

Source Library: Raritan Bay Oyster Industry

Sources:

- Flynn 2012 *Food Safety News*
- MacKenzie 1983 “A History of Oystering in Raritan Bay”
- New York City Department of Environmental Protection (DEP) no date (Bloomberg era) “NYC’s Wastewater Treatment System”
- New York State Lands Under Water: Application Surveys from Raritan Bay, 1881-1884
- SCAPE Landscape Architecture 2017 “Map of the Locations of Historic Oyster Beds”
- Shepard 2010 *Tottenville: the Town the Oyster Built*

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1. Map of the locations of historic oyster beds

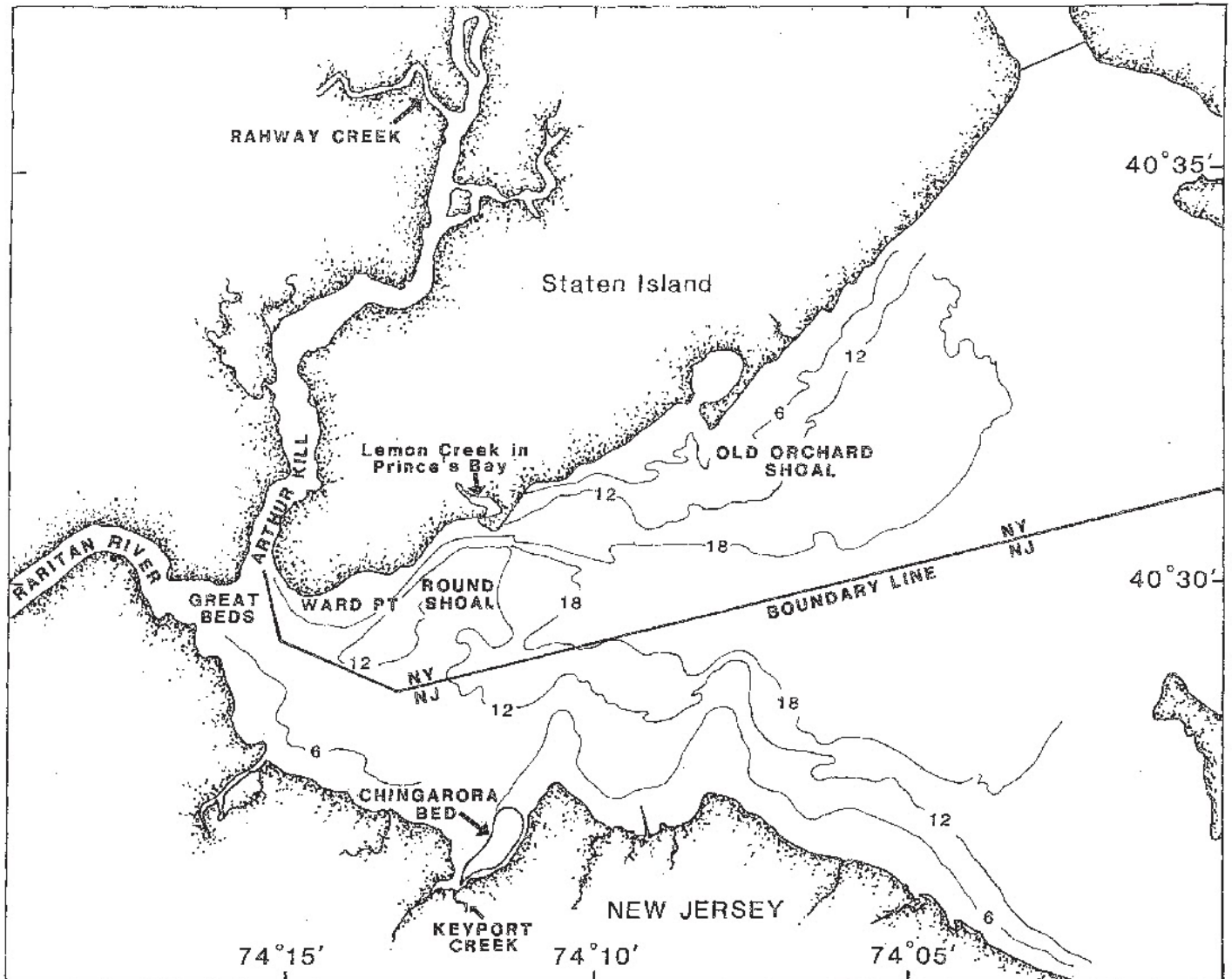


Figure 1. Some of the principal oyster beds, the creeks where oysters were floated, the location of the boundary line between New York and New Jersey and the water depths at various locations in Raritan Bay.

2. Joline 1950 “An Oysterman’s Work” *via* Shepard 2010 *Tottenville: the Town the Oyster Built*

My father owned a smart little sloop called the Josephine, and when I was a lad, I used to accompany him on some of his buying trips to Newark Bay.

The custom was to hoist an empty oyster basket to the masthead. This attracted many small boats, each boat carrying 5-20 bushels of ‘seed’ oysters. The small boats fastened themselves to both sides of our sloop, and trailed as far as a quarter of a mile behind us.

My job was to keep tally as each bushel of ‘seed’ oysters was dumped on the deck, and handle the pay-off. The cash was kept safely below in the cabin locker. Our deck could carry 400-500 bushels of ‘seed’ oysters.

Next morning the load was taken out to Prince’s Bay, to a piece of ground we had already staked, lying 10-20 feet under the surface. Here, as the sloop sailed back and forth over the plot, the cargo was shoveled overboard and allowed to grow for two or maybe three years.

Many predators and competitors beset our oysters. Sometimes drum fish devoured whole beds in a single tide. Mussels and oyster drills worked in a more leisurely manner, but just as destructively. Winter storms sometimes buried large areas under deep mud.

We planters maintained as many oyster beds as we could afford. Some planters took their oysters up with tongs at the end of two years, cleaning and separating the clusters and shifting them to other bottoms. Others allowed their oysters to lie undisturbed until ready for marketing.

Marketing began in September, as soon as cool weather set in, and New York City absorbed the entire crop. A fleet of sloops made one or two trips weekly and... as many as 200,000 bushels were taken from Prince’s Bay in a single season....

Oysters from Prince’s Bay enjoyed top billing, but as time went on there came a change in the quality and flavor of this famous brand.... The once succulent oyster had vanished from Prince’s Bay and a once profitable industry had been lost to Tottenville.

Transcribed [in Shepard, 2010] from 'Tottenville in Retrospect,' an unpublished manuscript by Benjamin F. Joline, 1950.... He tells us about the practical work of oystering in the 1880s. His father was H.S. Joline.

3. Selected Surveys of Lands Under Water, Raritan Bay, 1881-1884

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- for David and A. Sylvester Joline, April 28, 1881
 - zoomed [out](#)
 - zoomed [in](#)

 - For [S.S. White Dental Manufacturing Company](#) December 22, 1881

 - For the Johnstons December 22, 1881
 - Zoomed [out](#)
 - Zoomed [in](#)

 - For John J. Seguire (Garretson) May 6, 1884
 - Zoomed [out](#)
 - Zoomed [in](#)
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4. MacKenzie 1983 Part I: Oystering in Raritan Bay

...A large amount of labor was involved in building schooners, sloops, skiffs, tongs, rakes, dredges, anchors, baskets, floats and oars, cutting and hauling stakes out of woods and then setting them in place with cement buoy stones to mark the corners of lease boundaries, making ropes, sails and knives, waterproofing the outer clothing of boat crews with linseed oil, shucking and cleaning oysters, and obtaining ice to preserve them.

On the beds, tongs were operated by hand, dredges were hauled by hand, and oysters were shoveled into baskets and the baskets were hand carried; oyster skiffs were rowed.

The reputations of men were based on their strength and [skill]....

The principal ports for oyster boats in Raritan Bay were Prince's Bay, Perth Amboy, and Keyport.... In addition, coastal towns... such as Tottenville, Chelsea, Mariners Harbor and Port Richmond had fleets of boats.

Bedding the Oysters

When a schooner arrived in Raritan Bay, the captain headed for a designated bed to plant the oysters.¹ The schooner sailed back and forth over the bed while the oysters were being shoveled overboard to spread the oysters as evenly as possible....

On most beds, [all of the] oysters were harvested and sold each fall. Thus, the beds were clean for a new crop of seed the following spring....

In the beginning, a planter staked the boundaries of a plot with [wooden] poles... anchored in place with 200-pound cement stones. The planter claimed that the oysters [within those boundaries] were his.

Such claims were often disputed... in courts. The courts ruled that if a person staked a plot and planted oysters on it, his claim would be upheld.

The claim system gradually [became more] formal.... Leases (plots) ranged from a fraction of an acre to about 100 acres.

Planters who held a lease at Ward Point had to pay \$1.00 a year for it, because the bottom there was especially good (hard) for oysters....

Eventually.... oystering became a large commercial industry and many individuals formed companies....

Some poaching of the oysters occurred, and public fisherman tried to dig clams on the oyster leases. To protect their oysters, the leaseholders founded oyster planting associations... in the 1870s and 1880s. The associations hired watch boats to patrol the beds....

Marketing the Oysters

The principal oyster marketing season began on September 1 and ended around Christmas. Most oysters were harvested by tonging from skiffs, near a sloop anchored on the beds.... The tongers [separated] the oysters from shells and garbage, and transferred the oysters to the sloop....

The sloop carried the men to and from the beds along with the oysters....

¹ By 1825, New York Harbor oystermen were importing young "seed" oysters from other estuaries, and growing them to market size in New York Harbor.

The first engine-powered oyster boat was built in 1896 and by 1910 every oyster company on Raritan Bay had at least one...

When harvested oysters were brought ashore, they were put in... brackish water creeks and held there... 'to give the oysters a drink'.... [In this less-salty water] the oysters opened and flushed out... mud and sand; 'drinking' oysters made their flesh whiter, freshened their flavor, and... increased the volume [of meat]....

[Then] the oysters were put in oak baskets,... loaded onto sloops or passenger steamers, and taken to New York City and other markets....

Most activity on the oyster beds occurred during the fall harvesting season, less during the spring planting season, and little in summer and mid-winter.

In the fall, the western end of Raritan Bay was said to have an 'uncountable number of skiffs and sloops harvesting oysters from the beds amidst a forest of **oyster stakes** that were so numerous they were difficult to sail through'.

5. MacKenzie 1983 Part II: Oysters and the economy around Raritan Bay

One common saying used to be: "Who is going to eat all these oysters?"

Effect of the Industry on Local Economies

...The population of Staten Island, which had been relatively small, grew... as a result of... the oyster industry. Nearly all families in the southern half of the island were involved in... oystering, mostly handling oysters on the beds and ashore.... Tottenville had a shipyard in which sloops and schooners were built.... Communities had blacksmiths who made gear for the oystermen and farmers. Grocery and hardware stores were supported in part by the trade of people in the oyster industry.

In the 1850s an estimated 1,000 to 3,000 people were supported by the industry, and 400 ships and sloops worked on the beds. Investment capital was in the millions of dollars, and the richest Staten Islanders were oystermen. The Raritan Bay oyster industry did well economically because the bay had excellent hard bottom for raising oysters, large supplies of [small] oysters were available for planting, oysters grew fast, yields were good, oysters became fatter than those in most other estuaries, and large markets were nearby.

Pollution and the Demise of the Industry

The oyster industry in Raritan Bay prospered until about 1910, when the water in New York Harbor started to become [too] polluted. Newspaper reporters traced cases of typhoid to Raritan Bay oysters and in 1918, a typhoid fever outbreak made more than 15,000 people sick and resulted in 150 deaths. The outbreak was traced to the consumption of shellfish, much of it from Raritan Bay. The bay was temporarily closed to oyster and clam harvesting. (Much of the contamination of oysters may have occurred while they were held in floats in Lemon, Keyport and Rahway Creeks, Mariners Harbor and alongside the oyster barges in New York.) The negative publicity caused the oyster wholesalers to abandon the Raritan Bay oyster industry since they were reluctant to assume the financial risk for building boats and buying [small oysters from] Chesapeake Bay.... The industry limped along, threatened by pollution scares, until about 1925 when it more or less closed down.

Effect of the Closure on the Oystermen

The closure of the oyster industry plunged the oystermen into a depression. It was especially hard because the men had investments in their boats and gear which could not be used... for other purposes.... Oystermen who were having difficulty finding acceptable alternative employment got politicians to... help [try to lift the ban], and some were temporarily successful, but closures followed each time because more illnesses were traced to Raritan Bay oysters. Most men had to turn to other local jobs, or move elsewhere. Thus, the closures displaced many oystermen and their families, eliminated small family [businesses] and shore-based enterprises which had supported the oystermen, and diminished the quality of rural coastal life.

The larger oyster companies which had beds in other states were allowed to transplant their oysters from Raritan Bay to the other beds for cleansing. Most oysters were transplanted to Gardiners Bay in eastern Long Island and Narragansett Bay, Rhode Island. By that time a railroad ran from Greenport to New York City which transported market oysters to the city.

Effect of the Closure on Consumers

...New York [City] was already obtaining most of its oysters from... Connecticut, Long Island, Delaware Bay and Chesapeake Bay.... During the 1880s and 1890s, the railroad industry developed refrigerated railroad cars, which made it possible to ship huge quantities of chilled beef and pork from the Midwest to eastern cities (Walsh 1982). The meats competed with oysters as a source of protein. Since about 1900, the decline in oyster production has been caused, in part, by a reduced demand....

In recent years, shellfish, including oysters, and fish have been shown to be more healthful than meats; they contain unsaturated fats and smaller amounts of cholesterol. Thus, the demand for seafood has risen in relation to meats.

6. MacKenzie 1983 Part III: What happened to the oysters?

1. Increased silt inflow

Colonists... [in] the Raritan River's watershed cut down trees and plowed land to establish farms². [Trees stabilize soil, so cutting them down caused] a great deal of erosion. [When it rained, a lot of soil washed into the river, where we call it sediment.] As sediments were carried into streams, the larger particles settled out early, but much of the silt and clay [made of smaller particles] remained suspended in the water until it reached the mouth of the river and entered Raritan Bay. Here [the river current collided with the ocean]... and much of the sediment settled to the bottom....

Wherever silt accumulates more than about 3 inches over the bottom, the habitat cannot support oysters.... [They get buried in the sediment and don't have good access to the water. They depend on the water for food and for oxygen.]

Surveys made in the late 1970s showed that the bottom where the Great Beds were and the channel bottoms in Raritan Bay are now covered by at least several inches of soft mud....

[Before people cut down so many trees,] mud or soft bottoms may have been smaller in area, and the mud layer may have been thinner.

2. Dredging of channels

.... Most channelling occurred from 1890 to 1910.... The dredging in the western end of the Bay... must have destroyed huge numbers of oysters and eliminated much of the good (hard) oyster bottom. A lot of silt was released during the dredging....

4. Pollution

Raritan Bay lies 'downstream' from the largest population center in the United States: Greater New York City. Four rivers -- the Raritan, Hackensack, Passaic, and Hudson -- pass through this center and drain into Raritan Bay. In addition, the creeks where the oysters were held 'to drink' were not sanitary. It is not surprising that the oysters eventually became polluted and the oyster industry was forced to close.

² Native Americans also cut down trees and established farms.

7. Flynn 2012 “Oyster-Borne Typhoid Fever Killed 150 in Winter of 1924-25”

Published in *Food Safety News*

Editor’s Note: In the winter of 1924-25, oysters [from] polluted water were responsible for a typhoid fever epidemic that spread to New York, Chicago, and Washington, D.C. It was the deadliest outbreak of foodborne illness in U.S. history.... The Atlantic Seaboard oyster industry was responsible and it, too, would pay a high price.

Typhoid fever is a bacterial disease, caused by *Salmonella typhi*. It is transmitted by ingesting food or drink contaminated by the feces or urine of infected people....

The Oyster Industry

Before 1925, the East Coast’s... oystermen were taking in \$14 million a year, an amount that would today translate into nearly \$200 million. Collecting and processing 73,000 tons of oysters kept 67,000 gainfully employed....

The oyster-borne typhoid epidemic occurred without warning. Late in the winter of 1924, simultaneous outbreaks of typhoid fever were noted in Chicago, New York, Washington and several other cities....

Public Health Notices

It was the first time that radio joined with newspapers to carry public health warnings. Some oystermen blamed the new broadcast medium for causing hysteria that wrecked their industry....

After the source of infection was identified, ... the New York Department of Health said oysters from other major growing areas were safe, but there was no way to quickly restore consumer confidence.

“Seldom has the tremendous power of public health manifested itself so drastically as during the generalized typhoid excess of last winter, when the oyster industry suffered a loss of millions of dollars at the hands of public health authorities,” the American Journal of Public Health reported.

“While it is conceded that life and health take precedence over other considerations, and although no one would question their power, a grave responsibility rests upon health officials in the exercise of such authority.”

The journal found that for years little attention had been paid to sanitary protection and distribution of shellfish. A manual published in 1920 — “Standard Methods for the Bacteriological Examination of Shellfish” — had not gotten enough attention.

Regulation

After the epidemic, states adopted laws to regulate the oyster business....

After 1925, the Shellfish Sanitation Section of the Public Health Service began to keep track of state-certified shellfish shippers, conducted research, and provided advice in a program that included oysters, clams and mussels.

The shellfish sanitation control program ended major outbreaks of oyster-borne typhoid.

8. DEP New York City's Wastewater Treatment System - Bloomberg era

Excerpted [here](#) - *best to access digitally*