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Virginia Institute of Marine Science

MARINE RESOURCE INFORMATION

VIRGINIA INSTITUTE of MARINE SCIENCE BULLETIN

Vol. 3, No. 3 February 12, 1971

U.S.-SOVIET FISHING PACT MODIFIES EARLIER AGREEMENT

The United States and the Soviet Union last week signed in Washington, D.C. an addition to the bilateral fisheries agreement between the two countries on fisheries off the middle Atlantic coast of the United States. The addition covers fishing for river herring and the question of port calls -- matters which were left unresolved when the agreement was signed on December 11, 1970. At that time it was agreed that the two delegations would meet again to consider these matters further.

American fishermen and scientists have been concerned about recent declines in the river herring fishery. This decline coincided with the development of a Soviet fishery for river herring off the middle Atlantic coast. Although it was not possible to reach agreement on the meaning of the data available, it was agreed that interim measures are necessary for the conservation and protection of these stocks. Under the terms of the addition to the agreement, the Soviet Government has agreed to limit its catch of river herring to 4,000 tons in each of the two years covered in the agreement. The Soviet catch of river herring in 1969 was over 10,000 tons. Although final figures are not yet available, preliminary data indicated that both the American and Soviet catches of river herring declined in 1970. It was also agreed that scientific research on river herring should be intensified, looking towards more permanent conservation measures for this species.

In return for the limitation on the Soviet catch, the U.S. agreed to allow Soviet fishing and fisheries support vessels to make up to four calls per month to the middle Atlantic ports of Baltimore and Philadelphia. These calls will be primarily for the purpose of securing food, water and other supplies.

The fishing agreement concluded in December is an extension and modification of a fishery pact which was originally concluded on November 25, 1967 in Moscow and amended and extended through 1970 on December 13, 1968 in Washington. The new agreement went into effect January 1.

The American delegation was led by Ambassador Donald L. McKernan, special assistant for Fisheries and Wildlife to the Secretary of State. The Virginia Institute of Marine Science represented the Commonwealth by advising the State Department on matters of concern in Virginia. Experts and advisers from Connecticut, Maryland, Massachusetts, New Jersey, New York, North Carolina, Rhode Island, and Washington, D.C. also participated in the negotiations, along with officers of the Departments of State and Commerce, the Coast Guard and the U.S. Navy. The Soviet delegation was led by First Deputy Minister V. M. Kamentsev of the Soviet Ministry of Fisheries in Moscow.

In brief, the agreement provides for the following:

--Fishing by vessels longer than 110 feet is prohibited from January 1 through April 15 in an area of the outer continental shelf extending

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AREA COVERED BY THE FISHERIES AGREEMENT BETWEEN THE U.S. AND U.S.S.R.

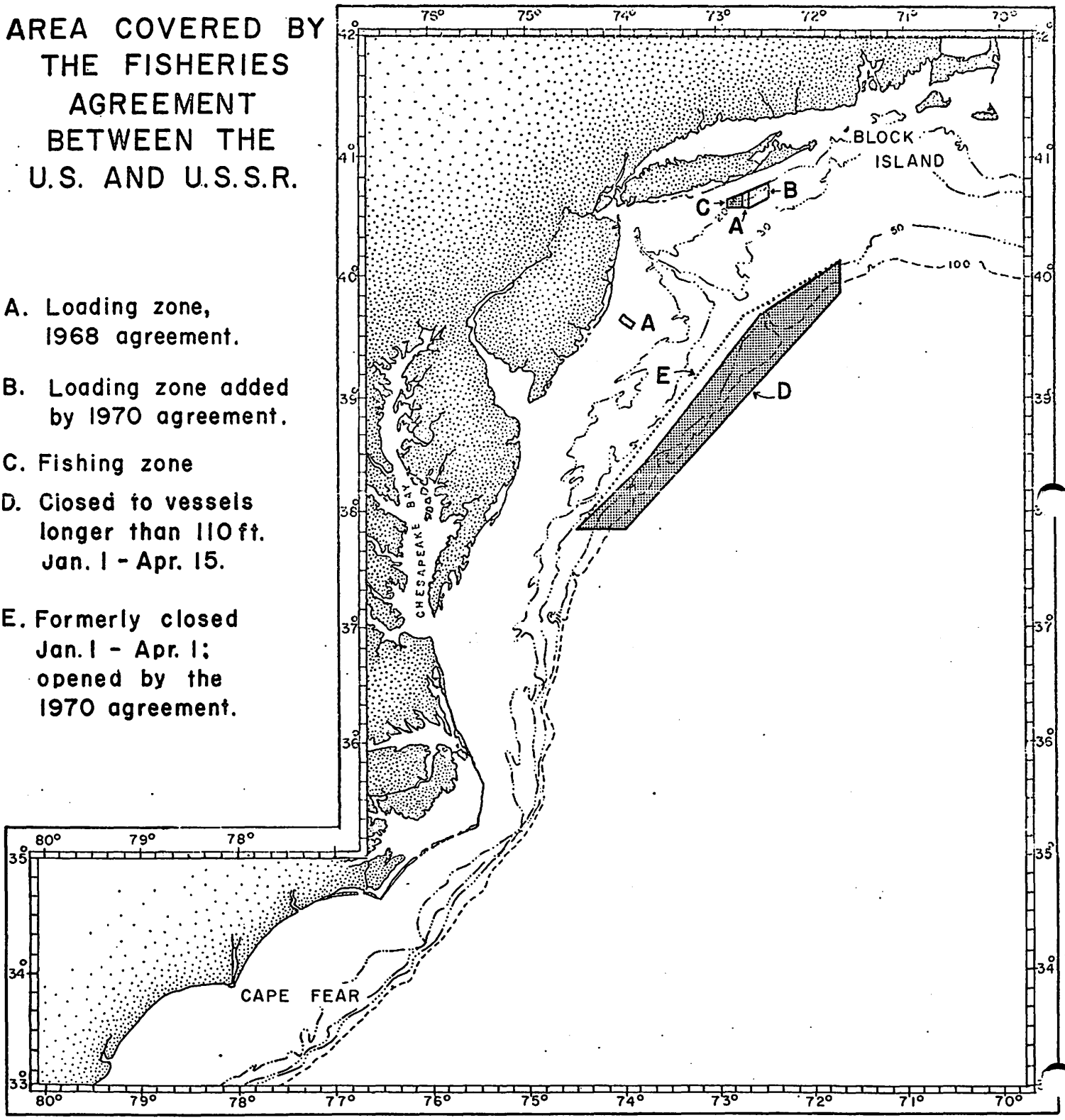
A. Loading zone, 1968 agreement.

B. Loading zone added by 1970 agreement.

C. Fishing zone

D. Ciosed to vessels longer than 110 ft. Jan. 1 - Apr. 15.

E. Formerly closed Jan. 1 - Apr. 1; opened by the 1970 agreement.



from south of Block Island to east of Chincoteague, Va.

--The USSR will not increase its catch of scup, flounders, black sea bass, red hake, and silver hake above the quantity caught in 1967 and will not conduct specialized fisheries for scup and flounders.

--Fishing for menhaden is prohibited on the high seas during the period from January through April.

--Soviet fishing and support vessels are given permission to conduct loading operations at certain times of the year in two prescribed areas within the U.S. nine-mile fishery zone contiguous to the territorial sea. One of the areas is off Long Island; the other is off Atlantic City, N.J.

--The Soviets are given permission to fish in a small portion of the nine-mile fishery zone off Long Island from January through March.

--Each government will facilitate entry into its ports by fishing vessels and fishery research vessels of the other government.

--Exchange of visits of representatives of fishermen's orginizations of the two countries to each other's fishing vessels operating in the middle Atlantic is provided for.

--The area to which the agreement applies is extended southward to Cape Fear, N.C., from the previous boundary at Cape Hatteras.

--Joint research and exchange of data on fisheries of mutual interest are provided for.

Fishery resources of the high seas are, according to the currently accepted principles of international law, the common property of the world community. Once fish are caught, they become the property of the fishermen. International law also specifies that all nations have equal rights to fish on the high seas. Therefore, fisheries resources of the high seas can be managed, or conserved, only by agreement among those governments whose citizens harvest such resources and the enforcement of appropriate conservation measures by those governments. Generally, a government will yield its rights to fish on the high seas only in the case of clearly necessary and equally applicable conservation procedures, or in a case in which one nation yields its rights for some compensation provided by another nation. Therefore, the Soviets will not agree to restrictions on its fishery which benefit the U.S. unless compensations are provided.

In 1966, the Soviet Union expanded significantly her fishery in the middle Atlantic Bight, having earlier established a fishery in the waters north and east of Cape Cod, which are covered by the International Commission for the Northwest Atlantic Fisheries (ICNAF). The impact of the Soviet fishery on the fish stocks led the U.S. to seek agreement with the USSR on alleviation of some of the economic and biological problems caused by the rapid expansion of the activities of the large, mobile Soviet fleet in the middle Atlantic, an area which U.S. fishermen have historically had to themselves with little foreign competition.

When first approached, the Soviets would agree to no restrictive measures, but agreed to a joint study of the fishery resources between Cape Cod and Cape

Hatteras, which was conducted in the fall of 1967. Soon after completion of the survey cruise, the Soviets agreed to meet with the U.S. to discuss fisheries problems. An agreement, effective for one year, was signed on November 25, 1967. This agreement was re-negotiated and modified somewhat in 1968 and extended for two years. The recently signed agreement -- a further modification which has a life of two years -- adds black sea bass and menhaden to the four species (flounder, red hake, silver hake and scup) covered in the 1967 conservation pact.

A large offshore area which has been closed to fishing by large vessels during the months of January, February and March will now be closed January 1 through April 15. The area is on the high seas well outside U.S. jurisdiction. The closure protects vulnerable winter concentrations of scup and flounders and ensures access of red hake and silver hake to the spawning grounds. The additional two weeks protection is helpful to U.S. fishermen, according to VIMS scientists who participated in the negotiations, and represents a significant limitation on the Soviet fishery.

Fishing for menhaden is prohibited during January through April seaward of the 12-mile-wide coastal zone over which the U.S. exercises exclusive jurisdiction. During the rest of the year the bulk of the menhaden population is within U.S. waters. Notable exceptions are May, November and December when menhaden are migrating. However, the U.S. fishery has traditionally harvested these migrating schools on the high seas and was understandably reluctant to restrict that part of its normal fishing season. The period of closure includes a significant portion of the spawning season.

The two delegations also agreed that there is an urgent need to adopt conservation measures in the mid-Atlantic for sea herring, the stocks of which are clearly depleted. The herring stocks in this area migrate northward during the summer months to waters off New England, where conservation regulations come under the multilateral ICNAF. Since the largest portion of the herring catch is taken in the ICNAF area, and since the 15 members of ICNAF are expected to adopt conservation regulations for herring at the annual meeting next June, the U.S. and USSR agreed to press for the adoption of effective measures by ICNAF, after which they would meet again to extend the ICNAF measures to the area of the present agreement. It is anticipated that the two delegations will meet later in 1971 in time to agree to conservation regulations for sea herring to be applied to the 1971-72 winter fishery in the mid-Atlantic.

Although the new agreement is for two years, it will be possible to amend it at any time, as has been done for river herring and as is contemplated for sea herring, or even to completely re-negotiate it if this should be necessary in light of developments in the fisheries.

On February 2, 1971 an observer from VIMS accompanied personnel of the U.S. Coast Guard and the National Marine Fisheries Service on a surveillance flight over the area from Cape Hatteras, N.C. to Ocean City, Md., from the 12 mile limit to 40-50 miles offshore. The weather was clear with 20-mile visibility. Total number of vessels operating in the area were: Soviet-58; East German-11; Bulgarian-1; Norweigian-1, and U.S.-3. (See map on page 5). Most of the fishing vessels were operating 20-24 miles off shore. Some of the side-trawlers were loaded with fish, most of which, from the altitude of 200 feet, appeared to be sea herring. The smaller fishing vessels were unloading their catches on refrigerated transports. No base ships were observed in the area.

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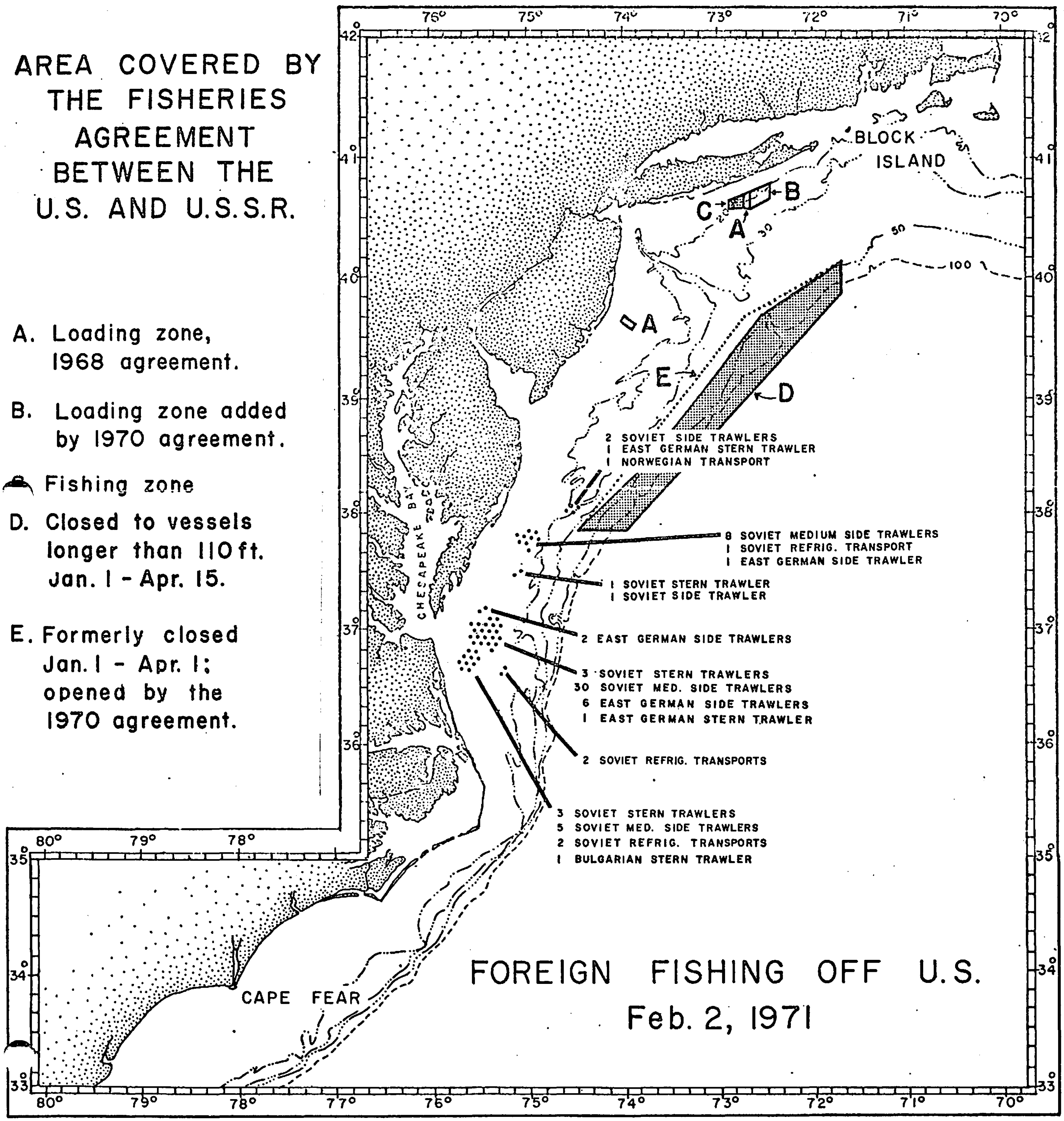
AREA COVERED BY THE FISHERIES AGREEMENT BETWEEN THE U.S. AND U.S.S.R.
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BLOCK ISLAND
CHESAPEAKE BAY
CAPE FEAR
2 SOVIET SIDE TRAWLERS
1 EAST GERMAN STERN TRAWLER
1 NORWEGIAN TRANSPORT
8 SOVIET MEDIUM SIDE TRAWLERS
1 SOVIET REFRIG. TRANSPORT
1 EAST GERMAN SIDE TRAWLER
1 SOVIET STERN TRAWLER
1 SOVIET SIDE TRAWLER
2 EAST GERMAN SIDE TRAWLERS
3 SOVIET STERN TRAWLERS
30 SOVIET MED. SIDE TRAWLERS
6 EAST GERMAN SIDE TRAWLERS
1 EAST GERMAN STERN TRAWLER
2 SOVIET REFRIG. TRANSPORTS
3 SOVIET STERN TRAWLERS
5 SOVIET MED. SIDE TRAWLERS
2 SOVIET REFRIG. TRANSPORTS
1 BULGARIAN STERN TRAWLER
FOREIGN FISHING OFF U.S.
Feb. 2, 1971

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PINK COLORATION IN OYSTERS

By Victor G. Burrell
VIMS Extension Agent

Occasionally, shucked oysters will develop a pink color. Usually the color is not present when the oysters are shucked and packed, which makes the problem more serious for the packers. Two types of pink coloration are the greatest concern to the Chesapeake Bay area. One is caused by pink "yeast" which grows and develops in the "pack." This problem can be controlled by proper plant sanitation. The second type of pink coloration appears to be caused by a plant pigment taken in by the oyster when it feeds.

The organism causing the second type of pink coloration is not known. However, some things have been discovered about this coloring agent in soft clams which appears to be identical to the coloring agent in oysters:*

1. The development of the pink color is not due to growth of a living organism in the clam. This means that it is different from yeast growing in the pack.

2. The pigment causing the color is held in the digestive gland, not in the gills as in green gilled oysters.

3. The pigment causing the color is destroyed when the clams are heated to 122°F for 15 minutes (heating to 104°F for 30 minutes did not change the pigment). This means steamed oysters would not be expected to develop a pink color in the pack.

4. Soft clams held as shell stock under refrigeration (39°F) for ten days did not show pink color when shucked, but shucked clams from the same lot did develop the pink coloration.

5. Bacteriological tests showed no red bacteria to be present.

"Pink" oysters seem to be a greater problem in years when the fall is very warm and late as in the case of 1970. Outbreaks appear to follow a cold snap Some packers test for "pink" oysters by opening and freezing several oysters from the batch to be tested. When the oysters are thawed, pink color, if present in the oyster, shows up immediately.

Also pink will show up when the digestive gland is cut through and pressed against a soft white paper towel wetted with fresh water.

Pink "yeast" is transported chiefly by airborne spores. It colors the liquor of the shucked oyster a light pink color and the rate of development depends on the temperature. The colder the oyster is kept throughout the process from removal from the water to final disposition as a

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*Lear, D. W. 1958. Further Red Shellfish coloration studies. Maryland Tidewater News 14 (3): 11.

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shucked oyster, the slower the yeast will develop**. Most pink "yeast" problems occur in warm weather.

The following procedure is recommended to facilitate low bacterial scores and prevent pink "yeast" contamination:

1. After thorough cleansing of mud and other organic matter, spray boat holes and decks, unloading buckets, conveyors, chutes, lifts, wheelbarrows, shovels, storage bins, benches, walls, ceilings, floors, rafters, etc., with a 1-500 dilution of formalin in a 0.3 percent solution of acetic acid. The disinfectant spray is prepared as follows:

   1 pint of formalin and 3 1/2 quarts of 28 percent acetic acid mixed well with 62 1/2 gallons of water, or

   1 quart of formalin and 5 quarts of 28 percent acetic acid mixed with 125 gallons of water, or

   2 quarts of formalin and 10 quarts of 28 percent acetic acid mixed with 250 gallons of water, or

   1 gallon of formalin and 5 gallons of 28 percent acetic acid mixed with 500 gallons of water.

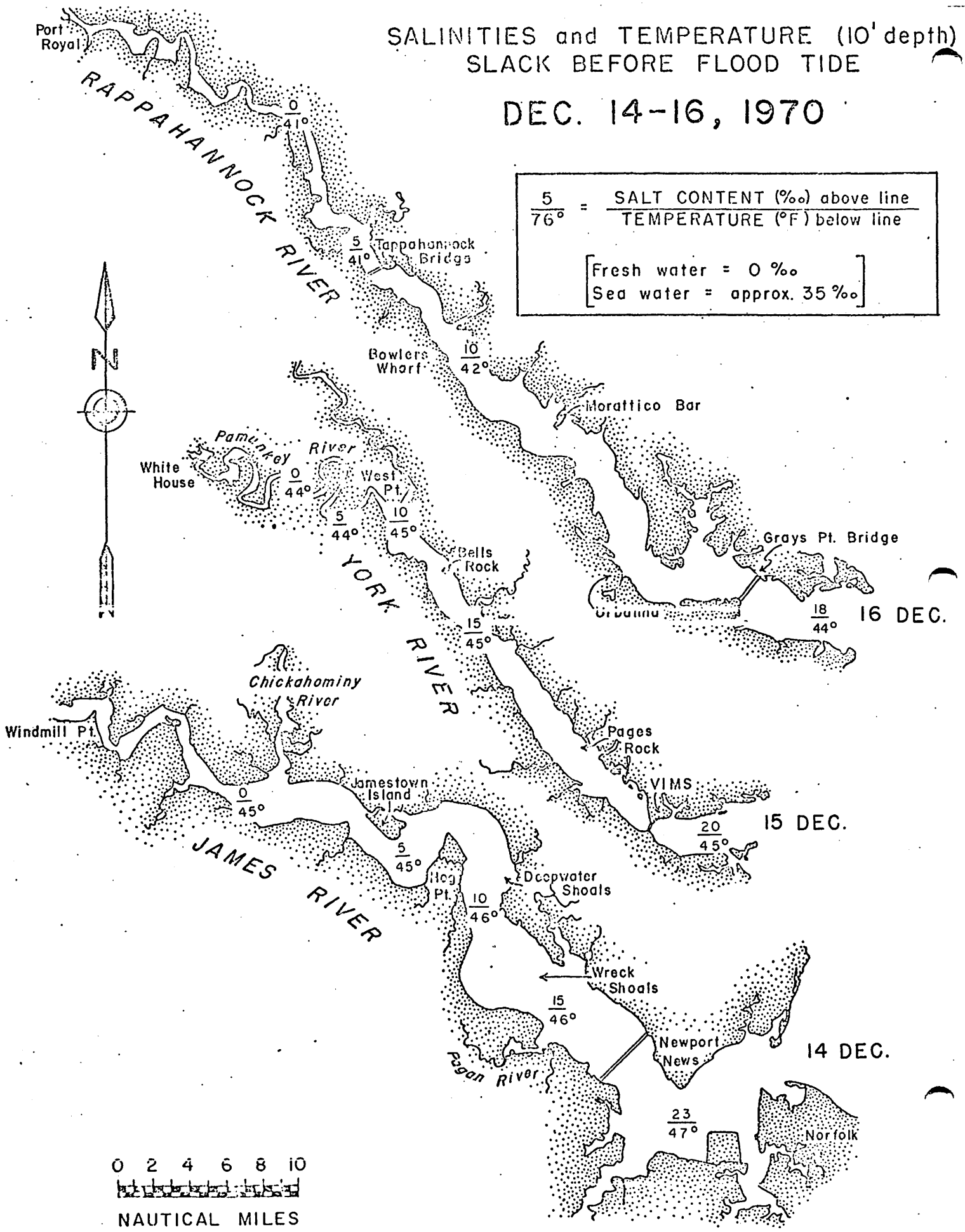
   Formula suggested by Oyster Institute Trade Report #35. Formalin and acetic acid may be ordered through a local drug store or from a chemical supply house. V. G. Burrell, VIMS' Extension Agent, can supply the addresses of several sources of these chemicals.

HANDLE RAW FORMALIN AND ACETIC ACID (28 PERCENT) WITH EXTREME CARE. IF EITHER COMES IN CONTACT WITH SKIN OR EYES, WASH IMMEDIATELY WITH FRESH WATER, OTHERWISE, SERIOUS BURNS WILL OCCUR.

This treatment of the shell storage bins, floors, and walls, the boat decks and holds, the equipment for handling the shell oysters, and the shucking benches should be made daily. The disinfection of the walls and ceilings of the shucking and packing rooms, during warm weather, should be made about three times weekly.

2. The shellstock should be shucked as quickly as possible after removal from the growing areas. During warm weather, this is of great importance. Refrigerated storage bins would be very advantageous and are strongly recommended when shellstock has to be held as long as twenty-four hours before shucking.

**Puncochar, J. F., Jr., W. H. Baldwin, Jr. and S. R. Pottinger. 1940. Paper presented at Joint Annual Convention of Oyster Growers and Dealers Association of North America, Inc., National Shellfisheries Association, and the Oyster Institute of North America. July 31, 1940, New Haven, Connecticut.


SALINITIES and TEMPERATURE (10' depth)
SLACK BEFORE FLOOD TIDE
DEC. 14-16, 1970
5/76° = SALT CONTENT (‰) above line / TEMPERATURE (°F) below line
[Fresh water = 0 ‰
Sea water = approx. 35 ‰]
Port Royal
RAPPAHANNOCK RIVER
0/41°
5/41°
Tappahannock Bridge
Bowlers Wharf
10/42°
Morattico Bar
Pamunkey River
White House
0/44°
West Pt.
5/44°
10/45°
Bells Rock
YORK RIVER
Grays Pt. Bridge
18/44°
16 DEC.
15/45°
Chickahominy River
Windmill Pt.
Pages Rock
VIMS
Jamestown Island
0/45°
20/45°
15 DEC.
5/45°
JAMES RIVER
Hog Pt.
10/46°
Deepwater Shoals
Wreck Shoals
15/46°
Newport News
14 DEC.
Pagan River
23/47°
Norfolk
N
0 2 4 6 8 10
NAUTICAL MILES

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