7-15-1970

Marine Resource Information Bulletin Vol. 2, No. 7

Virginia Sea Grant

MARINE RESOURCE INFORMATION

VIRGINIA INSTITUTE of MARINE SCIENCE BULLETIN

Vol. 2 No. 7 July 15, 1970

Weekly Summary For June-July

WEEKLY OYSTER SPATFALL ON SHELLSTRINGS IN VIRGINIA RIVERS

Prepared by the Virginia Institute of Marine Science
at Gloucester Point, Virginia 23062

JUNE-JULY 1970

Explanation

The Applied Biology Department in the Division of Applied Marine Science and Ocean Engineering at VIMS conducts regular surveys of oyster "setting" in Virginia rivers. These surveys are made weekly from the end of May through the beginning of October each year. Beginning at the mouth of each river and proceeding upstream to the limits of oyster setting, collecting areas are established on public and private beds. Counts of the number of oysters setting are obtained from a string of of oyster shells strung on wire and suspended from stakes at these locations. The number of spat which set in one week on the smooth side of each shell on the string are tabulated.

Use of Information

Using the numbers of spat counted on shells during each week of the spawning season, it is possible to estimate 1) the potential of a particular area for receiving a "strike" or set of oysters, and 2) the weeks when the strike occurs. This information is useful because shells planted just before the period of maximum set have the best chance of getting a good strike. For example, spatfall counts indicated that in the Great Wicomico River optimum time for planting shells and shellbags was the last week in June during the past year; cultch planted later than mid-July had little chance for receiving a strike.

A good strike on shellstrings usually indicates that a strike has taken place on bottom shells. However, a good strike on shellstrings in some locations may not be accompanied by good spatfall on the rock.

One reason for such a failure is that bottom shells can be so fouled by other marine life -- much of which cannot even be detected with the naked eye -- that no room is left for small spat to attach. Even with a reasonable spatfall, survival may be extremely low due to predators such as screw borers in the saltier waters, which kill many small oysters soon after attachment.

To provide information on the actual situation on the rocks, a companion survey of spatfall on bottoms will be issued in November 1970. This will help in determining the success of this year's strike on bottom shells and can be compared to the information presented in the series of tables attached to this report.

Key

Spat per Shell = a derived figure denoting the average number of spat set on the smooth side (one side only) of a shell.

To obtain approximate number of sets on both sides of oyster shells on shellstrings, total and spat per shell counts may be doubled. Figures are presented here for one side only because it is difficult to accurately count spat on the rough side of an oyster shell.

Index
0 to 1 spat per shell = poor set
2 to 10 spat per shell = fair set
11 to 100 spat per shell = good set

QUESTIONS CONCERNING SETTING AND SPATFALL MAY BE ADDRESSED TO MR. DEXTER HAVEN, VIRGINIA INSTITUTE OF MARINE SCIENCE, GLOUCESTER POINT, VIRGINIA 23062.

List of stations in various rivers in Virginia. The table shows average number of spat on a single oyster shell (smooth side only). See charts on following pages for locations.

	June 15-22	June 22-29	June 29 to July 6
JAMES RIVER			
Brown Shoals	0	0	0
Wreck Shoals	0	0	0
Horse Head	0	0	0
Point of Shoals	0	0	0
Deepwater Shoals	0	0	0

	June 17-24	June 24 to July 1	July 1-8
YORK RIVER			
VIMS Pier	0	0	0
Clay Bank	0	0	0
Foxes Creek	0	0	0

	June 18-25	June 25 to July 2	July 2-9
MOBJACK BAY AREA			
1 North River head	8.2	0	0
2 North River Black Water Cr	1.4	0	0
3 North River Cedar Point	0	0	0
4 East River head	1.2	26.7	.1
5 East River Put-In Creek	1.2	.3	0
6 East River mouth	0	0	0
11 Williams Wharf	.5	2.6	0

	June 18-25	June 25 to July 2	July 2-9
NEW POINT COMFORT AREA			
7 Pepper Creek	.5	0	.1
8 Dyer Creek	0	0	0
9 Horn Harbor	0	0	0
10 Winter Harbor	0	0	.4

	June 16-23	June 23-30	June 30 to July 7
PIANKATANK RIVER AREA			
1 Milford Havan	0	0	1.0
2 Stoakes Creek	0	0	2.3
3 Point Breeze	0	0	.6
4 Three Branches	N.S.*	0	2.0
5 Iron Point	0	0	10.6
6 Island Bar	0	0	13.1
7 Ginney Point	0	0	11.5
8 Twiggs	0	0	.5
9 Ferry Point	0	0	7.0
10 Hill Bay	0	0	2.8
11 Stutts Creek	0	0	1.7

*Not Sampled

	June 15-22	June 22-29	June 29 to July 6
GREAT WICOMICO RIVER			
3 Off Mill Creek	0	48.7	17.8
7 Off Cranes Creek	8.7	132.7	9.9
8 Off Fleet Point	.3	26.6	.9
9 Off Cockrells Creek	0	44.5	7.8
10 SW Haynie Point	9.1	283.3	112.5
11 Off Shell Creek	42.7	290.2	57.2
13 Glebe Point	31.0	227.8	530.7

	June 24 to July 1	July 1-8
NANSEMOND RIVER		
Nansemond Ridge	0	0
Larken's Rock	0	0
Half Pone	0	0

MARINE RESOURCE INFORMATION BULLETINS are prepared and distributed by the Information and Education Department, Virginia Institute of Marine Science, Gloucester Point, Virginia 23062, as part of a Sea Grant Advisory Services, Project under P.L. 89-688. Bulletins are mailed to persons in the seafood industry as well as to others using or managing the sea for profit or service. Purpose is to inform on matters relating to use, development, and replenishment of marine resources, including scientific studies, technological advances, legislation and problems. Copies of Bulletins are available free of charge. Anyone wishing to receive Bulletins regularly should write in care of the Institute. References to trade names of commercial products do not imply endorsement by VIMS.

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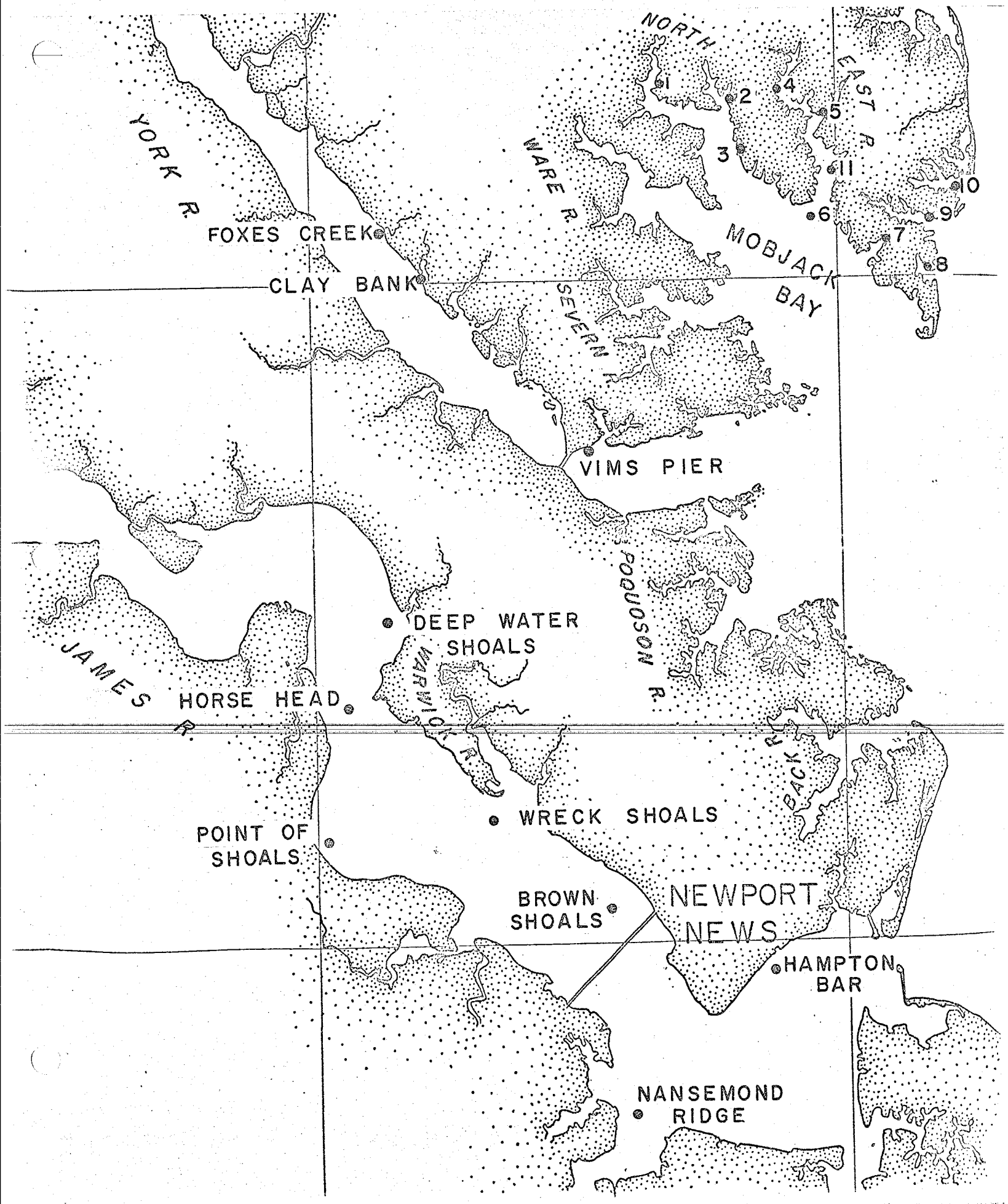
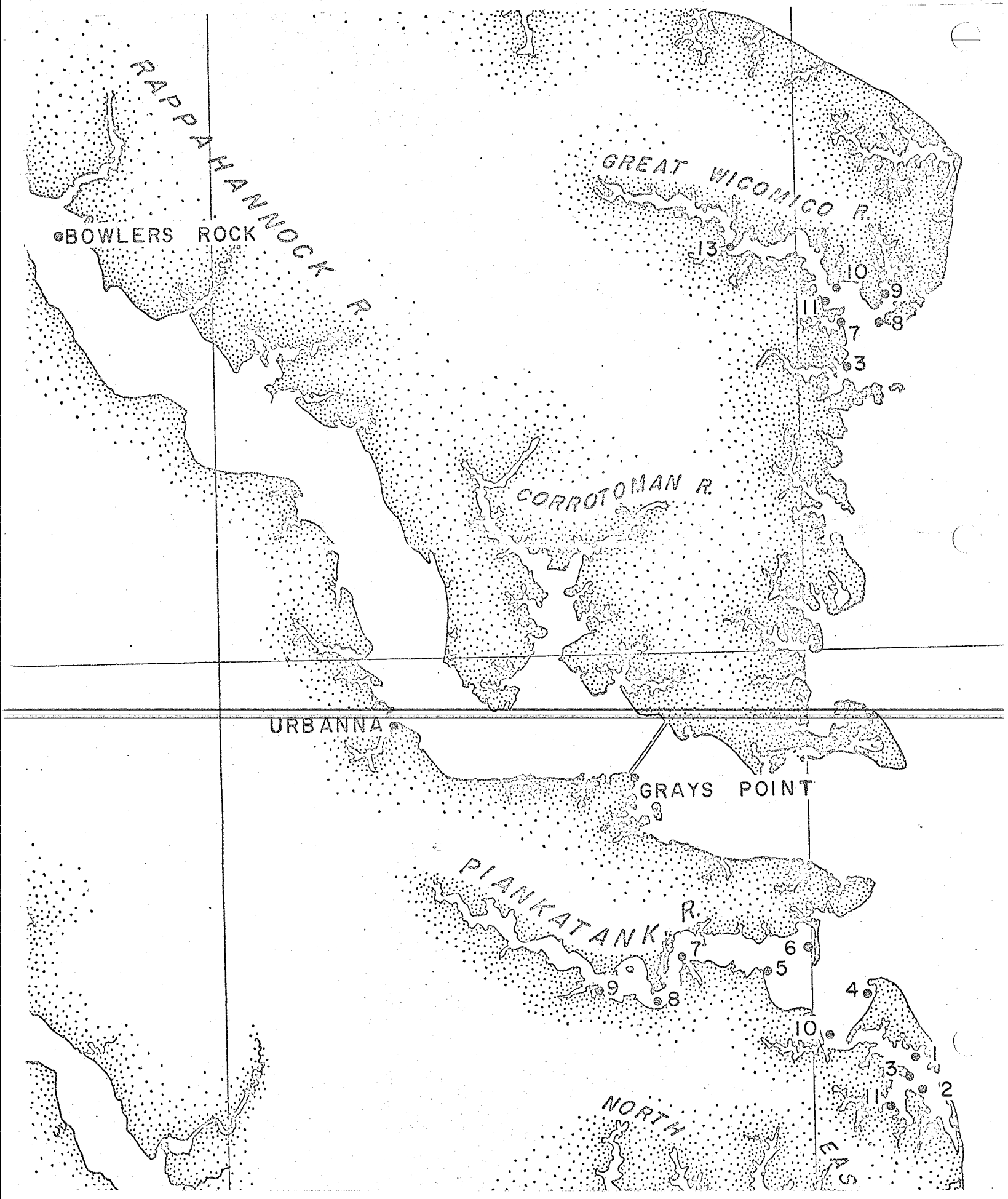

NORTH
EAST R.
YORK R.
WARE R.
MOBJACK BAY
1
2
3
4
5
6
7
8
9
10
11
FOXES CREEK
CLAY BANK
SEVERN R.
VIMS PIER
POQUOSON R.
DEEP WATER SHOALS
WARWICK R.
JAMES R.
HORSE HEAD
BACK R.
WRECK SHOALS
POINT OF SHOALS
BROWN SHOALS
NEWPORT NEWS
HAMPTON BAR
NANSEMOND RIDGE


RAPPAHANNOCK R.
BOWLERS ROCK
GREAT WICOMICO R.
13
10
9
11
8
7
3
CORROTOMAN R.
URBANNA
GRAYS POINT
PIANKATANK R.
7
6
5
9
8
4
10
1
3
2
11
NORTH

CERTIFIED CRAB MEAT PLANT IN VIRGINIA

Prepared by the Tri-State Seafood Committee and the Virginia Institute of Marine Science as an aid to seafood buyers in locating certified crab meat suppliers.

VIRGINIA

Virginia crab plants are certified by the Virginia Department of Health. All certificates expire March 31, 1970 unless cancelled or revoked prior to that date.

Name	Address	Plant No.
W.H. Allen & Sons	Gwynn	VA 23 C
Blake and Bass Seafood Co., Inc.	Newport News	VA 45 C
Capt. Faunce Seafood	Montross	VA 77 C
Channel Crab Co., Inc.	Norfolk	VA 40 C
Chesapeake Crab Company	Hampton	VA 9 C
Dawson Packing Co., Inc.	Yorktown	VA 11 C
Eastern Shore Seafood, Co.	Onancock	VA 51 C
G.T. Elliott, Inc.	Hampton	VA 37 C
Ewell & Freeman Seafood Co., Inc.	Seaford	VA 72 C
E. J. Fleming	Portsmouth	VA 44 C
W. Haywood Forrest Seafood Co., Inc.	Poquoson	VA 58 C
Graham & Rollins, Inc.	Hampton	VA 17 C
Gwynn's Island Seafood Co., Inc.	Grimstead	VA 71 C
P. K. Hunt & Son	Hampton	VA 16 C
Keyser Bros., Inc.	Lottsburg	VA 5 C
Lawson Seafood Co., Inc.	Hampton	VA 6 C
Martin & Richardson Seafood Co., Inc.	Newport News	VA 18 C
Millers Crab Shore	Colonial Beach	VA 36 C
Nandua Seafood Co.	Hacks Neck	VA 22 C
Old Dominion Crab Co., Inc.	Newport News	VA 19 C
Phillips Seafood Co.	Hampton	VA 74 C
M. F. Quinn Seafood, Inc.	Hampton	VA 25 C
R. C. V. Seafood Corp.	Morattico	VA 35 C
Rappahannock Oyster Co.	Kilmarnock(Byrdton)	VA 12 C
Richardson's Seafood, Inc.	Hampton	VA 76 C
Smith Seafood Co.	Reedville	VA 69 C
George D. Spence & Son	Quinby	VA 75 C
Tidewater Crab Co., Inc.	Newport News	VA 39 C
Herbert Wilkerson & Son	Colonial Beach	VA 13 C
York Crab & Oyster Co., Inc.	Seaford	VA 33 C
York River Seafood Co., Inc.	Perrin	VA 43 C

U.S. - POLAND AGREEMENT RESTRICTS FISHING FOR RIVER HERRING, MENHADEN, SEA BASS

The United States and Poland signed in Washington on June 13, 1970 an agreement on high seas fisheries off the Middle Atlantic Coast of the United States. This agreement constitutes an extension and modification of a fisheries agreement which was originally concluded June 12, 1969, in Warsaw, Poland, to protect scup, flounder and hake. It broadens the protective measures to apply to black sea bass, menhaden, and river herring.

The fisheries agreement between the United States and Poland specifies that fishermen from neither country will conduct specialized fisheries for scup, flounders, red hake, silver hake, menhaden, black sea bass, and river herring in the coastal waters from Block Island, Rhode Island to Cape Fear, North Carolina. A provision of the agreement exempts vessels of less than 110 feet, allowing most coastal vessels of the U.S. to continue their normal fishing operations. Although the menhaden fishery employs carrier vessels longer than 110 feet, the actual fishing unit is a pair of small aluminum purse boats which handles the purse seine and, therefore, is not restricted by the agreement.

The chief articles of agreement reached with the Poles in June are these:

Poland will not fish for scup, flounder, hake, black sea bass, menhaden, or river herring along the Middle Atlantic Coast and will take special precautions to avoid depletion of those resources throughout the year.

Under the previous agreement of 1964 a specified area of the Middle Atlantic, roughly between the 35-fathom curve and the 100-fathom curve, was closed to Polish fishermen from January 1 through March 31. The new agreement extends this exclusion time through the first two weeks in April hoping that this will offer some further degree of protection to scup, flounder, sea bass, red hake and silver hake.

Polish fishermen, in return for this agreement to accept these conservation restrictions on high seas fishery activities, will continue to be allowed to use three loading zones (see accompanying map) within the 9-mile contiguous fishing zone of the U.S. One of these is off Long Island, one is off the coast of New Jersey south of Atlantic City, and the third is off the coast of Virginia, north of the mouth of Chesapeake Bay. These zones may not be used during the summer. No fishing by Polish vessels is allowed within the contiguous fishing zone of the U.S.

Each Government will continue to provide for entry of a certain number of fishing and supply ships into certain parts of the other country. Ports open to Polish vessels under certain restrictions are: Boston, New York, Philadelphia, Baltimore and Norfolk.

The Agreement provides for cooperation in fishery research designed to improve future conservation programs in the Middle Atlantic.

The high seas for the United States, beyond 12 miles, are open to fishermen of all nations as a principle of international law. Therefore,

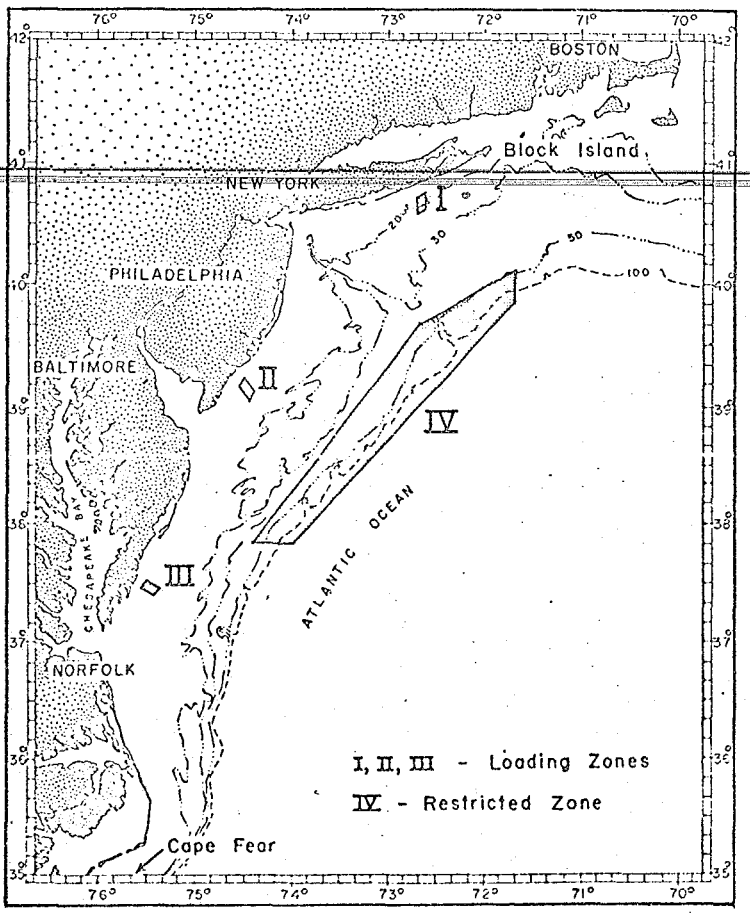
sound and convincing evidence must be presented to persuade a nation to restrict its fishing. Although actual negotiations were conducted by the State Department, Virginia catch records for river herring provided by the Institute of Marine Science strengthened the U.S. position in reaching an agreement with the Poles on that phase of the offshore fisheries.

These records, which showed appreciable declines in catches in the 1970 season were presented to the U.S. delegation by Dr. William J. Hargis, Jr., Institute Director and Dr. Jackson Davis, Head of the Department of Ichthyology at VIMS, who served as advisors to the U.S. negotiating team. The figures they presented helped convince the Poles that conservation would best be served by agreeing not to fish for river herring off our coast.

Poland recorded a catch of only 65 tons of river herring off the mid-Atlantic in 1969, these having been taken incidental to their fishing for sea herring and mackerel. Although the Polish catch of river herring has been small, that of the Soviet Union has been increasing as their fishing activity off the U.S. coast has expanded. In 1967 the U.S.S.R. reported a catch of 6,500 tons of river herring, in 1968 23,300 tons, and in 1969 their preliminary figures indicate a catch of about 34,000 tons. The Soviets catch river herring all along the U.S. coast, not just the area off the coast of Virginia and North Carolina.

The annual catch in Virginia averaged about 15,000 tons through 1968. In 1969 a decline started which reached alarming proportions this year when the catch fell to an estimated 7,500 tons. Evidence strongly implicates severe fishing pressure as the cause. The catch in the U.S. averaged 28,000 tons per year between 1963 and 1967.

Renegotiation of the bilateral fisheries agreement with the U.S.S.R. is scheduled for January 1971.



MIDDLE ATLANTIC REGION