
Reports

1997

Pfiesteria Task Force : VIMS Fish Sampling Data September and October 1997

Virginia Institute of Marine Science

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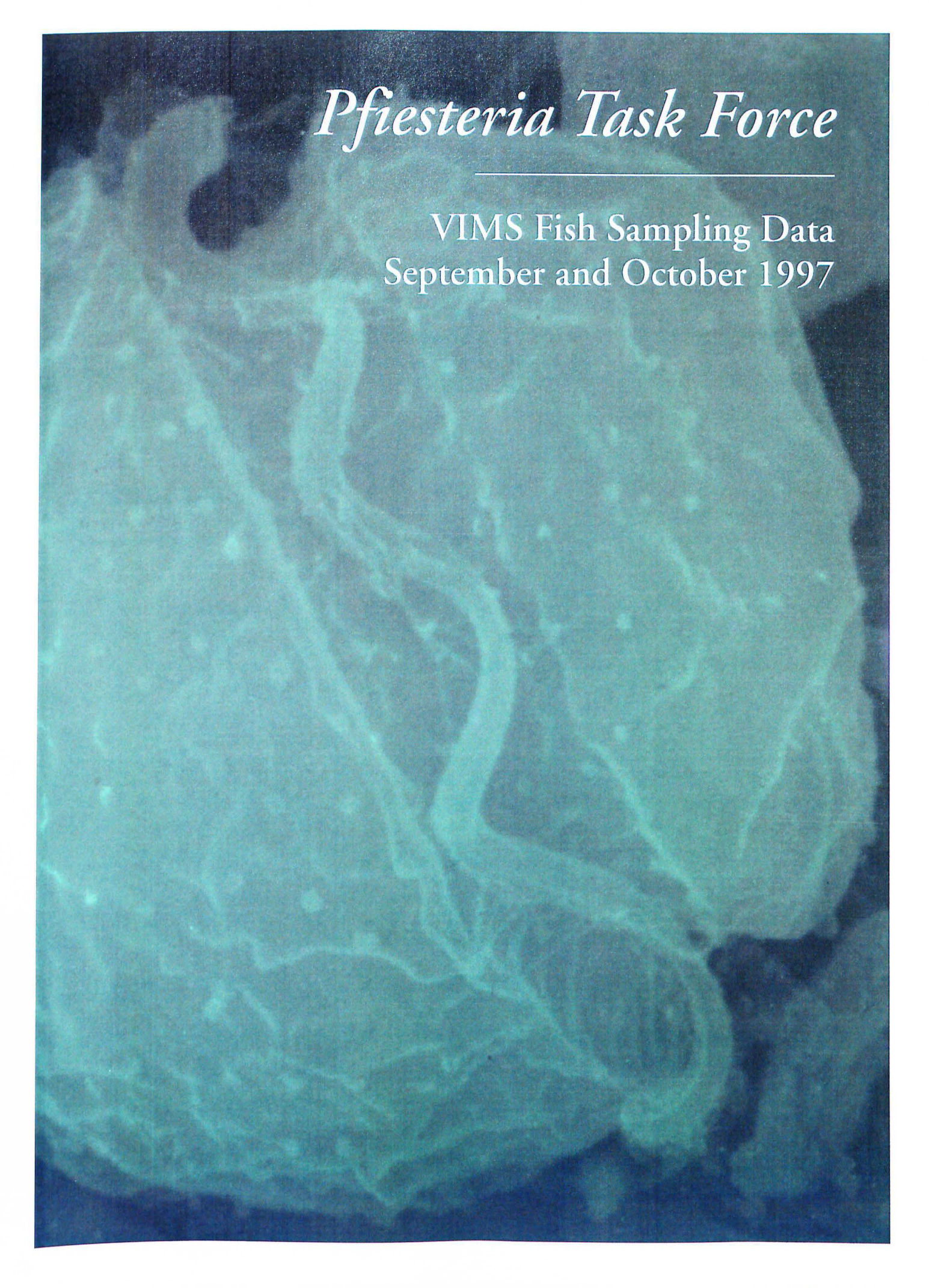


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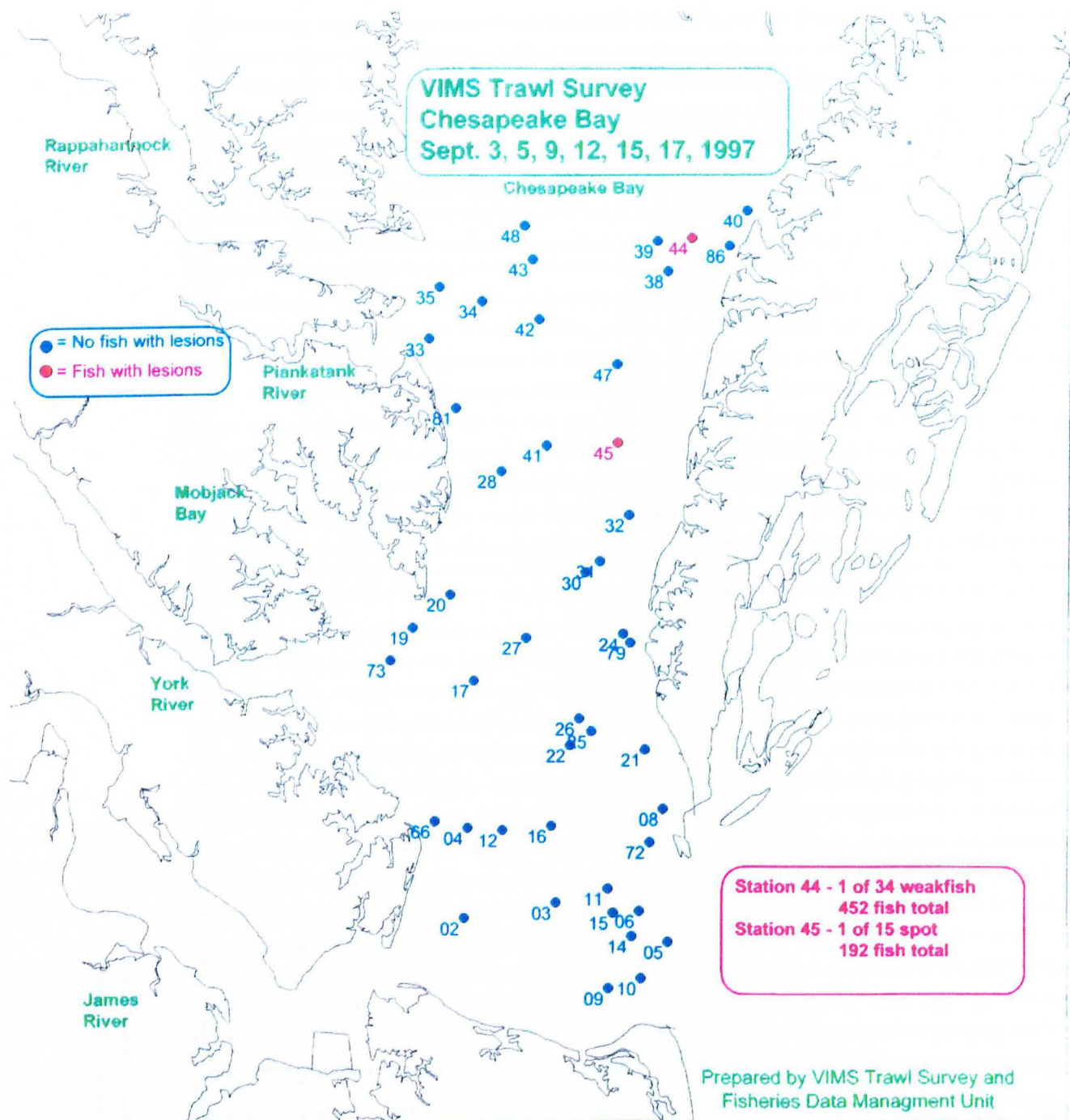
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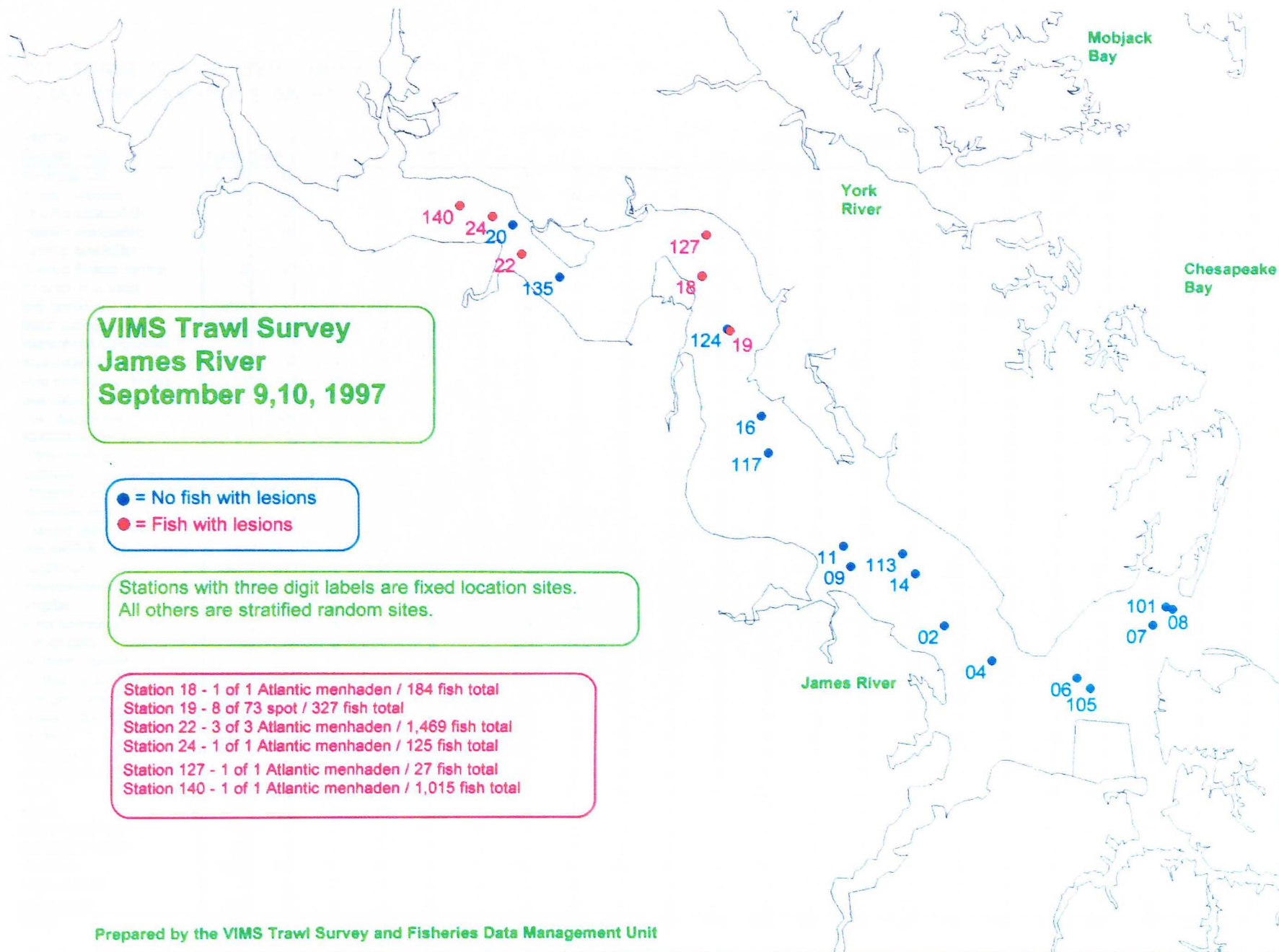
Pfiesteria Task Force

VIMS Fish Sampling Data
September and October 1997



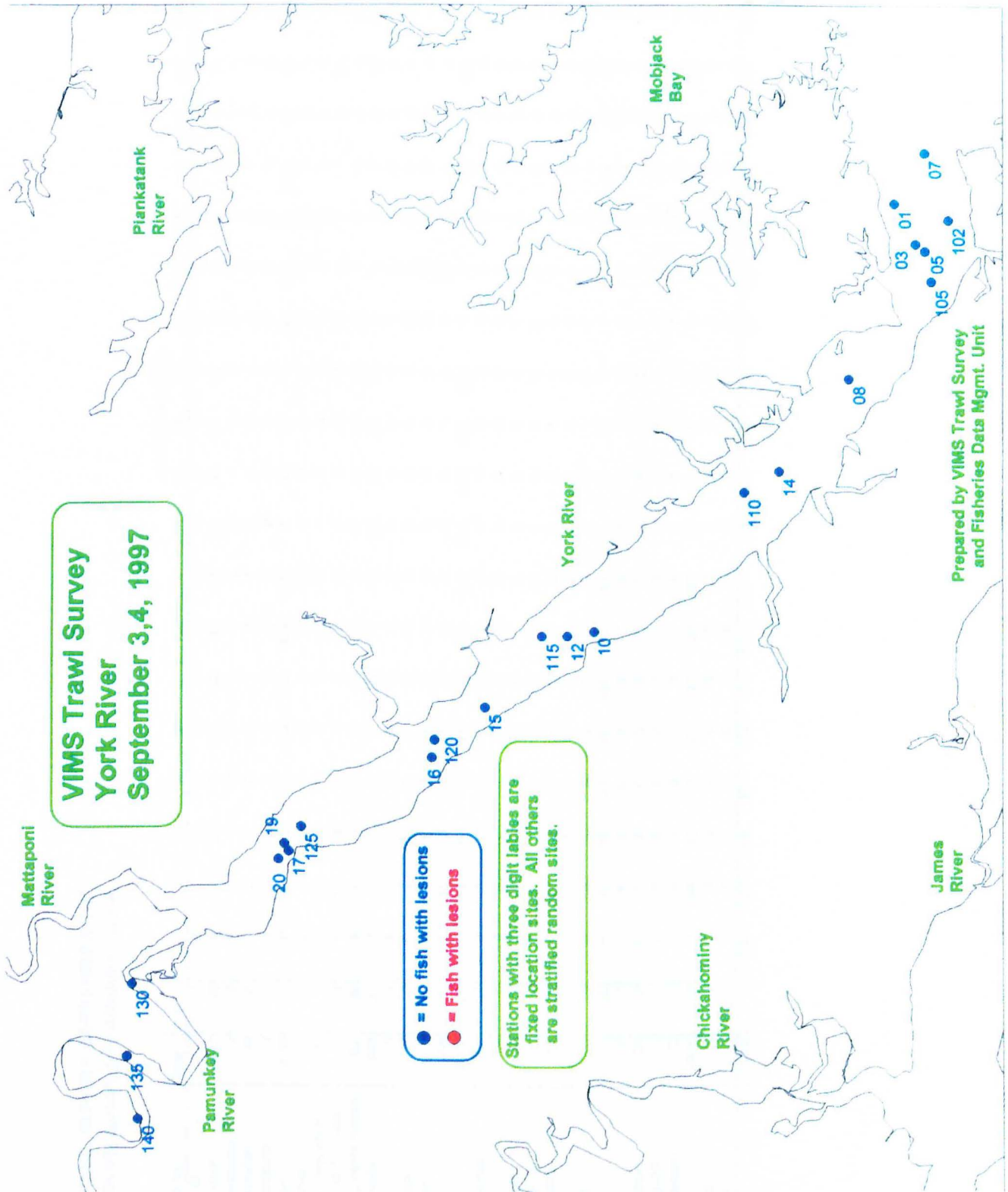
Chesapeake Bay Sample Summary: 9/3,5,9,12,15,17

2



VIMS TRAWL SURVEY SEPTEMBER 1997
JAMES RIVER SAMPLE SUMMARY: 9/9-10

JA9709			STATION NUMBER																							
Species Name	Total	Freq.	2	4	6	7	8	9	11	14	16	18	19	20	22	24	101	105	113	117	124	127	135	140		
American eel	20	6	0	1	0	0	0	0	0	0	0	1	5	2	8	3	0	0	0	0	0	0	0	0		
Atlantic croaker	397	19	4	68	0	22	43	59	31	4	0	6	21	2	33	9	1	24	39	1	9	0	19	2		
Atlantic cutlassfish	2	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Atlantic menhaden	7	5	0	0	0	0	0	0	0	0	0	1(1)	0	0	3(3)	1(1)	0	0	0	0	0	1(1)	0	1(1)		
Atlantic spadefish	7	4	1	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
Atlantic thread herring	3	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0		
Spanish mackerel	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
bay anchovy	9018	19	78	169	17	0	24	31	0	173	707	23	6	1	527	20	5308	1351	65	0	44	6	5	463		
black seabass	17	5	0	0	5	2	1	0	0	0	0	0	0	0	0	0	1	8	0	0	0	0	0	0		
blackcheek tonguefish	31	7	3	0	0	0	1	0	0	2	0	0	12	0	0	0	0	2	10	0	0	0	1	0		
blue catfish	518	5	0	0	0	0	0	0	0	0	0	0	0	126	3	22	0	0	0	0	0	0	342	25		
blue crab, adult female	63	11	28	3	18	0	0	2	0	0	4	0	0	0	2	0	0	1	1	1	2	0	1	0		
blue crab, juvenile female	143	17	13	3	35	1	2	2	0	1	0	2	27	13	17	7	0	5	1	0	6	0	1	7		
blue crab, male	171	16	19	4	25	0	3	4	3	0	0	3	19	27	15	4	0	3	6	0	16	0	6	14		
bluntnose stingray	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
brown shrimp	15	7	0	1	0	0	2	3	4	0	0	3	0	0	0	0	0	0	0	0	1	1	0	0		
butterfish	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
channel catfish	12	4	0	0	0	0	0	0	0	0	0	0	0	1	9	1	0	0	0	0	0	1	0	0		
cownose ray	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
gizzard shad	7	4	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	2	0	2	0	0		
harvestfish	21	11	0	3	0	0	0	0	2	5	0	1	0	0	2	2	1	0	0	1	1	1	0	2		
hogchoker	1635	19	4	69	3	0	9	17	156	11	0	79	163	124	241	26	0	2	57	1	139	8	111	415		
inshore lizardfish	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
kingfish	18	8	0	1	0	1	2	4	2	0	0	0	0	3	0	0	0	0	0	4	0	0	1	0		
lined seahorse	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
naked goby	7	5	0	1	2	0	0	0	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0		
northern pipefish	4	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
northern searobin	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
orange filefish	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
oyster toadfish	104	8	9	2	6	48	28	0	5	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0		
pigfish	27	3	0	0	0	21	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0		
silver perch	118	13	5	1	0	58	37	1	0	1	0	0	1	0	6	1	0	0	3	2	0	1	1	0		
smallmouth flounder	3	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
spot	1122	22	18	21	13	13	23	91	18	2	15	29	73(8)	62	472	17	2	26	106	9	30	3	19	60		
squid	15	5	0	2	1	0	0	0	0	0	0	0	0	0	0	0	6	4	2	0	0	0	0	0		
striped anchovy	68	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	21	0	6	0	0	0	0		
summer flounder	24	11	1	2	7	1	4	1	0	0	0	0	0	0	1	0	1	3	2	0	1	0	0	0		
weakfish	1079	20	16	43	6	17	30	20	36	15	0	36	0	2	8	12	3	11	550	3	234	4	12	21		
white catfish	5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2	1	0		
white perch	205	6	0	0	0	0	0	0	0	0	48	0	0	1	119	0	0	0	0	32	0	2	0	3		
Total	14894		199	396	149	184	215	237	262	215	775	184	327	365	1469	125	5367	1466	847	56	491	27	523	1015		

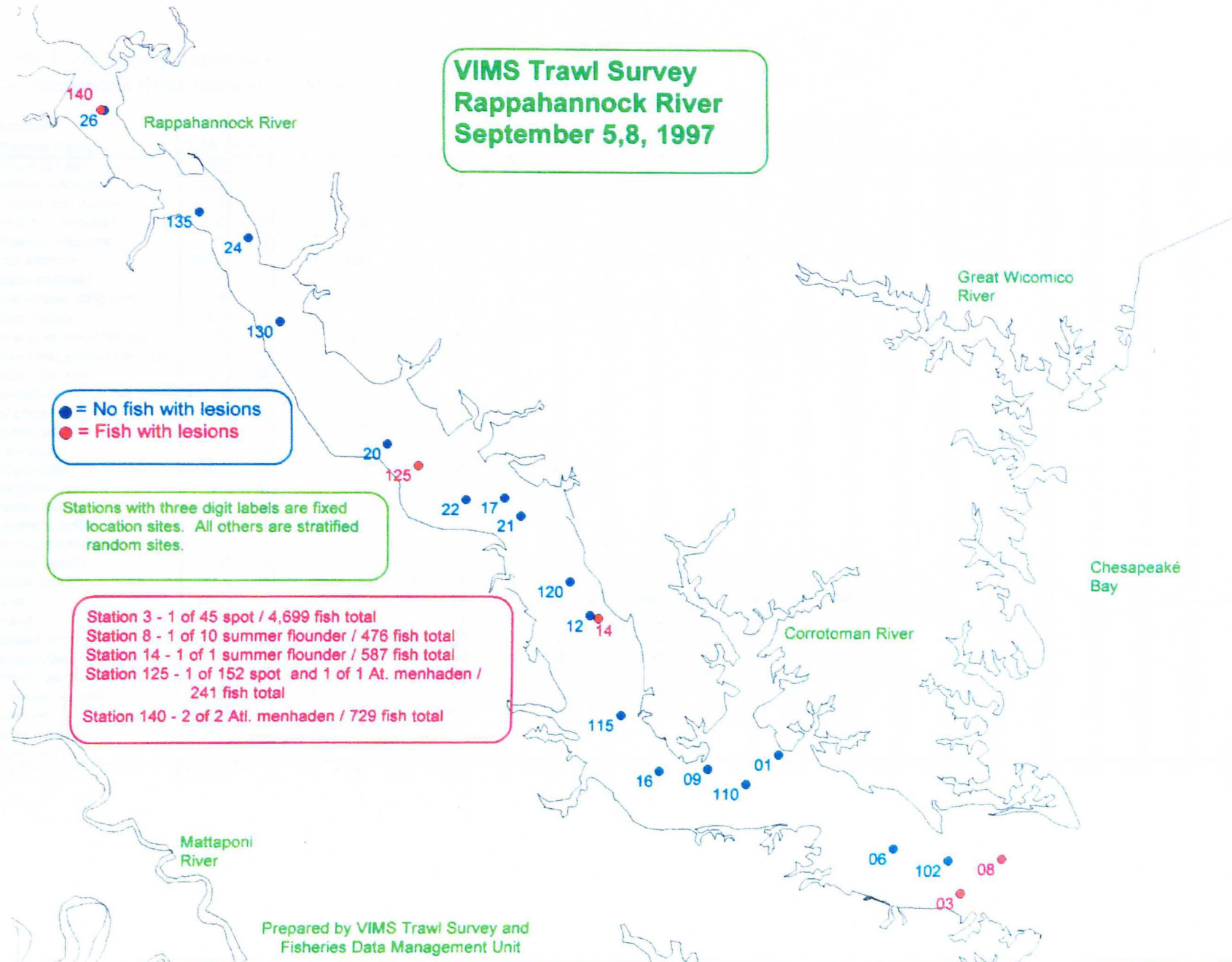


VIMS TRAWL SURVEY SEPTEMBER 1997

YORK RIVER SAMPLE SUMMARY: 9/3-4.

YK9709			STATION NUMBER																						
Species Name	Total	Freq.	1	3	5	7	8	10	12	14	15	16	17	19	20	102	105	110	115	120	125	130	135	140	
American eel	7	3	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	1	0	1	0		
Atlantic croaker	627	20	76	112	23	40	19	22	43	18	38	48	12	12	0	0	39	6	6	71	18	12	2	10	
Atlantic menhaden	3	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0		
Atlantic spadefish	18	10	1	2	0	0	0	1	0	1	2	2	0	1	0	0	0	1	0	2	5	0	0	0	
Spanish mackerel	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
bay anchovy	4180	21	0	516	302	22	119	120	934	226	9	89	17	5	38	357	20	1280	82	30	3	4	6	1	
black seabass	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
blackcheek tonguefish	37	8	2	21	2	0	1	0	0	2	1	2	0	0	0	0	0	0	0	6	0	0	0	0	
blue crab, adult female	72	14	0	10	4	1	2	2	0	5	0	2	0	6	0	0	1	1	0	33	3	0	1	1	
blue crab, juvenile female	222	20	19	7	8	13	8	16	10	6	11	27	14	24	0	0	8	4	4	4	14	4	3	18	
blue crab, male	333	21	17	11	11	5	7	20	7	5	20	28	20	32	2	0	2	7	9	15	37	11	33	34	
bluefish	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
brown shrimp	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
gizzard shad	8	4	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	
harvestfish	105	12	0	10	12	0	17	0	2	4	0	0	1	0	5	33	8	4	4	5	0	0	0	0	
hogchoker	3007	21	0	174	38	7	68	354	50	170	291	304	234	232	1	1	4	48	46	213	291	25	189	267	
inshore lizardfish	3	2	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
kingfish	41	11	12	0	2	2	0	0	2	0	3	2	0	0	0	1	1	0	0	8	1	7	0	0	
longnose gar	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	
naked goby	4	4	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
oyster toadfish	49	13	0	17	0	0	2	2	1	9	1	6	0	1	0	0	1	3	2	3	1	0	0	0	
pigfish	5	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
silver perch	173	15	0	8	0	0	15	7	1	7	3	0	1	47	7	3	0	1	13	22	15	0	23	0	
spot	998	20	174	35	59	43	49	190	5	61	11	56	19	1	1	1	90	64	28	52	3	56	0	0	
squid	9	3	1	6	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	
striped anchovy	24	2	20	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	
striped searobin	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
summer flounder	22	7	4	0	1	0	0	3	1	5	0	7	0	0	0	0	0	0	0	0	1	0	0	0	
weakfish	2514	22	1	168	43	13	27	37	84	597	42	49	70	14	9	8	8	264	151	281	6	556	21	65	
white catfish	14	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1	1	
white perch	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	
Total	12488		333	1103	506	147	334	777	1141	1116	432	628	388	380	64	404	184	1683	345	746	403	680	295	399	

VIMS Trawl Survey Rappahannock River September 5,8, 1997



Prepared by VIMS Trawl Survey and
Fisheries Data Management Unit

VIMS Trawl Survey September 1997
Rappahannock River Sample Summary: 9/5,8

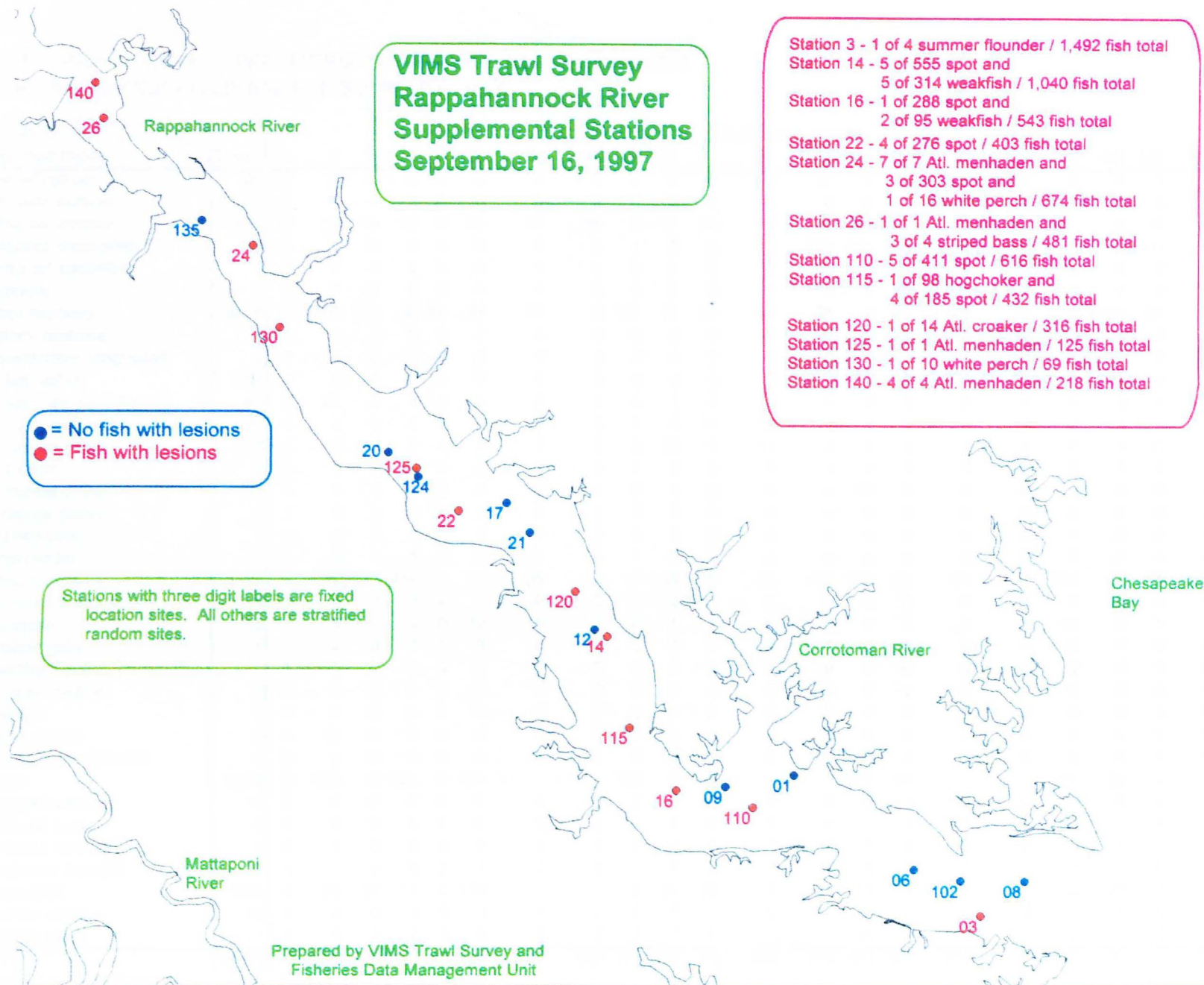
RA9709			STATION NUMBER																							
Species Name	Total	Freq.	1	3	6	8	9	12	14	16	17	20	21	22	24	26	102	110	115	120	125	130	135	140		
American eel	32	3	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	4	0	9		
Atlantic croaker	483	19	0	1	61	19	0	3	23	74	0	6	5	14	12	35	7	48	64	8	23	18	36	26		
Atlantic menhaden	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1(1)	0	0	0	2(2)		
Atlantic spadefish	16	6	1	0	7	3	0	1	0	0	0	0	0	0	0	0	1	0	0	3	0	0	0	0		
Spanish mackerel	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
bay anchovy	8907	21	24	4603	31	11	0	969	107	38	1039	57	124	251	1149	2	123	8	77	112	18	43	75	46		
black seabass	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
blackcheek tonguefish	4	3	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0		
blue catfish	853	4	0	0	0	0	0	0	0	0	0	0	0	0	3	457	0	0	0	0	0	0	304	89		
blue crab, adult female	82	18	6	20	0	20	0	0	2	0	4	1	3	4	2	1	1	8	2	2	2	2	1	1		
blue crab, juvenile female	120	21	9	10	2	5	2	3	3	11	5	12	3	14	2	3	10	12	8	1	1	0	3	1		
blue crab, male	171	22	11	4	8	5	2	11	9	12	9	7	9	18	5	5	3	13	6	10	2	3	8	11		
butterfish	3	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0		
channel catfish	145	3	0	0	0	0	0	0	0	0	0	0	0	0	0	137	0	0	0	0	0	0	1	7		
green goby	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
harvestfish	54	10	0	0	8	0	0	6	7	5	0	2	7	9	0	0	0	2	1	7	0	0	0	0		
hogchoker	1368	22	2	4	47	54	3	34	53	47	34	89	86	21	87	103	46	109	149	72	33	15	5	275		
kingfish	84	15	0	2	5	9	0	3	3	3	0	6	4	5	6	1	9	17	4	7	0	0	0	0		
naked goby	2	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
northern puffer	2	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
northern searobin	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
oyster toadfish	2	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
silver perch	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0			
spot	2513	22	10	45(1)	132	78	1	83	215	161	69	74	128	340	158	244	16	69	87	84	152(1)	129	36	202		
squid	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
striped anchovy	2	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
striped bass	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
striped searobin	6	1	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
summer flounder	29	12	3	0	5	10(1)	2	2	1(1)	0	1	1	1	0	0	0	1	0	1	0	0	0	1	0		
weakfish	1621	20	0	0	102	257	1	36	164	133	7	52	119	109	42	32	28	67	161	97	9	14	144	47		
white catfish	85	4	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	5	74	0		
white perch	316	5	0	0	0	0	0	0	0	0	0	0	0	0	11	30	0	0	0	0	0	100	162	13		
Total	16912		70	4699	408	476	12	1153	587	484	1170	307	489	785	1500	1053	245	354	560	404	241	333	853	729		

VIMS Trawl Survey Rappahannock River Supplemental Stations September 16, 1997

Station 3 - 1 of 4 summer flounder / 1,492 fish total
 Station 14 - 5 of 555 spot and
 5 of 314 weakfish / 1,040 fish total
 Station 16 - 1 of 288 spot and
 2 of 95 weakfish / 543 fish total
 Station 22 - 4 of 276 spot / 403 fish total
 Station 24 - 7 of 7 Atl. menhaden and
 3 of 303 spot and
 1 of 16 white perch / 674 fish total
 Station 26 - 1 of 1 Atl. menhaden and
 3 of 4 striped bass / 481 fish total
 Station 110 - 5 of 411 spot / 616 fish total
 Station 115 - 1 of 98 hogchoker and
 4 of 185 spot / 432 fish total
 Station 120 - 1 of 14 Atl. croaker / 316 fish total
 Station 125 - 1 of 1 Atl. menhaden / 125 fish total
 Station 130 - 1 of 10 white perch / 69 fish total
 Station 140 - 4 of 4 Atl. menhaden / 218 fish total

● = No fish with lesions
 ● = Fish with lesions

Stations with three digit labels are fixed location sites. All others are stratified random sites.



VIMS TRAWL SURVEY / PFEISTERIA TASK FORCE SEPTEMBER 1997
RAPPAHANNOCK RIVER SAMPLE SUMMARY: 9/16.

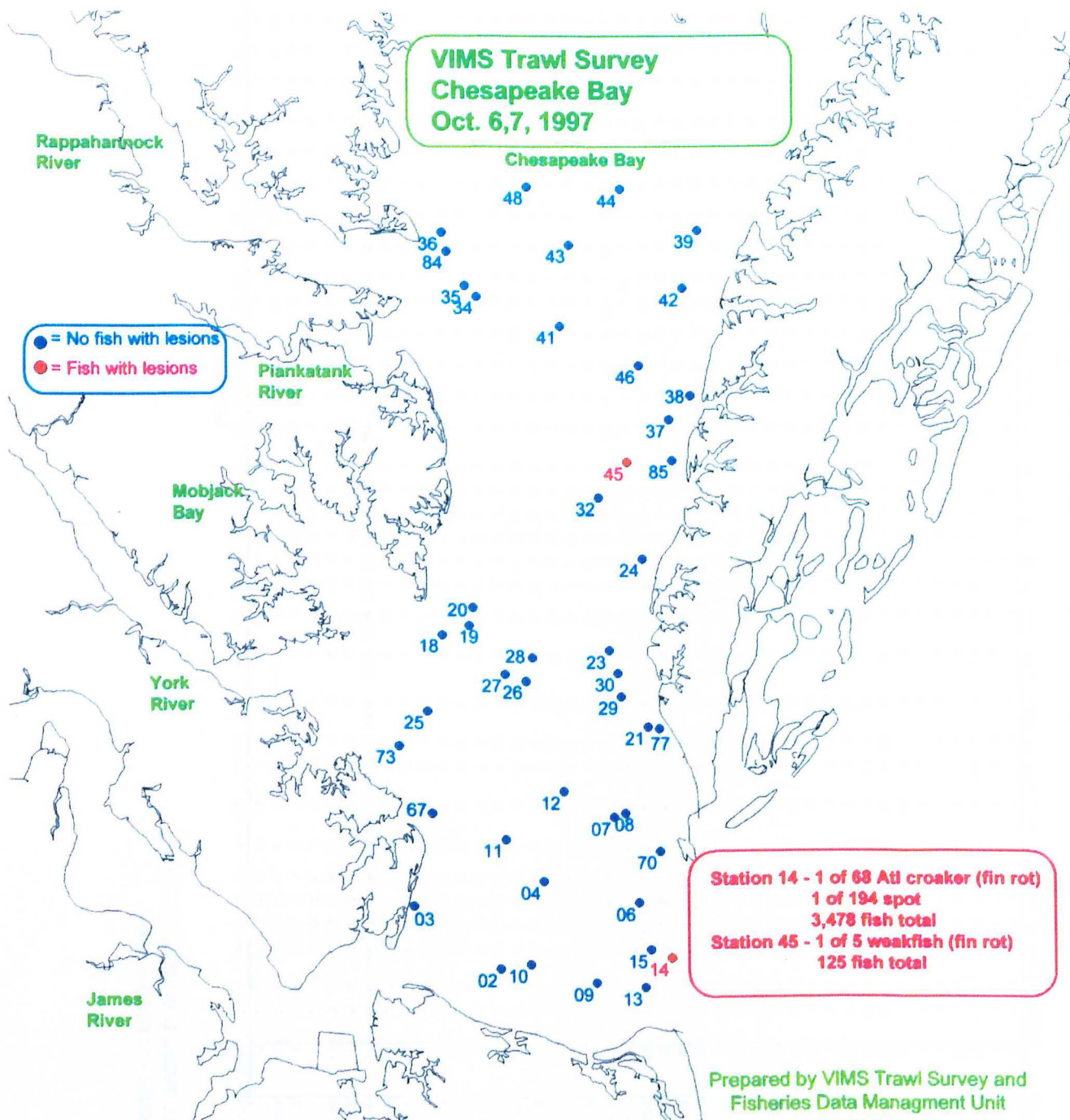
RA9710PTF	STATION NUMBER																							
Species Name	Total	1	3	6	8	9	12	14	16	17	20	21	22	24	26	102	110	115	120	124	125	130	135	140
American eel	24	0	0	0	0	0	0	0	0	0	0	0	0	16	1	0	0	0	0	1	4	1	1	
Atlantic bumper	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atlantic croaker	578	0	17	14	72	0	22	77	66	5	17	22	18	16	26	23	52	72	14(1)	6	12	8	9	10
Atlantic menhaden	15	0	0	0	0	0	0	0	0	1	0	0	0	7(7)	1(1)	0	0	0	0	1	1(1)	0	0	4(4)
Atlantic spadefish	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
alewife	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
bay anchovy	4115	18	1200	146	30	19	42	33	5	147	11	30	58	26	0	70	18	13	23	2184	21	0	11	10
black seabass	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
blackcheek tonguefish	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
blue catfish	287	0	0	0	0	0	0	0	0	0	0	0	0	2	192	0	0	0	0	0	0	46	47	
blue crab, adult female	60	7	21	0	4	0	3	0	2	4	1	0	0	5	0	4	3	0	0	0	4	2	0	0
blue crab, juvenile female	82	3	4	0	3	9	5	1	5	1	6	11	12	1	1	3	0	4	4	0	6	1	1	1
blue crab, male	153	4	8	0	5	4	1	7	7	0	23	16	11	3	3	5	1	9	9	9	12	5	2	9
bluefish	8	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	6	0	0	0	0
channel catfish	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0
feather blenny	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
green goby	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
harvestfish	17	0	0	1	0	0	5	1	0	1	0	0	3	0	0	0	0	0	3	2	0	0	0	1
hogchoker	1333	6	12	10	254	2	13	35	67	6	156	25	15	135	127	22	22	98(1)	174	62	16	7	4	65
inshore lizardfish	6	1	1	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
kingfish	98	1	5	1	14	0	10	15	8	0	1	7	0	7	7	1	1	3	15	0	1	1	0	0
naked goby	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
northern puffer	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
oyster toadfish	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
pigfish	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
silver perch	4	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
smallmouth flounder	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
spot	2816	0	175	6	104	0	164	555(5)	288(1)	100	3	5	276(4)	303(3)	27	99	411(5)	185(4)	71	35	2	2	5	0
striped anchovy	14	0	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	9	0	0	0	0
striped bass	5	0	0	0	0	0	0	0	0	0	0	0	0	0	4(3)	0	0	0	1	0	0	0	0	0
striped searobin	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
summer flounder	21	4	4(1)	0	0	2	1	2	0	1	0	2	2	1	0	0	0	1	0	0	0	0	0	1
weakfish	1235	0	35	37	11	0	134	314(5)	95(2)	6	20	35	7	134	13	74	107	47	3	24	47	23	18	51
white catfish	68	0	0	0	0	0	0	0	0	0	0	0	0	1	31	0	0	0	0	0	0	6	30	0
white perch	91	0	0	0	0	0	0	0	0	2	0	0	0	16(1)	20	0	0	0	0	0	10(1)	26	17	
Total	11072	46	1492	216	498	42	400	1040	543	277	238	153	403	674	481	301	616	432	316	2339	125	69	153	218

NOTE1: Total Catch Previously reported as 11,188 specimens.

NOTE2: Hogchoker at station 12 (13 not 131) and bluefish at station 124 (6 not 4) were the cause.

NOTE3: Station 124 was sampled in addition to the regularly sampled locations due to eyewitness accounts of lesioned fish.

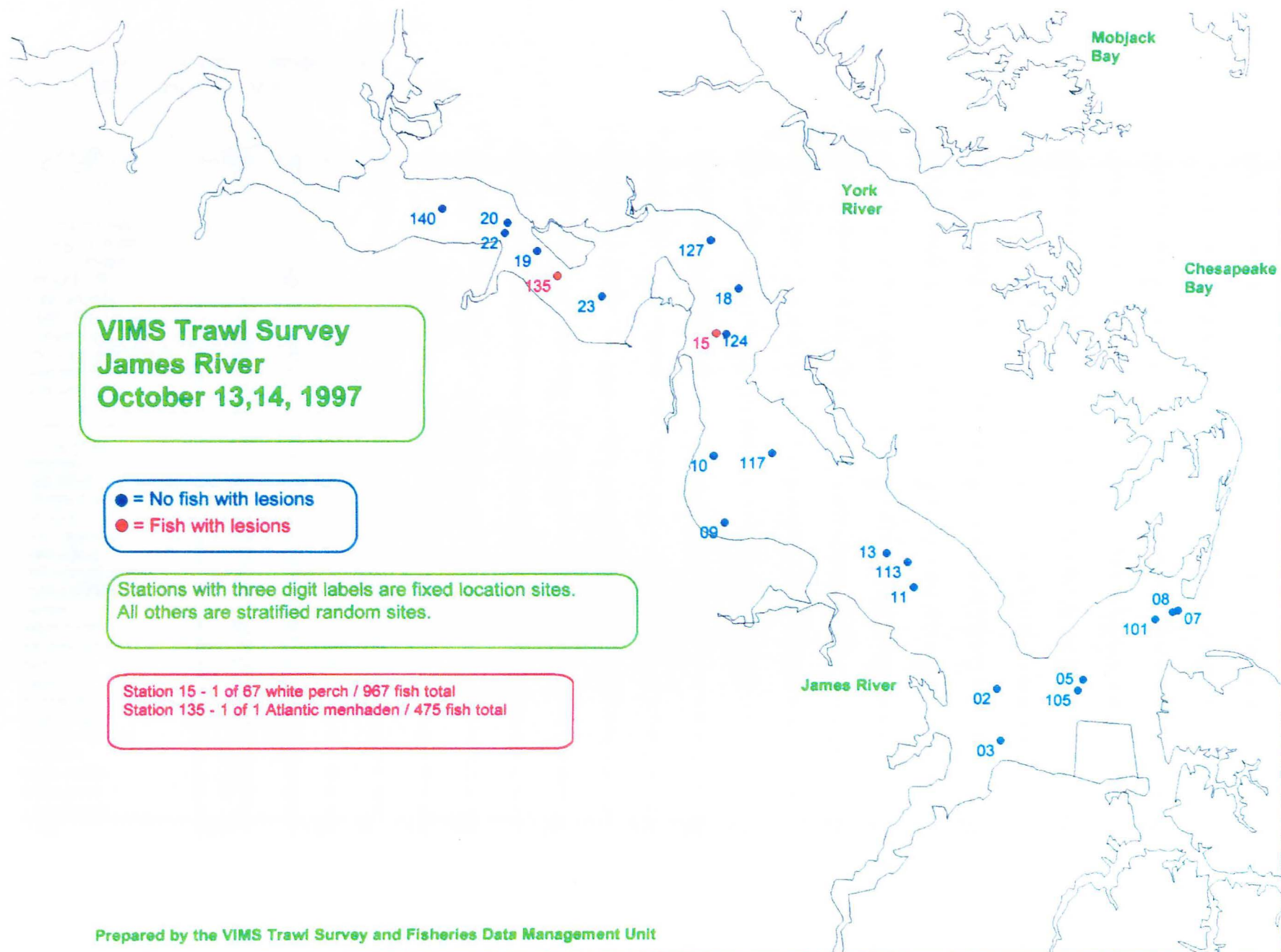
NOTE4: One additional specimen, summer flounder at station 3 was found to have lesions. Total specimens with lesions - 50.



CHESAPEAKE BAY SAMPLE SUMMARY: 10/6-7.

CL9710		Total	Freq.	STATION NUMBER																																																																																					
Species Name				2	3	4	6	7	8	9	10	11	12	13	14	15	18	19	20	21	23	24	25	26	27	28	29	30	32	34	35	36	37	38	41	42	43	44	45	46	48	67	70	73	77	84	85																																										
Atlantic bumper	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
Atlantic croaker	1256	30	13	8	300	0	0	0	0	0	3	18	8	1	88(1)*	0	28	7	11	0	0	1	89	5	73	27	84	0	122	33	43	41	35	3	22	39	39	24	24	35	54	0	0	0	0	0	0	0	0	0	0																																						
Atlantic cutlassfish	3	2	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
Atlantic moonfish	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
Atlantic spadefish	20	12	2	0	1	0	0	0	0	6	2	0	0	0	0	0	2	0	1	0	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0																																							
banded drum	2	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
bay anchovy	39718	30	6408	0	1260	3	0	0	16	6266	9102	0	2234	3115	7605	118	19	21	0	0	34	764	18	0	240	162	0	32	96	90	112	149	1451	138	74	79	62	26	22	4	0	0	0	0	0	0	0	0	0	0																																							
black seabass	20	10	0	2	0	1	1	0	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	5	0	3	0	0	0	0	0	0	0	0	0																																							
blackcheek tonguefish	113	18	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	9	2	0	1	68	0	12	1	1	1	1	0	0	4	1	1	0	4	2	0	0	0	0	0	0	0	0	0	0																																						
blue crab, adult female	88	16	5	0	0	0	0	0	7	8	0	0	13	1	1	0	1	0	0	0	0	0	0	0	0	1	2	0	29	0	0	0	0	0	1	1	0	0	0	4	9	0	0	1	4	0	0	0	0	0																																							
blue crab, juvenile female	29	13	2	1	0	0	0	0	0	0	0	0	0	0	0	0	6	3	0	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0	1	1	0	0	2	0	2	2	0	4	0	0	0	0	0	0																																							
blue crab, male	19	12	1	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	2	0	0	0	1	1	0	0	0	2	0	0	0	0	1	0	0	3	1	0	1	0	1																																								
bluefish	5	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
brown shrimp	15	9	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	0	0	1	0	1	0	4	0	1	1	0	0	0	0	0	0	0	0	0	0	0																																							
butterfish	50	10	0	0	0	0	0	0	7	3	5	0	8	1	0	0	0	0	0	0	0	0	0	0	13	9	0	0	0	0	0	0	0	0	2	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0																																							
cleannose skate	4	4	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
feather blenny	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
fringed flounder	2	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
harvestfish	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
hogchoker	328	23	0	0	0	0	0	0	4	0	0	1	4	16	3	4	0	0	0	0	0	0	33	0	0	0	125	1	60	8	14	3	2	8	6	4	11	3	0	7	8	0	0	1	0	0	2	0	0	2																																							
inshore lizardfish	112	28	1	1	5	0	1	2	0	1	0	4	3	1	0	0	1	2	10	16	13	0	1	0	2	1	22	0	0	0	1	3	3	1	0	2	0	0	0	0	0	1	2	0	7	1	4	0	0	0																																							
kingfish	343	39	8	2	19	20	1	0	22	18	5	2	1	13	12	0	2	1	0	3	1	0	5	0	30	32	3	5	3	10	34	20	5	6	22	0	4	12	6	4	1	3	3	0	0	5	0	0	5																																								
lined seahorse	16	8	0	0	1	0	6	1	0	0	4	1	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
northern pipefish	8	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1																																								
northern puffer	33	19	0	0	1	0	1	0	0	0	0	1	3	0	0	0	0	0	2	1	0	0	1	0	0	2	8	1	0	0	0	0	0	1	1	2	0	2	1	2	0	0	1	1	0	0	1	0	0																																								
northern searobin	17	8	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	9	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0																																								
northern stargazer	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0																																								
oyster toadfish	12	7	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	6	0	0	1	0	0	0	0	0	0	0	0	0																																								
pigfish	26	10	1	3	3	0	0	0	0	0	0	0	1	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	8	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0																																							
scup	3	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0																																								
silver perch	99	13	4	2	0	0	0	0	0	0	0	0	0	4	0	39	0	0	0	0	0	0	10	0	0	0	0	0	8	3	0	4	0	0	0	13	1	1	0	8	2	0	0	0	0	0	0	0	0																																								
skilletfish	2	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																							
smallmouth flounder	281	28	0	1	7	42	17	14	23	1	0	6	17	14	30	0	3	6	18	7	7	0	2	0	0	0	5	0	0	0	0	6	4	2	1	0	0	18	0	0	1	9	0	12	3	5	0	0	0																																								
spot	1263	32	15	0	67	1	0	0	5	5	12	1	24	194(1)	15	39	5	11	0	0	0	63	27	124	99	24	3	39	35	68	66	0	56	58	47	53	60	1	37	6	0	0	3	0	0	0	0	0	0																																								
squid	634	32	18	41	4	11	22	4	11	31	12	45	39	25	19	0	4	2	0	3	1	6	73	22	66	47	0	26	0	0	2	6	0	11	2	19	2	25	29	6	0	0	0	0	0	0	0	0	0																																								
striped anchovy	217	14	7	0	0	7	1	0	107	43	0	0	0	0	0	2	0	0	0	0	7	0	14	0	0	0	1	0	0	0	0	1	6	0	0	0	0	0	0	0	14	0	3	0	0	4	0	0																																									
striped burrfish	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1																																							
striped searobin	11	6	0	0	0	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																									

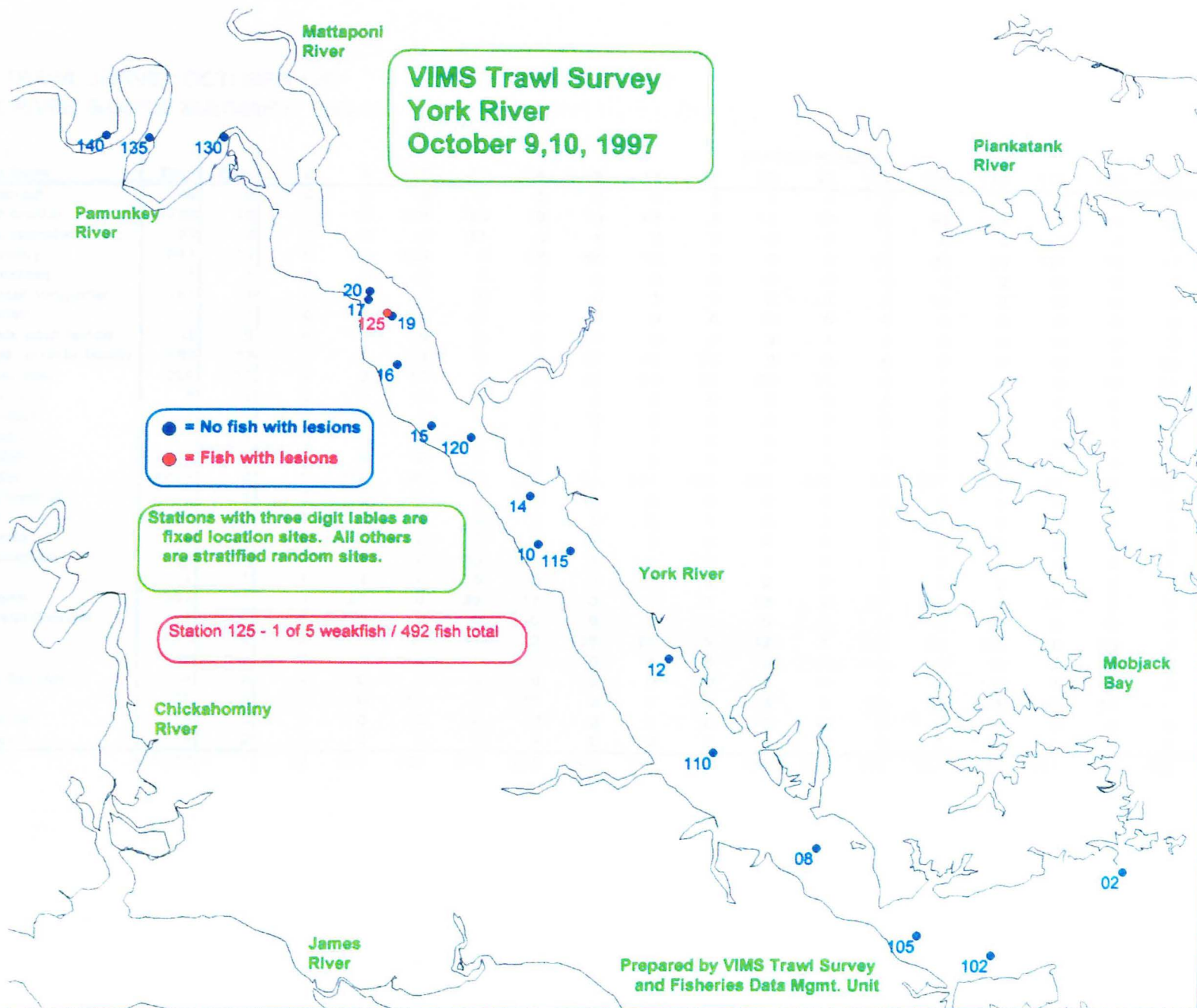
* = FIN ROT



VIMS TRAWL SURVEY OCTOBER 1997
JAMES RIVER SAMPLE SUMMARY: 10/13-14.

JA9710			STATION NUMBER																							
Species Name	Total	Freq.	2	3	5	7	8	9	10	11	13	15	18	19	20	22	23	101	105	113	117	124	127	135	140	
American eel	12	6	0	0	0	0	0	0	1	0	0	0	0	4	2	2	1	0	0	0	0	0	0	2	0	
Atlantic croaker	761	18	0	95	0	28	0	225	133	34	30	1	23	4	3	38	43	0	9	30	0	21	1	12	31	
Atlantic cutlassfish	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Atlantic menhaden	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1(1)	0	0	
Atlantic spadefish	11	6	2	0	1	1	3	0	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Atlantic stingray	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
bay anchovy	8228	19	1075	32	1563	0	0	320	5	502	39	727	92	3	0	0	19	6	3175	2	579	18	34	4	33	
black seabass	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
blackcheek tonguefish	28	9	0	2	1	3	0	1	1	0	6	0	0	0	2	1	0	0	0	11	0	0	0	0	0	
blue catfish	427	5	0	0	0	0	0	0	0	0	0	0	0	37	251	0	1	0	0	0	0	0	0	135	3	
blue crab, adult female	95	12	4	0	6	0	0	1	1	2	0	61	1	0	0	1	0	1	1	1	15	0	0	0	0	
blue crab, juvenile female	176	19	27	3	7	1	0	8	66	2	0	18	6	5	2	3	5	0	1	2	9	4	0	2	5	
blue crab, male	182	21	18	8	1	4	0	16	43	4	1	10	3	5	9	18	6	1	5	0	11	4	2	8	5	
brown shrimp	18	9	1	3	0	1	0	4	1	2	0	0	0	0	0	4	0	0	0	0	0	1	0	0	1	
channel catfish	21	4	0	0	0	0	0	0	0	0	0	0	0	1	9	10	1	0	0	0	0	0	0	0	0	
gizzard shad	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
harvestfish	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
hogchoker	1665	19	1	23	0	8	0	27	12	13	85	7	15	49	596	228	59	0	0	36	2	47	61	248	148	
inshore lizardfish	2	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
kingfish	24	13	0	1	0	5	0	1	3	1	0	1	0	0	0	0	2	3	1	2	0	2	1	1	0	
lined seahorse	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
naked goby	3	3	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
northern pipefish	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
oyster toadfish	19	7	0	0	0	10	1	0	0	1	2	0	0	0	0	0	0	1	1	3	0	0	0	0	0	
pigfish	4	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
silver perch	70	13	1	4	0	14	1	1	0	3	12	1	0	0	2	3	0	0	0	13	0	0	13	2	0	
smallmouth flounder	9	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	0	0	0	0	0	0	
spot	1171	22	29	70	1	8	0	71	55	75	116	66	72	17	40	186	137	1	22	16	2	43	31	54	59	
squid	35	5	3	0	3	17	0	0	0	0	0	0	0	0	0	0	0	9	3	0	0	0	0	0	0	
striped anchovy	18	5	1	0	7	0	0	1	0	0	0	1	0	0	0	0	0	0	8	0	0	0	0	0	0	
striped bass	14	2	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8	0	0	0	0	
summer flounder	11	5	0	0	0	2	0	0	0	0	1	1	0	0	0	0	0	6	1	0	0	0	0	0	0	
weakfish	124	19	1	6	2	3	4	6	1	11	56	0	1	3	0	3	2	0	2	1	0	9	7	4	2	
white catfish	24	7	0	0	0	0	0	0	0	0	0	0	0	1	5	9	4	0	0	0	0	1	0	2	2	
white perch	197	6	0	0	0	0	0	0	0	0	0	67(1)	0	0	1	43	7	0	0	0	53	0	0	0	26	
white shrimp	2	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
Total	13361		1164	247	1595	108	9	684	322	653	348	967	213	129	924	550	288	41	3230	117	680	150	150	475	317	

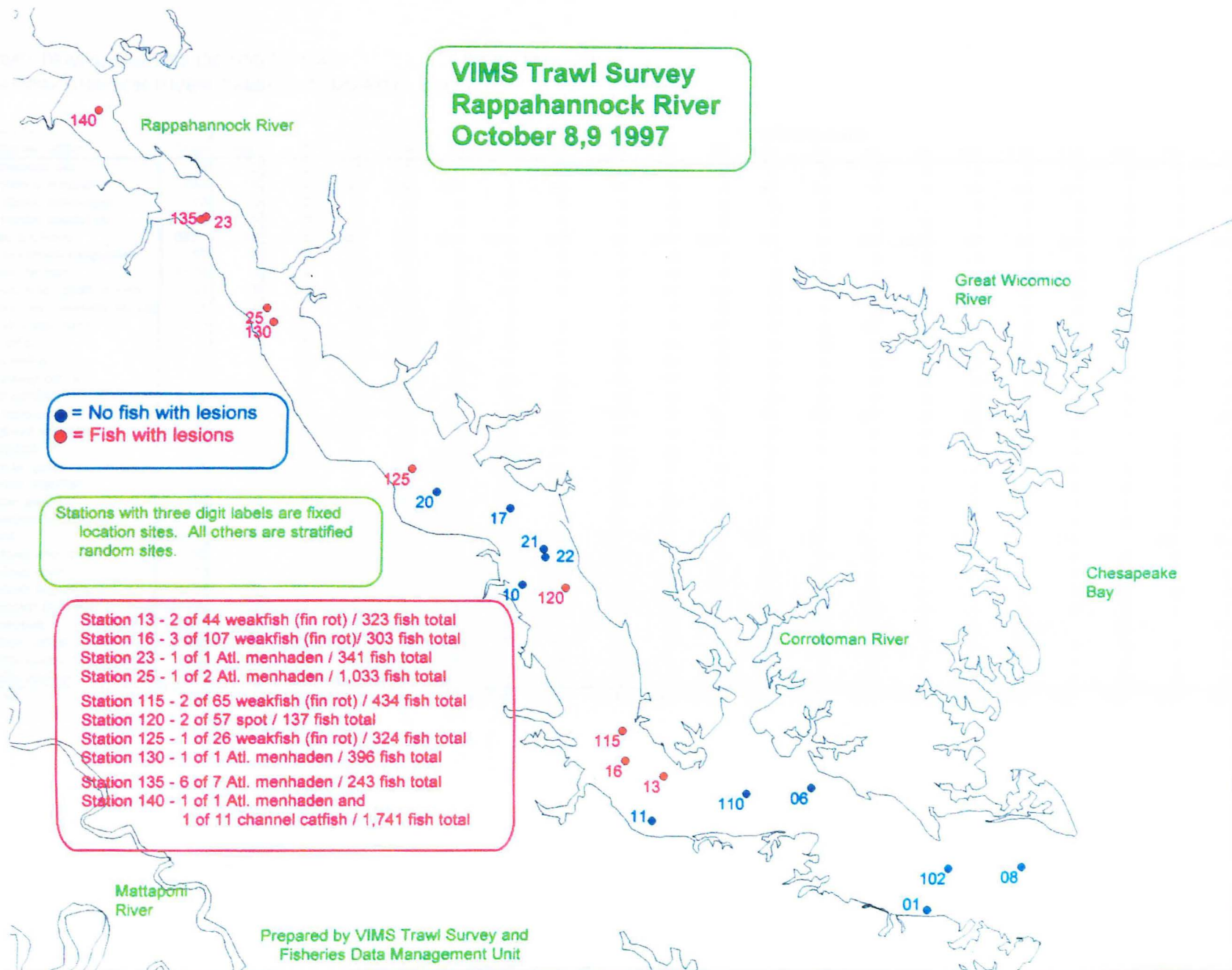
* = FIN ROT



VIMS TRAWL SURVEY OCTOBER 1997
YORK RIVER SAMPLE SUMMARY: 10/9-10.

YK9710			STATION NUMBER																		
Species Name	Total	Freq.	2	8	10	12	14	15	16	17	19	20	102	105	110	115	120	125	130	135	140
American eel	18	8	0	0	0	0	2	0	0	3	1	4	0	0	1	0	0	4	0	2	1
Atlantic croaker	3725	18	0	14	105	26	18	70	47	6	12	16	90	85	36	3	10	21	78	114	2974
Atlantic spadefish	27	3	0	0	0	21	0	4	0	0	0	0	2	0	0	0	0	0	0	0	0
bay anchovy	947	16	0	19	128	3	26	66	18	9	0	0	85	30	25	337	79	17	62	15	28
black seabass	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
blackcheek tonguefish	141	13	0	0	1	8	0	0	1	1	2	1	3	18	8	0	0	1	39	49	9
blue catfish	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
blue crab, adult female	33	8	6	0	0	0	0	14	0	2	3	1	2	0	0	0	0	3	0	2	0
blue crab, juvenile female	163	12	7	2	9	0	0	37	46	15	9	0	6	0	0	0	2	19	4	7	0
blue crab, male	259	17	5	3	17	1	0	38	56	25	20	11	3	1	4	0	15	21	9	20	10
brown shrimp	5	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	2	0
gizzard shad	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
green goby	2	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
harvestfish	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
hogchoker	4425	18	0	248	90	127	120	71	171	455	383	286	13	237	209	38	136	395	45	421	980
inshore lizardfish	3	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
kingfish	34	14	1	2	0	2	1	5	5	1	0	2	2	1	0	1	2	0	5	4	0
naked goby	4	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0
oyster toadfish	44	14	0	1	4	13	1	5	1	0	1	1	1	2	3	4	6	1	0	0	0
pigfish	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
silver perch	200	14	0	27	0	22	17	0	1	1	13	3	28	53	8	17	7	2	0	0	1
smallmouth flounder	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
spot	491	15	0	1	67	41	23	26	21	6	42	1	105	76	36	15	29	2	0	0	0
squid	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
summer flounder	14	6	2	0	1	4	0	0	0	0	0	0	4	2	0	1	0	0	0	0	0
weakfish	202	16	0	0	11	1	40	3	3	0	4	2	26	22	7	15	14	5(1)	3	8	38
white catfish	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11	1
white perch	15	2	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	8	0
Total	10772		26	317	433	270	255	343	371	524	490	328	374	527	337	431	300	492	247	664	4043

VIMS Trawl Survey Rappahannock River October 8,9 1997



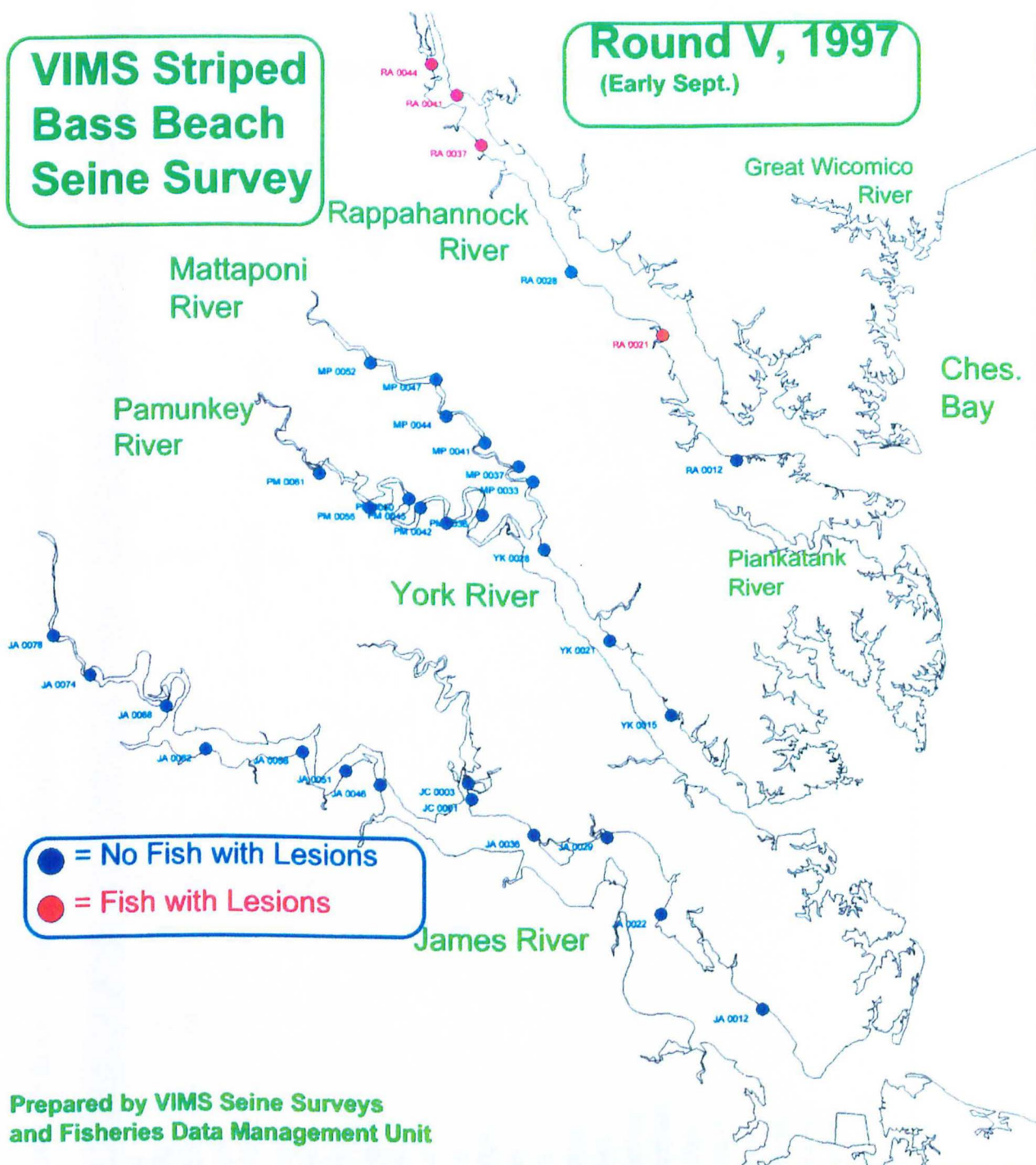
VIMS TRAWL SURVEY OCTOBER 1997
RAPPAHANNOCK RIVER SAMPLE SUMMARY: 10/8-9.

RA9710	STATION NUMBER																						
Species Name	Total	Freq.	1	6	8	10	11	13	16	17	20	21	22	23	25	102	110	115	120	125	130	135	140
American eel	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Atlantic croaker	734	18	0	35	130	104	5	40	75	0	2	49	79	9	0	55	43	37	8	13	18	14	18
Atlantic menhaden	13	6	0	0	0	0	0	0	1	0	0	0	0	1(1)	2(1)	0	0	0	0	0	1(1)	7(6)	1(1)
Atlantic spadefish	6	5	0	0	1	0	2	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
bay anchovy	8891	20	0	2993	13	831	1250	100	47	237	1451	81	17	149	1028	47	40	254	83	20	186	55	9
blackcheek tonguefish	19	6	0	0	10	0	0	0	1	0	1	1	0	0	0	3	3	0	0	0	0	0	0
blue catfish	1118	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	7	1109	
blue crab, adult female	84	15	0	4	3	1	10	0	1	17	34	2	1	4	0	0	0	0	1	3	1	1	1
blue crab, juvenile female	61	15	4	5	1	15	4	1	2	7	0	3	1	3	0	3	1	0	9	2	0	0	0
blue crab, male	113	20	2	7	3	13	8	3	2	8	17	2	6	17	0	1	3	2	1	2	3	6	7
bluefish	3	2	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
butterfish	6	4	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1	2	0	0	0
channel catfish	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11(1)	
harvestfish	5	2	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0
hogchoker	1034	17	0	0	84	16	0	35	30	2	21	70	48	87	0	32	24	19	5	17	86	25	433
inshore lizardfish	2	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
kingfish	127	18	0	13	15	0	14	8	9	2	11	9	5	1	0	20	3	4	1	5	1	3	3
naked goby	5	3	0	1	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
oyster toadfish	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
silver perch	78	11	0	0	6	0	0	7	2	0	0	2	0	0	0	7	33	3	9	3	5	0	1
smallmouth flounder	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
spot	2431	18	0	44	122	94	331	127	131	46	0	221	173	57	0	244	221	115	57(2)	255	69	53	71
striped anchovy	16	4	0	2	0	4	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
striped bass	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
striped searobin	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
summer flounder	15	10	0	2	1	3	1	0	0	1	0	0	0	0	0	1	2	0	0	1	1	2	0
weakfish	681	20	0	21	53	14	2	44(2)*	107(3)*	2	10	33	38	8	3	79	85	65(2)*	19	26(1)*	19	25	28
white catfish	68	5	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	6	26	34
white perch	80	8	0	0	0	15	1	0	0	3	4	0	0	4	1	0	0	0	0	0	0	26	26
white shrimp	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Total	15608		9	3129	442	1112	1639	323	303	328	1557	473	368	341	1033	493	461	434	137	324	396	243	1741

* = FIN ROT

VIMS Striped Bass Beach Seine Survey

Round V, 1997
(Early Sept.)



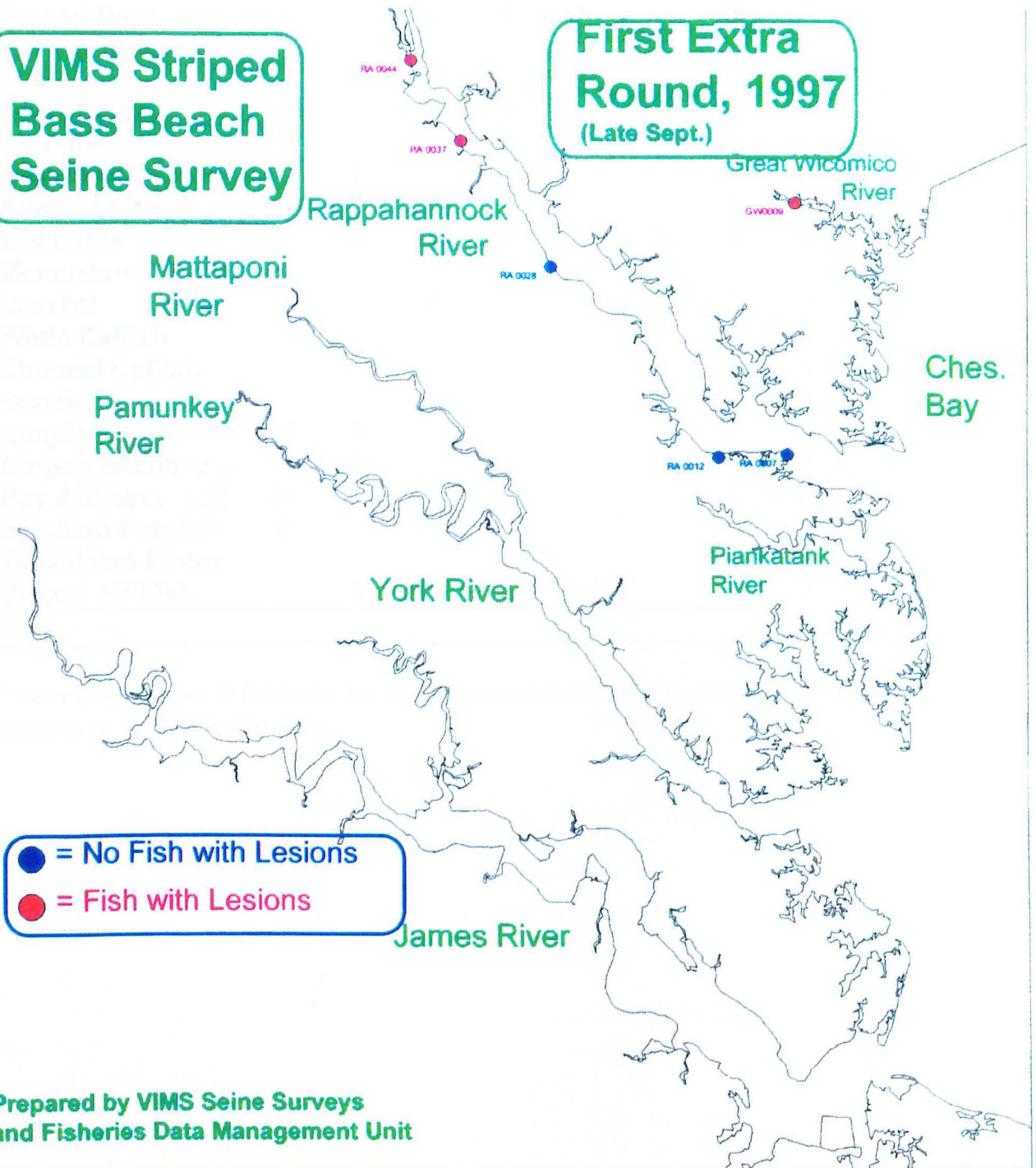
Fish captured by seine in the Rappahannock River, 3 September 1997.

Species	Mile 12	Mile 21	Mile 28	Mile 37	Mile 41	Mile 44	Totals
Spot	11	15	22	14	6	18	86
Bluefish	2			1	4		7
Silversides	18	18	28	4	4	5	77
Kingfish	1		1				2
Menhaden		352 <10%		33 76%	4 100%	228 ~50%	617
Anchovy		12		2			14
Weakfish		2					2
Killifish		3	5			11	19
Striped Bass		1	4	4	1	56	66
Pipefish			1				1
W. Perch				22	33	65	120
Croaker				1		25	26
Harvestfish				4			4
Am. Eel				1			1
Alewife				9	1		10
Mummichog				2	3		5
Needlefish				1			1
Silvery minnow				8	2		10
Channel Catfish					2	2	4
Blue Catfish					1		1
White Catfish					1		1
Hogchoker						1	1
Gizzard Shad						1	1
Spottail Shiner						20	20
Satinfin Shiner						3	3
Blueback herring						2	2
Total Fish	32	403	61	106	62	437	1101

Approximately 30% of Menhaden captured showed some degree of lesions. All other species were free of any lesions or other anomalies.

VIMS Striped Bass Beach Seine Survey

First Extra Round, 1997
(Late Sept.)



Prepared by VIMS Seine Surveys
and Fisheries Data Management Unit

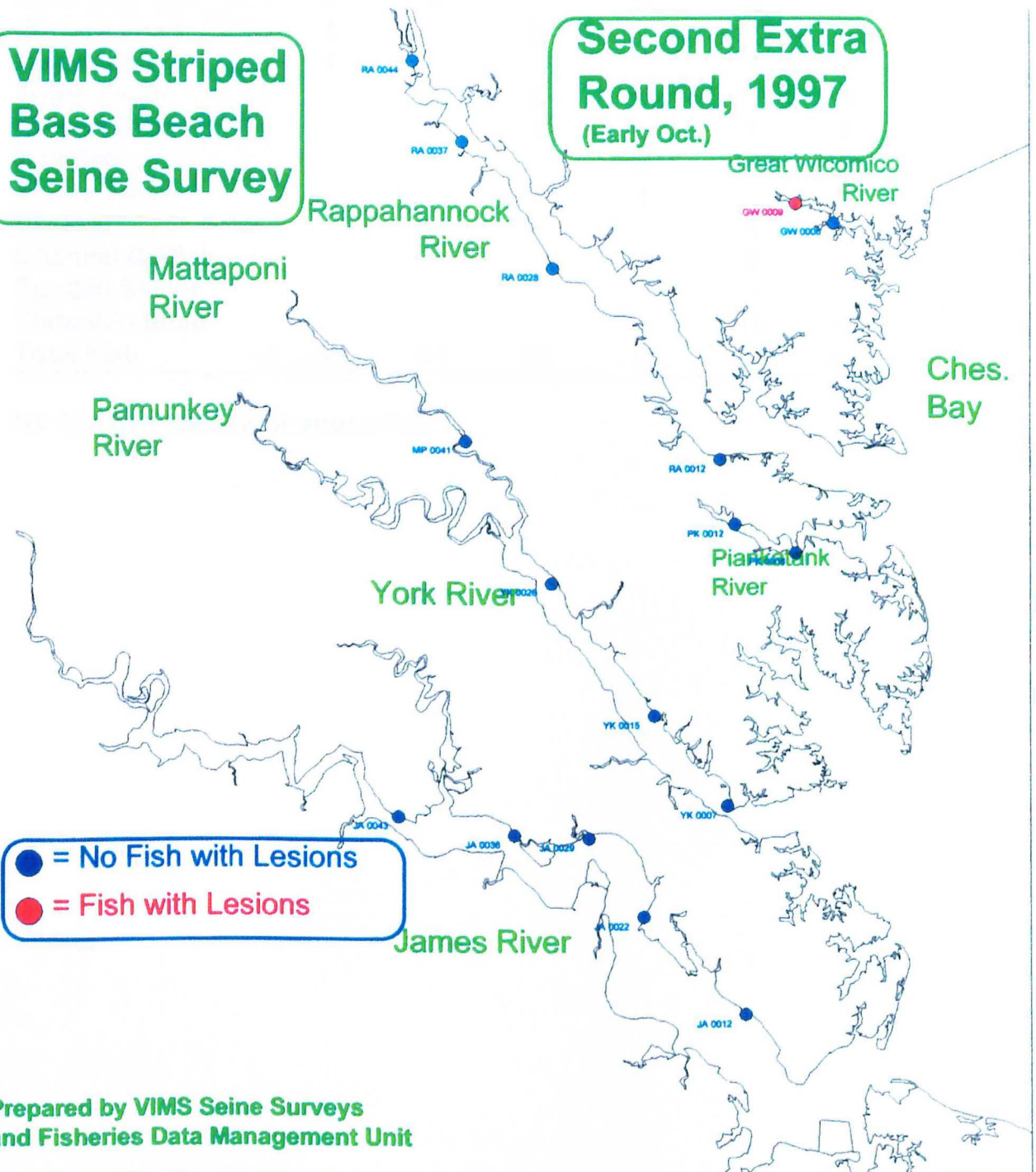
Fish captured by seine in the Rappahannock River on 16 September 1997.

Species	Mile 7	Mile 12	Mile 28	Mile 36	Mile 37	Mile 44	Mile 50	Totals
Hogchoker	1	1				1	2	5
Striped Bass			3	5	1		20	29
Spottail Shiner							14	14
Spot	21	34	10	33 1	18	8	5 2	129
White Perch			4	9	21	69	6 1	109
Weakfish	1							1
Summer Flounder		1		1				2
American Shad							1	1
Silverside		37	131	4	11	2	6	191
Menhaden					6 6	9 9		15
Croaker			7		1	5	1	14
White Catfish						3		3
Channel Catfish						4		4
Bluefish						1	1	2
Kingfish	12	5						17
Striped Anchovy		5						5
Bay Anchovy	24							24
Northern Pipefish	2							2
Tessalated Darter							2	2
Striped Killifish		2	1					3
								513

* where a number is followed by a |, the second number indicates fish with lesions or suspected lesions.

VIMS Striped Bass Beach Seine Survey

Second Extra Round, 1997
(Early Oct.)



Fish captured in the James River, 1 October 1997.

Species	Mile 12	Mile 22	Mile 29	Mile 36	Mile 42	Total
Southern Kingfish	13					13
Atlantic Silversides	13	50	18			81
Spot	7	9		1	3	20
Gizzard Shad	1		3		2	6
Bay Anchovy	1				1	2
White Perch		5	4	11	72	92
Striped Bass			1		1	2
Bluefish				2		2
Yellow Perch				1		1
Croaker					4	4
Channel Catfish					2	2
Spottail Shiner					1	1
Threadfin Shad					10	10
Total Fish	35	64	26	15	96	236

No fish had lesions or anomalies.

Fish Captured in the York River, 1 October 1997.

Species	Mile 7	Mile 12	Mile 23	Mile 26	Mile 41	Totals
Gizzard Shad	17		8			25
Silversides	35	178	10	26		249
Spot	1	9		3		13
A. Croaker	4	5	1			10
A. Needlefish	6					6
Kingfish	4					4
Red Drum	1					1
Striped Killifish		26				26
Bay Anchovy			12	9	9	30
Hogchoker					1	1
White Catfish					1	1
American Shad					2	2
Silver perch					2	2
Total Fish	68	218	31	112	15	370

No fish with lesions or anomalies present.

Fish captured by seine in the Rappahannock River, 1 October 1997.

Species	Mile 12	Mile 28	Mile 37	Mile 44	Mile 50	Totals
Hogchoker	1			3	11	15
Striped Bass		2	1	5	12	20
Spottail Shiner				1	16	17
Spot	3	1		3		7
White Perch				79	39	118
American Shad					1	1
Silverside		12	20			32
Croaker				1	2	3
Channel Catfish				1		1
Northern Pipefish			1			1
Tessalated Darter				8	2	10
Striped Killifish		5				5
Eastern Silvery Minnow				3 2	1	4
Yellow Perch				4		4
Banded Killifish				4		4
Blueback Herring					7	7
Satinfin Shiner					18	18
Total Fish	4	20	22	112	109	267

Two silvery minnows and one spot had suspicious looking sores on the bodies.

Fish Captured in the Great Wicomico River, 2 October 1997.

Species	Mile 5	Mile 8	Total
Striped Bass		8	8
Spot	45	47	92
Striped Killifish	26	6	32
Silversides	58	33	91
Hogchoker	1	9	10
Striped Anchovy		3	3
White Perch		4	4
Bay Anchovy		6	6
Menhaden		19 19	19
Total Fish	130	135	265

Nineteen out of nineteen menhaden had lesions.

Fish captured in the Piankatank River, 2 October 1997.

Species	Mile 7	Mile 12	Total
Striped Bass		3	3
Spot		21	21
Striped Killifish	5	4	9
Silversides	18	34	52
Silver Perch	22		22
Red Drum	1		1
Spotted Seatrout	1		1
Striped Anchovy	5	1	6
White Perch		24	24
Bay Anchovy		3	3
Tonguefish		1	1
Total Fish	52	91	143

No lesions or anomalies present.

VIMS Alosa Pushnet Survey
Great Wicomico River
October 14, 1997



Prepared by VIMS Juvenile Alosa Survey,
Trawl Survey, and Fisheries Data Management Unit

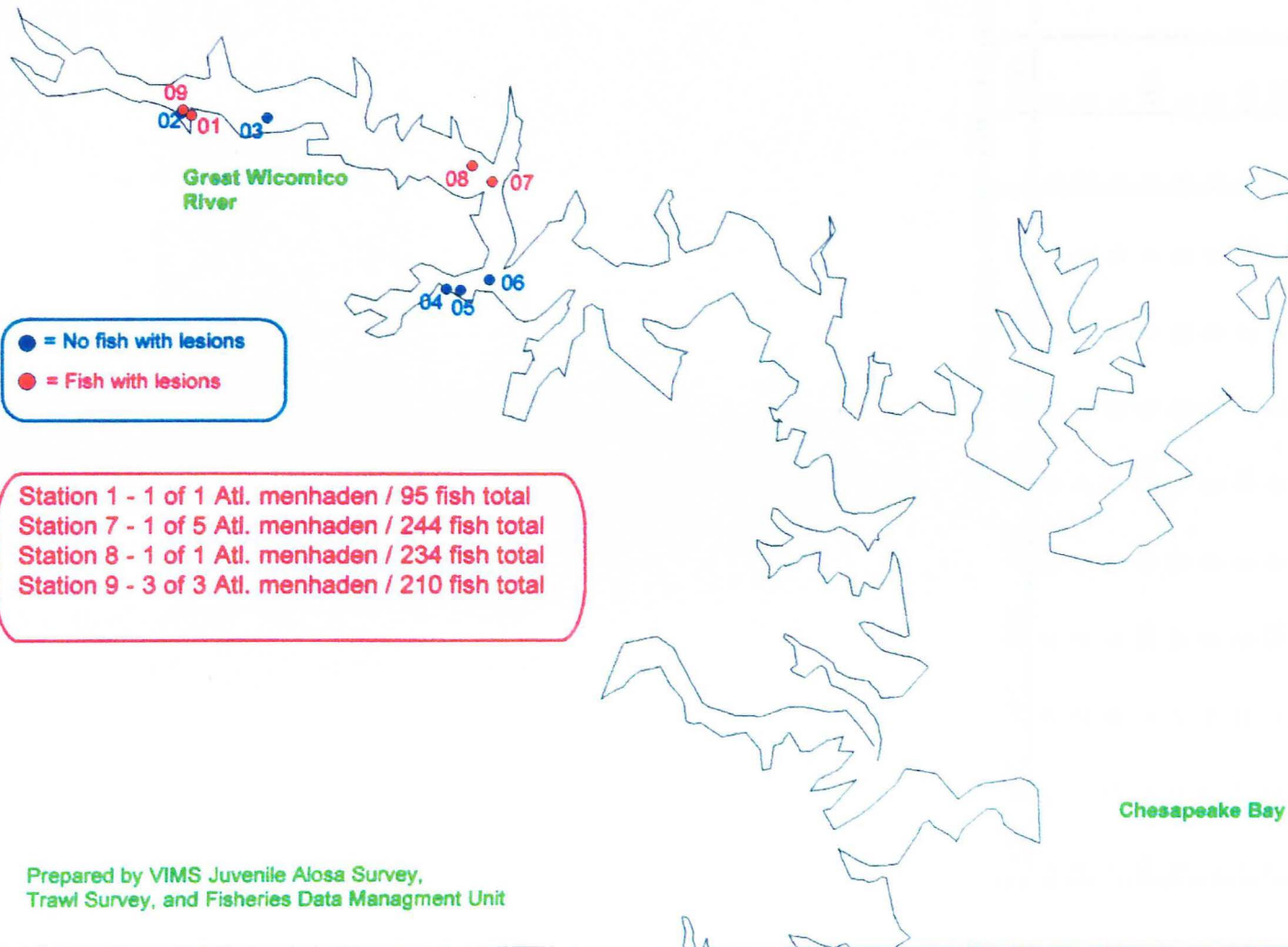
GW9710PTF-JA1 SPECIES NAME	Total	Freq.	STATION NUMBER						
			1	2	3	4	5	6	7
Atlantic menhaden	12	4	3	0	0	2	6	1	0
bay anchovy	2028	7	185	123	62	136	162	395	965
blue crab, juvenile female	1	1	0	0	0	0	1	0	0
blue crab, male	1	1	0	0	1	0	0	0	0
rough silverside	21	7	2	2	2	2	4	8	1
Total	2063		190	125	65	140	173	404	966

**VIMS Alosa Pushnet Survey
Great Wicomico River
October 29, 1997**



GW9710PTF-JA2		STATION NUMBER								
SPECIES NAME	Total	Freq.	2	3	4	5	6	7	8	9
Atlantic croaker	4	1	0	0	0	0	0	0	0	4
Atlantic menhaden	8	3	0	0	0	0	0	2	3	3(3)
bay anchovy	4627	8	74	31	148	330	1919	625	1003	497
blue crab, male	1	1	0	0	0	0	0	0	0	1
hogchoker	2	1	0	0	0	0	0	0	0	2
spot	1	1	0	0	0	0	0	0	0	1
weakfish	1	1	0	0	0	0	0	0	1	0
	4644		74	31	148	330	1919	627	1007	508

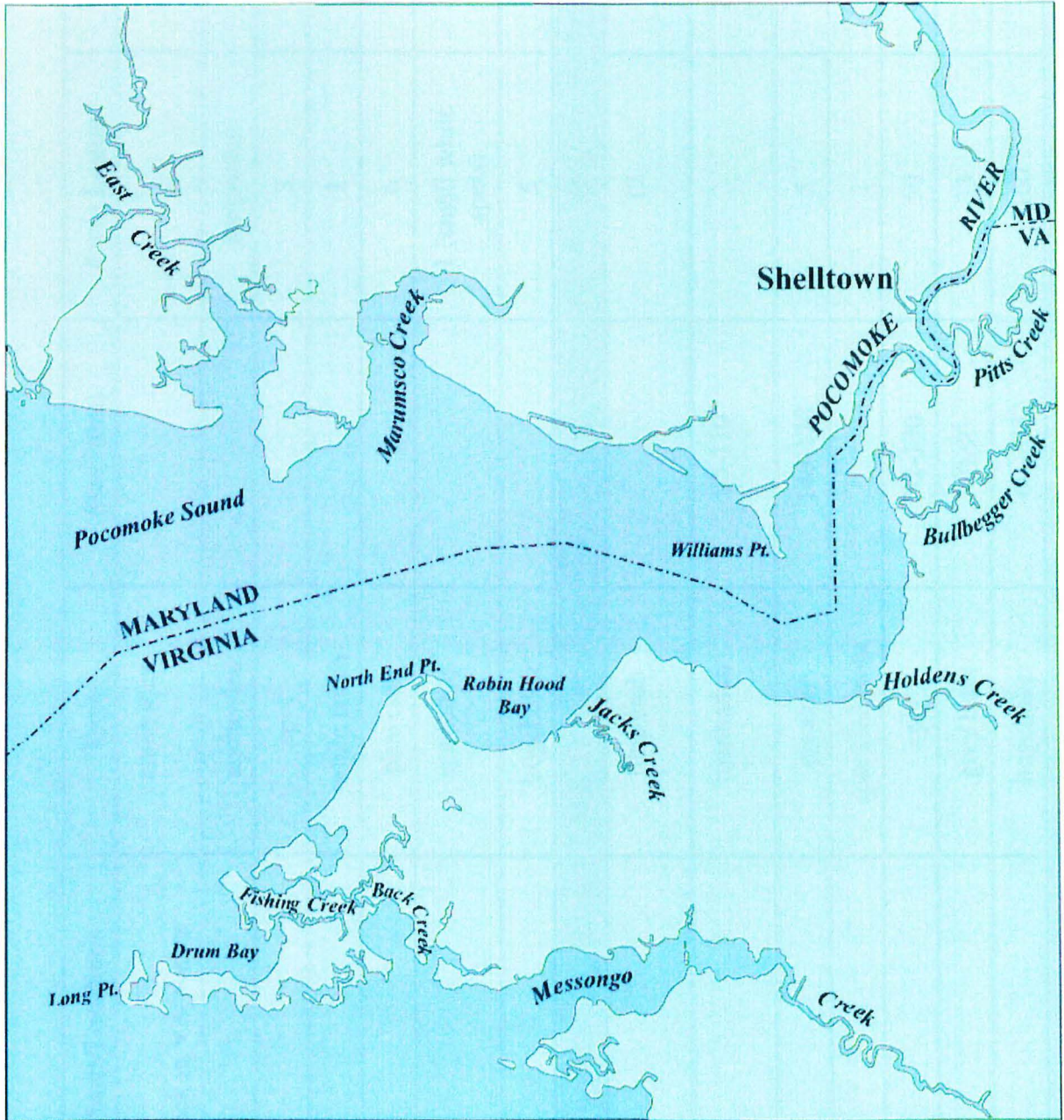
**VIMS Trawl Survey
Great Wicomico River
October 29, 1997**



GREAT WICOMICO RIVER SAMPLE SUMMARY: 10/29

SPECIES NAME	Total	Freq.	STATION NUMBER								
			1	2	3	4	5	6	7	8	9
Atlantic croaker	22	4	6	0	0	7	2	0	0	0	7
Atlantic menhaden	11	5	1(1)	0	0	0	0	1	5(1)	1(1)	3(3)
bay anchovy	1520	9	34	59	66	200	293	234	237	228	169
blue crab, unclassified	29	4	23	1	1	0	0	0	0	0	4
blue crab, juvenile female	11	4	1	0	0	1	1	8	0	0	0
blue crab, male	30	6	3	0	1	6	4	15	1	0	0
hogchoker	44	4	23	0	0	11	1	0	0	0	9
naked goby	5	1	0	0	0	0	0	5	0	0	0
northern pipefish	1	1	0	0	0	1	0	0	0	0	0
spot	191	7	4	0	0	142	6	16	1	4	18
striped blenny	1	1	0	0	0	0	0	1	0	0	0
weakfish	2	2	0	0	0	1	0	0	0	1	0
white perch	2	1	0	0	0	0	0	2	0	0	0
Total	1865		95	60	68	369	307	282	244	234	210

NOTE: Stations 2-9 performed in parallel with the VIMS Pushnet Survey.



Results of Trawls Pulled in the Pocomoke River/Sound on September 4, 1997

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/ Lesions
<i>Site 1</i> 1100; upstream of Pitts Creek in VA waters	menhaden			4
	anchovies		numerous	
	spot		3	
	white perch		2	
	blue crab		6	
	spadefish		1 (small white spots)	
	hogchoker		5	
<i>Site 2A</i> 1250; off Holdens Creek	blue crab		12	
	menhaden	85-110		2 (lower part of caudal peduncle)
	croaker	140-170	5	
	speckled trout		1	
	spot	92-130	50	1 (anal;=13cm)
	grey trout	60-90	33	
	hogchoker	60-105	160	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 2B</i>	blue crab		29	
1315; off Holdens Creek, 100 yards in from 2A	menhaden	100		1 (left side of body)
	hogchoker	60-110	142	
	spot	90-120	19	
	white catfish	210-340	2	
	silver perch	100	1	
	croaker	130-180	4	
	brown shrimp		1	
	grey trout	50-70	18	
	spadefish	40	1	
<i>Site 3</i> 1340; from end of 2B up to mouth of Bullbeggar Creek	bluefish	380	1	
	menhaden	100-130		6 (anal); 1 (front of dorsal fin)
	blue crab		2	
	croaker	130	15	
	hogchoker	50-90	7	
	spot	120-150	27	
	anchovies		7	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 4</i> 1400; Bullbeggar Creek up towards Shelltown	anchovies	25-67	c.150	
	blue crab		3	
	white catfish	160-280	4	
	menhaden	95-115	2	7 (anal); 1 (caudal)
	spot	120-140	12	
	hogchoker	75-100	3	
	brown shrimp	47	1	

TOTALS: 602 fish + c. 150 anchovies

Results of Trawls Pulled in the Pocomoke River/Sound on September 18, 1997

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w Lesions
<i>Site 1</i> Near Holden Creek	menhaden	88-90	1	1
	spot	96-167	33	
	weakfish	61-92	4	
	hogchoker	62-68	4	
	bay anchovy	35-94	63	
	blue crabs	55-109	6	
<i>Site 2</i> 100 m upstream from <i>Site 1</i>	menhaden	102-126	1	1
	spot	92-184	22	
	weakfish	69-144	5	
	hogchoker	34-110	21	
	bay anchovy	26-76	66	
	blue crab	72-97	2	
	brown shrimp	54	1	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 3</i> 100 m upstream of <i>Site 2</i>	menhaden	130	1	
	spot	86-171	140	
	weakfish	32-81	24	
	hogchoker	56-118	87	
	anchovy	26-89	118	
	croaker	178-380	3	
	naked goby		1	
	white catfish	285-296	2*	
	blue crab	74-130	7	
	brown shrimp	61-80	3	
*One of the catfish had a lot of obvious redness around the anus, but not an obvious lesion.				
<i>Site 4</i> near the mouth of Bullbeggar Creek	menhaden			
	spot	107-149	17	
	weakfish	100-166	6	
	hogchoker	37-66	11	
	anchovy	24-67	66	
	harvest fish	179	1	
	pipefish	127	1	
	blue crab	17-27	3	
	brown shrimp	61	1	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 5</i> Pocomoke River across from Shelltown, MD	menhaden			
	spot	163-169	2	
	weakfish	47-127	6	
	hogchoker	51-82	4	
	anchovy	50-66	3	
	bluefish	241	1	
	blue crab	26-101	4	
<i>Site 6</i> Pocomoke River upstream of Pitts Creek	menhaden	92		1
	spot	106-132	3	
	weakfish	34-55	4	
	hogchoker	34-130	32	
	anchovy			
	flounder	254-346	3	
	white catfish	154	1	
	croaker	142-181	3	
	blue crab	92-100	3	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 7</i> Robin Hood Bay, near Saxis Island	menhaden			
	spot	113-162	3	
	weakfish			
	hogchoker	91-122	2	
	anchovy	21-61	4	
<i>Site 8</i> Robin Hood Bay, 50 m from <i>Site 7</i>	menhaden	104-111	2	
	spot	112-122	9	
	weakfish			
	hogchoker			
	anchovy	Juv.	Thousands	
	blue crab	56-81	2	

TOTALS: 781 fish + >1,000 juvenile bay anchovies
8 menhaden, 3 had characteristic lesions
No other fish had serious lesions

Salinity ranged from 13 ppt at the downstream sites to 11 ppt at the upstream site. All samples were taken on flood and slack high tides.

No sign of a fish kill or distressed fish other than the reported lesions.

Results of Trawls Pulled in the Pocomoke River/Sound on September 25, 1997

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 1</i> Upriver of Shelltown, MD	menhaden	101		1
	white perch	120-220	4	
	silver perch	111	1	
	spot	111-150	4	
	catfish (white)	93-261	6	
	hogchoker	65-115	8	
	blue crabs		2	
	Rangia		1	
<i>Site 2</i> 100 m upstream from <i>Site 1</i>	blue crab	120	1	
	spot	114-125	4	
	striped bass	182	1	
	weakfish	60	1	
	hogchoker	69	1	
	anchovy	30-60	279	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 3</i> 100 m upstream of <i>Site 2</i>	blue crab	25 and 130	2	
	flounder	256	1	
	hogchoker	40-104	9	
	spot	106-120	5	
	weakfish	48-84	2	
	anchovy	28-54	230	
	Penead shrimp	50	1	
<i>Site 4</i> near the mouth of Bullbeggar Creek	menhaden	125	1	
	blue crab	40-130	6	
	spot	94-161	7	
	silver perch	115	1	
	hogchoker	40-98	9	
	weakfish	54	1	
	anchovy	28-54	145	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 5</i> Pocomoke River across from Shelltown, MD	blue crab	70-110	9	
	spot	115-150	6	
	weakfish	81-141	7	
	hogchoker	32-71	9	
	anchovy	38-65	86	
	croaker	165	1	
<i>Site 6</i> Pocomoke River upstream of Pitts Creek	menhaden	129		1
	spot	105-134	4	
	hogchoker	53-109	5	
	anchovy	30-95	69	
	silver perch	47	1	
	blue crab	21	1	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Site 7</i> Robin Hood Bay, near Saxis Island	menhaden	96		1
	spot	94-126	2	
	weakfish	90	1	
	hogchoker	64-88	4	
	anchovy	27-85	364	
	silver perch	107-125	6	
	blue crab	58	1	

TOTALS: 1339 fish distributed among 12 species
 4 menhaden, 3 had characteristic lesions
 No other fish had serious lesions

Salinity ranged from 15 ppt at the downstream sites to 11 ppt at the upstream site. All samples were taken on flood and slack high tides.

No sign of a fish kill or distressed fish other than the reported lesions.

Results of Trawls Pulled in the Pocomoke River/Sound on October 2, 1997

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 1</i> Robin Hood Bay (salinity 16%)	spot	129	1	
	bay anchovy	24-86	74	
	juvenile perch species	19	1	
<i>Trawl 2</i> Robin Hood Bay	spot	114-115	2	
	bay anchovy	20-62	60	
	sand shrimp	26-28	2	
	blue crab	24-28	2	
<i>Trawl 3</i> Robin Hood Bay	spot	119-143	6	
	bay anchovy	28-68	49	
	silver perch	67-141	2	
<i>Trawl 4</i> Near Holden Creek (salinity 13%)	spot	104-127	3	
	bay anchovy	43-50	4	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 5</i> Near Holden Creek	spot	105-122	8	
	bay anchovy	44-56	12	
	striped bass	190	1	
	silver perch	167	1	
	hogchoker	64	1	
	blue crab	91-141	2	
<i>Trawl 6</i> Near Holden Creek	spot	111-136	4	
	bay anchovy	28-64	71	
	silver perch	134	1	
	hogchoker	76	1	
	blue crab	35-109	5	
<i>Trawl 7</i> Near Pitts Landing (salinity 13%)	spot	113-181	15	
	white perch	157-169	2	
	hogchoker	40-110	90	
	blue crab	55-122	12	
	weakfish	84-289	2	
	white catfish	91-265	99	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 8</i> Near Pitts Landing	spot	122-150	4	
	silver perch	34*	3	
	hogchoker	54-139	41	
	blue crab	46-138	6	
	weakfish	68-99	9	
	white catfish	84-181	26	
	flounder	229	1	
	menhaden	135		1
*only one measurement was taken				

TOTALS: 624 fish distributed among 13 species
1 menhaden with lesions

Results of Trawls Pulled in the Pocomoke River/Sound on October 9, 1997

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 1</i> Robin Hood Bay (salinity 18 ppt, 24°C)	blue crab	12-140	4	
	spot	117-123	6	
	anchovy	22-75	24	
	hogchoker	81	1	
	silver perch	32	1	
<i>Trawl 2</i> Robin Hood Bay	blue crab	26-125	4	
	spot	112-115	6	
	sand shrimp	37	1	
	anchovy	24-52	137	
<i>Trawl 3</i> Williams Pt., Holden Creek (salinity 16 ppt. 24°C)	hogchoker	57-81	3	
	anchovy	28-70	67	
	spot	15-22	2	
	silver perch	14-20	2	
	sand shrimp	26-34	3	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 4</i> Williams Pt., Holden Creek	blue crab	150-155	2	
	hogchoker	72	1	
	anchovy	35-68	132	
	sand shrimp	36	1	
<i>Trawl 5</i> Pocomoke &upstream Shelltown) (salinity 12 ppt., 24°C)	white perch	160-191	10	
	blue crab	115-120	6	
	striped bass	230-265	3	
	white catfish	93-235	3	
	menhaden	102		1
	silver perch	115-120	5	
	grey trout	179	1	
	hogchoker	39-104	3	
	spot	120-149	33	
	anchovy	29-56	38	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 6</i> Pocomoke	blue crab	24-139	5	
	hogchoker	90	1	
	spot	104-148	2	
	anchovy	35-50	242	

TOTALS: 750 fish distributed among 11 species
1 menhaden with lesions

Results of Trawls Pulled in the Pocomoke River/Sound on October 17, 1997

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 1</i> Robin Hood Bay (salinity 19 ppt, 18°C)	blue crab	22-91	4	
	spot	112-150	8	
	anchovy	28-60	12	
	silver perch	18	1	
<i>Trawl 2</i> N. end Robin Hood Bay	blue crab	88	1	
	striped bass	220	1	
	silver perch	22-120	6	
	spot	120	2	
	hogchoker	106	1	
	anchovy	23-62	110	
<i>Trawl 3</i> Holden Creek (upcreek mouth) (salinity 16 ppt, 18°C)	hogchoker	72	1	
	anchovy	28-55	27	
	spot	102-166	5	
	blue crab	32-97	2	
	white perch	136	1	
	mud crab	10-11	18	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 4</i> west of Holden Creek	striped bass	171	1	
	blue crab	24-33	2	
	hogchoker	75	1	
	spot	108-131	5	
	silver perch	21	1	
	anchovy	26-63	22	
	sand shrimp	36	1	
<i>Trawl 5</i> in front of Bullbeggar Creek	alewife	115	1	
	hogchoker	69-78	3	
	spot	100-112	2	
	anchovy	26-78	39	
	blue crab	32	2	
	sand shrimp	34-37	3	
	silver perch	25	1	

General Collection Times/Locations	Type	Size (mm)	# w/o Lesions	# w/Lesions
<i>Trawl 6</i> Pocomoke (upstream Shelldown) (Salinity 13 ppt, 19°C)	weakfish	330	1	
	striped bass	455	1	
	alewife	120	1	
	blue crab	31-122	17	
	white catfish	110-172	2	
	white perch	173-226	14	
	hogchoker	65-110	8	
	spot	109-197	62	
	anchovy	31-64	40	
	silver perch	31-33	3	
	sand shrimp	43	1	
<i>Trawl 7</i> Pocomoke	blue crab	65-94	8	
	spot	112-158	7	
	hogchoker	43-112	3	
	silver perch	22-48	7	
	white catfish	98	1	
	sand shrimp	30-41	2	

TOTALS: 464 fish distributed among 12 species
no lesions found