



WATER WAYS

Charting a Future for Mid-Atlantic Maritime Communities

BETTY J. BELANUS



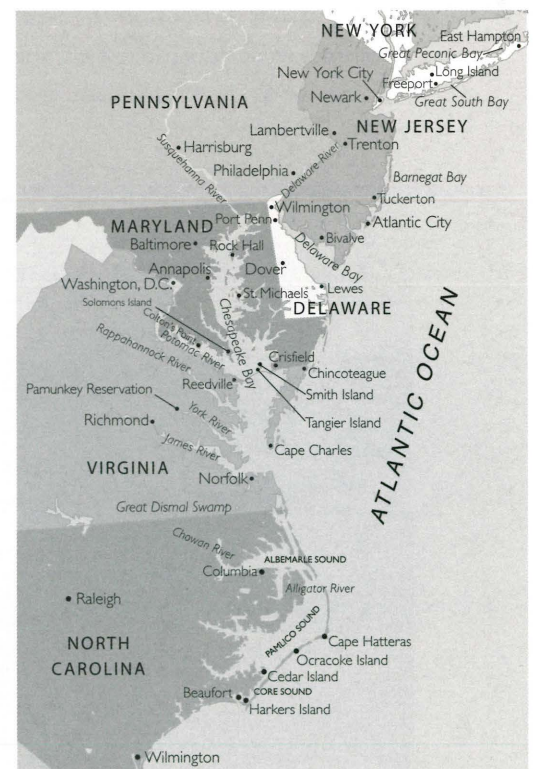
When I stepped aboard the *A.J. Meerwald*, a restored Delaware Bay oyster schooner and New Jersey's official tall ship, I was not assaulted by the full weight of the past, present, and future of Mid-Atlantic maritime communities. I was struck, instead, with the thrill of cruising under sail on a beautiful historic vessel, all polished wood and coiled ropes. The day was gorgeous. The sails—hoisted with the help of some of the passengers, including my daughter—luffed gently in the breeze.

This trip on the *A.J. Meerwald* in July of 2000 was my maiden voyage on a journey across over 2,000 miles of shoreline in the states of New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina, with an occasional foray into Pennsylvania. To a water-loving person such as myself, much of it was pure pleasure. Visiting small and large maritime and waterfowl museums, enjoying choppy boat trips, crossing complexly engineered bridges, socializing on weathered docks, and helping haul in nets in hopes of fish, I learned a great deal. The people who live around the ocean and bays, marshes and swamps, rivers and creeks of the Mid-Atlantic have lifetimes of knowledge to offer a visitor who cares to listen.

Despite the deep sense of contentment that a sailing ship or back porch with a water view can bring, however, much of what I learned in my research was disquieting. So many changes have occurred over the past couple of generations of maritime communities in this region that long-time residents can sometimes barely recognize their hometowns. A deep sense of loss tempers the stories of many.

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(Facing page) Ned Winder from Poquoson, Virginia, starts a new day of commercial fishing. Photo by Harold Anderson





The A. J. Meerwald, restored oyster schooner, on one of her educational cruises on the Delaware Bay.

Photo courtesy Bayshore Discovery Center

On the way to a beautiful new museum on Harkers Island, North Carolina, director Karen Willis Amspacher rode me past the grove of windswept oaks that was her father's home place; it is now a summer residence being used by "dingbatters"—a Down East, North Carolina term for outsiders. For various reasons more families like Karen's were selling their land and moving off the island, and local traditions were being lost. This, she explained, was her motivation for spearheading the Core

Sound Waterfowl Museum project, to ensure that some small piece of the local heritage was preserved and interpreted "for the people."

In Lewes, Delaware, Festival fieldworker Harold Anderson was taken by Rufus Carter to see "his boat." After traveling about twenty miles inland, Anderson found himself face to face with the last known wooden menhaden fishing boat, the *McKeever Brothers*, which has been converted to a landlocked restaurant, complete with a mural of frolicking crabs and lobsters painted on the side. Carter and his fellow crew members had worked on the *McKeever Brothers* in the 1960s, following the schools of fish locally called "bunker" that supplied a huge Mid-Atlantic industry processing fish meal and oil. Reedville, Virginia, where Mr. Carter still has relatives, is home to one of only two menhaden operations left in the region. Those interested in the history of the menhaden industry would like to see the *McKeever Brothers* returned to Lewes, restored, and made into a museum.

In Amagansett, New York, sitting around the kitchen table drinking a cup of tea, fieldworker John Eilertsen and I chatted with Madge and Stewart Lester about the heritage of their fishing family and the demise of commercial fishing in eastern Long Island. Lobsters and scallops in the area had both succumbed



to disease, and haul seining for striped bass had long since been prohibited. The view out of the Lesters' window reminded me of many other fishermen's backyards in the region: piles of traps, nets, ropes, small boats, and other equipment awaiting a better harvest that may never come.

But maritime communities often adapt to changes. When one species of fish becomes scarce or unmarketable, you fish for another. When crabbing with wire mesh pots proves more efficient than trot-lining (running a baited line across a section of water), you buy or learn to make pots. When recreational fishing catches on in your area, you fish for bait or get a charter-boat license. When the oyster-shucking or crab-picking plant shuts down, you get a job cooking at a local seafood restaurant or a nearby school. It's all about adaptation, flexibility, and survival.

And even when some things are in danger of being lost forever, like the fleet of Delaware Bay oyster schooners, someone like Meghan Wren has the vision to spearhead an effort to give at least one of them a new life. The *A.J. Meerwald* represents a sense of local pride, an opportunity to educate kids about the ecology and history of the region, and a hope for cultural tourism that can help bolster the flagging fishing economy. All these spring from the ribs of a boat destined, like so many of its sisters, to sink to the bottom of the Maurice River and become a fish habitat.

Water Ways: Mid-Atlantic Maritime Communities is about change and renewal, pride in the past and hope for the future, and the interconnectedness of cultural life and natural history in this region. It is composed of the stories of people like Karen Willis Amspacher, Rufus Carter, Meghan Wren, and Madge and Stewart Lester and their communi-

ties, told as much as possible in their own words. It speaks about their joys, frustrations, and work to conserve the rich heritage that permeates this region like the smell of salt water and marsh mud.

The whole story of Mid-Atlantic maritime culture would take thousands of pages and hundreds of photographs to tell, and many prize-winning authors have already written volumes. (See "Suggested Reading.") To illustrate the rich complexity of the story, we will explore three natural resources that have been important throughout the region's history: oysters, shad, and Atlantic white cedar. The past, present, and future of the region are synopsized in these resources, all three of which cut deeply into cultural, economic, and ecological life. Each carries with it stories of exploitation, decline, and renewal of the resources that shaped Mid-Atlantic maritime community culture, the theme that brings the whole region into focus.



Visitors get hands-on experience hauling sails aboard the *A. J. Meerwald*. Photo by Betty J. Belanus
(Left) Rufus Carter from Lewes, Delaware, poses in front of the *McKeever Brothers*, a menhaden fishing boat that was turned into a restaurant in Seaford, Delaware. Photo by Harold Anderson

EASTERN OYSTERS

"This is a happy occasion. I thank the museum and the carpenters and all the people who volunteered to work on the boat. It was a disaster when it came in here, but, thank the Lord, it's in good shape today. Planning on going back on the water." —Captain Art Daniels, Jr., on the occasion of the launch of his newly restored oyster-dredging boat, the *City of Crisfield*

OCTOBER 2003 marked the 37th annual National Oyster Shucking Competition in Leonardstown, St. Mary's County, Maryland. Sponsored by the Lexington Park Rotary Club each year, the contest pits champion shuckers from Texas, Louisiana, and Massachusetts against Mid-Atlantic favorites, all competing for a trip to the World Championships in Ireland.

A pile of two dozen lumpy, grey, tightly closed oysters faces each of the eight male contestants. The signal is given, and the shucking and cheering begin. Less than three minutes later, the fastest contestant signals completion by raising his arms in triumph. After the other shuckers follow suit, the oysters are whisked away for judging, for not only time but also

"presentation" are considered. As soon as a champion is declared, the audience is served the raw oysters—first come, first served—and soon afterwards the women shuckers take the stage for competition.

This display of skill comes at a time when oyster harvests are at an all-time low in the Mid-Atlantic, with no clear evidence that they will ever rebound. Oyster-shucking houses have closed, and those still operating get their supply more often from the Gulf of Mexico than from the Chesapeake or Delaware bays. But the shucking contest is one sign of hope that restoration projects, more stringent pollution control, and disease-resistant strains will one day bring oysters back a bit of their former glory as the most important fishery in the Mid-Atlantic.

Oysters have left their mark on the human landscape in this region, in names like Bivalve and Shellpile around the Delaware and Chesapeake bays. You can walk across any non-asphalt parking lot from the Great South Bay of Long Island to Core Sound, North Carolina, crunching oyster shells underfoot as you go. And though they are not shucking anymore, former oyster-packing-house workers such as Mildred Butler from Rock Hall, Maryland, can tell you what the work was like: "An oyster knife was rough, and you had to wear gloves. You had to be careful: you steadied your hands. If the gloves got a hole in them, you had to get another pair. Couldn't work with your fingers out. It would cut your hands up. It was rough, I'm telling you." To make the work go a bit easier, shuckers often sang some of the same old-time hymns they still sing in church.

The Eastern oyster (*Crassostrea virginicus*) was one of many varieties of seafood eaten by Native Americans in the region. Its tough, sharp shells were often used for tools, and vast middens (ancient refuse mounds) of them are found in many coastal areas. Nanticoke Indians from Delaware were adept at fashioning wampum (beads used for commerce) from the shells.

Colonial settlers in the Chesapeake Bay region considered oysters only a hardship food, since they were one of the few fresh



Contestants at the National Oyster Shucking Championship in Leonardstown, Maryland.

Photo by Betty J. Belanus

foods available throughout the coldest months of the year. Oysters began to gain favor in the growing cities of the region, and by the end of the 18th century, oysters were sold in bars, fancy restaurants, and even by street vendors in Baltimore, Philadelphia, and New York.

On the Great South Bay of Long Island, such entrepreneurs as Dutch immigrant Jacob Ockers, “The Oyster King,” grew rich by marketing his famous bluepoint oysters at New York City’s Fulton Fish Market and exporting thousands of barrels to Europe. Around the turn of the 20th century, Ockers owned ten schooners and shipped more than 150,000 barrels of oysters a year from processing plants called “shanties” along the bay. But by the late 1930s, overfishing, contaminated run-off, and a devastating hurricane had killed what was left of the Long Island oyster industry. The Blue Point Oyster Company recently donated its former oyster grounds to The Nature Conservancy, which will use the area for an oyster restoration project, as well as for research and education, sustainable aquaculture, and a nature sanctuary.

Oyster shell piles of this magnitude were common sights in the Mid-Atlantic around the turn of the 20th century.

Photo courtesy The Mariners' Museum

To the south, oystering in the Delaware and Chesapeake bays blossomed into an industry far surpassing the Long Island operation. Shipping oysters by rail to Philadelphia, Baltimore, and beyond sparked economic booms in towns like Port Norris, New Jersey, and Crisfield, Maryland. At the height of the oyster industry on the Delaware Bay near Port Norris, the fleet of oyster schooners (sister ships of the *A.J. Meerwald*) numbered more than 500. An estimated 4,000 people fished the Delaware Bay for oysters, and many more people were involved in the support industries of processing, shipping, and shipbuilding. In the year 1880, 2.4 million bushels of oysters were harvested. But today, Bivalve (Port Norris’s port on the Maurice River) is practically a ghost town.

In the Chesapeake Bay, before the early 1800s, “tonging” was the most common means of harvesting oysters. This process involved standing precariously on the side of a small boat with long-handled scissors-like tongs equipped with a metal basket at the end, scooping heavy loads of oysters off their reefs. By the 1810s, a more efficient method, the dredge, was introduced to the Chesapeake Bay





The *City of Crisfield* won the annual skipjack race on Deal Island, Maryland, in 2003. Such competitions are based on the tradition of work boats racing into port to be the first to get fish to market. Photo by Betty J. Belanus

The *City of Crisfield*, a skipjack owned by Captain Art Daniels, foundered on its dock before being hauled to the Chesapeake Bay Maritime Museum for restoration. In 2003, the *City of Crisfield* won the annual Deal Island, Maryland, Skipjack Races on Labor Day. In the *Chesapeake Quarterly* Michael W. Fincham, writer/producer for the Maryland Sea Grant College, wrote about Deal Island, the Daniels family, and the human consequences of the decline in oyster fishing, which in turn affects the skipjack fleet: "Down at the long neck of flat woodlands and wide-open wetlands, Deal Island is home to 900 people clustered around three harbors and three villages and at least six Methodist churches. It was here that Art Daniels was able to raise his sails every winter and through hard work and summer crabbing raise his five children. His three sons all went to work as watermen and so did some of their children. His skipjack, some days, has three generations of Daniels men on board. All his children still live nearby. For most of the 20th century, during decades of rural outmigration to the cities, fishing villages like these created habitat for thousands of men and women who carried on the pace and pleasures and traditions of small town life in supportive communities, close-knit by kinship, work ethic and church. Would these Bayside communities break down and thin out like those underwater oyster reefs?"

by New Englanders, who had already wiped out most of their own oyster beds with the device. "Dredging" or, as it came to be called in the Chesapeake region, "drudging" required a much larger boat and more manpower. A large metal dredge with teeth scraped the oysters off reefs, dumping huge loads of oysters, and whatever else the reefs contained, onto the deck of the ships.

The invasion of the Chesapeake by Northerners led the state of Maryland in 1820 to impose a ban on dredging and transporting oysters out of state. At the end of the Civil War, when many returning soldiers went back to the bay to make a living in a soaring oyster market, watermen and businessmen successfully lobbied to allow dredging. A full-blown "Oyster War" broke out: tongers versus dredgers, and the crews of schooners and other large dredging boats from Maryland versus those from Virginia. Guns ranging from carbine rifles to cannons became standard equipment aboard oyster boats, and Maryland found it necessary to institute an "Oyster Navy" (which evolved into the present-day Marine Police).

It took a while longer for the Chesapeake and Delaware bay oyster industry to decline to the point of the Great South Bay fishery, but by the mid-1950s, things were looking grim. Adding to problems of overfishing, two oyster diseases, MSX and Dermo, began to devastate the beds, and soon up to 90 percent of the oysters were dead. Fishing for blue crabs, formerly considered a seasonal sideline for oystermen, took over as the main occupation for many of Maryland's Chesapeake Bay watermen. In recent years, the blue crab harvest in Maryland (where the crab is the "state crustacean" and a popular tourist symbol) has declined so dramatically in the Chesapeake that many think crabs could go the way of oysters before long. To meet the demand for popular regional dishes like crab cakes, crab meat is now likely to come from North Carolina or as far away as Asia, prompting manufacturers and restaurants to advertise "Maryland-Style Crab."

The decline of the Eastern oyster affected not only watermen, oyster shuckers, and those who longed for a dozen on the half shell. It also hurt the skipjack, a regional boat developed on the Chesapeake in the 1880s for dredging in relatively shallow waters. At the peak of oystering on the Chesapeake, these single-masted, 70-foot-long boats, purportedly

Roosevelt Wingfield working on the Rappahannock River in Virginia tonging for oysters, circa 1990. He is one of the few watermen who used a bamboo pole to sound the bottom for oysters.

Photo by Larry Chowning, courtesy Cornell Maritime Press

(Below left) The *City of Crisfield* skipjack sinking near its dock in Wenona, Maryland. Photo courtesy Chesapeake Bay Maritime Museum

The *City of Crisfield* undergoing restoration at the Chesapeake Bay Maritime Museum in St. Michael's, Maryland. Photo (center) courtesy Chesapeake Bay Maritime Museum and (right) by Michael Fincham, courtesy Maryland Sea Grant Program



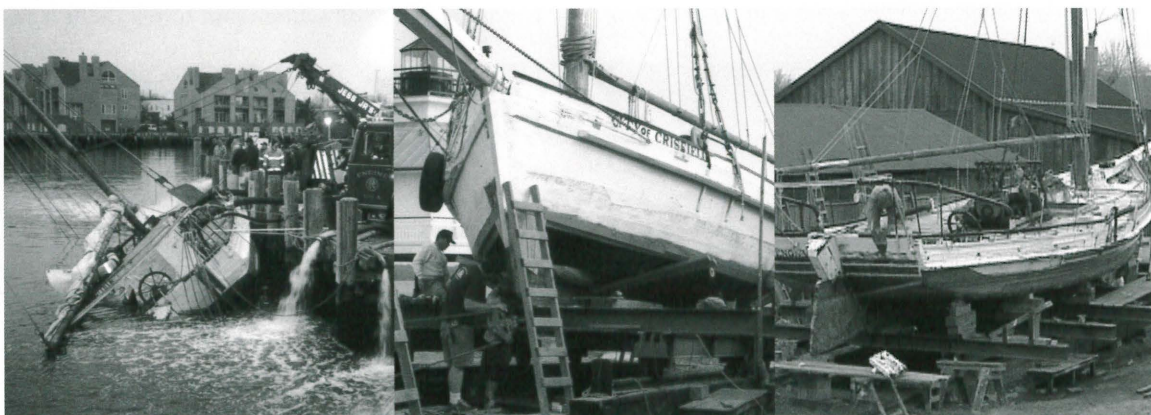
named for a type of local fish that skims across the water, numbered in the hundreds. In a conservation measure, Maryland oystermen have been limited to dredging only under sail, except on Mondays and Tuesdays, when they may use their small, gasoline-engine-equipped “yaw” or “push” boats for power. Thus, the skipjack fleet on the Chesapeake has survived as the last commercial fishing fleet in the country that still fishes under sail.

As oysters became scarce, and watermen switched to crabbing or other types of fishing, skipjacks were often left to rot. Today, there are about 30 left, and only about a dozen of them still dredge for oysters commercially. Alarmed by the disappearance of the fleet, community members and museum officials in Maryland began working together to save the remaining skipjacks. The skipjack fleet was placed on the National Register of Historic Landmark's

“11 Most Endangered” list in 2002.

The Skipjack Restoration Project housed at the Chesapeake Bay Maritime Museum in St. Michael's, Maryland, has so far saved six boats from the scrapyards, including Captain Art Daniels's *City of Crisfield*, a frequent winner of the annual skipjack races held off Deal Island, Maryland, every Labor Day.

The future of oysters in the bay may lie not with *Crassostrea virginicus* at all, but with a new Asian strain of oyster (*Crassostrea ariakensis*), which has proven to be disease resistant, fast growing, and similar in taste to the native oyster. Many scientists, environmentalists, and watermen have reservations about the new species for a number of reasons. But some brisk October day in the not too distant future, the champion shuckers in Leonardstown could be showing off their prowess on *Crassostrea ariakensis*.



AMERICAN SHAD

"When it warms past forty Fahrenheit, they begin their migration, in pulses, pods—males (for the most part) first. Soon, a single sentence moves northward with them—in e-mails, or telephones, down hallways, up streets—sending amps and volts through the likes of me. The phone rings, and someone says, 'They're in the river.'"—John McPhee, *The Founding Fish*

IT'S APRIL on the Delaware River. The small white flowers called Spring Beauties and the serviceberry, locally called the "shad bush," are in bloom. It is the weekend of the Lambertville, New Jersey, Shad Fest, during which the small town of 4,000 will host 30,000 visitors who walk around Union Street browsing craft stalls and tasting seasonal treats which may include roast shad, shad dogs, shad chowder, and shad cakes. The finalists of the poster contests, featuring creative and colorful renderings of shad and other harbingers of spring, are hanging in store windows.

The festival has been going on officially since 1981. But the reason for the festival, celebrating the return of shad to the Delaware River by fishing for and eating shad on the river, is much older. In ancient times the Lenni Lenape Indians caught shad in fishing weirs they built with stone. But in Lambertville, shad fishing is usually traced back to the late 18th century, when the first commercial shad fishery was established on what is now called Lewis Island. Today, the Lewis Fishery is the heart and soul of the Shad Fest.

A typical evening's shad-fishing haul at the Lewis Fishery on the Delaware River. (Far right) Keziah Groth-Tufts, left, helps her mother and others pull in the net at the Lewis Fishery. Photos by Betty J. Belanus

On the Friday night before the 2003 festival began, the workers at the fishery, headed these days by fourth-generation shad fisherman Steve Meserve, made two "hauls" with their 200-yard-long, 10-foot-deep net as they do most other nights from late March to late May. Despite the chilly evening, spectators and potential customers milled around watching the process, which takes about 20 minutes per haul. Fred Lewis, the fishery's owner, is usually there, lending his 80-plus years of experience.

Haul-seining for shad has not changed much since the 1800s. The "sea end" of the net, gathered into the fishery's rowboat manned by three crew members, is "paid out" in a wide circle. Meanwhile, the "landsman" carries the other end of the net along the riverbank. The boat rows to shore, and the crew jumps out to bring their end of the net to the point where the fish will be hauled in. The landsman walks back to that point with his end of the net, and, when they meet, all crew members (and anyone else who wants to help) pull in the net, creating a baglike pocket that everyone hopes is full of fish.

The dramatic moment at the Lewis Fishery that evening, when the net was tight enough to reveal the catch, was as exciting as the climax of an adventure film. Would there be enough roe and buck shad to satisfy customers, some of whom have come all the way from Philadelphia and Trenton? How many game fish, some of which are illegal to catch in these waters, would have to be thrown back? What else of value (like carp, which some Asian-American customers prefer over shad) would there be?

Steve's wife, Sue Meserve, called out each type of fish and placed them into plastic laundry baskets. She and her helpers then retreated to the first floor of a small white cabin to sell the fish to



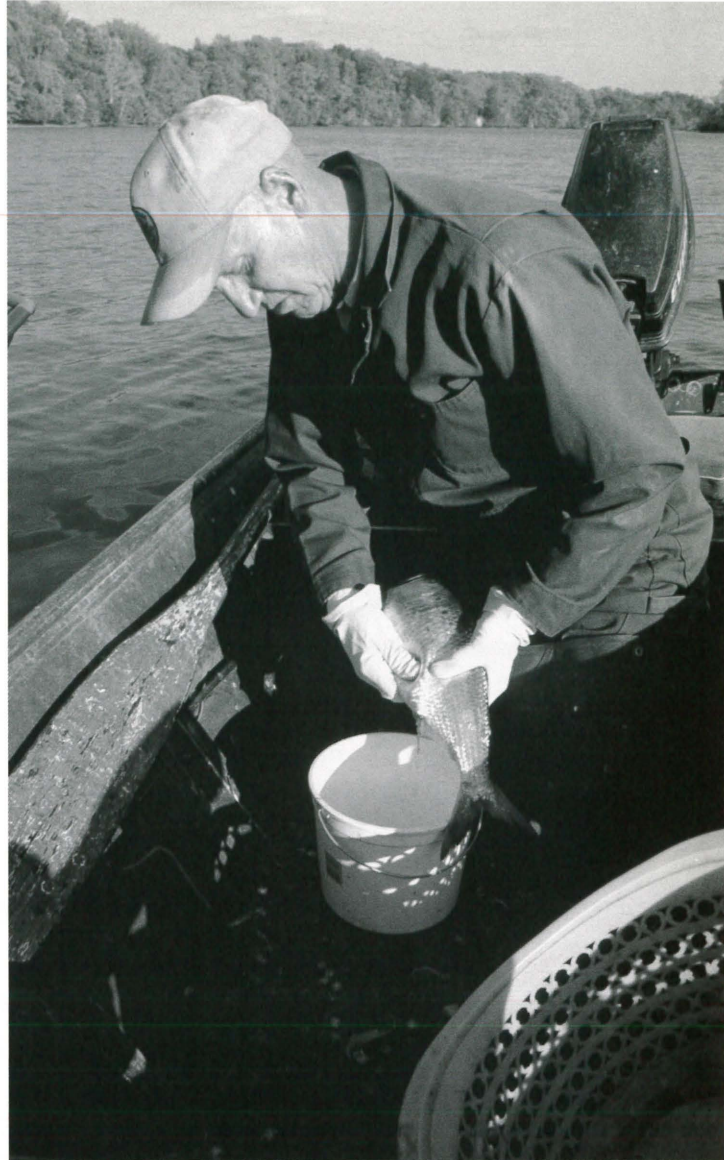
the patient customers according to certain rules that allow regulars their fair share while honoring as many requests from visitors as possible. No one goes home empty-handed. Before they are sold, each shad must be weighed and measured, and scale samples need to be scraped off each iridescent body and placed in a small envelope for the scientists who monitor the health of the fish and the river. After the second haul, the family, crew, and visitors often relax on the second floor of the cabin on benches around an old wood stove, enjoying a dinner that may include grilled shad and shad roe fritters.

American or white shad (*Alosa sapidissima*, translated “most delicious shad”) is a tasty but bony fish that migrates up rivers to spawn, as do other anadromous fish: herring, striped bass (rock fish), blue fish, and the now nearly extinct sturgeon. Native Americans from New York to North Carolina fished for shad and herring, using them for food and for fertilizer. If you can get around the bones, the fish of the American shad is white and sweet. The roe (egg sac) is a special delicacy.

Legend has it that, during the Revolutionary War, an early run of shad saved Washington’s troops at Valley Forge from starvation. It is true that shad and other anadromous fish were staples of Mid-Atlantic families that lived near rivers. In the spring of 1874, in the midst of difficult economic times, an unusually prolific run of hickory shad (American shad’s more oily cousin) and blue fish caused farmers in and around Lewes, Delaware, to run to the beach with nets, buckets, and even frying pans to scoop up the fish for food and fertilizer for their crops, saving many people from possible starvation.

In North Carolina, the plentiful shad and herring runs on such rivers as the Roanoke and Chowan in the 18th and 19th centuries gave rise to a large-scale seasonal industry manned by enslaved and free Blacks and brought to life in the writings of regional historian David Cecelski in his book, *The Waterman’s Song: Slavery and Freedom in Maritime North Carolina*:

Laying seines around schools of a hundred thousand fish required an orchestra’s sense of timing and teamwork....The fishery was a Herculean test of endurance and perseverance....The fish ran so bountifully during the six- to eight-week peak season that the fishermen worked the seines every day of the week, all day and all night. Every haul lasted on the average from four to seven hours, making three or four hauls daily an accomplishment.



Henry Langston extracts eggs from a roe shad; they will be hatched at the Pamunkey Shad Hatchery on the Pamunkey River in Virginia.

Photo by John Pemberton

Pamunkey shad-hatchery worker Henry Langston squeezes eggs from a roe shad caught in the Pamunkey River. In the early 1980s, Virginia author Larry Chowning went fishing with the late Chief William H. Miles and his son Billy, and described the historic Pamunkey fishing method in his book, *Harvesting the Chesapeake: Tools and Traditions*: "Long before the English arrived on the scene, the Pamunkys were harvesting shad with crude weir traps made from rocks and brush. They'd build a dam of rocks across the river leaving gaps. In the gaps, they would secure woven funnel-shaped baskets that snagged the shad as they swam upriver to spawn. 'Naturally, we don't fish like that anymore,' said Chief Miles."

Today, only one commercial herring fishery remains on the Chowan River, run by brothers Bobby and Herbert Byrum. But even if shad and herring fishing is no longer commercially viable in North Carolina, the Albemarle shad boat, a sturdy vessel made of native Atlantic white cedar (juniper) and still used by some commercial and recreational fishermen, keeps the memory alive. The shad boat was recently named the state boat of North Carolina.

Overfishing, the building of dams and other obstructions in rivers, and the large volume of pollutants that have been dumped into rivers for years eventually took their toll on anadromous fish. The phenomenal shad and herring runs were gone, and the canning houses that once offered seasonal employment closed. (Can labels have become antique collectors items.) By 1980, there were so few shad in the tributaries of the upper Chesapeake Bay that Maryland instituted a moratorium on shad fishing. In Virginia, shad fishing was prohibited after the harvest of 1993.

The annual Shad Planking in Wakefield, Virginia, a political rally in its 56th year, now must import shad from out of state. Other communities have discontinued their shad plankings in support of the fishing ban. (The events are called "plankings" because the fish are cooked by nailing them to wooden planks and smoking them slowly over an open fire. A traditional joke claims that when the fish is

finally done, you should throw it away and eat the plank.)

Shad restoration efforts are underway throughout the Mid-Atlantic, including improvements to river-water quality and removal of obstructions preventing fish from swimming upstream. One restoration effort dates back to 1918, when the Pamunkey tribe of Virginia started a shad hatchery. "We've been fishing all our lives, and the river is a way of life," says vice chief and hatchery administrator Warren Cook. "We decided we wanted to help put shad back in the river. We're the oldest shad hatchery in the United States." In 1999, the shad hatchery, which leans out onto the river near small fishing shanties, was updated with funds from the Chesapeake Bay Program and the state. The neighboring Mattaponi tribe has established a hatchery on the Mattaponi River, adding to the restoration effort. This past autumn, the Pamunkey hatchery sustained considerable damage from Hurricane Isabel, but it is hoped that it can be repaired in time for the spring shad season.

Hatchery workers catch female shad (called "roes" or "cows") and squeeze eggs from the fish. The eggs are then fertilized and hatched in big tanks, and the baby fish are fed brine shrimp. At about 15 days old, they are tagged using a harmless chemical dye and released into the muddy river. From 1989 to 1997, more than 32 million young shad were released into the wild from the Pamunkey facility. Thanks to the tagging, fish hatched in the Pamunkey and Mattaponi hatcheries and released into the James and the Susquehanna rivers can be traced far beyond Virginia. Bill Matuszeski, former director of the EPA's Chesapeake Bay Program Office, said, "We can only hope that some day, one of the fry from [the Pamunkey hatchery] supplied to the Susquehanna will become the first shad to return to Lake Otsego in New York, one of the farthest sources of water to the Chesapeake Bay."

Postal workers offer a special "shad cancellation" at the annual Lambertville, New Jersey, Shad Fest.

Photo by Susan Charles Groth





Chief William H. Miles and his son Billy wait for gill nets to drift down the Pamunkey River to catch shad. *Photo by Larry Chowning, courtesy Cornell Maritime Press*

The Lewis Fishery cannot lay claim to the depth of history of the Pamunkey and Mattaponi tribal fisheries, but it has been a bellweather for the health of shad on the Delaware River and in its tributaries for over a hundred years. Captain Bill Lewis knew something was wrong back in the early years of the 20th century, as the numbers of fish caught began declining. By the 1940s, so few fish were being hauled in the Lewis nets that some people wondered why the seasonal fishermen kept at it. No shad were caught at all in 1953 and 1956. Records from the Lewis Fishery, which have been kept every year since 1888, helped convince the states along the Delaware River to form a coalition to study the decrease in shad and to work on cleaning up polluted waters around the Philadelphia-Camden area. Shad populations began rebounding in the 1960s, and today the catch numbers around 500 fish each season.

Vice president for resource protection of the Chesapeake Bay Foundation, Mike Hirshfield, has stated, "It's tragic that a generation of kids [in Maryland and Virginia] is growing up not even knowing what a shad is." But some kids on the Delaware River are more fortunate. Nine-year-old Keziah Groth-Tuft, daughter of folklorist Susan Charles Groth, loves to go out in the rowboat, help pull in the net, and weigh and measure the fish, although she'd rather eat a hot dog than a piece of shad. The Lewis family considers Keziah and the other young people involved in the fishery a sign of hope for the next generation of traditional shad fishermen. Fred Lewis recalls: "Well, I got started because my father was into it. And he began fishing back in 1888. And ever since then, one of us has been doing the fishing every year. We never missed a year." And if this fishery's family, crew, and friends can help it, they never will.



Brothers Lemuel and Steve Ward, barbers and pioneer waterfowl carvers from Crisfield, Maryland, called themselves "Counterfeiters in Wood." Their favorite wood was cedar. *Photo courtesy Ward Museum of Wildfowl Art*

ATLANTIC WHITE CEDAR

"When I can't get cedar no more, why, I'll just have to quit making sneakboxes.... Jersey sneakboxes must be one reason why God made trees." —

George Hendricks, New Gretna, New Jersey

ON THE VERNAL EQUINOX, March 20, 2000, students from Tyrrell County Elementary School in rural eastern North Carolina joined a group of naturalists, educators, and arts activists in a muddy swamp to plant tree seedlings. This wasn't just any lesson in trees and ecology, though. The children were planting Atlantic white cedar, known locally as juniper, a mainstay of traditional life and economy in the coastal Mid-Atlantic. Since colonial days, entrepreneurs throughout the region had become so efficient at cutting down and marketing cedar wood for boat-building and roofing shingles that whole forests had disappeared by the 1800s. To add to the problem,

many clear-cut swamps were drained, and the loss of the natural filtering qualities of trees and peat wreaked havoc with the water quality needed to sustain anadromous fish species such as shad in the local rivers, and shellfish such as oysters in the nearby sounds and bays.

By noon on that soggy March day, one hundred trees had been planted, the first of the 7,000 planned in a project of the arts organization Pocosin Arts in Columbia. Attached to each juniper seedling was a handmade clay marker, upon which each child inscribed a symbol "to commemorate the day, the project, and the millennium." Feather Phillips, the director of the project, explained, "[The Millennium Forest] will be open space alternating with dense planting, the way the trees grow in nature. It will be a place visitors can enter to sit, meditate, and contemplate."

Atlantic white cedar (*Chamaecyparis thyoides*) once grew in profusion in wetlands from Long Island to North Carolina. The trees grow

in clumps that tend to intertwine as they reach heights of up to eighty or a hundred feet, making it difficult to cut just one or two trees at a time. Referring to cedar stands in the wetlands of southern New Jersey in *The Great Book of Wildfowl Decoys*, author Gary Giberson explained how the clear-cut timber was used with ruthless efficiency:

The smallest trees, those growing around the outside of the stand, would make the best bean poles or net markers. The next size tree, two to four inches in diameter, would be used for fence posts. The six-inch-diameter trees would be used for cedar shingles. Working in toward the middle of the stand, the next size tree would be cut for weather boards or small trim material. These logs would be around eight to ten inches in diameter. The remaining large trees were used as boat lumber.

Straight grained, light, and insect resistant, Atlantic white cedar was also used for duck and goose decoys, barrels, buckets, furniture, channel markers, utility poles, railroad ties, the interior of freezers and washing machines, and even for organ pipes. In the 18th and 19th centuries, reforestation was not a common practice, and the trees did not regenerate themselves. The wood eventually became so scarce that lumber companies in New Jersey created a brisk business in the 19th century “mining” it by dredging up fallen trees from the swamps.

An elementary school student from Tyrrell County, North Carolina, plants an Atlantic white cedar (juniper) seedling in the Millennium Forest at Pocosin Lakes National Wildlife Refuge as part of the 7,000 Junipers project.

Photo courtesy Pocosin Lakes National Wildlife Refuge

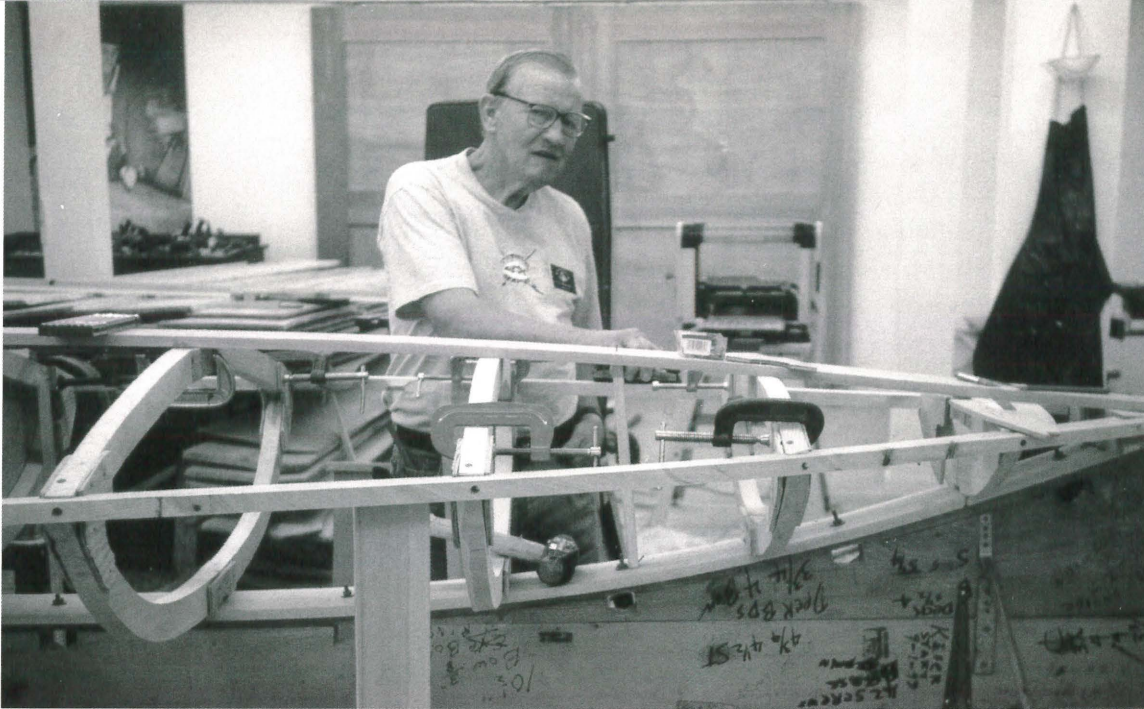


A stand of Atlantic white cedar in the New Jersey Pine Barrens, showing how the trees grow in a dense cluster, which led to clear-cutting.

Photo by George F. Russell @ USDA-NRCS PLANTS Database

Spanning the border of North Carolina and Virginia, the Great Dismal is a vast swamp where huge stands of Atlantic white cedar (juniper) and cypress once stood, before the lumber companies cut them down. North Carolina author Bland Simpson traveled with local guide Reggie Gregory to the last stand of Great Dismal juniper and described it in *The Great Dismal: A Carolinian's Swamp Memoir*: “In close ranks, the cedar spires stand, each tree a tall tawny pole with bark in thin vertical strips marking a slow swirling whorl around and about the tree up to its dark green arrow-crown. They grow in thick, high-acid peat of their own making and reach heights of sixty and seventy feet, diameters of a foot. Deadfalls and windfalls cross and lap each other on the forest floor, and walking in the cedars is slow going or no going at all.... In aerial photographs, the Swamp's few remaining patches of cedar show up stark and dramatic, like shadows on the moon.

‘Well,’ Reggie said, ‘there’s your juniper.’”



Gus Heinrichs poses with a sneakbox at the Perrine Boat Shop at Tuckerton Seaport. *Photo courtesy Tuckerton Seaport*

Legendary decoy carvers Lem and Steve Ward, who are memorialized at the museum in their hometown of Crisfield and at the Ward Museum of Wildfowl Art in nearby Salisbury, Maryland, were fairly typical in their use of cedar. Sometimes they used old cedar telephone poles, but if they could get a good piece of “North Carolina juniper,” they were happier. Though cedar was their favorite, they used any kind of wood they could obtain. After World War II, they bought a number of Navy life rafts and cut thousands of blocks of balsa wood to use for gunning decoys. Balsa had the advantage of being lighter than cedar, but it was much less durable. Today, Chesapeake Bay carvers Ron Rue and Dan Brown carry on the Ward brothers’ tradition, still using cedar when they can get it. Decoy collectors pay thousands of dollars for a decorative Ward decoy, and those made of cedar are the most prized.

Another piece of waterfowling equipment made from cedar is the “sneakbox,” a 12-foot-long boat with a spoon-shaped hull traditionally built and used by duck hunters in the Barnegat Bay-Pine Barrens region of New Jersey. Like many folk craft, the boat was developed to meet a unique set of needs, in this case, hunting in conditions ranging from open water to the thinnest layer of marsh mud and, in the coldest months, to ice. The boat draws so little water, it is joked, that it can “follow the trail

of a mule as it sweats up a dusty road.” These boats need wood that is light, flexible, straight-grained, and resistant to wood-eating marine animals; “swamp cedar” or “Jersey cedar,” as Atlantic white cedar is called locally, was the only wood that could fill the bill.

In the late 1970s, folklorists from the Library of Congress’s American Folklife Center interviewed sneakbox maker Joe Reid, from Waretown, New Jersey, who explained, “Fiberglass doesn’t handle itself in water the way cedar does. Cedar takes in just the right amount of water and settles down.... You can’t beat cedar for a boat.” Folklorist Mary Hufford noted that, although most of the older men were no longer making full-sized sneakboxes, and many of them had stopped hunting, they had started making miniature sneakboxes for their children and grandchildren. Hufford observed that these miniatures are “a means of transporting aging gunners mentally into the marshes, while transmitting regional identity to children and grandchildren.”

The sneakbox tradition lives on in Gus Heinrichs, born in 1931 in Tuckerton, New Jersey, a historic shipbuilding and lumbering town. Heinrichs came from a boat-building family, and when he was young, his father built him a 24-foot garvey, another type of regional boat made of cedar. He used it for clamming until the 1950s, when he became

a house carpenter. In 1983, Heinrichs was admiring a sneakbox at a decoy and gunning show when someone dared him to build one. He went to work almost immediately on his first sneakbox, which won a prize at the show the next year. Today, Gus Heinrichs is the resident sneakbox maker at the Tuckerton Seaport museum complex. "My dad wanted at least one of his sons to learn sneakbox-building and carry on a tradition that he had started many years before.... The sneakbox I build is a different style but from the same patterns passed down by my dad," explains Heinrichs.

At last count, there were still 1,000 junipers to be planted to reach the 7,000 mark at Pocosin National Wildlife Refuge. There are also many other Atlantic white cedar forest restoration projects going on from New Jersey to North Carolina. These efforts won't make up for the millions of trees clear-cut in the Mid-Atlantic over the past three centuries, but they are significant. Meanwhile, one can only hope that Gus Heinrichs and his helpers can continue to find enough cedar to build their boats and demonstrate their skill for the public. Otherwise, sneakbox-making will become a part of memory culture, with only miniature models made for grandchildren remaining as evidence of the legacy.

These three resources—oysters, shad, and Atlantic white cedar—sketch a history of the maritime traditions of the Mid-Atlantic region. The next generation of skipjack captains, shad fishermen, and sneakbox makers will build upon the past, charting a course for the region's maritime resources into the future. Through efforts of grassroots conservation and local wisdom, the region's cultural history lives on through the eternal process of change and renewal.

Dr. Betty J. Belanus is an education specialist at the Center for Folklife and Cultural Heritage and has been working on the Festival since 1986. She has curated or co-curated five other Festival programs; this was by far the most challenging, but one of the most rewarding.

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