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**Contribution of 1982 and Subsequent Year Class Females
to the
Virginia 1986 Commercial and Recreational Harvest**

by

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Marine Resource Report 87-11

The legal Virginia striped bass fishery in 1986 was June–November. Most fish were harvested during June and October–November in the upper Rappahannock using pound nets and anchor gill nets (Tables 1 and 2).

A total of 3,410 pounds were landed by Virginia commercial fishermen. VIMS monitored the total striped bass catch from several James and Rappahannock River pound net fishermen during the fall months. This included both the legal >24"TL, and sub-legal <24"TL fish. Figure 1 shows the length frequencies by year class for female fish taken in the VIMS samples.

The percentage of females over 24 inches in the VIMS monitored catch (Table 3, figure 2) was used to estimate the contribution of 1982 and younger females to the commercial catch. Females over 24 inches contributed 51% of the catch, by weight. Expanded to the fall commercial catch of 1,599 pounds, this represents 815 pounds, all from the 1982 year class. The average 1982 female weighed 7.25 pounds. This translates to a catch of approximately 113 fish.

From the growth rates of the females, the data on male:female ratios on the spawning grounds during spring, and the modest spring–summer catch prior to the implementation of the 24" limit, it would appear that most of the then legal (>18"TL) fish had migrated from the Bay.

The 1987 Virginia recruitment index was 16.3, the highest ever recorded (figure 3). The Rappahannock River produced ten times the average number, the James four times, and the York was average. Special pound net samples collected for VIMS on the upper Rappahannock during the spring showed that most of the spawners were 1981 and 1982 year class females and 1983 males.

Table 1a
Virginia Commercial and Recreational Fishery Landings

<u>Water Body</u> (numbers refer to Fig. 1)	1983-1986							
	1983		1984		1985		1986	
	<u>Pounds</u>	<u>Percent</u>	<u>Pounds</u>	<u>Percent</u>	<u>Pounds</u>	<u>Percent</u>	<u>Pounds</u>	<u>Percent</u>
Upper Tributaries (337, 377, 049, 067)	30,175	44	3,858	25	39,284	50	2,205	56
Lower Tributaries (195, 295, 395, 177, 277)	11,313	17	5,243	34	13,195	17	882	23
Potomac Tributaries (085, 050, 059, etc.)	1,510	2	456	2	0	0	0	0
Main Stem Bay (011, 111, 211, 311, 411)	7,841	12	2,890	18	14,105	18	323	8
Ocean (600's)	3,586	5	2,904	18	527	<01	0	0
Commercial sub-total	54,425	(75)80	15,351	(75)80	67,111	(85)87	3,410	(85)87
Recreational sub-total (as a % of commercial)	<u>13,587</u>	<u>25</u>	<u>3,837</u>	<u>25</u>	<u>8,937</u>	<u>15</u>	<u>511</u>	<u>15</u>
TOTAL	68,031	(100)105	19,188	(100)105	77,177	(100)102	3,921	(100)102

NOTE: When recreational catch, expressed as 25 or 15% of the commercial total (100% of commercial catch), is added to the commercial total, the TOTAL percent will equal 105 and 102% respectively.

Table 1b

<u>Gear Type</u>								
Otter trawl	290	<01	2,484	16	49	<01	0	0
Pound Net	24,503	45	4,590	29	4,934	7	1,563	46
Staked Gill Net	19,807	36	3,846	25	15,706	23	20	<1
Drift or Anchor Gill Net	9,638	17	4,332	28	46,422	69	945	28
Hook and Line	187	<01	99	<01	0	0	0	0
Haul Seine	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>882</u>	<u>26</u>
TOTAL	54,425	100	15,351	100	67,111	100	3,410	100

Table 2

Virginia Commercial Catch

1986

MONTH	UPPER TRIBUTARIES		LOWER TRIBUTARIES		BAY		OCEAN		TOTAL	
	LANDINGS	FRACTION	LANDINGS	FRACTION	LANDINGS	FRACTION	LANDINGS	FRACTION	LANDINGS	FRACTION
Jan										
Feb										
Mar					CLOSED					
Apr										
May										
June	712	0.18	882	0.23	64	0.01	0	0.00	1,658	0.42
Jul	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Aug	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Sep	153	0.04	0	0.00	0	0.00	0	0.00	153	0.04
Oct	700	0.18	0	0.00	59	0.02	0	0.00	759	0.19
Nov	640	0.16	0	0.00	200	0.05	0	0.00	840	0.21
Dec	*		*		* CLOSED		*		*	
	2,205	0.56	882	0.23	323	0.08	0	0.00	3,410	(0.85)0.87
									Recreational Catch (@ .15 of 3410)	511 0.15
									TOTAL	3,921 1.00

Table 3

Contribution of 1982 Females to Fall 1986 Commercial Catch
 (Computed from VIMS James and Rappahannock Pound Net Catches)

VIMS Pound Net Catch Results

<u>Year Class</u>	<u>Number</u>		<u>Percent of Total Females</u>	<u>Total Catch</u>		<u>Total Weight</u>		<u>River</u>
	<u>Females</u>	<u>Males</u>		<u>>24"TL</u>	<u>Females >24"TL</u>	<u>>24"TL</u>	<u>Females >24"TL</u>	
78	-	-	-	-	-	-	-	James
	-	1	-	1	-	10.8	-	Rapp.
79	-	-	-	-	-	-	-	James
	-	1	-	1	-	8.7	-	Rapp.
82	1	1	<1.0	1	1	5.5	5.5	James
	4	12	<1.0	2	2	14.7	14.7	Rapp.
83	3	19	<1.0	-	-	-	-	James
	25	60	2.7	-	-	-	-	Rapp.
84	46	69	5.0	-	-	-	-	James
	105	127	11.5	-	-	-	-	Rapp.
85	1	1	<1.0	-	-	-	-	James
	<u>222</u>	<u>218</u>	<u>24.3</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>Rapp.</u>
	407	506	44.5%	5	3	39.7	20.2	

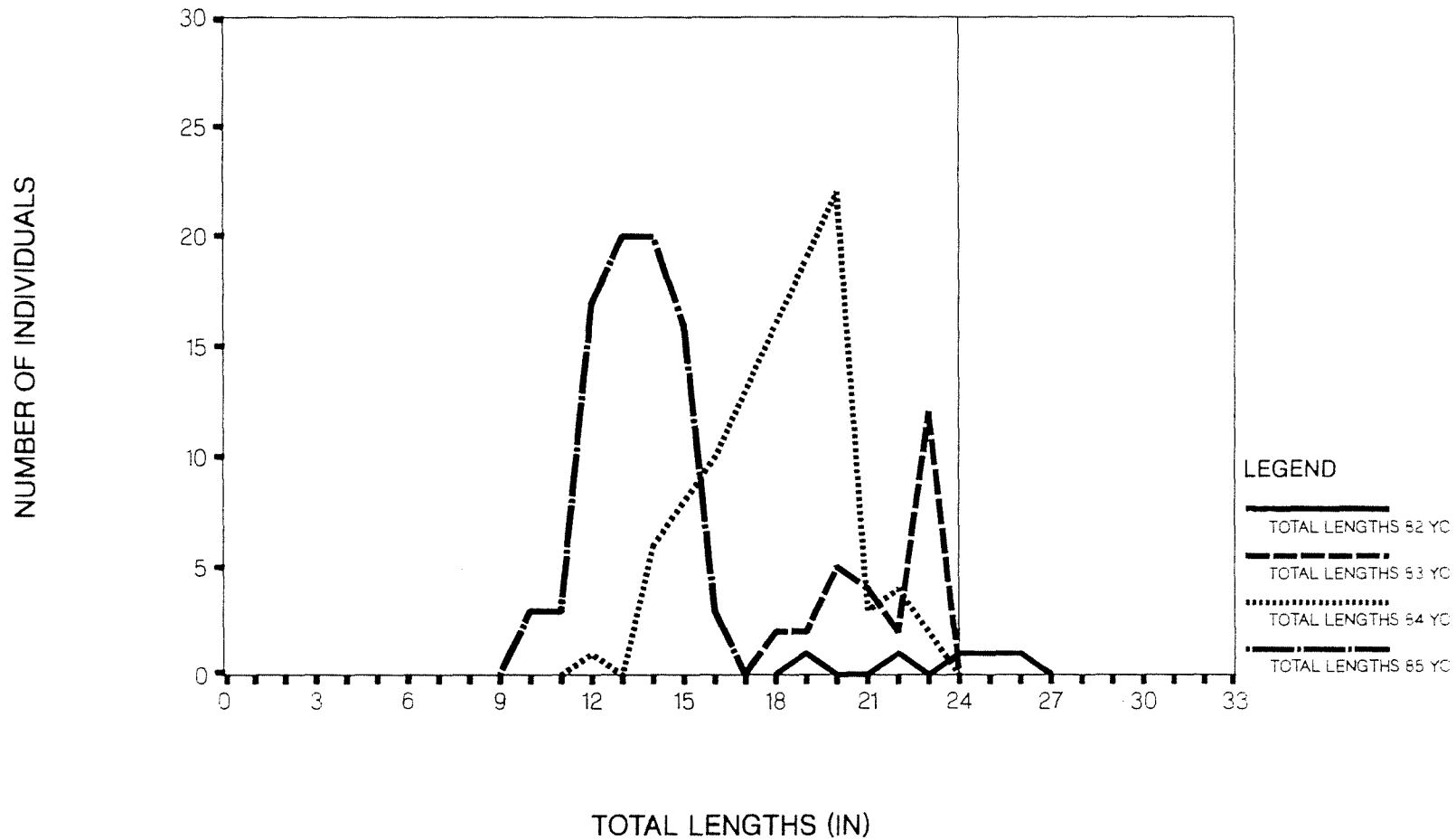
Total:913

**Legal females composed 51%
of the catch by weight**

From Table 1a: 51% of 1,599 pounds is 815 pounds.

VIRGINIA FEMALE STRIPED BASS YEAR CLASS LENGTH FREQUENCIES

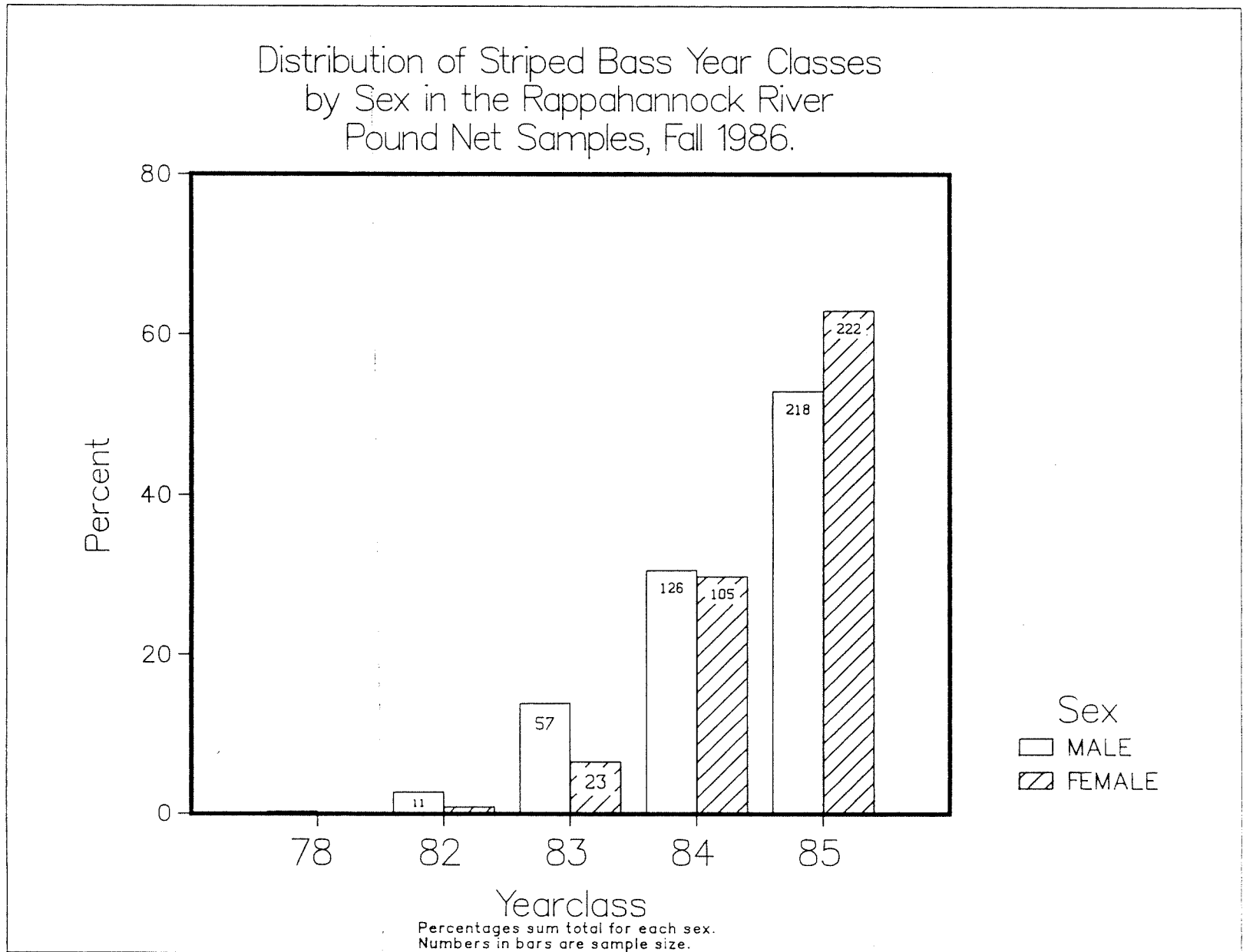
JAMES AND RAPPAHANNOCK RIVERS



(VIMS DATA PREPARED FOR VMRC)

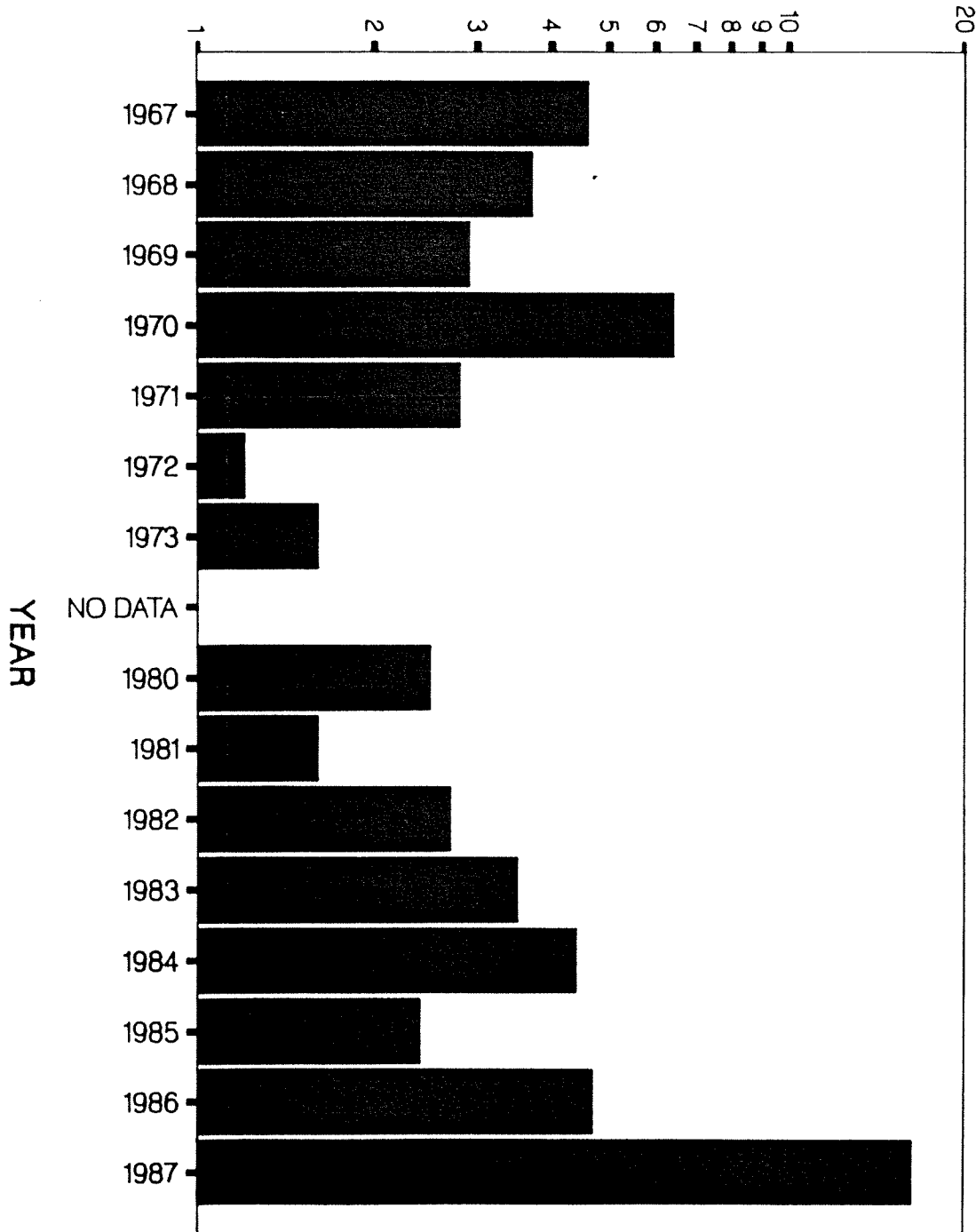
Figure 1

Figure 2



YOUNG OF THE YEAR INDEX

Figure 3



VIRGINIA STRIPED BASS YOUNG OF THE YEAR INDEX

BEACH SEINE SURVEY DATA
FROM J. COLVOCOPRESSES