JUL-13JUL	0	0	0	0	0	0	0	0	0	1367	12.5	5.2	11.7	43.0	4.5
25JUL-27JUL	0	1	0	0	0	0	0	0	0	266	20.5	6.7	16.8	55.0	9.8
07AUG-10AUG	4	0	0	1	0	0	0	0	0	52	37.2	10.0	37.0	65.0	10.2
22AUG-24AUG	1	1	0	0	0	0	0	0	0	5	46.4	33.0	48.0	58.0	9.4
05SEP-07SEP	3	3	2	0	0	0	0	0	0	13	54.9	46.0	55.0	63.0	5.2
19SEP-21SEP	1	1	2	3	0	0	1	1	0	10	64.8	44.0	64.5	89.0	12.9
03OCT-05OCT	3	0	5	8	1	5	2	0	0	25	67.2	50.0	66.0	82.0	8.6
	======	======	======	======	======	======	======	======	======	======					
	12	6	9	12	1	5	3	1	0	21531					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-2 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR STRIPED BASS IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9
	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0
05JUL-08JUL	23	47	36	31	6	2	0	0	0	0	0	0	0	0	0	0
17JUL-20JUL	9	30	6	11	29	27	18	10	1	1	0	0	0	0	0	0
31JUL-03AUG	0	0	6	7	20	18	22	19	21	9	3	3	0	0	0	0
14AUG-17AUG	0	0	1	4	6	14	31	22	18	14	4	0	3	1	0	0
28AUG-31AUG	0	0	0	0	0	2	11	17	29	27	5	9	5	1	2	0
11SEP-14SEP	0	0	0	0	1	2	1	5	9	14	5	2	2	1	3	1
25SEP-28SEP	0	0	0	0	0	0	0	3	8	26	24	21	8	5	4	2
10OCT-12OCT	0	0	0	0	0	0	0	1	2	4	12	10	7	6	5	1
23OCT-26OCT	0	0	0	0	0	0	0	0	1	0	0	2	1	2	0	0
06NOV-09NOV	0	0	0	0	0	0	0	0	0	1	0	2	2	0	0	0
27NOV-30NOV	0	0	0	0	0	0	0	0	0	2	5	7	3	0	1	2
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	32	77	49	53	62	65	83	78	89	99	60	56	31	16	15	6

DATES	90.0-94.9	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9+	N	MEAN	MIN	MED	MAX	SD
	0	0	0	0	0	0	0	0	0	0	5	57.8	45.0	60.0	63.0	7.3
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	146	20.3	9.0	20.0	35.0	5.6
17JUL-20JUL	0	0	0	0	0	0	0	0	0	0	142	30.0	11.0	32.5	58.0	11.0
31JUL-03AUG	0	0	0	0	0	0	0	0	0	0	128	42.3	20.0	42.0	68.0	10.6
14AUG-17AUG	0	0	0	0	0	0	0	0	0	0	120	46.3	22.0	46.0	75.0	9.9
28AUG-31AUG	0	0	0	0	0	0	0	0	0	0	113	54.7	37.0	54.0	82.0	8.9
11SEP-14SEP	0	0	0	0	0	0	0	0	0	0	49	57.8	31.0	57.0	88.0	11.7
25SEP-28SEP	0	0	0	0	0	0	0	0	1	0	113	63.6	47.0	62.0	132.0	10.2
10OCT-12OCT	1	0	0	0	0	0	0	0	0	0	50	68.1	48.0	68.0	90.0	9.0
23OCT-26OCT	1	0	0	0	0	0	0	0	0	0	7	72.0	53.0	71.0	93.0	12.4
06NOV-09NOV	1	0	0	0	0	0	0	0	0	0	6	70.8	57.0	69.5	90.0	11.0
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	20	68.2	56.0	65.5	89.0	8.5
	======	======	======	======	======	======	======	======	======	======	======					
	3	0	0	0	0	0	0	0	1	0	899					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-3 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR STRIPED BASS IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9
13JUN-15JUN	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	0	4	12	4	1	0	0	0	0	0	0	0	0	0	0	0	0
10JUL-12JUL	0	5	26	43	36	15	0	2	0	0	0	0	0	0	0	0	0
24JUL-27JUL	0	0	5	10	21	40	24	25	15	7	4	1	0	0	1	0	0
07AUG-10AUG	0	0	3	12	12	24	24	31	27	6	8	4	4	4	1	0	0
21AUG-23AUG	0	0	0	0	1	4	20	30	33	13	12	9	6	7	4	2	1
05SEP-07SEP	0	0	0	0	1	0	5	23	19	14	8	6	7	2	4	3	0
18SEP-20SEP	0	0	0	0	0	0	0	5	23	29	15	14	8	1	2	1	1
03OCT-05OCT	0	0	0	0	0	0	0	2	4	13	11	13	4	4	1	3	1
16OCT-18OCT	0	0	0	0	0	0	0	2	5	3	8	10	7	7	2	1	1
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	8	13	46	69	72	83	73	120	126	85	66	57	36	25	15	10	4

DATES	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9	140.0-144.9	145.0-149.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	12	14.2	12.0	14.0	16.0	1.2
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0	21	22.1	16.0	22.0	31.0	3.7
10JUL-12JUL	0	0	0	0	0	0	0	0	0	0	0	127	28.4	15.0	28.0	47.0	5.5
24JUL-27JUL	0	0	0	0	0	0	0	0	0	0	0	155	41.1	20.0	40.0	82.0	10.1
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0	0	163	45.6	20.0	45.0	81.0	12.5
21AUG-23AUG	0	0	0	0	0	0	0	0	0	0	0	147	55.0	34.0	52.0	93.0	12.0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0	0	95	57.3	33.0	54.0	86.0	11.7
18SEP-20SEP	0	0	0	1	0	0	0	0	0	0	0	104	60.7	48.0	59.0	113.0	9.8
03OCT-05OCT	3	0	1	0	1	0	0	0	0	0	0	66	67.0	45.0	64.0	117.0	14.4
16OCT-18OCT	4	1	1	0	0	0	0	0	0	0	1	54	71.6	47.0	68.0	145.0	17.0
	======	======	======	======	======	======	======	======	======	======	======	======					
	7	1	2	1	1	0	0	0	0	0	1	944					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-4 LENGTH FREQUENCY DISTRIBUTION OF LARVAL AND YOUNG-OF-YEAR WHITE PERCH IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2000

DATES	0.0-1.9	2.0-3.9	4.0-5.9	6.0-7.9	8.0-9.9	10.0-11.9	12.0-13.9	14.0-15.9	16.0-17.9	18.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03APR-06APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10APR-13APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17APR-20APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24APR-27APR	0	1	0	0	0	0	0	0	0	0	0	0	0	0
01MAY-04MAY	0	3	2	0	0	0	0	0	0	0	0	0	0	0
08MAY-12MAY	0	1470	115	0	0	0	0	0	0	0	0	0	0	0
15MAY-19MAY	0	468	1151	8	0	0	0	0	0	0	0	0	0	0
22MAY-26MAY	1	1136	1767	210	0	0	0	0	0	0	0	0	0	0
30MAY-02JUN	0	997	880	828	129	0	0	0	0	0	0	0	0	0
05JUN-08JUN	0	926	942	423	320	11	0	0	0	0	0	0	0	0
12JUN-15JUN	0	644	926	348	157	79	4	2	0	0	0	0	0	0
19JUN-22JUN	0	523	500	484	241	80	4	0	0	0	0	0	0	0
26JUN-29JUN	0	264	526	359	209	37	3	0	1	0	0	0	0	0
11JUL-13JUL	0	11	78	138	112	42	8	5	2	0	2	0	0	0
25JUL-27JUL	0	0	2	11	26	48	66	71	48	12	8	0	1	0
07AUG-10AUG	0	0	0	0	0	6	3	4	3	1	4	0	0	0
22AUG-24AUG	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19SEP-21SEP	0	0	0	0	0	0	0	0	0	0	0	0	1	1
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	1	6443	6889	2809	1194	303	88	83	54	13	14	0	2	1

DATES	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9+	N	MEAN	MIN	MED	MAX	SD
07MAR-10MAR	0	0	0	0	0	0	0	0	.	.	.	.	.
20MAR-22MAR	0	0	0	0	0	0	0	0	.	.	.	.	.
27MAR-29MAR	0	0	0	0	0	0	0	0	.	.	.	.	.
03APR-06APR	0	0	0	0	0	0	0	0	.	.	.	.	.
10APR-13APR	0	0	0	0	0	0	0	0	.	.	.	.	.
17APR-20APR	0	0	0	0	0	0	0	0	.	.	.	.	.
24APR-27APR	0	0	0	0	0	0	0	1	3.7	3.7	3.7	3.7	.
01MAY-04MAY	0	0	0	0	0	0	0	5	4.1	2.9	3.5	5.5	1.2
08MAY-12MAY	0	0	0	0	0	0	0	1585	3.4	2.1	3.4	4.8	0.4
15MAY-19MAY	0	0	0	0	0	0	0	1627	4.2	2.1	4.3	6.4	0.6
22MAY-26MAY	0	0	0	0	0	0	0	3114	4.4	1.9	4.3	7.7	1.0
30MAY-02JUN	0	0	0	0	0	0	0	2834	5.0	2.0	4.3	9.6	1.7
05JUN-08JUN	0	0	0	0	0	0	0	2622	5.1	2.5	4.3	10.8	1.9
12JUN-15JUN	0	0	0	0	0	0	0	2160	5.2	2.2	4.7	14.4	2.0
19JUN-22JUN	0	0	0	0	0	0	0	1832	5.8	2.0	5.6	12.8	2.2
26JUN-29JUN	0	0	0	0	0	0	0	1399	5.9	2.1	5.6	16.0	2.0
11JUL-13JUL	0	0	0	0	0	0	0	398	7.7	2.8	7.5	22.5	2.5
25JUL-27JUL	0	0	0	0	0	0	0	293	13.7	5.1	13.9	34.0	3.3
07AUG-10AUG	0	0	0	0	0	0	0	21	15.0	10.0	14.1	22.0	4.1
22AUG-24AUG	0	0	0	0	0	0	0	1	15.2	15.2	15.2	15.2	.
05SEP-07SEP	0	0	0	0	0	1	0	1	68.0	68.0	68.0	68.0	.
19SEP-21SEP	0	1	1	0	0	0	0	4	41.3	30.0	40.5	54.0	10.5
03OCT-05OCT	0	0	0	0	0	0	0	0	.	.	.	.	.
	======	======	======	======	======	======	======	======					
	0	1	1	0	0	1	0	17897					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-5 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR WHITE PERCH IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9
05JUL-08JUL	2	7	2	0	0	0	0	0	0	0	0	0	0
17JUL-20JUL	16	32	3	1	1	0	0	0	0	0	0	0	0
31JUL-03AUG	0	10	10	9	4	4	5	3	1	0	0	0	0
14AUG-17AUG	0	2	9	25	6	1	1	2	3	0	0	0	0
28AUG-31AUG	0	1	0	11	8	10	2	0	2	0	0	0	0
11SEP-14SEP	0	0	0	3	7	11	10	1	0	0	0	1	0
25SEP-28SEP	0	0	0	1	1	8	19	18	6	3	7	1	1
10OCT-12OCT	0	0	0	0	0	0	5	4	6	1	3	2	5
23OCT-26OCT	0	0	0	0	0	1	2	1	1	2	3	2	4
06NOV-09NOV	0	0	0	0	0	0	0	1	3	3	5	10	10
27NOV-30NOV	0	0	0	0	0	0	0	0	8	10	9	24	18
	======	======	======	======	======	======	======	======	======	======	======	======	======
	18	52	24	50	27	35	44	30	30	19	27	40	38

DATES	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9	100.0-104.9+	N	MEAN	MIN	MED	MAX	SD
05JUL-08JUL	0	0	0	0	0	0	12	15.2	7.0	15.0	20.0	3.4
17JUL-20JUL	0	0	0	0	0	0	53	16.2	11.0	16.0	30.0	3.4
31JUL-03AUG	0	0	0	0	0	0	46	28.3	16.0	25.0	52.0	10.2
14AUG-17AUG	0	1	0	0	0	0	50	29.9	17.0	26.5	84.0	11.4
28AUG-31AUG	0	0	3	0	0	0	37	37.2	15.0	34.0	89.0	16.9
11SEP-14SEP	0	0	0	0	0	0	34	38.3	27.0	37.0	66.0	7.9
25SEP-28SEP	0	0	0	1	0	0	67	47.8	28.0	45.0	90.0	10.5
10OCT-12OCT	4	5	0	0	0	0	35	61.3	40.0	61.0	84.0	14.3
23OCT-26OCT	1	0	0	0	5	3	26	71.8	39.0	69.0	100.0	20.3
06NOV-09NOV	14	8	1	2	8	2	67	74.9	49.0	75.0	100.0	12.9
27NOV-30NOV	10	6	2	1	8	1	97	70.9	51.0	69.0	100.0	12.0
	======	======	======	======	======	======	======					
	29	20	6	4	21	6	524					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-6 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR WHITE PERCH IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0
10JUL-12JUL	0	1	19	19	4	3	0	0	0	0	0
24JUL-27JUL	0	0	0	2	10	16	6	7	2	0	0
07AUG-10AUG	0	0	1	4	12	18	17	11	8	3	0
21AUG-23AUG	0	0	0	1	8	5	9	13	28	15	5
05SEP-07SEP	0	0	0	0	0	5	8	9	11	13	5
18SEP-20SEP	0	0	0	0	0	0	2	4	4	11	14
03OCT-05OCT	0	0	0	0	1	0	0	0	3	10	9
16OCT-18OCT	0	0	0	0	0	0	0	1	1	5	6
	======	======	======	======	======	======	======	======	======	======	======
	0	1	20	26	35	47	42	45	57	57	39

DATES	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	0	.	.	.	.	.
10JUL-12JUL	0	0	0	0	46	25.8	17.0	25.0	38.0	4.2
24JUL-27JUL	0	0	0	0	43	38.5	28.0	38.0	54.0	6.4
07AUG-10AUG	0	0	0	0	74	40.2	24.0	40.5	57.0	7.8
21AUG-23AUG	1	0	0	0	90	49.1	25.0	51.0	66.0	8.9
05SEP-07SEP	3	1	0	0	56	51.5	37.0	52.0	71.0	8.5
18SEP-20SEP	12	4	0	0	53	60.1	43.0	61.0	74.0	7.3
03OCT-05OCT	5	10	3	1	42	63.8	32.0	63.5	81.0	9.3
16OCT-18OCT	8	1	0	0	23	61.7	45.0	63.0	72.0	6.2
	======	======	======	======	======					
	29	16	3	1	427					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-7 LENGTH FREQUENCY DISTRIBUTION OF LARVAL AND YOUNG-OF-YEAR ATLANTIC TOMCOD IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2000

DATES	0.0-1.9	2.0-3.9	4.0-5.9	6.0-7.9	8.0-9.9	10.0-11.9	12.0-13.9	14.0-15.9	16.0-17.9	18.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9
07MAR-10MAR	0	0	0	285	62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20MAR-22MAR	0	0	0	35	32	25	0	0	0	0	0	0	0	0	0	0	0	0	0
27MAR-29MAR	0	0	0	10	67	116	55	3	0	0	0	0	0	0	0	0	0	0	0
03APR-06APR	0	0	0	3	21	45	110	121	45	3	0	0	0	0	0	0	0	0	0
10APR-13APR	0	0	0	1	0	6	20	30	34	52	29	0	0	0	0	0	0	0	0
17APR-20APR	0	0	0	0	0	0	1	10	23	41	139	121	5	0	0	0	0	0	0
24APR-27APR	0	0	0	0	0	2	1	2	7	11	49	116	47	3	0	0	0	0	0
01MAY-04MAY	0	0	0	0	0	0	0	0	1	0	3	12	19	14	0	0	0	0	0
08MAY-12MAY	0	0	0	0	0	0	0	0	0	1	0	13	31	103	151	65	5	1	0
15MAY-19MAY	0	0	0	0	0	0	0	0	0	0	0	2	2	19	56	72	38	2	0
22MAY-26MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	2	3	4
30MAY-02JUN	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	25	54	60
05JUN-08JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	6	27	32
12JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
19JUN-22JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
26JUN-29JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11JUL-13JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25JUL-27JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22AUG-24AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
19SEP-21SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	334	182	194	187	166	110	108	220	264	105	140	214	145	77	88	100

DATES	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9+	N	MEAN	MIN	MED	MAX	SD
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	347	7.5	6.0	7.4	9.1	0.5
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	92	8.9	6.2	8.7	11.9	1.5
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	251	10.7	6.8	10.9	14.6	1.6
03APR-06APR	0	0	0	0	0	0	0	0	0	0	0	0	0	348	13.7	6.8	13.9	18.9	2.2
10APR-13APR	0	0	0	0	0	0	0	0	0	0	0	0	0	172	17.1	7.5	17.8	23.0	2.8
17APR-20APR	0	0	0	0	0	0	0	0	0	0	0	0	0	340	22.9	13.6	23.3	30.0	3.6
24APR-27APR	0	0	0	0	0	0	0	0	0	0	0	0	0	238	26.1	11.6	27.0	36.0	4.4
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	49	31.1	17.9	30.0	39.0	4.8
08MAY-12MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	371	40.2	18.0	40.0	60.0	5.2
15MAY-19MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	191	45.4	25.0	46.0	58.0	5.0
22MAY-26MAY	2	0	0	0	0	0	0	0	0	0	0	0	0	19	54.4	36.0	56.0	68.0	9.2
30MAY-02JUN	72	42	19	3	2	0	0	0	0	0	0	0	0	305	63.5	34.0	64.0	86.0	7.8
05JUN-08JUN	60	63	40	24	8	4	0	0	0	0	0	0	0	272	69.8	43.0	70.0	92.0	8.7
12JUN-15JUN	11	16	29	30	26	11	1	0	0	0	0	0	0	127	80.0	59.0	81.0	98.0	7.5
19JUN-22JUN	4	20	30	58	44	30	16	3	3	0	0	0	0	210	84.1	62.0	84.0	106.0	8.1
26JUN-29JUN	5	24	32	45	35	34	15	7	7	0	0	0	0	205	84.7	60.0	84.0	109.0	9.4
11JUL-13JUL	1	0	4	5	8	6	3	2	0	1	1	0	0	31	89.3	66.0	89.0	115.0	10.3
25JUL-27JUL	1	2	4	7	12	13	9	3	2	1	1	0	0	56	89.2	42.0	90.0	116.0	11.6
07AUG-10AUG	0	5	16	28	38	36	28	15	3	3	1	1	0	174	90.0	72.0	89.5	120.0	9.0
22AUG-24AUG	0	0	5	7	8	6	3	3	4	1	0	0	0	37	90.4	77.0	88.0	111.0	9.9
05SEP-07SEP	1	1	14	13	11	17	8	6	3	0	0	1	0	76	87.9	53.0	87.5	120.0	10.4
19SEP-21SEP	0	0	2	7	10	13	11	1	1	0	0	0	0	45	90.3	77.0	90.0	106.0	6.5
03OCT-05OCT	0	0	0	0	3	2	7	4	6	3	0	0	2	27	103.4	85.0	101.0	140.0	13.1
	======	======	======	======	======	======	======	======	======	======	======	======	======	======					
	157	173	195	227	205	172	101	44	29	9	3	2	2	3983					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-8 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR ATLANTIC TOMCOD IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9	100.0-104.9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	0	0
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	0	1	6	9	22	26	39	28	18
17JUL-20JUL	0	0	0	0	0	0	0	0	0	1	0	0	1	5	19	30	25	30	10
31JUL-03AUG	0	0	0	0	0	0	0	0	0	0	0	2	2	14	13	29	37	22	30
14AUG-17AUG	0	0	0	0	0	0	0	0	0	0	0	1	1	3	14	32	26	28	17
28AUG-31AUG	0	0	0	0	0	0	0	0	0	0	0	1	0	12	17	29	30	25	16
11SEP-14SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	20	21	22	20
25SEP-28SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	3	11	16	24	23	28
10OCT-12OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	13	19	18
23OCT-26OCT	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	4	5	8
06NOV-09NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
	0	0	0	0	0	0	0	0	0	2	0	5	10	47	112	190	222	204	169

DATES	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9	140.0-144.9	145.0-149.9	150.0-154.9	155.0-159.9	160.0-164.9+	N	MEAN	MIN	MED	MAX	SD
	0	0	0	0	0	0	0	0	0	0	0	0	5	86.8	80.0	89.0	91.0	5.0
05JUL-08JUL	5	6	1	0	0	0	0	0	0	0	0	0	161	91.4	66.0	92.0	119.0	9.4
17JUL-20JUL	20	7	6	1	1	0	0	0	0	0	0	0	156	94.3	58.0	94.0	125.0	11.1
31JUL-03AUG	12	7	2	1	2	1	0	0	0	0	0	0	174	93.9	66.0	92.0	130.0	10.9
14AUG-17AUG	6	7	5	2	2	1	0	0	0	0	0	0	145	95.0	69.0	93.0	130.0	11.1
28AUG-31AUG	15	13	4	2	0	0	0	0	0	0	0	0	164	94.2	66.0	92.0	121.0	11.0
11SEP-14SEP	12	15	9	0	2	2	1	0	0	0	0	0	136	99.3	81.0	98.0	137.0	11.8
25SEP-28SEP	17	10	9	1	2	1	0	3	0	0	0	0	148	99.5	75.0	99.0	143.0	12.3
10OCT-12OCT	10	17	13	12	13	5	4	1	1	1	0	0	134	109.4	76.0	109.5	150.0	14.6
23OCT-26OCT	28	6	11	16	14	8	9	5	4	3	0	0	124	117.9	55.0	118.0	150.0	16.2
06NOV-09NOV	3	6	6	12	5	4	16	5	8	2	5	1	78	130.0	92.0	131.0	160.0	15.8
27NOV-30NOV	1	3	9	6	14	18	20	22	14	10	9	0	129	136.0	89.0	138.0	159.0	13.4
	129	97	75	53	55	40	50	36	27	16	14	1	1554					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-9 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR ATLANTIC TOMCOD IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	1	2
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0	1	1
10JUL-12JUL	0	0	0	0	0	0	0	0	0	0	0	0	0
24JUL-27JUL	0	0	0	0	0	0	0	0	0	0	0	0	0
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0	0	0	0
21AUG-23AUG	0	0	0	0	0	0	0	0	0	0	0	0	0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0	0	0	0
18SEP-20SEP	0	0	0	0	0	0	0	0	0	0	0	0	0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	0
16OCT-18OCT	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	0	0	0	0	0	0	0	2	3

DATES	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9	100.0-104.9	105.0-109.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	1	0	0	0	4	75.3	66.0	72.5	90.0	10.4
26JUN-28JUN	0	0	1	0	0	0	0	3	75.7	68.0	70.0	89.0	11.6
10JUL-12JUL	0	1	1	0	0	0	0	2	83.5	82.0	83.5	85.0	2.1
24JUL-27JUL	0	2	2	2	2	0	1	9	91.1	80.0	90.0	105.0	7.4
07AUG-10AUG	1	0	5	5	4	2	0	17	91.8	78.0	90.0	103.0	6.6
21AUG-23AUG	0	1	4	1	4	0	0	10	90.3	81.0	88.5	99.0	5.9
05SEP-07SEP	0	0	0	0	0	0	0	0	.	.	.	.	.
18SEP-20SEP	0	0	0	0	0	0	0	0	.	.	.	.	.
03OCT-05OCT	0	0	0	0	0	0	0	0	.	.	.	.	.
16OCT-18OCT	0	0	0	0	0	0	0	0	.	.	.	.	.
	======	======	======	======	======	======	======	======					
	1	4	13	9	10	2	1	45					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-10 LENGTH FREQUENCY DISTRIBUTION OF LARVAL AND YOUNG-OF-YEAR BAY ANCHOVY IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2000

DATES	0.0-1.9	2.0-3.9	4.0-5.9	6.0-7.9	8.0-9.9	10.0-11.9	12.0-13.9	14.0-15.9	16.0-17.9	18.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03APR-06APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10APR-13APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17APR-20APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24APR-27APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08MAY-12MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15MAY-19MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22MAY-26MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30MAY-02JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05JUN-08JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12JUN-15JUN	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
19JUN-22JUN	0	0	13	16	0	0	0	0	0	2	2	0	0	0	0
26JUN-29JUN	0	0	30	46	93	42	7	1	0	0	0	0	0	0	0
11JUL-13JUL	0	5	16	49	76	202	288	227	172	118	138	3	1	0	0
25JUL-27JUL	0	6	11	44	98	270	302	237	128	70	228	160	23	3	0
07AUG-10AUG	0	0	12	53	85	106	111	188	225	234	242	181	123	31	2
22AUG-24AUG	0	0	0	11	63	91	111	103	120	159	580	277	154	139	85
05SEP-07SEP	0	0	0	0	0	1	11	69	132	159	273	315	487	320	101
19SEP-21SEP	0	0	0	2	6	11	14	2	5	13	206	235	277	440	317
03OCT-05OCT	0	0	0	0	3	8	15	10	7	7	26	173	249	361	265
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	11	82	221	424	731	859	837	792	762	1695	1344	1314	1294	770

DATES	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9+	N	MEAN	MIN	MED	MAX	SD
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
03APR-06APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10APR-13APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
17APR-20APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24APR-27APR	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
08MAY-12MAY	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
15MAY-19MAY	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
22MAY-26MAY	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
30MAY-02JUN	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
05JUN-08JUN	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
12JUN-15JUN	0	0	0	0	0	0	0	0	0	3	17.1	16.5	17.3	17.6	0.6
19JUN-22JUN	0	0	0	0	0	0	0	0	0	33	7.5	4.0	6.0	22.7	5.1
26JUN-29JUN	0	0	0	0	0	0	0	0	0	219	8.5	4.0	8.6	14.2	2.0
11JUL-13JUL	0	0	0	0	0	0	0	0	0	1295	14.4	2.8	14.1	30.5	4.1
25JUL-27JUL	0	1	0	0	0	0	0	0	0	1581	16.1	3.2	14.4	50.0	6.1
07AUG-10AUG	0	0	0	0	0	0	0	0	0	1593	18.9	4.3	18.0	42.0	7.0
22AUG-24AUG	17	2	3	0	0	1	0	0	0	1916	23.5	6.7	22.4	71.0	8.8
05SEP-07SEP	16	2	0	0	0	0	0	0	0	1886	28.4	11.7	29.0	53.0	7.8
19SEP-21SEP	144	31	3	1	1	0	0	0	0	1709	34.5	6.0	35.0	69.0	8.4
03OCT-05OCT	87	17	10	2	1	0	0	1	0	1243	35.6	9.0	36.0	82.0	7.9
	======	======	======	======	======	======	======	======	======	======					
	264	53	16	3	2	1	0	1	0	11478					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-11 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR BAY ANCHOVY IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9+	N	MEAN	MIN	MED	MAX	SD
05JUL-08JUL	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16.5	15.0	16.5	18.0	2.1
17JUL-20JUL	1	12	23	15	1	0	0	0	0	0	0	0	0	52	22.0	13.0	22.0	30.0	3.8
31JUL-03AUG	1	1	15	55	34	8	1	0	0	0	0	0	0	115	28.7	13.0	28.0	40.0	4.2
14AUG-17AUG	0	4	26	51	56	28	7	0	0	0	0	0	0	172	29.6	17.0	30.0	42.0	5.5
28AUG-31AUG	0	0	23	40	43	58	27	2	1	0	0	0	0	194	32.7	20.0	33.0	50.0	6.3
11SEP-14SEP	0	0	1	30	66	38	35	17	4	1	0	0	0	192	35.5	22.0	34.0	56.0	6.6
25SEP-28SEP	0	0	0	9	24	55	49	34	10	3	2	0	0	186	40.1	25.0	40.0	64.0	6.8
10OCT-12OCT	0	0	0	4	21	51	59	31	13	6	0	0	0	185	41.1	26.0	41.0	58.0	6.4
23OCT-26OCT	0	0	0	0	5	10	17	30	14	3	8	1	1	91	47.5	33.0	47.0	70.0	8.3
06NOV-09NOV	0	0	0	1	11	15	22	15	7	0	1	0	0	72	41.5	28.0	41.0	64.0	6.5
27NOV-30NOV	0	0	0	0	1	1	1	4	1	2	1	0	0	11	47.3	34.0	46.0	63.0	9.0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======					
	2	19	88	205	262	264	218	133	50	15	12	1	1	1272					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-12 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR BAY ANCHOVY IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10JUL-12JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24JUL-27JUL	0	0	1	14	11	1	0	0	0	0	0	0	27	29.5	24.0	29.0	39.0	3.3
07AUG-10AUG	0	0	6	0	0	0	0	0	0	0	0	0	6	20.7	20.0	20.0	23.0	1.2
21AUG-23AUG	0	0	7	13	5	2	2	0	0	0	0	0	29	28.1	21.0	26.0	42.0	5.5
05SEP-07SEP	0	0	9	12	8	10	6	0	0	0	0	0	45	31.4	21.0	31.0	42.0	6.7
18SEP-20SEP	0	0	2	9	5	23	16	13	8	3	0	0	79	40.2	21.0	40.0	56.0	8.1
03OCT-05OCT	0	0	0	2	14	6	3	1	0	0	0	0	26	33.7	28.0	32.0	45.0	4.5
16OCT-18OCT	0	0	0	3	28	10	18	8	2	1	1	0	72	38.1	29.0	37.0	62.0	7.5
	======	======	======	======	======	======	======	======	======	======	======	======	======					
	0	0	25	53	71	52	45	22	10	4	1	0	284					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-13 LENGTH FREQUENCY DISTRIBUTION OF LARVAL AND YOUNG-OF-YEAR AMERICAN SHAD IN HUDSON RIVER ESTUARY DETERMINED FROM LONG RIVER SURVEY, 2000

DATES	0.0-1.9	2.0-3.9	4.0-5.9	6.0-7.9	8.0-9.9	10.0-11.9	12.0-13.9	14.0-15.9	16.0-17.9	18.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03APR-06APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10APR-13APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17APR-20APR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24APR-27APR	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08MAY-12MAY	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
15MAY-19MAY	0	0	0	1	40	79	12	0	0	0	0	0	0	0	0	0
22MAY-26MAY	0	0	0	4	42	46	25	3	4	4	2	0	0	0	0	0
30MAY-02JUN	0	0	0	0	8	21	11	14	6	2	0	0	0	0	0	0
05JUN-08JUN	0	0	0	1	16	8	5	1	1	0	1	0	0	0	0	0
12JUN-15JUN	0	0	0	0	5	5	6	10	14	25	32	4	0	0	0	0
19JUN-22JUN	0	0	0	0	0	3	2	0	5	7	37	9	1	0	0	0
26JUN-29JUN	0	0	0	0	0	0	1	16	25	34	103	102	21	2	0	0
11JUL-13JUL	0	0	0	0	0	0	0	0	0	0	2	1	0	2	1	1
25JUL-27JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
22AUG-24AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
19SEP-21SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	6	113	163	62	44	55	72	177	116	22	4	4	7

DATES	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9+	N	MEAN	MIN	MED	MAX	SD
07MAR-10MAR	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
20MAR-22MAR	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27MAR-29MAR	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
03APR-06APR	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10APR-13APR	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
17APR-20APR	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
24APR-27APR	0	0	0	0	0	0	0	0	0	0	1	9.1	9.1	9.1	9.1	.
01MAY-04MAY	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
08MAY-12MAY	0	0	0	0	0	0	0	0	0	0	2	9.9	8.8	9.9	10.9	1.5
15MAY-19MAY	0	0	0	0	0	0	0	0	0	0	132	10.5	7.8	10.4	12.9	1.0
22MAY-26MAY	0	0	0	0	0	0	0	0	0	0	130	11.3	7.4	10.8	20.2	2.6
30MAY-02JUN	0	0	0	0	0	0	0	0	0	0	62	12.7	8.0	12.2	18.4	2.7
05JUN-08JUN	0	0	0	0	0	0	0	0	0	0	33	10.7	7.8	9.5	24.6	3.3
12JUN-15JUN	0	0	0	0	0	0	0	0	0	0	101	18.4	8.7	18.8	29.9	4.2
19JUN-22JUN	0	0	0	0	0	0	0	0	0	0	64	21.6	10.6	22.2	30.7	4.1
26JUN-29JUN	0	0	0	0	0	0	0	0	0	0	304	23.5	13.1	23.7	36.0	4.6
11JUL-13JUL	1	1	0	0	0	0	0	0	0	0	9	38.1	21.8	39.0	55.0	12.4
25JUL-27JUL	10	7	4	1	0	0	0	0	0	0	27	54.3	44.0	54.0	65.0	5.1
07AUG-10AUG	3	9	3	5	0	0	0	0	1	0	25	60.7	49.0	59.0	91.0	8.2
22AUG-24AUG	0	3	1	4	1	0	0	0	0	0	11	61.5	41.0	61.0	71.0	8.3
05SEP-07SEP	0	0	6	5	2	2	0	0	0	0	16	65.8	48.0	65.5	79.0	7.1
19SEP-21SEP	0	0	0	5	5	3	1	0	0	0	14	72.0	67.0	70.0	81.0	4.4
03OCT-05OCT	0	0	0	0	2	6	1	1	0	0	11	74.3	44.0	76.0	85.0	10.9
	======	======	======	======	======	======	======	======	======	======	======					
	14	20	14	20	10	11	2	1	1	0	942					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-14 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR AMERICAN SHAD IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9
05JUL-08JUL	0	0	2	7	6	7	4	3	0	0	0	0	0	0	0	0	0
17JUL-20JUL	0	0	4	3	1	4	4	5	15	15	5	2	0	1	0	0	0
31JUL-03AUG	0	0	1	2	0	1	6	7	12	19	11	8	5	2	2	0	0
14AUG-17AUG	0	0	0	0	0	0	4	3	8	6	9	5	5	1	0	0	0
28AUG-31AUG	0	0	0	0	0	0	0	1	4	9	15	16	15	8	3	2	1
11SEP-14SEP	0	0	0	0	0	0	0	0	2	3	8	6	5	1	3	1	0
25SEP-28SEP	0	0	0	0	0	0	0	0	0	0	3	3	13	12	5	1	6
10OCT-12OCT	0	0	0	0	0	0	0	0	0	0	2	4	7	8	11	4	3
23OCT-26OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	5	4
06NOV-09NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	10	9
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	7	12	7	12	18	19	41	52	53	44	50	35	29	23	23

DATES	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9	140.0-144.9+	N	MEAN	MIN	MED	MAX	SD
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	29	34.1	21.0	34.0	49.0	7.5
17JUL-20JUL	0	0	0	0	0	0	0	0	0	0	59	49.3	22.0	52.0	75.0	12.2
31JUL-03AUG	0	0	0	0	0	0	0	0	0	0	82	56.9	23.0	58.0	83.0	11.2
14AUG-17AUG	0	0	0	0	0	0	0	0	0	0	41	58.5	41.0	59.0	76.0	9.2
28AUG-31AUG	0	0	0	0	0	0	0	0	0	0	78	66.8	46.0	65.5	91.0	8.8
11SEP-14SEP	0	0	0	0	0	0	0	0	0	0	29	67.5	52.0	67.0	85.0	8.6
25SEP-28SEP	1	1	0	0	0	0	0	0	0	0	45	77.6	62.0	77.0	100.0	9.1
10OCT-12OCT	0	0	1	0	0	0	0	0	0	0	40	78.6	63.0	78.0	105.0	8.8
23OCT-26OCT	2	3	2	0	0	0	0	0	0	0	18	92.9	78.0	90.5	108.0	8.4
06NOV-09NOV	7	4	3	4	3	0	0	0	1	0	46	97.3	79.0	94.0	139.0	11.9
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
	======	======	======	======	======	======	======	======	======	======	======					
	10	8	6	4	3	0	0	0	1	0	467					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-15 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR AMERICAN SHAD IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9
13JUN-15JUN	0	2	28	3	0	0	0	0	0	0	0	0
26JUN-28JUN	0	1	26	60	39	4	0	0	0	0	0	0
10JUL-12JUL	0	0	3	27	47	21	19	24	23	3	0	0
24JUL-27JUL	0	0	0	0	0	11	19	28	30	19	4	4
07AUG-10AUG	0	0	0	1	4	6	11	23	46	23	7	1
21AUG-23AUG	0	0	0	0	0	0	1	5	27	67	16	7
05SEP-07SEP	0	0	0	0	0	0	0	0	2	8	44	49
18SEP-20SEP	0	0	0	0	0	0	0	1	2	1	11	32
03OCT-05OCT	0	0	0	0	0	0	0	0	0	1	0	12
16OCT-18OCT	0	0	0	0	0	0	0	0	0	1	2	2
	======	======	======	======	======	======	======	======	======	======	======	======
	0	3	57	91	90	42	50	81	130	123	84	107

DATES	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	0	33	22.5	17.0	23.0	26.0	1.8
26JUN-28JUN	0	0	0	0	0	0	130	27.8	19.0	28.0	35.0	3.5
10JUL-12JUL	0	0	0	0	0	0	167	38.2	21.0	36.0	56.0	8.9
24JUL-27JUL	1	0	0	0	0	0	120	49.8	35.0	50.0	70.0	7.5
07AUG-10AUG	0	0	1	0	0	0	125	50.2	29.0	51.0	81.0	7.9
21AUG-23AUG	2	0	0	0	0	0	135	57.5	44.0	57.0	74.0	4.7
05SEP-07SEP	11	0	0	1	0	0	120	64.5	50.0	65.0	89.0	4.6
18SEP-20SEP	28	14	0	1	0	0	92	68.9	45.0	69.0	88.0	6.0
03OCT-05OCT	17	33	16	3	1	0	85	75.2	55.0	76.0	91.0	6.2
16OCT-18OCT	20	46	59	19	4	0	153	79.3	59.0	80.0	93.0	5.4
	======	======	======	======	======	======	======					
	79	93	76	24	5	0	1160					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-16 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR ALEWIFE IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9
	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
05JUL-08JUL	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0
17JUL-20JUL	0	0	0	0	0	0	20	15	15	3	2	2	0	0	0	0	0
31JUL-03AUG	0	0	0	0	0	0	12	16	20	14	1	5	0	0	0	0	0
14AUG-17AUG	0	0	0	0	0	0	6	14	11	16	5	8	4	1	0	0	0
28AUG-31AUG	0	0	0	0	0	0	2	14	14	15	10	10	4	1	0	0	0
11SEP-14SEP	0	0	0	0	0	0	1	1	1	8	1	12	5	1	1	0	0
25SEP-28SEP	0	0	0	0	0	0	0	0	1	3	4	11	14	15	3	1	0
10OCT-12OCT	0	0	0	0	0	0	0	0	3	6	5	6	10	7	5	1	1
23OCT-26OCT	0	0	0	0	0	0	0	0	0	2	4	3	6	9	9	5	2
06NOV-09NOV	0	0	0	0	0	0	0	0	0	0	1	7	7	5	5	6	3
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	2	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	0	0	43	62	65	67	34	64	51	41	24	15	6

DATES	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9	140.0-144.9+	N	MEAN	MIN	MED	MAX	SD
	0	0	0	0	0	0	0	0	0	0	1	62.0	62.0	62.0	62.0	.
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	4	45.5	41.0	46.0	49.0	4.1
17JUL-20JUL	0	0	0	0	0	0	0	0	0	0	58	48.1	41.0	46.5	68.0	6.5
31JUL-03AUG	0	0	0	0	0	1	0	0	0	0	71	52.5	40.0	51.0	122.0	10.8
14AUG-17AUG	0	0	0	0	0	0	0	0	0	0	67	55.7	41.0	56.0	77.0	8.8
28AUG-31AUG	0	0	0	1	0	0	0	0	0	0	75	57.4	41.0	57.0	112.0	10.3
11SEP-14SEP	0	0	0	0	0	0	0	0	0	0	32	63.4	40.0	65.0	80.0	8.1
25SEP-28SEP	0	0	0	0	0	0	0	0	0	0	56	70.1	52.0	70.5	85.0	7.4
10OCT-12OCT	0	0	0	1	0	0	0	0	0	0	46	70.3	53.0	71.0	112.0	11.5
23OCT-26OCT	1	1	0	0	0	0	0	0	0	0	42	77.5	56.0	79.0	103.0	10.2
06NOV-09NOV	4	2	0	0	0	0	0	0	1	0	41	81.8	64.0	80.0	139.0	14.2
27NOV-30NOV	0	0	0	1	0	0	0	0	0	0	7	84.9	74.0	80.0	113.0	13.3
	======	======	======	======	======	======	======	======	======	======	======					
	5	3	0	3	0	1	0	0	1	0	500					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-17 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR ALEWIFE IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	0	0	0	0	0	0	1	0	0	0	0	0
10JUL-12JUL	0	0	0	0	0	0	28	12	6	2	0	0
24JUL-27JUL	0	0	0	0	0	1	7	8	1	3	2	3
07AUG-10AUG	0	0	0	0	0	0	3	3	0	0	1	0
21AUG-23AUG	0	0	0	0	0	0	0	6	9	11	3	3
05SEP-07SEP	0	0	0	0	0	0	0	0	1	3	2	3
18SEP-20SEP	0	0	0	0	0	0	0	0	1	0	4	7
03OCT-05OCT	0	0	0	0	0	0	0	0	0	2	4	3
16OCT-18OCT	0	0	0	0	0	0	0	0	0	0	1	1
	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	0	1	39	29	18	21	17	20

DATES	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	0	1	41.0	41.0	41.0	41.0	.
10JUL-12JUL	0	0	0	0	0	49	45.4	40.0	43.0	60.0	4.9
24JUL-27JUL	1	0	0	0	0	26	51.3	38.0	48.0	72.0	10.1
07AUG-10AUG	0	0	0	0	0	7	47.3	42.0	46.0	61.0	6.4
21AUG-23AUG	0	0	0	0	0	34	55.5	45.0	56.0	69.0	5.9
05SEP-07SEP	0	0	0	0	0	9	62.1	54.0	63.0	69.0	5.7
18SEP-20SEP	2	0	0	0	0	16	63.8	50.0	65.0	72.0	5.1
03OCT-05OCT	4	1	0	0	0	15	65.6	56.0	66.0	75.0	5.5
16OCT-18OCT	2	2	0	0	1	7	74.1	63.0	74.0	90.0	8.7
	======	======	======	======	======	======					
	9	3	0	0	1	164					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-18 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR BLUEBACK HERRING IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	0	0
17JUL-20JUL	0	0	0	0	0	0	45	12	3	0	0	0
31JUL-03AUG	0	0	0	0	3	9	34	25	19	7	0	0
14AUG-17AUG	0	0	0	0	0	0	27	23	22	9	0	0
28AUG-31AUG	0	0	0	0	0	0	11	32	20	11	17	3
11SEP-14SEP	0	0	0	0	0	0	2	15	30	20	1	1
25SEP-28SEP	0	0	0	0	0	0	0	2	19	34	7	1
10OCT-12OCT	0	0	0	0	0	0	0	2	14	47	38	13
23OCT-26OCT	0	0	0	0	0	0	0	0	0	0	0	3
06NOV-09NOV	0	0	0	0	0	0	0	0	0	1	5	0
27NOV-30NOV	0	0	0	0	0	0	0	0	0	1	4	2
	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	3	9	119	111	127	130	72	23

DATES	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9	95.0-99.9+	N	MEAN	MIN	MED	MAX	SD
05JUL-08JUL	0	0	0	0	0	0	0	.	.	.	.	.
17JUL-20JUL	0	0	0	0	0	0	60	43.4	41.0	43.0	53.0	2.8
31JUL-03AUG	0	0	0	0	0	0	98	45.3	31.0	45.0	60.0	6.3
14AUG-17AUG	0	0	0	0	0	0	82	47.6	40.0	48.0	60.0	5.2
28AUG-31AUG	1	1	0	0	0	0	101	52.6	40.0	51.0	76.0	7.7
11SEP-14SEP	0	0	0	0	0	0	71	52.4	42.0	52.0	67.0	4.7
25SEP-28SEP	4	2	2	0	0	0	77	58.4	48.0	57.0	81.0	6.9
10OCT-12OCT	5	1	0	0	0	0	133	59.7	45.0	60.0	77.0	5.1
23OCT-26OCT	0	1	0	0	0	0	4	68.5	65.0	65.5	78.0	6.4
06NOV-09NOV	0	0	0	0	1	0	7	66.0	58.0	63.0	91.0	11.2
27NOV-30NOV	0	0	0	0	0	0	7	63.3	56.0	63.0	69.0	4.0
	======	======	======	======	======	======	======					
	10	5	2	0	1	0	640					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-19 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR BLUEBACK HERRING IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0
10JUL-12JUL	0	0	0	0	0	0	11	7	0	0	0
24JUL-27JUL	0	0	0	0	0	0	28	24	10	3	0
07AUG-10AUG	0	0	0	0	0	0	21	21	13	3	0
21AUG-23AUG	0	0	0	0	0	0	27	10	13	15	3
05SEP-07SEP	0	0	0	0	0	0	8	33	25	15	1
18SEP-20SEP	0	0	0	0	0	0	5	16	24	21	5
03OCT-05OCT	0	0	0	0	0	0	2	5	15	30	21
16OCT-18OCT	0	0	0	0	0	0	0	3	9	43	33
	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	0	0	102	119	109	130	63

DATES	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	0	0	.	.	.	.	.
10JUL-12JUL	0	0	0	0	0	18	43.4	41.0	43.0	47.0	1.9
24JUL-27JUL	0	0	0	0	0	67	46.1	40.0	45.0	60.0	4.8
07AUG-10AUG	0	0	0	0	0	58	46.4	40.0	45.5	57.0	4.1
21AUG-23AUG	1	0	0	1	0	70	49.4	40.0	47.5	80.0	7.8
05SEP-07SEP	1	0	0	0	0	83	50.1	40.0	50.0	67.0	5.1
18SEP-20SEP	0	1	0	0	0	74	52.8	42.0	53.0	74.0	5.7
03OCT-05OCT	4	1	0	0	0	85	57.3	44.0	57.0	73.0	5.5
16OCT-18OCT	20	5	2	0	2	130	60.8	47.0	60.0	85.0	6.1
	======	======	======	======	======	======					
	26	7	2	1	2	585					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-20 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR SPOTTAIL SHINER IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9+	N	MEAN	MIN	MED	MAX	SD
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
17JUL-20JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
31JUL-03AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
14AUG-17AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
28AUG-31AUG	0	0	0	0	0	0	0	1	0	0	0	0	1	45.0	45.0	45.0	45.0	.
11SEP-14SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
25SEP-28SEP	0	0	0	0	0	0	0	0	0	0	1	0	1	61.0	61.0	61.0	61.0	.
10OCT-12OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
23OCT-26OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
06NOV-09NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
	0	0	0	0	0	0	0	1	0	0	1	0	2					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-21 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR SPOTTAIL SHINER IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	1	1	4	1	0	0	2	3	0	0
10JUL-12JUL	0	1	24	26	11	2	0	0	0	0
24JUL-27JUL	0	0	0	4	6	11	6	0	0	0
07AUG-10AUG	0	0	1	0	5	14	16	10	18	5
21AUG-23AUG	0	0	0	0	0	3	11	23	15	18
05SEP-07SEP	0	0	0	1	0	0	9	15	7	8
18SEP-20SEP	0	0	0	0	0	0	1	5	10	12
03OCT-05OCT	0	0	0	0	0	0	0	1	8	12
16OCT-18OCT	0	0	0	0	0	0	0	0	3	6
	======	======	======	======	======	======	======	======	======	======
	1	2	29	32	22	30	45	57	61	61

DATES	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	12	30.6	13.0	24.0	48.0	13.4
10JUL-12JUL	0	0	0	0	64	25.9	19.0	26.0	35.0	4.0
24JUL-27JUL	0	0	0	0	27	35.7	25.0	37.0	42.0	4.8
07AUG-10AUG	0	0	0	0	69	44.1	23.0	43.0	56.0	7.2
21AUG-23AUG	5	1	0	0	77	50.4	35.0	50.0	68.0	6.7
05SEP-07SEP	3	3	0	0	47	50.3	25.0	49.0	68.0	8.3
18SEP-20SEP	3	2	0	0	34	54.7	42.0	55.5	65.0	5.7
03OCT-05OCT	5	7	2	0	41	59.2	47.0	59.0	71.0	5.7
16OCT-18OCT	9	12	3	1	37	62.8	50.0	63.0	75.0	6.1
	======	======	======	======	======					
	25	25	5	1	408					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-22 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR WHITE CATFISH IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17JUL-20JUL	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
31JUL-03AUG	0	0	3	4	5	4	1	0	0	0	0	0	0	0	0	0
14AUG-17AUG	0	0	2	1	0	3	12	3	0	0	0	0	0	0	0	0
28AUG-31AUG	0	0	0	0	0	0	0	4	6	0	1	0	0	0	0	0
11SEP-14SEP	0	0	0	0	0	0	1	0	0	5	15	6	2	0	0	0
25SEP-28SEP	0	0	0	0	0	0	0	0	0	1	0	2	3	1	0	0
10OCT-12OCT	0	0	0	0	0	0	0	0	0	0	1	0	6	2	2	0
23OCT-26OCT	0	0	0	0	0	0	0	0	0	0	4	4	9	6	2	0
06NOV-09NOV	0	0	0	0	0	0	0	1	0	0	0	4	1	0	1	0
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	4	1	1	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	5	10	5	5	7	14	8	6	6	21	20	22	10	5	0

DATES	90.0-94.9	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9+	N	MEAN	MIN	MED	MAX	SD
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
17JUL-20JUL	0	0	0	0	0	0	0	0	0	10	19.4	17.0	19.5	22.0	2.0
31JUL-03AUG	0	0	0	0	0	0	0	0	0	17	30.8	22.0	32.0	43.0	6.0
14AUG-17AUG	0	0	0	0	0	0	0	0	0	21	39.2	21.0	41.0	49.0	7.6
28AUG-31AUG	0	0	0	0	0	0	0	0	0	11	51.7	45.0	53.0	61.0	4.6
11SEP-14SEP	0	0	0	0	0	0	0	0	0	30	62.1	42.0	62.0	72.0	5.4
25SEP-28SEP	0	0	0	0	0	0	0	0	0	7	68.9	59.0	70.0	75.0	5.3
10OCT-12OCT	0	0	0	0	0	0	2	1	0	14	84.2	63.0	74.5	128.0	22.2
23OCT-26OCT	0	0	0	0	0	0	0	0	0	25	71.0	61.0	72.0	81.0	5.5
06NOV-09NOV	0	0	0	0	0	0	1	0	0	8	74.0	49.0	68.5	122.0	21.3
27NOV-30NOV	0	0	0	0	0	0	1	2	0	10	85.9	60.0	71.0	129.0	28.3
	======	======	======	======	======	======	======	======	======	======					
	0	0	0	0	0	0	4	3	0	153					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-23 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR WHITE CATFISH IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0
10JUL-12JUL	0	0	0	0	0	0	0	0	0	0
24JUL-27JUL	0	0	0	0	0	0	0	0	0	0
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0
21AUG-23AUG	0	0	0	0	0	0	0	0	0	0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	0
18SEP-20SEP	0	0	0	0	0	0	0	0	0	0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0
16OCT-18OCT	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	0	0	0	0	0	0

DATES	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	0	.	.	.	.	.
10JUL-12JUL	0	0	0	0	0	.	.	.	.	.
24JUL-27JUL	0	0	0	0	0	.	.	.	.	.
07AUG-10AUG	0	0	0	0	0	.	.	.	.	.
21AUG-23AUG	0	0	0	0	0	.	.	.	.	.
05SEP-07SEP	0	0	0	0	0	.	.	.	.	.
18SEP-20SEP	0	0	0	0	0	.	.	.	.	.
03OCT-05OCT	0	0	1	0	1	72.0	72.0	72.0	72.0	.
16OCT-18OCT	0	0	0	0	0	.	.	.	.	.
	======	======	======	======	======					
	0	0	1	0	1					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-24 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR WEAKFISH IN HUDSON RIVER ESTUARY DETERMINED FROM FALL SHOALS SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9
	0	0	0	0	0	1	1	1	0	1	1	0	0	0	0	0	0
05JUL-08JUL	7	22	19	10	3	3	1	0	0	0	0	0	0	0	0	0	0
17JUL-20JUL	0	0	2	11	15	18	23	17	10	8	2	3	2	0	0	0	0
31JUL-03AUG	0	4	5	7	7	13	7	10	11	17	10	12	5	3	2	1	0
14AUG-17AUG	4	2	0	2	4	10	12	6	9	10	11	8	5	3	3	1	0
28AUG-31AUG	0	0	0	1	1	0	4	9	15	7	8	6	12	6	3	3	4
11SEP-14SEP	0	0	0	0	0	0	1	1	0	3	6	17	11	13	8	4	1
25SEP-28SEP	0	0	0	0	0	1	0	1	4	4	1	1	6	3	13	7	10
10OCT-12OCT	0	0	0	0	0	0	0	1	0	0	0	1	2	3	1	8	14
23OCT-26OCT	0	0	0	0	0	0	0	0	0	0	0	1	2	0	4	3	7
06NOV-09NOV	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
27NOV-30NOV	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	0	3
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	11	28	26	31	30	46	49	46	50	50	39	49	46	32	38	28	39

DATES	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9	140.0-144.9+	N	MEAN	MIN	MED	MAX	SD
	0	0	0	0	0	0	0	0	0	0	5	49.6	39.0	49.0	63.0	9.7
05JUL-08JUL	0	0	0	0	0	0	0	0	0	0	65	21.1	11.0	20.0	40.0	6.4
17JUL-20JUL	0	0	0	0	0	0	0	0	0	0	112	42.3	20.0	42.0	74.0	10.9
31JUL-03AUG	0	0	0	0	0	0	0	0	0	0	116	49.7	16.0	51.0	85.0	16.5
14AUG-17AUG	2	1	0	1	0	0	0	0	0	0	99	53.1	10.0	55.0	112.0	19.4
28AUG-31AUG	2	0	2	0	0	0	0	0	1	0	86	65.0	27.0	62.0	137.0	18.0
11SEP-14SEP	0	0	0	0	0	0	1	0	0	0	69	71.6	42.0	70.0	127.0	11.4
25SEP-28SEP	11	4	1	5	1	1	2	1	0	1	79	87.0	38.0	86.0	156.0	20.7
10OCT-12OCT	15	8	6	2	1	0	0	2	0	0	64	94.7	48.0	95.0	132.0	13.3
23OCT-26OCT	9	6	11	3	1	4	0	0	0	0	51	98.9	66.0	99.0	123.0	12.8
06NOV-09NOV	5	5	0	2	1	1	0	1	0	1	19	105.1	50.0	100.0	196.0	27.6
27NOV-30NOV	2	6	3	4	2	1	0	0	0	0	26	100.1	74.0	101.5	123.0	12.8
	======	======	======	======	======	======	======	======	======	======	======					
	46	30	23	17	6	7	3	4	1	2	791					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation

TABLE E-25 LENGTH FREQUENCY DISTRIBUTION OF YOUNG-OF-YEAR WEAKFISH IN HUDSON RIVER ESTUARY DETERMINED FROM BEACH SEINE SURVEY, 2000

DATES	10.0-14.9	15.0-19.9	20.0-24.9	25.0-29.9	30.0-34.9	35.0-39.9	40.0-44.9	45.0-49.9	50.0-54.9	55.0-59.9	60.0-64.9	65.0-69.9	70.0-74.9	75.0-79.9	80.0-84.9	85.0-89.9	90.0-94.9
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10JUL-12JUL	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0
24JUL-27JUL	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	0	0
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0
21AUG-23AUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
05SEP-07SEP	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
18SEP-20SEP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16OCT-18OCT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======	======
	0	0	0	0	0	0	1	2	0	1	1	2	0	0	6	0	0

DATES	95.0-99.9	100.0-104.9	105.0-109.9	110.0-114.9	115.0-119.9	120.0-124.9	125.0-129.9	130.0-134.9	135.0-139.9	140.0-144.9	145.0-149.9+	N	MEAN	MIN	MED	MAX	SD
13JUN-15JUN	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
26JUN-28JUN	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
10JUL-12JUL	0	0	0	0	0	0	0	0	0	0	0	3	47.0	44.0	48.0	49.0	2.6
24JUL-27JUL	0	0	0	0	0	0	0	0	0	0	0	6	75.8	60.0	80.5	84.0	9.6
07AUG-10AUG	0	0	0	0	0	0	0	0	0	0	0	3	69.7	63.0	66.0	80.0	9.1
21AUG-23AUG	1	0	0	0	0	0	0	0	0	0	0	2	90.0	84.0	90.0	96.0	8.5
05SEP-07SEP	0	0	0	0	0	0	0	0	1	0	0	2	96.5	55.0	96.5	138.0	58.7
18SEP-20SEP	0	1	0	0	0	0	0	0	0	0	1	2	124.5	104.0	124.5	145.0	29.0
03OCT-05OCT	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
16OCT-18OCT	0	0	0	0	0	0	0	0	0	0	0	0	.	.	.	.	.
	======	======	======	======	======	======	======	======	======	======	======	======					
	1	1	0	0	0	0	0	0	1	0	1	18					

NOTE: Lengths are total lengths in mm, N = Number of lengths, MEAN = Mean length, MIN = Minimum length, MED = Median length, MAX = Maximum length, SD = Standard deviation