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Supplement to The public oyster grounds of the Rappahannock River

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SUPPLEMENT to

"The Public Oyster Grounds of the Rappahannock River "

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4 January 1957

A. Introduction

In the spring of 1952 a summary was made of conditions on the Rappahannock River oyster grounds for the previous five years. Five more years have passed but little change is noted in this river. The exceptionally heavy set above Towles Point in 1954 and an apparent decline in setting below the Point are the chief deviations from the patterns described in 1952. A severe loss of oysters in the Rappahannock from hurricanes in August 1955 accentuated a scarcity which appears to be general on the Atlantic Coast. A period of unfavorable weather in the form of hurricanes and high temperatures has caused or intensified this scarcity. Prices have continued to rise, consequently, and probably effort to catch oysters has been increased.

B. Setting

The unusual set of 1954 extended from Drummond Ground to Morattico but not in the lower river or above Morattico. The set occurred late, probably mostly in September, whereas the usual meager set is early--predominantly in July. This one heavy set, though it fell between two serious mortalities, has given the Rappahannock oyster bars a temporary reprieve from depletion. Without it the upper Rappahannock would have been rather unproductive for several years after the 1955 loss; yet in spite of the usual low set the upper river did recover enough from the 1949 mortality to entice a moderate number of oystermen into the area in 1953 and 1954. This was possible only because death rates, other than in the two catastrophic periods, are even lower than setting rates and because the grounds were not exploited for several years after the 1949 mortality.

A high proportion of the 1954 set was on old market oysters and many young oysters were lost in the two succeeding seasons of tonging

before culling was practical. In the summer of 1955, after a reminder from Capt. Doggett, plans were being made to recommend to the Commission of Fisheries that some bars be closed to tonging to save these young oysters and permit them to mature. The mortality of August 1955 and the ensuing scarcity of oysters quickly forced us to abandon this proposal. Nevertheless, from the standpoint of yield to oystermen, the upper Rappahannock River, an area where death rates are low, should have been closed during the 1955-56 season and possibly the previous season also. Had this been done in the 1954-55 season, however, the subsequent losses of August 1955 would have brought no end of criticism.

C. The Supply of Shell

The supply of shell has not changed greatly in the past five years. No doubt there will be some loss of shell when the 1954 set has been harvested but there still appears to be plenty of shell in the upper river. No doubt scarcity of setting surfaces inhibits the set somewhat in the lower river. Two of the biggest grounds, Drummond Ground and Parrott's Rock, appear to have little but cinder or shell fragments and sponge on the bottom. Fouling, particularly by yellow and red sponges, is a far more serious factor in the lower river than in the upper, and every effort should be made to plant shells as late (June) before the setting period (July) as possible. It would be desirable to remove as much of the sponge as possible from these beds but no feasible program for this can be suggested.

D. Mortalities

The usual pattern of moderate death rate in the lower river and very low rate in the upper river has not changed except for the unusual losses of June or July 1949 and August 1955. There have been minor fluctuations and the summer and fall of 1954 was a period of higher losses than usual. A very localized winter mortality of oysters on Ferguson's ground above Rogues Hole was encountered in February 1956; this was of interest because although winter losses are rare, mortalities of even greater extent were reported from Maryland at about the same time. The causes are unknown.

It has been observed that most boxes (clocks) break apart after one summer of deterioration. The boxes left after the sudden mortality in August 1955 were still quite evident in the fall survey of 1955 and again in July 1956 but by November 1956 nearly all had broken apart.

E. Drill Activities

In the previous report fear was expressed that drills were increasing after the fresh-water cleanout of 1945. This has not occurred; drills are no more abundant, and possibly less so, than in the early fifties. Several springs have been moderately wet and some losses from fresh-water kill were experienced in the upper James. On the other hand summers have been dry and hot and salinities suitable for drills have persisted as high as Ross Rock in the summer and fall.

It does not appear that drills are destructive enough in the Rappahannock River now to justify control efforts such as were discussed in the earlier report.

F. Growth and Fattening

It has been our impression that growth of the 1954 year-class has been poor, but no firm data are available and it may be that we have compared these late-set oysters with the early set, which makes considerable growth the first summer.

Variations in the condition or fatness of oysters remain a puzzle to us. Oysters in the Rappahannock were poor each winter after the 1949 mortality but gradually improved each season and were quite fat in the season of 1954-55. The condition dropped abruptly after the August 1955 losses but recovered fairly well in the fall. This past fall of 1956, however, oysters which seemed to have every opportunity to become fat remained poor and only in the month of December did they reach a fair degree of fatness. Obviously we do not yet know the factors regulating fattening.

G. Recommendations

While the upper Rappahannock promises fairly good oystering for several years, we believe the lower Rappahannock may disappoint oystermen in the near future. We believe that efforts should be made to plant as much shell as possible in this area as late in the season as possible.

We continue to recommend that new seed areas be developed in Corrotoman and Piankatank Rivers. These rivers offer a better chance of producing a set than the Rappahannock, and their use as seed areas with shell planting by the State would provide more work and income to local tongers than they now realize from market oysters.

TABLE 1

Spatfall on Natural Culch in the Rappahannock

(Average number of spat per bushel for all bars sampled)

YEAR	BELOW TOWLES' POINT	ABOVE TOWLES' POINT
1952	97	6
1953	70	8
1954	105	237
1955	60	10
1956	56	7
Five years average	78	54

TABLE 2

Live Oysters and Shell Reserve in Rappahannock River, 1952-56

(Average number per bushel of natural culch)

AREA	LIVE OYSTERS			Blank shells	Cinder per cent of bushel
	Market	Small	Spat		
Below Towles' Point					
1952	65	143	97	99	9
1953	68	130	70	125	6
1954	103	100	105	81	11
1955	78	78	60	119	26
1956	45	64	56	118	10
Above Towles' Point					
1952	55	72	6	145	23
1953	53	54	8	227	15
1954	92	52	237	103	20
1955	43	311	10	101	32
1956	24	239	7	82	22
Whole River					
1952	59	101	42	141	17
1953	55	78	26	199	14
1954	96	69	190	95	17
1955	55	245	24	106	30
1956	30	192	20	93	18