THE TIDES THAT

PROUD AND INDEPENDENT, THE PEOPLE OF THE DEAL ISLAND PENINSULA ARE ON THE FRONT LINES OF CLIMATE CHANGE. UMD WANTS TO HELP MAKE SURE THEIR CENTURIES-OLD COMMUNITY DOESN'T WASH AWAY.

BY LIAM FARRELL

PHOTOGRAPHS BY JOHN T. CONSOLI

1

ON A SWAMPY JULY MORNING, Stoney Whitelock finally got his boat into the water. For five weeks, the 111-year-old wooden vessel, named *Minnie V.* after the original owner's wife, had been dry-docked at Scotts Cove Marina in Chance, Md., to undergo repairs.

A native of the Deal Island peninsula, a finger of land poking into the Chesapeake Bay about 40 miles west of Ocean City, Whitelock restores historic boats known as skipjacks. He bought *Minnie V.* two years ago for oyster harvesting, sailing and racing.

Whitelock spent 40 years building power lines but always had water in his veins. As a child, he watched boats from his classroom window and listened to sea tales at Sunday family dinners.

"This was a special day," he said after guiding *Minnie V.* to the dock, his Eastern Shore accent flattening vowels. "It feels so much better in the water."

Half a world away, scientists watched a different launch with alarm. A 1-trillion-ton iceberg, nearly the size of Delaware and containing twice the water volume of Lake Erie, had broken off from Antarctica. Though scientists aren't sure if climate change was the cause, the rupture raised fears that a continent with 90 percent of the world's ice—enough to determine whether Chance will survive the next century—would be further destabilized.

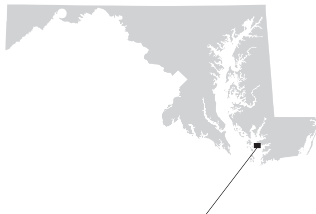
Whitelock knows his position is uncertain. Over the last 15 years, flooding on the lone road to his house increased from a few times a year to dozens.

"I got tired of battling it," he says. "You had to pick your days to get home."

Not too tired, however, to leave entirely: He moved just one road down.

"If it's your home," Whitelock says, "you're always partial to it."

Since 2012, researchers from the University of Maryland have tried to connect local needs with global environmental challenges through the Deal Island Peninsula Project. As climate change leads to erosion and flooding that strands school buses and submerges roads even on sunny days, UMD has brought together people like Stoney Whitelock with environmental and government officials for workshops, community conversations and collaborative research to forge consensus and find ways to take action.



The goal, says anthropology Professor Michael Paolisso, the lead faculty member, is to create a blueprint for similar high-risk areas in the country. Peninsula residents are fiercely independent, with no intention of leaving an endangered home. While they have a reverent and codependent relationship with the environment, the very words "climate change" can carry a host of negative connotations, Paolisso says, from academic arrogance to government overreach. They have spent generations surviving the wrath of nature; why should they follow the orders of outsiders?

"They struggle with the scientific explanations," he says, "because they struggle with the idea that science could ever predict what nature would do."

2

The Deal Island peninsula is like many places on Maryland's Eastern Shore, where the clustered state's center unfurls into country roads, glinting marshes and verdant fields. When English settler John Smith wrote more than 400 years ago that "heaven and earth never agreed better to frame a place for man's habitation" than on the Chesapeake Bay, this is one of the places he was talking about.

Defined by the UMD project as the 18 square miles encompassing the communities of St. Stephens, Oriole, Dames Quarter, Chance, Deal Island and Wenona, it was known as "Devil's Island," a pirate refuge for British loyalists during the American Revolution.

Above: The Deal Island peninsula is dotted by abandoned homes, evidence of the economic, social and environmental struggles facing the community.

Top right: Arby Holland stands in front of his general store in Wenona. Watermen gather here at the beginning of their days, grabbing breakfast at 4:30 a.m.

Bottom right: Stoney Whitelock stands aboard *Minnie V.*, a historic skipjack boat that he recently restored. Increased flooding forced Whitelock out of his home, but he didn't want to leave the area and moved just one road down.

The peninsula was an agricultural community before settlers shifted to water transportation and seafood harvesting in the 19th century, and the spread of Methodism spurred a name change to Deil Island (with one minister wanting to show "the Devil had no claim here") and, eventually, Deal. It was once an important hub for steamboats, but a 1933 storm destroyed the wharf, and a population that approached 3,000 in 1940 has dwindled to a third of that.

People on the Deal Island peninsula are proud. They know by the color inside a crab's swim fin whether it's close to shedding. They remember offhand when an osprey reappeared in a nesting place after the winter. They tell stories about characters with nicknames like Fur Pole, Sputnik and Scrabbit.

Arby's General Store in Wenona, the southernmost peninsula community, is a squat turquoise building with food, fishing supplies and an adjoining bar and grill that announces its proximity to the Manokin River: "It ain't the end of the world," its sign says, "but you can see it from here!"

Debby Holland, who has run the place for decades with her husband and store namesake, and the other locals in Arby's can provide point-by-point breakdowns of which hurricanes hit hardest and why, how tides lined up to spinning winds and whose houses flooded and how badly. Conflict with the environment is not new; what's to come isn't more frightening than what's already been.

"I'm not going anywhere," Holland says. "These old-timers are used to this. They just go through every hurricane, wipe out the mud and start all over again."

Instability, however, is inescapable. The Deal Island peninsula is located in Somerset County, the poorest and second smallest in Maryland. Almost 40 percent of its residents are 65 or older and only 11 percent are under 18. (Maryland's overall numbers are 13 percent and 23 percent, respectively.) The median household income of $36,000 a year trails both Maryland ($73,850) and the United States as a whole ($53,657). Abandoned homes, some with elaborate gables and spires, are weather-beaten fossils from long-gone inhabitants who enjoyed long-gone financial fruits.

Paolisso, who joined UMD's faculty in 1997, first visited in 2000 to research a pfiesteria outbreak and bought a home in Chance six years later, joining the ranks of newcomers known as "come heres." His appreciation is both professional—he values the history and culture of local communities—and personal—like everyone else, he habitually waves at each car and pedestrian he passes while driving. Because everyday concerns over economic and social struggles far outweigh future sea rise projections, he says, grassroots dialogue was needed.

"They have more immediate needs," Paolisso says. "And they care about the environment just as much."

3

Inch by inch, nature is asserting itself on the peninsula. Amidst clumps of marshland pines are bright white stalagmites sticking up like bleached bones. These are the "ghost forests," made up of trees killed by the spiking salinity of rising seas.

The Maryland Climate Change Commission has forecast a grim future for the Chesapeake Bay, predicting it will rise 1.4 feet by 2050 and 3.7 feet by 2100. Several factors are contributing: geologic processes are causing the land to sink; glaciers and ice caps are melting; warming seawater is increasing in volume; and the Gulf Stream is weakening and carrying less water away.

The average elevation of the Deal Island peninsula today is only about 3 feet.

Famine, drought, sickness and extinction ride pale horses through any projections of earthly life if carbon emissions aren't eventually halted. But for Katherine "Jo" Johnson Ph.D. '16, project director until earlier this year, UMD had to start its work in the present. Johnson, who grew up 20 miles away in Salisbury, says creating a network of trust was more important than arguing about the causes or future impact of climate change; otherwise, there would be no way to brace for its blows.

"Because this is a rural, marginalized and sparely populated area, (experts) think people are crazy for living out there," Johnson says. "They really feel that this environment is prioritized over their lives and their livelihood."

So local residents and experts from organizations like the Maryland Department of Natural Resources, the

> **“People are struggling, but the option is quit or keep going. We choose to keep going because that’s what has always served us in the past.”**
>
> **— Dave Webster**

Dave Webster, a pastor and waterman, looks at his catch in a crabshanty.

Chesapeake Bay National Estuarine Research Reserve and the Somerset County planning and zoning office met at more than a dozen events over three years to discuss flooding, marsh restoration and local history. Those conversations built a network of 50 people and expanded into what infrastructure projects could mitigate environmental problems.

The first tangible result is thin white sticks poking up from marshes, marking study sites. Although the wetlands appear pristine at a passing glance, they are crisscrossed by Civilian Conservation Corps ditches dug in the 1930s to control mosquitoes by letting in fish to eat larvae. DNR is now studying whether plugging them will provide a better buffer from rising water.

“Change is just part of living in this dynamic environment,” says Sasha Land, a DNR coastal planner working on the project. “The difference now is that the magnitude of these impacts is changing.”

Although hundreds of islands, most uninhabited, have disappeared beneath the Chesapeake Bay, the rate of sea rise has sped up. The story of nearby Holland Island—once a thriving community with a school, church, post office and baseball team that eroded to a single abandoned home surrounded by water—looms in the Deal Island imagination like a Grimm fairy tale.

Johnson, however, says experts must resist holding communities like Deal Island to different standards than equally threatened, but more populous and powerful, cities like Miami.

“Is it fair to say, ‘You need to move tomorrow’?” she asks.

4

Wearing a shirt from the 57th annual Deal Island Skipjack Races and a cap from the 50th, Andrew Webster, a historian with local lineage to the 1800s, points out stained glass windows in Rock Creek United Methodist Church, a more than 200-year-old congregation and the oldest on the peninsula. They show wheat, a lamb, the Alpha and Omega, and an anchor intertwined with a cross.

Webster, Paolisso and Johnson believe the strong religious heritage of the peninsula, once known as the “Garden of Methodism,” could be an asset in motivating residents to prepare for climate change.

“That’s the calling of the believer,” says Webster, a member of Rock Creek. “To see the things that need to be changed in the society around you.”

An immature religious infrastructure made Deal Island ripe for traveling preachers during the post-Revolutionary War fervor known as the Second Great Awakening. Local Methodist convert Joshua Thomas, the “Parson of the Islands,” traveled in a log canoe to hold revivals for thousands. When ordered to minister to British soldiers before they invaded Baltimore in 1813, he prophesied—correctly—that they would lose.

While the national Methodist church is more moderate today than its evangelical cousins—including supporting government-mandated emissions reductions—rural congregations still retain the antebellum lineage of lay, populist preachers who disdain hierarchical authority. The precincts with peninsula voters went overwhelmingly last fall for President Donald Trump, who has cast doubt on climate science and pulled the United States from the 2015 Paris climate accords.

Dave Webster (no immediate relation to Andrew) is the Methodist pastor for three peninsula churches: Rock Creek, St. John’s and St. Paul’s. A fifth-generation Dames Quarter waterman who has lived on the same road his whole life, “Dave-Dave” gets up at 3 a.m. to catch crabs and attend to his religious duties. He performs three services most Sundays.

Sitting in his home office after repairing some crab pots, Webster doesn't disagree that the climate is changing, but says, "I don't agree with who's at fault or why it's happening."

"My book, that I go by, says God controls all these things," he says, tapping the large, open Bible on his desk.

Webster believes coastal residents are expected to drastically alter their lives even though scientists and politicians are unwilling to surrender SUVs and private jets. He chafes at the narrative that watermen are negligent, when northern pollution is one of the bay's worst problems (the Susquehanna River's leaking Conowingo Dam is a local bogeyman). The temporal nature of the land, he says, was one reason longtime residents built homes away from the shoreline.

But Webster has the same goal as the UMD project: making the Deal Island peninsula as livable and sustainable as long as possible.

"People are struggling, but the option is quit or keep going," he says. "We choose to keep going because that's what has always served us in the past."

The respect that Paolisso and Johnson showed for these disagreements was essential, says Andrew Webster. Less diplomatic academics "might have torpedoed it from the very beginning."

Progress, he says, only occurs with room for beliefs of local people as well as scientific data. "It's due to both of them that we have the world we live in today."

5

As soon as Monica Princiotta saw the two-story Deal Island house with panoramic views of Tangier Sound, she told her husband, Bill, that she had to have it. For the last three years, the "come here" couple has split time between there and North Carolina.

A friendly demeanor belies her No Trespassing signs—meant not to scare strangers, but to keep them away from the rapidly eroding shoreline. When they bought the house, Princiotta says, they didn't know how difficult and expensive it would be to stave off the waves year after year.

"Our fear is, if we don't protect this side, we'll be on an island," she says. "It's just so sad to see it being washed away."

This is one of the most endangered points on the peninsula. Fifty years ago, the fronting road extended into what is now bay and vanishing beach. Thirty-foot-high dunes long used for Boy Scout camps and high school parties have faded into lapping water, leaving only a tiny strip between open waves and a marsh pond. If that buffer is eaten away, Tangier Sound will have an easy path to the island's interior and one day during storms could cut off points further south, including Wenona.

The University of Maryland project made DNR aware of this crisis. As part of the new Coastal Resiliency Grant Program, the state will design, build and restore natural dunes and marsh grasses to slow the water's advance, which has eroded the shoreline more than 275 feet since the 1970s. The project will use a combination of natural and engineered features to protect it and slow down accelerated erosion.

"Ultimately, that's what the project is leading toward," says Land. "Where are the opportunities for restoration that reduce the risk for communities and restore natural features that enhance resilience?"

Outside assistance will be critical. The entire 2018 operating budget of Somerset County is $38 million, one-hundredth that of Prince George's County. Meanwhile, Somerset is still rebuilding from the damage of Hurricane Sandy back in 2012.

"We can do things to slow it down. And we can buy time," says Nancy Goldsmith, a Dames Quarter resident. "But it's going to take money, and it's going to take will."

In the sky over Princiotta's house, an osprey lazily circled and occasionally dived to skip across the water's surface. Its nest perched nearby on a wooden platform tower.

Ospreys usually mate for life and return each year to where they were born. Graceful and heedless, this one swung over where the fate of its home will depend on human action, human ingenuity and—just maybe—human conversation. TERP

A "No Trespassing" sign put up by Monica Princiotta aims to keep people away from her eroding property. The state is planning to put a living shoreline here to prevent the Tangier Sound from cutting into the island's interior.