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## WARRIORS

FIGHTING ON THE FRONT LINES FOR THE WORLD'S WATERWAYS AND FOR THE PLANET

{PART 2 OF 2}



-- 20th Anniversary Issue --

JILL JEDLIKA / BUFFALO NIAGARA WATERKEEPER

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A handwritten signature in black ink that reads "John Paul DeJoria".

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# “The Fierce Urgency of Now”

Rashema Ingraham’s grandfather was a fisherman on Bimini, the westernmost of the roughly 700 islands that make up the Bahamas. As Lauren Evans writes of Rashema in this issue of Waterkeeper Magazine, “Growing up, she and her two sisters spent a lot of time at his house, which was 200 feet from the bay and just 70 feet from the ocean.

“Rashema was seven years old the first time she accompanied her grandfather to fish in his handmade boat, which is when she became aware of the vast underwater world right outside his home. They were close enough to shore that he was able to maneuver the boat through the water using only a pole, prodding the bottom that lay just 10 feet below the surface. She gazed down into the limpid waters, where she saw schools of fish, a lemon shark and a nurse shark gliding near the boat.

“For Rashema, the more time she spent examining the living things around her, the more she fell in love with them, and, she says, ‘the more aware I became of their fragility. I thought, someone’s got to stand up and fight for this incredible place.’ Rashema decided that she would be that person.”

Her fascination with the natural world continues and, in her dual roles as Bimini Coastal Waterkeeper and executive director of Waterkeepers Bahamas, her concern for it has only grown as she confronts sea-level rise and the other environmental challenges confronting the Bahamas.

As a kid, nothing in school interested Kemp Burdette as much as working his way up eastern North Carolina’s rivers and cypress swamps. His scholastic record suggested...something other than academics. Like the Navy, where he qualified as a rescue swimmer

and learned to jump out of a helicopter into rough seas and extract crashed pilots from their sinking planes.

Post-Navy, he decided that he had something to prove academically, and enrolled at the University of North Carolina, Wilmington. He won departmental scholarships in history and geology, and his senior honors thesis was published in a highly respected academic journal.

This helped Kemp win a Fulbright Scholarship, which took him to his next port of call: Newfoundland, where he studied the crash of the province’s fishing industry. Its waters were once so rich with fish it was hard to sail through them, but ever-larger ships and their nets depleted the fishing stocks, devastating the local people and leaving them with little but alcohol, drugs, and stories of better days.

It was then, Kemp recalls, that he decided he had to fight to protect what he loved. And there was nothing he loved more than his native state’s Cape Fear River and its watershed. Today, as the Cape Fear Riverkeeper, he is fighting a host of threats, including massive pollution from ballooning industrial pork and poultry operations, and from coal-fired power plants.

Growing up in Beijing during the tumultuous years of Mao Zedong’s Cultural Revolution, Yongchen Wang found a needed respite on trips to a lake at a nearby park where she would go with her father and brother.

“It was an important time that influenced me,” she recalls. “I became very interested in the rivers, the trees and the birds.”

As Eugene K. Chow writes in his profile of Yongchen, “When she grew up to be a reporter, her passion for environmental activism was re-awakened. It fully blossomed in 1988 when she worked on a story

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RALPH LAUREN

LETTER FROM THE EXECUTIVE DIRECTOR, MARC A. YAGGI (CONT.)



FEATURED IN THIS ISSUE, FROM LEFT TO RIGHT, TOP TO BOTTOM, BIMINI COASTAL WATERKEEPER AND HEAD OF WATERKEEPERS BAHAMAS RASHEMA INGRAHAM, BUFFALO NIAGARA WATERKEEPER JILL JEDLICKA, MIAMI WATERKEEPER RACHEL SILVERSTEIN, HACKENSACK RIVERKEEPER CAPTAIN BILL SHEEHAN, MARAÑÓN RIVER WATERKEEPER BRUNO MONTEFERRI, BEIYUN WATERKEEPER YONGCHEN WANG, LONDON WATERKEEPER THEO THOMAS, CAPE FEAR RIVERKEEPER KEMP BURDETTE, KARNALI RIVER WATERKEEPER MEGH ALE, AND HANN BAYKEEPER MBACKE SECK.

about the trees in Beijing’s Xiangshan Park, where every autumn locals gathered in large numbers to marvel at the changing colors of the leaves. But, she observed, this annual ritual was beginning to take a toll. When she visited the park she saw the trees had been badly damaged by people trampling on the roots, pulling off leaves, and even breaking off entire branches. This sight left a deep impression on her.

“That was the first time I saw nature destroyed, and I realized that it was not only for humans — that we have to share nature with the birds and the trees.’ It was at that moment that she began to think that she had to do something to protect the environment.

“As the Beiyun Waterkeeper,’ Yongchen says, ‘I consider it my duty to be a voice for China’s rivers and for the natural world, because, in spite of their enormous importance to China’s, and the planet’s, future, they cannot speak for themselves.’”

Legendary singer-songwriter and activist Pete Seeger once observed, “The world is going to be saved by people who fight for their homes, whether they’re fighting for the block where they live in the city or a stretch of mountain or a river.”

If there is any one thing that characterizes Rashema Ingraham, Kemp Burdette, Yongchen Wang, and the other Waterkeepers you can read about in this issue, it is their passion for their home places and their resolve to fight for them, no matter the personal costs. It’s a characteristic they share with every Waterkeeper on the planet.

This was certainly the case in 1966, when a group of fishermen

on New York’s Hudson River banded together to take a dying river back from polluters and restore it for the people. First, as the Hudson River Fishermen’s Association, and later, as Hudson Riverkeeper — the world’s first Waterkeeper organization — they patrolled the river, identified pollution problems, and forced those who caused them to begin cleaning up their messes. Thanks to them and the laws they helped enact, today the Hudson River is recognized as an international icon of ecosystem revitalization.

And today Waterkeeper Alliance is a global organization uniting 350 Waterkeeper groups, operating in 46 countries on six continents and employing nearly 1,200 advocates movement-wide. Waterkeepers now patrol and protect nearly three million square miles of watersheds around the world, serving approximately three-quarters of a billion people — and counting — and as our supporters and donors increase, our reach continues to grow.

But as proud as we are of our success, we know that the challenges are rapidly escalating. Most of us take clean water for granted, yet our species is squandering and destroying it at a frightening pace. Every day two million tons of sewage and industrial and agricultural waste are discharged into the world’s waters, and today more than two billion people worldwide don’t have access to drinkable water. More than three million children under the age of five die annually as a result of unsafe drinking water and poor sanitation, and more than half the hospital beds in the world are filled with people suffering from waterborne diseases.

It is a wonder to me how, given our species' utter dependence on water, we can be so cavalier about climate change and the way water is wasted, polluted, and misused. Isn't the case for clean and abundant water so obvious that it needs no defense or advocates?

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Hovering over us all is what Pope Francis has called "the existential crisis of climate change." And climate and water are deeply interconnected. Climate change is altering the chemistry of our oceans, the character of our coastlines, and the timing and intensity of rain and snow, wreaking havoc around the world.

It is a wonder to me how, given our species' utter dependence on water, we can be so cavalier about climate change and the way water is wasted, polluted, and misused. Isn't the case for clean and abundant water so obvious that it needs no defense or advocates?

But it does, and, make no mistake about it, humanity has the ingenuity and ability to solve these crises. At Waterkeeper Alliance, we believe that highly trained, effective local leaders, such as the world's Waterkeepers, are critical to this work.

The Waterkeeper movement was built on the conviction that change starts at the local level. Decisions about vital issues like energy sources, transportation options and land-use are most often made at the local level, and it is there that they can be most effectively addressed. Local actions that involve shared responsibility rather than a top-down imposition can be tailored to the people and culture of the community, and make it easier to hold decision-makers accountable.

I'm inspired by the Waterkeepers around the world who, for lower pay than they could command in the private sector, and often at risk of their safety, fight daily for their beloved waterways.

Let me share just a few examples of the difference Waterkeepers are making:

- Columbia Riverkeeper in Oregon has combined grassroots organizing with savvy legal strategies to defeat proposed fossil-fuel export terminals in America's Pacific Northwest.
- Cabo Pulmo Coast Waterkeeper in Baja, Mexico stopped a 30,000-room mega-resort that would have threatened the Sea of Cortez, which Jacques Cousteau once called "the aquarium of the world."
- Chattahoochee Riverkeeper's advocacy in Atlanta, Georgia has resulted in more than \$2 billion of investments to restore a river

that had become a drainage ditch for sewage, to a thriving community resource.

- Middle Huai River Waterkeeper in China helped secure the closure of three chemical companies in Huaihe, helping to mitigate the health problems of more than 1,000 villagers. The group's truly heroic efforts were featured in a documentary film, "The Warriors of Qiugang," which was nominated for an Oscar.

Multiply these examples by a thousand and you'll get an idea of the Waterkeeper movement's impact.

Based on our firm belief in the power and efficacy of grassroots leadership, Waterkeeper Alliance has made a commitment that aligns with the UN's "Sustainable Development Goal for Clean Water and Sanitation."

We're committed to having, before mid-century, a Waterkeeper in every habitable watershed on the planet. But our advocates need you to help, and I encourage you to think about why you should. Why is clean water important to you? I bet, for many of you, it is a treasured beach or body of water that nurtures your soul and brings you happiness and peace — a place that, I hope, you will refuse to stand idly by and watch as it is sacrificed to the profits of the fossil-fuel barons or destroyed by plastic pollution.

When you think about why it is important to you, I guarantee that you will become more engaged and inspired.

In another time of crisis, Martin Luther King, Jr. called America to conscience, and his words reverberated around the world. On one occasion, he said, "We are now faced with the fact that tomorrow is today. We are confronted with the fierce urgency of now. In this unfolding conundrum of life and history, there is such a thing as being too late. This is no time for apathy or complacency. This is a time for vigorous and positive action."

Now is the time to stand shoulder to shoulder with your local Waterkeeper Warrior to help save our blue planet.



AbTech congratulates Waterkeeper Alliance on its 20th anniversary and all of its amazing warriors for their leadership in the battle against water pollution.

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## ON THE COVER:

Buffalo Niagara Waterkeeper Jill Jedlicka in the Niagara Gorge in the lower Niagara River. Jill is playing a leading role as her region recovers from the toxic legacy of its industrial past and builds a future based on its vast and plentiful water resources.

Photo by ©Mark Schäfer, courtesy of Culture Trip  
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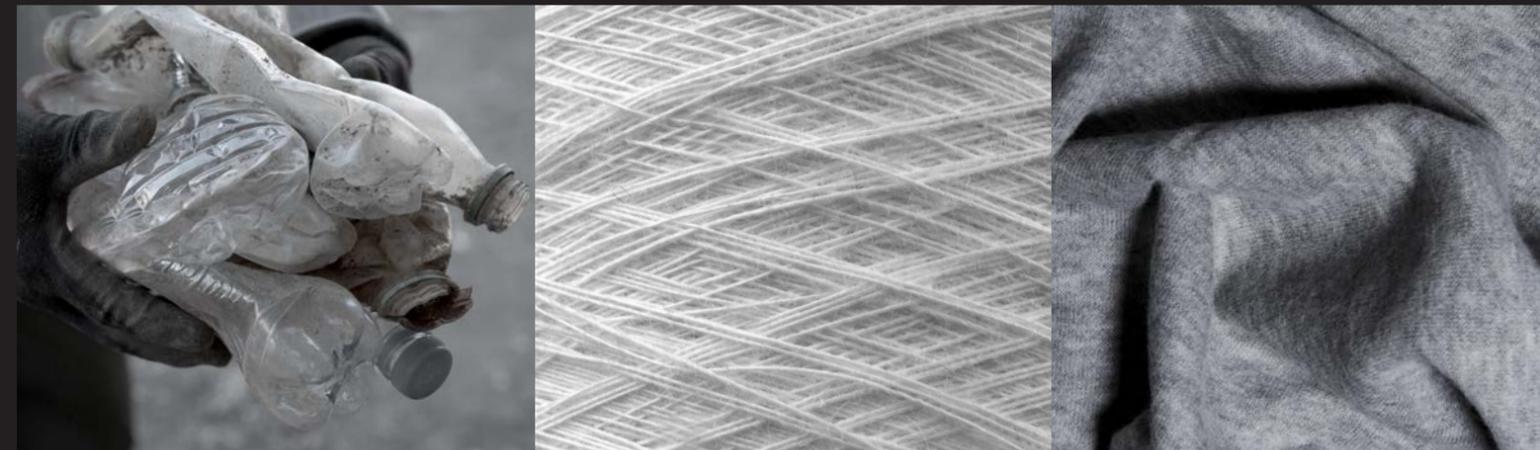
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“If we want to continue to live in Florida, I don’t think it’s a stretch to say we’ll have to invest tens of billions, just in Miami, just to maintain some sense of functioning 21st-century life.”

# RACHEL SILVERSTEIN

MIAMI WATERKEEPER



## MIAMI VOICE

RACHEL SILVERSTEIN DIVES DEEP TO SALVAGE HER CITY’S FUTURE.

BY ELLEN SIMON

PHOTOS BY ROSE MARIE CROMWELL, COURTESY OF CULTURE TRIP

On her fourth day as Miami Waterkeeper, Rachel Silverstein was at her kitchen table, sipping coffee and reading up on nonprofit management, when a New York Times reporter called asking if she knew anything about a coastal coral die-off caused by dredging at the Port of Miami.

That call was the first time Rachel heard that the dredging had failed to protect endangered staghorn corals nearby, as required by the permit. It would lead her to take countless dives in teeth-rattling conditions, spend a year untangling a hidden dataset, and see an Army Corps staff biologist plead guilty to lying to federal investigators. And it would eventually prompt Miami Waterkeeper to file an Endangered Species Act suit against the Army Corps of Engineers.

In the process, Rachel, 35, learned more about managing a nonprofit than any book could ever teach. She put together scrappy teams to fight alongside her. She grew Miami Waterkeeper’s staff from one — her — to six. Its operations moved from her kitchen table to an office in Coral Gables. She also established its reputation as one of the most credible environmental organizations in the region.

“We’re extremely careful that everything we say is backed up by a document or scientific evidence,” Rachel says. “When we call agencies or the community or the media and say something’s a problem, it’s given a lot of weight.”

As a result, Miami Waterkeeper has become the voice for the underwater coral

forest offshore from the glittering city and a first-line defender of the natural world, fervently working in an utterly unnatural environment.

“Florida had to be drained and straightened and controlled to allow for development,” Rachel says. “All the channels and canals and retention ponds you see everywhere — those are the remnants of the Everglades.”

But the days of controlling Miami’s environment may be running out. The ocean is rising so quickly that at high tide, seawater ascends through the sewers. Rachel calls her day-to-day work “the tyranny of the urgent.”

Are there days when the work is overwhelming? “Almost every day,” she says.

“One of the hardest things we have to deal with,” she adds, “is saying ‘no’ to working on issues that are in our mission area, that are really important, that we know we could have an impact on — just because of limited capacity.”

### ANIMAL, VEGETABLE, AND MINERAL

Growing up in San Diego, Rachel always felt the pull of the ocean. She was the only child in her second-grade class who finished a tide pool field trip soaked to the neck. She learned to scuba dive when she was 14. As a college student, she cobbled together grants from funders, including the Garden Club of America, to study reefs off the western coast of Australia, tracking a DNA marker correlated



SINCE SHE WAS A CHILD GROWING UP IN SAN DIEGO, RACHEL HAS ALWAYS FELT THE PULL OF THE OCEAN.

“STUDYING CORALS, SHE SAYS, IS ‘LIKE STUDYING THE TREES IN THE RAINFOREST.’ CORALS ARE THE UNDERPINNING OF THE WHOLE ECOSYSTEM, THE PLACE WHERE FISH AND OTHER MARINE ANIMALS FIND FOOD, SHELTER, AND A PLACE TO REPRODUCE. BUT A LOT OF PEOPLE OVERLOOK THEM. I LIKE THAT YOU REALLY HAVE TO PAY ATTENTION TO KNOW THAT THEY’RE THERE, AND THAT THEY’RE NOT ROCKS. WE REFER TO THEM AS MONSTERS BECAUSE THEY’RE ANIMAL, VEGETABLE, MINERAL – ALL IN ONE CREATURE.”

with reefs’ resilience to climate change. Her undergraduate advisor agreed to send one of his graduate students along. It was the start of an enduring friendship.

The pair’s adventures included a stay on Rottnest Island, off the coast of Perth, where they were given keys to a research truck, the island’s only vehicle, and a quick course on stick-shift driving on the left-hand side of the road. Their only companions were the island’s quokkas, sharp-clawed, cat-sized, decidedly rat-like marsupials. Following an old guidebook from a dusty library, they dove off remote beaches, determined to collect enough corals to justify the trip. They eventually published their research; now, more than 10 years later, her friend’s seven-year-old demands nightly bedtime stories of the trip.

After graduating from Columbia University in 2006 with a bachelor’s degree in environmental biology, Rachel earned a Ph.D. in marine biology from the University of Miami, focusing on the effects of climate change on corals.

Studying corals, she says, is “like

studying the trees in the rainforest.” Corals are the underpinning of the whole ecosystem, the place where fish and other marine animals find food, shelter, and a place to reproduce.

“But a lot of people overlook them,” she says. “I like that you really have to pay attention to know that they’re there, and that they’re not rocks. We refer to them as monsters because they’re animal, vegetable, mineral — all in one creature.”

If Rachel had a superpower, it would be her doggedness. Her Ph.D. advisor, Andrew Baker, once compared the number of emails he’d gotten from all his graduate students over six years to the number he’d gotten from Rachel alone. They tallied up to about the same number.

While she was at the University of Miami, Rachel — who had interned at San Diego Coastkeeper as an undergraduate — became friends with Alexis Segal, who was the Miami Waterkeeper. Their trails would overlap again in Washington in 2014. Alexis had left Miami Waterkeeper

to accept a fellowship at the White House. Rachel’s first job after graduate school was a Sea Grant Knauss Fellowship with the U.S. Senate Commerce Committee. When Rachel expressed her interest in the open Miami post, Alexis connected her with the group’s board members, and Rachel soon was appointed Miami Waterkeeper.

#### THE KILLING OF CORALS

When Rachel got that call at her kitchen table, her immediate thought was that a responsible person from the Army Corps of Engineers would meet her for coffee, hear her out, and halt the project after learning about the damage the dredging was doing. But she was quickly disabused of this notion. On her first call to the Corps, she asked Corps biologist Tracey Jordan Sellers for data. Sellers told her to file a Freedom of Information Act Request. The documents didn’t arrive until nine months later.

Rachel knew when she hung up that this wasn’t going to be settled over coffee,

and reached out to Miami Waterkeeper’s stalwart outside counsel, Jim Porter, who also would serve as dive boat captain on outings to the corals.

He would help Miami Waterkeeper build an outside legal team, made up of lawyer-outdoorsmen who kick off every call talking about the fish they caught over the weekend. With partner organizations, Miami Waterkeeper filed suit against the Army Corps in October 2014 on the grounds that the staghorn corals killed by the dredging — the same corals Rachel had studied for her Ph.D. — were protected by the Endangered Species Act.

As the litigation played out, Rachel could see the dredging from her kitchen table. There were days she’d call the Army Corps and be told, “The dredging boat might not even be working today.” She’d look out the window and say, “Yes it is.”

She started diving while the dredging was going on. “The current was very strong, and it was hard to see because of all of the sediment in the water” she remembers. “It

sounded like something was eating a car next to you. I could feel the vibrations in my chest.”

Four years after Miami Waterkeeper and its partners filed suit, the Army Corps agreed to a settlement that included the restoration of 10,000 staghorn corals in Miami-Dade County over three years, a project carried out by the University of Miami, which had found a way to grow corals in nurseries and replace them on the reef.

It was a win based on a loss. The Army Corps’ contractors had reported that six corals had died because of the dredging, but Rachel knew, from her own dives, that the death toll was much greater. While an individual staghorn coral grows to about seven inches tall, coral grow together, forming colonies. A colony of staghorn coral grows to about four feet high and six feet in diameter. Rachel knew the losses were losses of colonies, not merely a handful of individual corals.

After Miami Waterkeeper and its

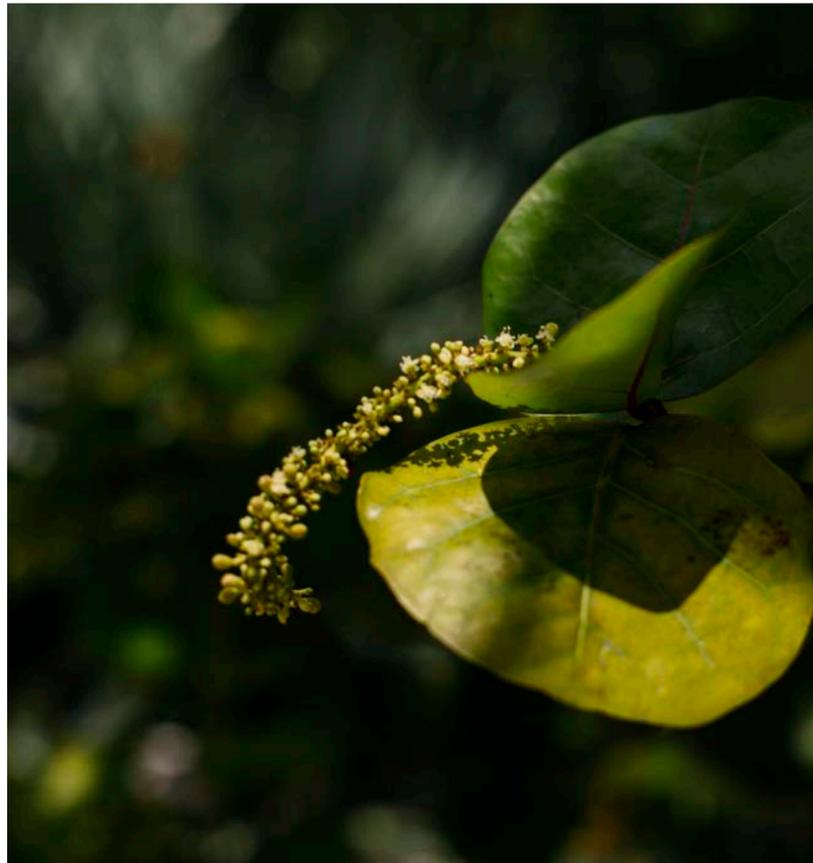
partners won the settlement, in 2018, Rachel enlisted her academic colleagues to study dredging’s true toll on the corals at the Port of Miami, so that future dredging projects wouldn’t do similar damage.

The Corps’ contractors had kept records of their weekly (and in some cases, twice-weekly) dives monitoring 600 tagged colonies of coral. But rather than using spreadsheets, they had stored each of 1,001 data-points as individual PDFs, making the dataset nearly impossible to analyze. So Ross Cunning, one of Rachel’s former academic colleagues (and lead author of the paper they would eventually publish) wrote a computer program to convert all those PDFs to cells in a spreadsheet, transforming what had been hidden into a dataset a statistician could work with.

The numbers would eventually reveal a story of devastating loss of corals and coral-reef habitat that Rachel, Cuning, Andrew Baker and a fourth colleague, Brian Barnes, of the University of South Florida, would publish in the August 2019 edition of the

“ THE DAYS WHEN MIAMI COULD JUST TAKE FROM THE OCEAN ARE OVER. AS SEA LEVELS RISE, LOW-LYING MIAMI IS LIKE A CHILD IN A BAY WITH HER NOSE JUST ABOVE WATER AT RISING TIDE: THE CITY IS GOING TO HAVE TO MAKE CHANGES, AND MAKE THEM QUICKLY. ”

RIGHT, SOUTH FLORIDA'S FLORA, FROM SEAGRASS TO MANGROVES, WILL PLAY A CRUCIAL ROLE AS SEA-LEVEL RISE ACCELERATES. OPPOSITE PAGE, RACHEL AT VIRGINIA KEY BEACH PARK IN MIAMI-DADE COUNTY, WHERE HER TEAM CONDUCTED SURVEYS TO ASSESS IMPACTS ON RECENTLY RESTORED DUNE ECOSYSTEMS.



journal Marine Pollution Bulletin.

“We spent most of the last year combing through the contractor’s data and analyzing it, using proper statistics,” Rachel says. “We found more than 560,000 coral had died.”

And that may be an underestimate, Rachel says. After all, the dredging buried an area of reef the size of 200 football fields.

It also became clear that there was a criminal element to the project. Tracey Jordan Sellers, the stonewalling Army Corps biologist who told Rachel to file a Freedom of Information Act Request for basic records, pleaded guilty, in July 2019, to felony charges of lying to federal investigators about working part-time for an outside consultant hired for the dredging.

Unfortunately, the stifling sediment from the dredging isn’t the only threat to the corals. Researchers suspect that the dredging may have also caused an as-yet-unnamed contagious disease that’s killed tens of millions of them — and is spreading. Rachel is working with Baker and Cunning on an epidemiological study of the disease, exploring possible links to the dredging.

There is, however, a ray of hope that Florida’s decision-makers may have learned something from the experience. Miami Waterkeeper and its partners filed another

suit, in 2016, warning that the Army Corps would make the same mistakes in a planned dredging project in Florida’s Broward County to the north. The Army Corps essentially conceded, agreeing to redraft all its environmental documents to account for the impacts in Miami. As a result of that suit, dredging in Broward County has been delayed for at least four years.

#### AT OCEAN’S EDGE

Miami sits on an ancient coral bed. Some of its homes and offices are built from blocks of limestone rich in fossilized coral; you can see the creatures’ skeletons in the walls and sidewalks as you walk the neighborhoods. But the days when Miami could just take from the ocean are over. As sea levels rise, low-lying Miami is like a child in a bay with her nose just above water at rising tide: The city is going to have to make changes, and make them quickly.

It has seen a cumulative sea-level rise of 0.92 feet since 1900, according to a recent article in *The Washington Post* citing data from Climate Central, a group of scientists and journalists conducting research on climate change. That higher daily level boosts storm surges and high tides. To prepare for ever-rising tides, the city will need to reinforce and elevate its buildings,

roads, sewage infrastructure and power infrastructure — including the 49-year-old Turkey Point nuclear-power plant, the only one in the world that uses a system of unlined outdoor canals to cool its water.

“If we want to continue to live in Florida, I don’t think it’s a stretch to say we’ll have to invest tens of billions, just in Miami, just to maintain some sense of functioning 21st-century life,” Rachel says.

Thanks to connections formed as a doctoral student and fellowship recipient, Rachel is on a first-name basis with people in Miami’s government, industry, and law enforcement. But when it comes to winning appropriations for sewer-infrastructure upgrades, she and her staff use a lesson she learned during her Senate fellowship: They show up at the public comment portion of hearings.

At a recent county budget hearing, Rachel and her team spoke in favor of a plan to increase funding for Miami-Dade Water and Sewer to fix its pipes. The sewer system’s two main outflow pipes were built in 1956 and 1975. On good days, it pumps up to 143 million gallons of treated sewage into the Gulf Stream. On bad days, segments of its 6,500 miles of pipes corrode and crack, sending raw sewage to local beaches. By law, Miami-Dade Water and Sewer must stop

ocean dumping by 2025, but the county is nowhere near ready to meet that deadline.

“Miami-Dade County is currently in the midst — and has been for quite some time — of a sewage-infrastructure crisis,” Rachel stated in September at the county’s final budget hearing of the year. “This body has the power to fix it. Now. To not kick the can down the road, until pipes are literally bursting at our feet.”

Her persistence has paid off. A slim one-vote margin of support for the increased budget going into the meeting turned into a final vote of 10 to 3 in favor — one small step toward fixing the problem.

Rachel knows the levers to pull to win public engagement on an issue like sewer infrastructure. When Miami Waterkeeper got reports in 2017 that a broken sewer line was spewing partially treated sewage into the ocean, she decided that the organization needed underwater video. Unable to dive because she was pregnant, she persuaded Miami Waterkeeper board member Phil Kushlan to dive near the break with an underwater video camera.

“Obviously, I had no interest in going,” Kushlan says. “Rachel explained the treatment level — that it would be gross, but not dangerous. She knows what engages people; she knew we needed video of that

outflow pipe, especially video of the sewage literally flowing out. So I made the dive. As soon as they put that out on social media, it really resonated with people, and the county fixed it.”

#### CONVINCING THE UNWILLING

Much of Rachel’s work comes down to this: nudging people toward change. Along with Miami Waterkeeper’s staff attorney, Kelly Cox, Rachel has thrown herself into the arduous, and decidedly unglamorous, work of convincing cities and towns in the Miami area to pass summer fertilizer bans to protect fragile Biscayne Bay from nitrogen- and phosphorus- pollution. Since summer brings heavy tropical rains to Miami, it’s the time when fertilizer is least likely to be absorbed into the soil, and most likely to be washed away toward Biscayne Bay.

At a late-summer meeting at Coral Gables’ municipal complex, the city’s horticulturist was skeptical. What about the four applications of fertilizer annually, including in summer, for popular non-native palms? How will these transplanted trees, which don’t like the area’s soil, continue to thrive without artificial help?

Rachel used a subtle-charm offensive. Once the horticulturist found out she was a

serious orchid buff, as he was, he listened to what she had to say. He checked when she suggested that a quick online search would show the latest research recommended three fertilizer applications a year for the palms, rather than four, with none in summer, and found that she was right.

Rachel and Kelly had spent months pushing for proposed legislation banning summer fertilizer applications, and this meeting did the trick. It’s now on the city’s agenda for a vote.

Score one more win for Rachel over the unwilling.

Andrew Baker, her Ph.D. adviser, says Rachel’s and his frequent co-author Ross Cunning “sort of collectively and secretly have an eye roll when Rachel wants us to do another project.” The funding for the work Rachel suggests is generally unavailable. Furthermore, Cunning is now working as a research biologist in Chicago, at the Shedd Aquarium.

“But she convinces us,” he says. “Rachel keeps people engaged, and that’s what it takes. Great leaders need to enroll people and keep their motivation up. It’s not as if one person can do this by herself.” **W**  
*Ellen Simon is Waterkeeper Alliance’s Advocacy Writer and a Contributing Editor to Waterkeeper Magazine.*



# HOMETOWN HERO

ALL MBACKÉ SECK WANTED WAS A CLEAN BEACH; IN THE PROCESS, HE WOUND UP SAVING HIS COMMUNITY AND LEADING HIS COUNTRY TOWARD A SUSTAINABLE FUTURE.

BY ELLEN SIMON

PHOTOS BY ©JANE HAHN, COURTESY OF CULTURE TRIP

Mbacké's home beach in Senegal, Hann Bay, about eight miles from Dakar, used to win comparisons to Rio de Janeiro's Copacabana. When Mbacké was growing up in the 1970s, Hann beach had glistening white sand and ocean waves perfect for swimming. The waters were rich with fish; a fisherman courting a local girl traditionally would bring his largest catch to her house to win over her mother.

Then Hann Bay, with its three-mile-long stretch of beach, became the center of Senegal's industry. By the beginning of the 21st century, there were more than 70 factories discharging industrial waste along its shore. Dakar's population grew five times over, while the city continued to depend on one overloaded sewage treatment plant. The beach turned into a trash heap, the bay into a sewer. Fishermen had to go farther out to catch anything at all. The big fish became a memory.

Mbacké didn't intend to make cleaning Hann Bay his life's work. He didn't know the work would take him from his home in Hann Village (also called Yarakh) to dozens of countries as an emissary of Waterkeeper Alliance and an internationally recognized environmental leader. He didn't know that speaking out would cost him three jobs.

But he probably would have plowed ahead anyway. It's who he is.

When he was told recently that a young Ugandan Waterkeeper wants to be like him, he said, "They say, if the big elephant opens the way, it's not for himself, it's for his son; it's for the baby elephants."

He's been the big elephant — and he's suffered for it.

## GOOD TROUBLE

Mbacké, now 56, has a habit of finding trouble — the kind of trouble where he's put himself at risk to preserve something he loves.

He started cleaning the stretch of Hann Beach that fronted his village in 1988, working with a student crew and rudimentary tools. At the time, he was the leader of one of his village's "futbol" clubs, ASC Yarakh. In a five-kilometer-long beach (about three miles), his crew worked to make sure the five meters they cared for were clean.

"All the rest of Hann Bay, the sand was black and dirty," Mbacké says. "Just in our five meters, the sand was clean and white and people could play on the beach."

That act of stewardship helped raise Mbacké to the status of a village leader.

In spite of that, when he was 25, the village elders decided the soccer field, which was one of the community's vital centers, would be developed, turned into houses and a market. And when Mbacké spoke out, organized, and made powerful people angry, he faced more trouble. "The authorities put me in jail for one week," he says.

He'd grown up in a small, crowded home, one of 11 children. His father was a plumber in a sugar factory, his mother was a fish seller. His parents were hard-working, and his mother, especially, was tough-minded. She was unruffled when Mbacké was arrested and jailed.

"Everywhere we went in Senegal, whether it was Hann Village, or the capital of Dakar, or a beachside village an hour away, everyone knew Mbacké."

M B A C K É  
 S E C K

HANN BAYKEEPER





WHEN MBACKÉ STARTED ORGANIZING CLEANUPS, HANN BAY'S NICKNAME WAS "TRASH BAY." BUT HIS PERSISTENCE CONVINCED THE GOVERNMENT OF SENEGAL, THE FRENCH DEVELOPMENT AGENCY, AND THE EUROPEAN INVESTMENT BANK TO COMMIT \$68 MILLION TO FUND A CLEANUP OF THE BAY.

"My sister was crying, all the other mothers were crying," he remembers. "But my mother wasn't. She said, 'You're helping the community, it's O.K.'"

The soccer field was saved thanks to Mbacké's leadership. He would continue to play on it — and organize from it — for decades to come.

#### THE INTRODUCTION

Another, more sinister kind of trouble was also available to Mbacké.

There were eight houses on the street where he was born. Gross national income when he was 10, in 1974, was \$450 a person, according to the World Bank. In that sea of poverty, his street stood out as the most dangerous in the village. "Almost every house had a drug seller," he says. Violence was rampant. One of the young men on his street killed his own nephew.

But that was never Mbacké's path. From leader of his local soccer club, he rose to become the president of the National Youth Council of Senegal, which connects the country's 2,500 youth organizations.

During the six years he spent as president of the council, he met people from every part of Senegal. All the while, he continued to play soccer and work with his club to clean up Hann Bay.

But a youth leader who doesn't have money for college has to find another way to live. He found work as a dockhand, playing soccer with a team from the neighborhood in his spare time.

A member of an opposing team, upon hearing Mbacké speak, asked, "What are you doing?" "I'm a docker in the port," Mbacké replied. "A docker doesn't have French like you," the man said. "You have to go to school."

While French is Senegal's official language, many people are

much more fluent in one of the local languages, including Mbacké's native language, Wolof. Elementary education isn't universal in Senegal. When Mbacké was ten, only 40 percent of children were enrolled in primary school, according to the World Bank.

But Mbacké's soccer opponent wouldn't take no for an answer. Mbacké had married when he was 30; at one point, the man from the opposing team took Mbacké's wife to a social work class at Université Cheikh Anta Diop in Dakar. She announced that she would be bringing her husband there soon. And when she returned home, she told Mbacké, "You're going to go to school, you're going to go to school, you're going to go to school."

So Mbacké did. After earning a degree, he found a job locally as a social worker in a government agency, helping people get job training and pay their hospital bills.

But the fortunes of his home community continued to decline. By the early 2000s, Hann Village was home to 40,000 people, with no sanitation service. Many of them were suffering from illnesses related to the toxicity of the water — skin and respiratory diseases and diarrhea. At one end of the bay, rather than going to a municipal treatment-plant that was operating under capacity, raw sewage from Dakar wound slowly down an open canal, Canal 6, which passed by villagers' homes and the local fish market, then dumped straight into Hann Bay.

When it rained, Canal 6, which had come to be called "the plague of Hann Bay," would discharge thousands of tons of garbage, plastics and oily sludge onto the beach and into the bay. At several other locations, industrial waste emptied additional poisons into the waters. A Libyan oil refinery one kilometer away regularly discharged toxic chemicals into the water from a pipe that ran directly under the village chief's home. A fat-rendering plant and a food-dyeing facility contributed their own filthy liquids.

One of Mbacké's friends from Hann Bay, Malick Sene, returned from Canada, where he had re-located, with news of a water-advocacy organization in New Brunswick, Petitcodiac Riverkeeper, that was having remarkable results restoring the Petitcodiac River. Malick had befriended the Riverkeeper and learned about the larger Waterkeeper movement. He reached out to the Alliance, with the hope that it might offer a means to help reverse Hann Bay's decline and restore it to health. In 2006, he invited Waterkeeper staff to visit Senegal.

Marc Yaggi, now Waterkeeper Alliance's executive director, was on that trip. He was struck by the optimism and enthusiasm of the people, but even more so by Mbacké's energy and magnetism.

"Everywhere we went in Senegal, whether it was Hann Village, or the capital of Dakar, or a beachside village an hour away, everyone knew Mbacké. They were waving at him, calling him into their shops."

Mbacké was interested in becoming a Waterkeeper, but the difficulties were immediately clear: Mbacké didn't speak English and no one at Waterkeeper Alliance at that time spoke French or Wolof. That didn't deter Mbacké.

He joined the movement by force of will, teaching himself English by watching "The Fast and the Furious" street racing movies with French subtitles, then translating in his head. While he was still learning the new language, he became Africa's first Waterkeeper.

A few months after Marc Yaggi's visit, Mbacké attended his first Waterkeeper Alliance conference.

"When I participated in my first Waterkeeper conference in San Francisco," he recalls now, "I said, 'In my mind, San Francisco is a place where cars in movies jump the hills; now it's the beginning of a new experience of cleaning my bay.'"

"In Senegal, being a part of the Waterkeeper movement helped me become more credible," Mbacké says. "I learned so many skills from other Waterkeepers and staff at Waterkeeper Alliance."

Among those skills: How to use social media, how to plan activities, how to mount an advocacy campaign, how to build a network of supporters.

When Mbacké started organizing cleanups, Hann Bay's nickname was "Trash Bay."

But Mbacké's persistence convinced the government of Senegal, the French Development Agency, and the European Investment Bank to commit \$68 million in 2013 to fund a cleanup of the bay.

Part of the plan is to build seven pumping stations and 45 kilometers of sewage pipes, with 10,000 residential sewage connections. The plan also calls for building a treated-wastewater discharge point three kilometers offshore, and for the closure of the infamous Canal 6, the main channel carrying municipal waste into the bay.

The work is going slowly, Mbacké says, but it is underway.

The plan has two phases, the first is to rebuild Hann Village. "When you go into the village today, the face of the village is changing," he says. "They've built a big street, a network for sewage. Trucks pick up rubbish. The government built new infrastructure, which collects all the dirty water from houses and factories. The sewage is no longer going into the sea. It's starting."

"I'm 56 years old, born in the village. Today, I go in the village, and I don't know where I am. When I go to my father's house and I park my car on the paved road, when I see my son riding his bike on a real street, I am so proud. No more smoke, no more dust."

In 2015, through his work with Waterkeeper Alliance's international team of coal campaigners, Mbacké started mobilizing people to fight three coal plants planned for Senegal. "We recruited the young people, women, teachers," he says. "We worked with these communities so they knew how to get the attention of the local media and say no to coal plants in Senegal."

And ultimately, he planted the seeds for other Waterkeeper organizations in Africa, including Bargny Coast Waterkeeper, some 20 miles from Mbacké's village. Together, the groups organized a

“ IN SENEGAL, BEING A PART OF THE WATERKEEPER MOVEMENT HELPED ME BECOME MORE CREDIBLE. I LEARNED SO MANY SKILLS FROM OTHER WATERKEEPERS AND STAFF AT WATERKEEPER ALLIANCE. ”

2,000-person protest in 2015 to fight the three planned coal plants. But in spite of all Mbacké's work, one was built in Bargny, an event Mbacké views as one of his greatest defeats. The campaign did, however, succeed in stopping the other two, and in September 2019 the African Development Bank announced that it would no longer finance coal plants.

"Thanks to Waterkeeper Alliance," Mbacké says, "my voice now carries across my country." In 2016, Mbacké was awarded Senegal's top environmental prize, the Green Trophy, for his leadership nationally in advocating for a sustainable future for Senegal. In his acceptance speech, he said, "Victories are temporary, but defeats are also temporary."

#### THE COST

But Mbacké's achievements have not come without a price. As a result of his activism and his outspokenness about environmental and social conditions, Mbacké has had to endure more than one stretch of unemployment.

At one point, he didn't have money to pay for his children's school, and, ultimately, the financial stress cost him his first marriage. He left Senegal and found work for five months pumping gas.

His first wife never understood what kept him coming back to his work as an environmental activist. "She said, 'You have no money, you are broken.' I said, 'I'm rich to my community. I'm a resource for my community.'"

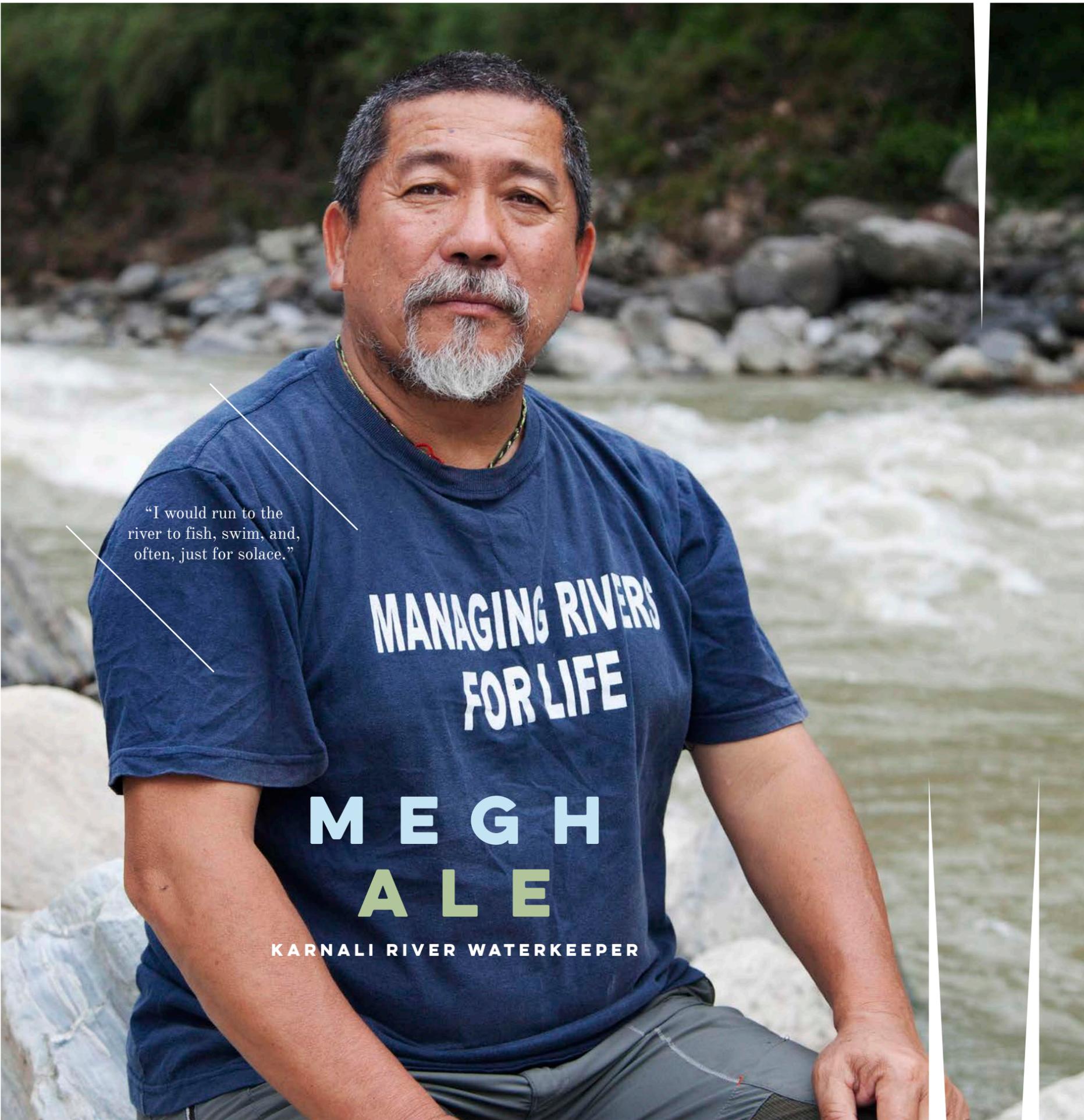
And that has always been more than enough for Mbacké. Besides being known throughout Senegal, he's also something of a legend on his childhood street, where there was once a drug dealer behind almost every door.

"The mothers say about those old drug dealers, 'If you want to finish in a cemetery or jail, you have this guy,'" Mbacké says. "If you want to finish university or travel around the world, you have Mbacké."

"The boys of the street, they go to university now," he says. "This area is quiet. We changed the life for many young boys in our village. They don't smoke; they don't go to jail."

Hann Bay hasn't yet been returned to its pristine state, but the work is well along, thanks to Mbacké.

The bay will be cleaner when the children in Hann Village grow up because of what Mbacké has accomplished, so much of it through sheer force of will, clearing the way, not for himself, but for his sons, and for the baby elephants. **W**



“I would run to the river to fish, swim, and, often, just for solace.”

MEGH  
ALE

KARNALI RIVER WATERKEEPER



## A RIVER RUNS THROUGH HIM

MEGH ALE KEEPS FINDING WAYS TO PROTECT NEPAL’S LAST WILD RIVER.

BY GARY WOCKNER

PHOTOS BY \*SAILENDRA KHAREL, COURTESY OF CULTURE TRIP

For as long as he can remember, Megh Ale (pronounced “Ah-lay”) has had a passion for rivers. “As a child in Nepal, I was unhappy in school,” he recalls. (Born left-handed, he was forced to write with his right hand.) “And so I would run to the river to fish, swim, and, often, just for solace.” He is remembered by many of his fellow villagers for helping them cross the river. He also won their admiration for saving several of them from drowning in the river’s strong currents.

Megh is a patient man, and patience is a virtue in Nepal if you are a river conservationist. The corners of his mouth almost always turn up into a soft smile, and his eyes twinkle. But a sense of alarm is also there in Megh’s face and voice. Nepal has about 6,000 rivers and tributaries, and every single river is dammed, except one. That’s right — one. Now, that final free-flowing river, the Karnali, which is Nepal’s longest river and classified as one of the world’s top five rivers to raft, is also threatened by a massive dam project. Megh is leading the fight to save it.

After graduating from college, Megh found his calling, not surprisingly, as a river guide for an outdoor company that conducted Himalayan river expeditions. He did it for six years in Nepal, then, with the experience and skills he developed, worked as a river guide in Austria, Switzerland, Turkey, and the United States.

After returning home in 1991, and founding a whitewater rafting company named Ultimate Descents – Nepal, his passion

for rivers blossomed into activism. In 1995 he started the Nepal River Conservation Trust, now the country’s flagship organization for protecting rivers. Life as a Waterkeeper began much later, in 2015, when Megh joined with Waterkeeper Alliance to launch a series of local Waterkeeper organizations in Nepal. Currently, there are 12, representing the Karnali, Bagmati, SetiGandaki, Trishuli, and Sunkoshi Rivers, as well as a countrywide organization, Waterkeepers Nepal. Megh is the Waterkeeper for the Karnali River.

Over the last 25 years, Megh has received wide recognition, as well as numerous awards, for his work. In 2007, Ashoka, a U.S.-based organization that identifies and supports the world’s leading social entrepreneurs, awarded him a fellowship. When he received it, he was described this way:

“Transforming the way people understand the value and economic potential of Nepal’s rivers, Megh Ale is saving the rivers of Nepal through ecotourism, conservation, and cleanup through his organization, the Nepal River Conservation Trust. Megh is creating new opportunities for people in Nepal and all over the world to experience and benefit from Nepal’s rivers and waterways.”

And he is busy doing just that to this day — in particular, on the Karnali River.

The rivers of Nepal are facing an onslaught of dam-building threats, and Megh has worked tirelessly to oppose many of them. His primary weapon is promoting ecotourism and other aspects of the recreational economy as an

“ TRANSFORMING THE WAY PEOPLE UNDERSTAND THE VALUE AND ECONOMIC POTENTIAL OF NEPAL’S RIVERS, MEGH ALE IS SAVING THE RIVERS OF NEPAL THROUGH ECOTOURISM, CONSERVATION, AND CLEANUP THROUGH HIS ORGANIZATION, THE NEPAL RIVER CONSERVATION TRUST. MEGH IS CREATING NEW OPPORTUNITIES FOR PEOPLE IN NEPAL AND ALL OVER THE WORLD TO EXPERIENCE AND BENEFIT FROM NEPAL’S RIVERS AND WATERWAYS.”

OPPOSITE PAGE, ON THE BANKS OF THE KARNALI, MEGH REFLECTS ON HIS TWO-PLUS DECADES OF RIVER CONSERVATION; HE HAS TAKEN THOUSANDS OF PEOPLE RAFTING ON THE KARNALI AND IGNITED A COUNTRY-WIDE MOVEMENT OF WATERKEEPERS IN NEPAL.



alternative to river-destroying dam building.

His work involves educating and empowering communities to speak up for their local rivers when the dam builders come knocking. He has allied with dozens of local schools, trained more dozens of raft guides, created festivals and events, including three national river summits since 2014, and — through his adventure-tourism company — taken thousands of people rafting on Nepal’s rivers. “Transforming the way people understand the value and economic potential of Nepal’s rivers represents our best chance of saving them,” he says.

To really get to know Megh and appreciate his passion for rivers requires joining him on a rafting trip on his sacred Karnali.

The Karnali, which means “turquoise,” begins in the Himalaya Mountains in Tibet, near Mt. Kailash, the spiritual center for three major eastern religions — Hinduism, Buddhism, and Jainism. The mountain is believed to be where the Hindu Lord Shiva sits in a state of perpetual meditation. In bold contrast, the Karnali is never still. It rages down the canyons of western Nepal, its glacier-fed blue-green waters glistening in the sun.

In the first week of November 2016, which is the dry season in Nepal, I joined Megh and his team from Ultimate Descents as they led 21 international adventurers from 10 different countries on an eight-day trip on the Karnali — the inaugural “Karnali River Waterkeeper Expedition,” dedicated to the river’s protection.

On our first day, five of us awoke early in the village of Tallo Dungeswar and drove 18 miles upstream to the village of Daab. GMR, a private Indian engineering firm, proposes to build a 1,345-foot tall hydroelectric dam there that, if built, would be the world’s tallest. The GMR project, which would generate electricity primarily for export to India, is just one of several proposals to dam the Karnali.

The proposals have ignited a massive controversy in Nepal while drawing international attention from activists and media. Soon after we arrived, Megh mischievously led four of us through the village to the riverbank to unveil a “SAVE THE KARNALI” banner that proclaimed it to be “The last best place in Nepal and only free flowing river in the country.” We photographed the event and returned to our trip’s starting-point, which would be the last large settlement we’d see for eight days. Most of the canyon downstream from Tallo Dungeswar is dotted with small farming villages accessible only on foot.

Leaving our bus behind, we quickly eased into the water. As our “armada” of three large rafts and three kayaks set off, I could see the blade of my paddle through the Karnali’s blue-green water, which is clear to a depth of about six feet, then becomes clouded by the dissolved minerals running off the Himalayan glaciers. It was easy to see why Megh loved this river and this landscape, and has spent a good part of his life trying to save it.

In part due to Megh’s work, the dam proposals for the Karnali have been delayed for two decades. Megh’s countering proposal, obviously, is to keep the Karnali free flowing and a source of conservation, eco-tourism dollars, and national pride. In this quest, he and his colleagues have brought together members of the country’s many religious and ethnic groups, as well as residents of local communities. He is also working to build a countrywide campaign to produce legislation similar to the U.S.’s National Wild and Scenic Rivers Act, to protect the Karnali River and its corridor, which extends through Nepal and into India.

As we continued down the river, we came across villages carved out of the forest every few miles. Their inhabitants have been thriving there for hundreds of years by fishing, farming rice and vegetables, and hiking out of the canyon to sell and trade other goods. The villagers sold us fish and vegetables, and, at one location, a goat, which we slaughtered and ate over the next two days. We also frequently encountered villagers in long dugout canoes, paddling along the edges of the river and ferrying themselves and their products from bank to bank across its calmer stretches. Occasionally, we saw people slipping through the forest above us, sometimes walking down to the beach to say hello.

While the human culture along the Karnali is several hundred years old, the geology of the river and the canyon has been forming for millions of years. And today it is a world-renowned rafting destination. Over an unforgettable two-day stretch, Megh led us through a steep-walled, hard-rock canyon that created fabulous rapids. We raced through “class III” and “class IV” rapids nicknamed

“Sweetness and Light,” “Jailhouse Rock,” “God’s House,” “Juicer,” and “Flip and Strip.” Although the proposed dam, tunnel, and powerhouse are upstream of this wild section of the river, the rapids would nonetheless be diminished by the hydropower project. And the wonderful beaches that line the riverbanks would be even more diminished — the dam would trap all of the sand and sediment upriver and, over time, would rob the beaches in the lower river of their sand, just as dams do all over the planet.

The dam also would block the passage of endangered migrating fish, including the mahseer, which can grow five feet long and weigh over 100 pounds, and the giant catfish, which can be even bigger. And it would further endanger the human culture that survives on the fish, as well as the river’s burgeoning ecotourist economy.

Megh foresees a “Karnali River National Park” that would protect not only the river, but also a mile-wide corridor all along its route from Mt. Kailash on the Tibetan border, down into Bardia National Park in Nepal, and through Nepal into India to the headwaters of the Ganges. Although the country has many national parks and spends vast amounts of money to protect them and their wildlife, it has no protected rivers.

Our expedition ended after eight days, and we floated out onto the plains at the town of Chisapani, where the river widens before braiding downstream, and where large diversion structures already suck out water to supply the massive rice farms on the plains. So,

though the canyon and rapids of the Karnali are undammed, the river is not untouched. Will it remain undammed? Plans to keep it so are gaining steam through efforts to reach out to international funding agencies, media and political leaders, and to further develop the ecotourism economy of rafting and fishing.

In 2018, Megh and a group of activists and scientists spent 44 days on the river completing the first Karnali River scientific expedition, from its source near Mount Kailash down to the border of India, where the Karnali meets the Ganges. The trip was chronicled by news reporters and filmmakers. And in 2020, he will launch the “Great Karnali Quest: Sacred River Corridor Raft Race,” extending 242 kilometers and linked to a national “Visit Nepal 2020” promotion sponsored by the Nepalese government. He never stops finding ways to promote the natural beauty of the Karnali River.

Megh does this all with a shy smile and a workmanlike attitude, and he doesn’t voluntarily speak of his accomplishments. You have to ask questions to pull his vast store of knowledge about the Karnali out of him. But what he does eagerly share are his future plans, and as you listen, you can see the twinkle in his eyes and find yourself caught up in his indomitable hope and enthusiasm. **W**

*Gary Wockner is the Poudre Waterkeeper in Colorado. He is also a scientist, writer, and author of the 2016 book “River Warrior: Fighting to Protect the World’s Rivers.”*



## RASHEMA'S WORLD

RASHEMA INGRAHAM HAS ALWAYS KNOWN ONE THING: THAT THERE IS NOTHING MORE IMPORTANT TO HER THAN PROTECTING AND PRESERVING HER ISLAND WORLD.

BY LAUREN EVANS

PHOTOS BY <sup>®</sup>PEYTON FULFORD, COURTESY OF CULTURE TRIP

It's high noon on Grand Bahama, and the sun is glinting off the pale turquoise waters of Bahama Beach. This — the near-cloudless sky, the gentle breeze rustling the palms — is precisely what tourists had in mind when they booked their flights here from Canada, the Northeastern United States and other frigid places, hoping to escape the harsh March weather.

But the 13 Bahamian teenagers in Rashema Ingraham's charge are not here to lounge in beach chairs, and they pay no mind to the pale sunbathers sipping margaritas nearby. For them, the crystalline water isn't an exotic escape, but a vibrant, teeming ecosystem whose organisms they will spend the next several hours identifying — and, Rashema hopes, eventually grow up to save.

Out in the water, luminous multicolored fish dip in and out of reef balls strung along the coastline like a necklace. The kids, as they snorkel, nudge each other, point and grab pencils tied with string to halved PVC pipes they wear on their arms like medieval wrist guards, diligently jotting down each new discovery. To a novice like me, the fish populating the reef are simply beautiful and splendidly various: some striped, some wide and flat, some with funny-looking mouths.

But the students see more than I do. They know these fish. They recognize them from the pages of a glossy book they browsed through on the bus ride from the local YMCA, from previous trips; from studying they've done for months as "Waterkeepers Bahamas Cadets." Over the course of the afternoon, it wasn't necessarily the stingray that glided by close enough to touch, or even the sea turtle, with its wise face and waving flippers, that thrilled the kids the most. When I asked one student to tell me his favorite of the fish he had identified that day, he replied: "A snapper."

This ability to get teenagers excited about fish — on a Saturday, no less — comes naturally to Rashema. After all, long before she became the Bimini Coastal Waterkeeper and the executive director of Waterkeepers Bahamas, she was just such a kid, with a deep love for the natural world.

Rashema's grandfather was a fisherman on Bimini, the westernmost of the roughly 700 islands that make up the Bahamas. Growing up, she and her two sisters spent a lot of time at his house, which was just 70 feet from the ocean and 200 feet from the bay. No matter where you looked, there was water. "There was no way for me

"It was almost as though the universe was saying to me, 'Now is the time.'"

# RASHEMA INGRAHAM

BIMINI COASTAL WATERKEEPER



“ IF THEY WANTED TO WORK WITH US ON A BETTER WAY OF SENDING THAT MESSAGE OUT, THEN FINE. BUT THAT WASN'T THEIR PURPOSE. IT WAS, 'WE NEED YOU TO BE QUIET,' AND I AM NOT GOING TO BE QUIET. ”

Despite its image as a postcard-ready tourist destination, the Bahamas is confronting a number of threats to its ecosystem. Overfishing is endangering the conch populations on which many Bahamians' diets and livelihoods depend. Reckless development is destroying the groves of sprawling coastal mangrove forests that provide habitats for multiple species of fish, stabilize the coastline, and act as natural filters for pollutants that would otherwise run out to sea. Hurricanes are becoming more severe and more frequent, and sea-level rise is imminent. (As the waters invade the land, Rashema is working with the group SwimTayka to teach basic swimming skills to young Bahamians who might not otherwise have the opportunity to learn.)

Although Bahamian government officials frequently state that the environment is a priority, the country's ineffectual patchwork of laws says otherwise. For instance, while the country has enacted legislation to protect sharks, it has no such protections for the mangroves that serve as a habitat for their young. Every election season, politicians print up glossy pamphlets trumpeting their sustainable-development goals. But the goals, Rashema says, are too modest for the scope of the challenge.

The main problem, as in many places, is that effectively addressing the looming environmental catastrophe facing the Bahamas would mean acknowledging the extent of the problem in the first place — and the government has not, so far, done so.

“The focus has always been on tourism dollars,” Rashema says — even if attracting those dollars means hiding the truth about what's happening.

One of the jobs Rashema has taken on is revealing that truth to the public. In addition to her work with the youth programs, she has helped implement a water-monitoring program, which focuses on collecting water samples, testing them, and posting the findings publicly, allowing beachgoers to know whether or not the water is safe for swimming. This service has not always been well received by the government. Shortly after a local newspaper published an article about the Waterkeeper's efforts, Rashema got a call from the

to escape that,” she says, laughing.

She was seven years old the first time she accompanied her grandfather to fish in his handmade boat, which is when she became aware of the vast underwater world right outside his home. They were close enough to shore that he was able to maneuver the boat through the water using only a pole, prodding the bottom that lay just 10 feet below the surface. As he dropped his line and sinker into the seagrasses for catch, she gazed down into the limpid waters, where she saw schools of fish, a lemon shark, and a nurse shark gliding near the boat.

The more time Rashema spent examining the living things around her, the more enamored of them she became — and the more aware of their fragility. Throughout her childhood, she spent many Saturday mornings lingering in her backyard on Grand Bahama, observing everything from fallen trees to crawling lizards. Even then, she says, “I could see that weather really determined whether or not organisms would move about.”

Her fascination with the natural world endures, and her concern for it has grown. Through her work with the cadets, and the even younger “Youth Ambassadors,” Rashema hopes to educate the next generation about the environmental challenges the Bahamas faces.



WATER SAMPLES FROM TAINO BEACH ON GRAND BAHAMA, TAKEN TO DETERMINE BACTERIAL COUNTS.

prime minister's office, urgently insisting that officials there meet with her to discuss the testing — specifically, why she was doing it. Rashema and her colleagues explained at the meeting that they were offering a public service, and assured the officials they were using the standards of the United States Environmental Protection Agency, which were also being used by their own government. They offered to let government representatives accompany their next water-testing outing (which they did, once).

“If they wanted to work with us on a better way of sending that message out, then fine,” Rashema says. But that wasn't their purpose. “It was, ‘We need you to be quiet.’”

She pauses. “And I am not going to be quiet.”

Rashema didn't always want a career fighting for the Bahamas' waters. She initially thought she would become a meteorologist. Then she decided to earn a bachelor's degree in tourism management from the College (now University) of the Bahamas in Nassau, where

many of her courses focused on the environment and geography. After graduating in 2008, she went to work as a secretary and paralegal at the law firm Callenders & Co., but her interest in her natural surroundings never waned. In her spare time, she launched a nonprofit company that provided roadside garbage bins.

In 2013 the law firm took on a client that would change Rashema's life: a nonprofit called “Save the Bays,” which hired Callenders to help challenge damaging practices around Clifton Bay in Nassau — specifically, oil-spills by a government-run power company, which was dredging and building docks without permits. These, as well as other environmentally destructive activities, were enabled by lax — or nonexistent — laws.

“It was almost as though the universe was saying to me, ‘Now is the time,’” Rashema recalls.

An education director for Save the Bays asked her to join



RASHEMA IS DETERMINED TO EDUCATE THE NEXT GENERATION OF BAHAMIANS TO BE LEADERS IN THE FIGHT AGAINST THE EXISTENTIAL THREAT OF CLIMATE CHANGE.

them as a volunteer, helping create programs that would extend the group's reach to schools and the public. She did that for three years. In 2014 the chairman of Save the Bays, Joseph Darville, a well-known environmental and human rights advocate in the Bahamas, decided to join Waterkeeper Alliance, convinced that being part of the world's leading water-advocacy organization would help his group amplify its message.

Rashema became a full-time staff member at Save the Bays in 2016, and took it upon herself to learn everything she could about Waterkeeper Alliance and its mission. In 2017 she was named both Bimini Coastal Waterkeeper and executive director of Waterkeepers Bahamas. In those positions she has worked tirelessly to educate the people of the Bahamas on why fighting to preserve the island-nation's pristine waters is so important.

While the two jobs are obviously related, they're also distinct: As the head of Waterkeepers Bahamas, her job is to represent all the islands' Waterkeepers, including Grand Bahama Waterkeeper, led by Joseph Darville, and Clifton Western Bays Waterkeeper, led by Frederick Smith.

Darville recalls that he "was designated unofficially as the president for Waterkeepers Bahamas." But he is 77 years old

now and wanted to find someone with a passion like his for environmental causes but with even more energy. "Rashema is fulfilling that wish to the nth degree," he says.

Rashema is considering the possibility of becoming a lawyer — at 36, she has plenty of time. But for now, she still sees it as her mission to educate the youth of the Bahamas about the realities of what is happening to their home, and the uncertain future that lies ahead if action isn't taken.

"A lot of young people aren't talking about climate-change issues," she observes. "They're not talking about how much more powerful and destructive hurricanes have become over the last 10 years, or paying attention to the fact that hurricanes are happening outside of the hurricane season now" — even though storms have wiped out neighborhoods on Grand Bahama and on the southern islands.

But Rashema is working to change this. And based on her students' enthusiasm in the water, it seems to be having an impact. Cheri Wood, a volunteer instructor who works with the Waterkeepers' youth programs, says that Rashema's passion, paired with her incredible appetite for learning, is what makes her such a great leader.



ALONG WITH A TEAM OF WATERKEEPERS, RASHEMA PROVIDED CRITICAL SUPPORT TO THOSE AFFECTED BY HURRICANE DORIAN, DELIVERING FOOD, WATER, AND SUPPLIES TO RESIDENTS SO THAT THEY COULD BEGIN HEALING FROM THE TRAUMA AND START THE PROCESS OF REBUILDING.

“RASHEMA’S GRANDFATHER WAS A FISHERMAN ON BIMINI, GROWING UP, SHE AND HER TWO SISTERS SPENT A LOT OF TIME AT HIS HOUSE, WHICH WAS JUST 70 FEET FROM THE OCEAN AND 200 FEET FROM THE BAY. ‘NO MATTER WHERE YOU LOOKED, THERE WAS WATER. THERE WAS NO WAY FOR ME TO ESCAPE THAT.’ ”

PHOTO BY WATERKEEPERS BAHAMAS

"Rashema is dedicated," she says, "not just to the environment, but to educating the next generation to care about the environment and to take care of it."

Rashema's hope is that at least some of the cadets will go on to careers as policymakers, civil engineers, coastal engineers, developers "who are creating greener spaces and appreciating the ecosystems around them." In the Bahamas particularly, she wants young people to have stronger voices when it comes to demanding more stringent environmental regulations. After all, they're the ones whose futures hang in the balance.

By now, the sun is beginning to sink below the horizon, the water beneath it bursting with light. As Rashema and the Waterkeepers Bahamas Cadets ride home, the sea dips in and out of view, although it's never out of sight for more than a few moments. In the island world that is the Bahamas, water is omnipresent, and for that reason, says Rashema Ingraham, "We are constantly reminded of why we need to be fighting."

*Lauren Evans is a freelance writer who covers the environment, gender, and the developing world. You can follow her on Twitter @laurenfaceevans.*

*Editor's Note: This profile of Rashema Ingraham, Bimini Coastal Waterkeeper and Executive Director of Waterkeepers Bahamas, was written before Hurricane Dorian made landfall in the Bahamas on September 1, 2019, as a category 5 hurricane, leaving devastation in its wake. A nearly 20-foot storm-surge inundated many of the islands' drinking water sources with saltwater. And Dorian's sustained 185 mph winds ripped open the covers of several large oil-storage tanks on East Grand Bahama, contaminating significant coastal habitat, as well as freshwater sources for local residents. In the aftermath, the lack of water for drinking, bathing and cooking added to the stress on those already displaced. Rashema's own home was destroyed; nevertheless, she quickly went to work leading response efforts.*



## THE BOUNTIFUL OR THE DAMMED

BRUNO MONTEFERRI WILL DO WHATEVER IT TAKES TO PUT AN END TO THE MASSIVE SCHEME TO DAM, AND DESTROY, THE MAGNIFICENT MARAÑÓN RIVER.

BY LISA W. FODERARO

PHOTOS BY \*TUI ANANDI, COURTESY OF CULTURE TRIP

**F**loating on a raft through the so-called Grand Canyon of the Amazon, first-time visitors to the Marañón River in Peru tend to fall silent. The usual banter about epic rapids and paddling prowess fades amid the staggering scenery: rugged mountains rising thousands of feet from either bank; austere plant life clinging to rocky ledges; nighthawks swooping over water the color of café au lait.

The Marañón is the main source by volume of the legendary Amazon River. It flows more than a thousand miles in a broad arc north of Lima, starting at the eastern base of the Andes Mountains. It then courses through a tropical dry forest flecked with cacti and acacia trees, and on through a tropical rainforest where it merges with the Ucayali River to form the Amazon.

Yet the Marañón is so remote, and overshadowed by its mighty cousin, that few in Peru — let alone the outside world — have seen it.

“People know about the Amazon, but not many people know about the Marañón,” says Bruno Monteferrri, the Marañón River Waterkeeper, on a recent whitewater-rafting trip. “And that has to change, especially because of all the threats.”

A study published in the scientific journal *Nature* in May found that nearly two-thirds of the planet’s longest rivers no longer flow freely, and that is mostly the result of dams and reservoirs. Of the remaining large, unimpeded rivers, those longer than 1,000 kilometers, or about 620 miles, about half are in South America. But in the Amazon basin alone, there are now plans for up to 500 dams, the study’s authors said. While hydroelectric dams may

be renewable, they are not “green.” Among other things, free-flowing rivers provide a critical food source for hundreds of millions of people and nurture biodiversity.

Bruno, who is an environmental lawyer, is fighting up to 20 proposed dams on the Marañón that, according to the claims of some Peruvian government officials, are important to the country’s energy future. But if they were built, they would displace thousands of indigenous people, submerge forested lands, and impede the flow of sediment that nourishes ecosystems throughout the Amazon basin.

While many of the hydroelectric dam projects exist largely in theory, or as dots on a map, several are further along in the planning. Two in particular are located amid the river canyons that have recently attracted ecotourists who spend anywhere from a few days to a few weeks exploring the Marañón by raft.

For Bruno, an ardent outdoorsman, and his colleagues at Marañón River Waterkeeper, stopping those two dams — known as Veracruz and Chadin II — is crucial. Chadin II was proposed by a subsidiary of Odebrecht, a giant Brazilian construction company that is embroiled in a corruption scandal. So far, the investigation has ensnared a handful of former presidents of Peru and dozens of corporate officials, some of whom are now in jail. (Or worse: Alan García, the former Peruvian president who had backed plans for building the 20 dams, shot himself in the head in April 2019 as police arrived at his house in Lima to arrest him.)

The corruption scheme, involving hundreds of millions of dollars in bribes to

“But then I began traveling to the mountains with my friends and started to appreciate what Lima and the outskirts of Lima had to offer. I realized that I didn’t want to leave Peru yet.”

**BRUNO  
MONTEFERRI**

MARAÑÓN RIVER WATERKEEPER



“ IF YOU HAVE FIVE OR SIX DAMS - OR 20 DAMS - THE ENVIRONMENTAL IMPACT CANNOT BE LOOKED AT IN ISOLATION, WE ARE ASKING THE GOVERNMENT TO ANNUL THE CONCESSION CONTRACTS. IT IS CRITICAL THAT THE FATE OF THE MARAÑÓN BE RAISED TO THE LEVEL OF A NATIONAL DIALOGUE. ”

In some ways, it seems that Bruno's entire professional life has brought him to the forefront of the Marañón River battle. For the past 15 years, he has worked for the Peruvian Society for Environmental Law, one of the most influential environmental nonprofits in the country; in 2006 the group won the MacArthur Foundation's Award for Creative and Effective Institutions. In addition to his law degree, Bruno has a master's in conservation leadership from Cambridge University in England, where he met his wife, Christel Scheske, a conservation scientist.

For a while in his late teens, however, Bruno wavered about his future. At 16, he was the top-ranked tennis player in his age category in Peru and in the top 10 in South America. A life playing tennis on the international stage beckoned.

“But then I began traveling to the mountains with my friends and started to appreciate what Lima and the outskirts of Lima had to offer,” says Bruno, who is now 37. “In two hours you are already in the mountains, and in four hours you are in the higher part of the Amazon. I realized that I didn't want to leave Peru yet.”

Such travel was novel in those days. As a child, Bruno recalls hearing explosions in the distance in Lima, as the feared rebel group known as the Shining Path made incursions into the city. As a result of the violence, travel was all but impossible.

“You didn't have the option to explore the country, because you could get ambushed and kidnapped,” he says, adding that by the time he was in his teens, the government had quelled the rebel group, and travel had become much safer.

As Bruno was starting college in Lima, he also became passionate about surfing, an activity that deepened his love for the sea. Some of the best waves in the Western Hemisphere can be found along Peru's coast. As a youngster, he had often bodysurfed in the Pacific Ocean with his family, and at 17 he started using a surfboard. A few years later, he was riding waves more than 15 feet tall, an experience that would later inspire one of his signature legal campaigns.

It was during law school that Bruno decided to devote himself to protecting natural landscapes, and began to work for the Peruvian Society for Environmental Law. After graduating, he took a full-time position with the society.

Today, he directs the society's program Conservamos por Naturaleza (We Conserve for Nature). He also heads the organization's marine governance initiative. Over the years, he has worked on numerous projects, from beach cleanups and reforestation campaigns to a recent ban on single-use plastics. He has partnered with indigenous communities to protect land, collaborated with video-game developers to introduce conservation themes in games, and worked with companies like Patagonia on environmental campaigns.

The society's executive director, Pedro Solano, attributes Bruno's effectiveness, in part, to his ability to connect with people.

“He's empathetic,” says Solano, who has traveled the country with Bruno. “He listens to people and tries to understand their point



OPPOSITE PAGE, BRUNO, A FREQUENT BEACHGOER, COLLECTS PLASTIC WASTE AS PART OF A CLEANUP CAMPAIGN. ABOVE, BRUNO SURFING AT LA HERRADURA BEACH, A PASTIME THAT DEEPENED HIS CONNECTION TO THE SEA AND LED TO HIS INVOLVEMENT PROTECTING SURF BREAKS.

of view. When he visits a remote place and talks to either a young boy or an old man, the next time Bruno sees them, they will come up and give him a big hug.”

And, yes, he has helped save the waves or “surf breaks,” whose shape and size can be altered by infrastructure like piers and oil rigs. In 2000, Peru was the first country in the world to pass a law preserving waves beloved by surfers, after one such swell was ruined by new construction. In recent years, Bruno has worked with the government to craft regulations in support of the law. So far, nearly three-dozen surf breaks have won legal protection. Last year, Bruno, who is a new father, somehow found time to direct a film, “A la Mar” (“To the Sea”), about the initiative.

But ensuring that the Marañón River remains free flowing might be his biggest challenge. Bruno was familiar with the area of the river in the jungle, near where it feeds into the Amazon River, but he had not seen the vast stretches that meander through mountainous dry forest. Then he met Ben Webb, an Australian whitewater guide who had fallen under the spell of the Marañón on a kayaking trip, and was determined to halt the dams. Ben runs rafting-tours on the river through Marañón Experience, a company he formed with Luigi Marmanillo Cateriano. The trips begin after the rainy season ends in May, and introduce both Peruvians and international tourists to the Marañón, which includes dozens of Class III and IV rapids (on a scale of one to six).

“Ben was kind of a hippie, with his backpack and long hair, and he came into our office and said, ‘So we have to save the Marañón,’” Bruno recalls, noting that the meeting took place before the corruption scandal had weakened Odebrecht. “And I said, ‘Ben, this is one of the most powerful companies in Latin America. It's not likely we'll win this battle.’”

That was in 2014. Two years later Marañón River Waterkeeper was born, under the auspices of the Peruvian Society for Environmental Law, with Bruno at the helm and Ben serving as international coordinator. Luigi Cateriano became national coordinator.

Last July, one of Ben and Luigi's guided rafting trips included a German activist who is working to stop the construction of new dams around the world, and an American filmmaker preparing a documentary about Marañón River Waterkeeper for public television. After hours of rafting, the group pitched tents on a sandy beach, while Ben and Luigi grilled shrimp and served up “chilcanos,” cocktails made with Peruvian “Pisco” brandy, ginger ale and lime. Driftwood was gathered for a large campfire, and a brilliant moon illuminated the river.

“You come to the Marañón and your perspective changes,” says Bruno, his chiseled features and scruffy beard lit up by the fire.

Bruno and Ben supported the production of an earlier documentary about the Marañón's role in the Amazon and the dams that could undermine it. Called “Confluir,” (“Come Together”), the film, released in early 2018, features a group of American adventurers who ran some of the river's biggest rapids in the 1970s by kayak and canoe. It alternates between grainy footage of that expedition and current video shot during a monthlong rafting trip on the Marañón with an international group of research scientists and river enthusiasts.

Marañón River Waterkeeper has screened “Confluir” at a handful of film festivals and shown it to a dozen communities along the river. One such town is Lonya Grande, a scrappy outpost with rutted streets and wandering roosters where many residents work on local coffee farms. A few years ago, the Veracruz-dam developers had given a presentation there in which they had downplayed any environmental fallout and impressed residents with the promise of jobs.

Last summer, Ben took townspeople whitewater rafting on the river for free. For some, it was the first time they had actually been on the Marañón. Then, after the screening of “Confluir,” and stirring remarks by Bruno, members of the audience erupted in applause and vowed to protect the Marañón.

“Lonya Grande was a town that was in favor of the dam,” Bruno says, “but there's no way they will say yes to the dam again.”

Bruno continues to explore legal options, and a grant from the Gordon and Betty Moore Foundation enabled Marañón River Waterkeeper to hire a full-time lawyer in August. In addition, the group is buying land to create private reserves and establishing conservation easements, as well as bringing attention to the petroglyphs and cave paintings that would be flooded, and that, Bruno insists, should be protected by law. Bruno is also making the case that the Peruvian government must consider the collective impact of all the dam proposals rather than weighing them individually.

“If you have five or six dams – or 20 dams – the environmental impact cannot be looked at in isolation,” Bruno explains. “We are asking the government to annul the concession contracts. It is critical that the fate of the Marañón be raised to the level of a national dialogue.”

“But,” he adds, “even if the government's decision is that this river must be sacrificed in order to have energy, we will continue to fight for the Marañón.” **W**

*Lisa W. Foderaro was a staff reporter for The New York Times for more than 30 years and has also written for National Geographic, Audubon Magazine, and Adirondack Life.*



“The pollution has no right to be in the river; we do.”

**THEO  
THOMAS**  
LONDON WATERKEEPER



**THAMES  
TAMER**

LONDON WATERKEEPER THEO THOMAS IS BATTLING TO TRANSFORM LONDON’S ICONIC WATERWAY INTO A RIVER FIT TO SWIM.

BY LISA W. FODERARO

PHOTOS BY \*FINN BEALES, COURTESY OF CULTURE TRIP

**F**ew rivers have had as long and illustrious a history as the Thames.

It was where Julius Caesar led an invasion in 54 B.C., finding a fortified line of British tribes along the northern bank; where, a thousand years later, the Danish King Cnut established his rule over England; and where, in the 1500s, Queen Elizabeth I paraded amid a royal flotilla.

But as much as its history is tied to war and royalty, and later industry and commerce, the River Thames also bears a more prosaic distinction — as one of the oldest sewers on the planet. There is evidence of wooden sewer pipes dating to Roman times, and for centuries the dumping of waste continued, along with garbage, animal carcasses and eventually industrial chemicals. By the 1800s, the stench was so bad that the windows of Parliament were hung with chlorine-soaked curtains — but to no avail. Benjamin Disraeli, then Chancellor of the Exchequer, bemoaned that the Thames was a “Stygian pool reeking with ineffable and unbearable horror.”

Today, things are considerably better, thanks to the decline of manufacturing in London and its environs, modern sewage treatment, and new environmental laws. Ferries and excursion boats now ply the

choppy waters in the heart of London, and kayaks are a common sight. Porpoises and seals have returned. But the Thames is far from pristine. Raw sewage flows into the river between 30 and 50 times a year, the result of so-called combined sewer overflows. That is the term for sewage discharges that occur when waste-treatment plants that handle both stormwater and wastewater are overwhelmed by rain, sending the whole mess into the river untreated.

So when Theo Thomas, the London Waterkeeper, goes for a swim in the Thames in London, where he lives, it is as much to make a political statement as it is for pleasure.

“The pollution has no right to be in the river; we do,” he says. “Our defense of the environment has to be stated quite viscerally — putting our bodies in it and for it. Throughout history, that’s the only way things have been changed. With the civil rights movement and with votes for women, people put their bodies in the way of the problem.”

Theo usually waits five days after it rains to dive into the river, in a section of London called Richmond upon Thames, which has riverfront parks and where tides are relatively weak. That, he says, is when the river returns to bathing-water quality. In his professional

“OUR DEFENSE OF THE ENVIRONMENT HAS TO BE STATED QUITE VISCERALLY - PUTTING OUR BODIES IN IT AND FOR IT. THROUGHOUT HISTORY, THAT’S THE ONLY WAY THINGS HAVE BEEN CHANGED. WITH THE CIVIL RIGHTS MOVEMENT AND WITH VOTES FOR WOMEN, PEOPLE PUT THEIR BODIES IN THE WAY OF THE PROBLEM.”



life, however, he is decidedly less patient, even as the private company that oversees sewage treatment, Thames Water, builds a \$4.2 billion “super sewer” that will stanch most sewage overflows by storing the wastewater until treatment plants can accept it.

When the 15-mile “Tideway Tunnel” is completed in 2023, such overflows are expected to occur only four times a year, a decrease that should transform water quality in the Thames. But Theo wants assurances that the water company will closely monitor overflows after the tunnel’s completion, so that residents will know whether or not the discharges are actually that rare, and whether or not they got their money’s worth. After all, utility customers are footing the bill for the super sewer through rate increases.

In the meantime, Theo believes, people should have real-time information online about current sewage overflows along the entire Thames, which winds for 215 miles from Gloucestershire to the North Sea. Such an alert system is now in place in Copenhagen, and has led to increased water recreation there. Since becoming London Waterkeeper in 2014, Theo has promoted the notion of a swimmable Thames — “A Thames Fit to Swim” is his mantra — and badgered Thames Water to develop a system similar to Copenhagen’s.

Indeed, under British law the water company is required to make such information public. But first, Theo says, Thames Water must establish monitoring at its outfall pipes — where combined overflows are discharged — so that it has the necessary data.

“I did one information request,” he recalls, “asking how many combined sewers they have and how often they overflow between Richmond and Putney, a stretch of about 10 miles. And they said, ‘We’ve got 35, but we only know when 12 of them overflow, and we have no idea how much comes out of them.’ In a lot of cases, they don’t have any information to put in the public domain.”

Theo, 49, has an earnest gaze beneath a mop of chestnut hair, with a face that quickly morphs from serious to mischievous. He grew up in Knighton, a town of 3,000 on the border of England and Wales. His love of waterways stems from his childhood by the unspoiled River Teme.

“You would just go down to the river and spend time splashing around in it,” he recalls. “My friends and I would walk along

“I’D SEEN HOW THERE WERE MANY PEOPLE WHO WANTED TO MAKE A DIFFERENCE AT THE GRASSROOTS, NEIGHBORHOOD LEVEL, BUT WERE OFTEN THWARTED BECAUSE THEY WEREN’T BEING LISTENED TO. I THINK PUBLIC POWER IS KEY TO A COHESIVE SOCIETY, AND I FELT I HAD A GOOD UNDERSTANDING OF HOW TO HELP WITH THAT.”

the banks and follow the river out of town and into the hills. That was our landscape.”

He left Knighton to study at Warwick University near Birmingham. He majored in political science and got involved in student activism. He was mainly focused on the anti-apartheid movement, pressuring companies and campuses to divest from South Africa. The success of those protests made a lasting impression on Theo.

“When Nelson Mandela was released from prison and the Berlin Wall fell — those things came about through people power,” he says.

After graduating, Theo took a job as a journalist with BBC Radio in Leicester. From 1995 to 2000, he covered stories on topics ranging from politics to crime to real-estate development. “Being a journalist,” he says, “was a great way of understanding how British society worked. You’d get access to all of the protagonists involved in different issues.”

In those years, Theo was what he calls a “lifestyle environmentalist” — buying organic vegetables, recycling and biking to work. But it didn’t feel like enough: “I’d seen how there were many people who wanted to make a difference at the grassroots, neighborhood level, but were often thwarted because they weren’t being listened to. I think public power is key to a cohesive society, and I felt I had a good understanding of how to help with that.”

He decided to return to his activist days, but there were very few environmental jobs in the East Midlands. Theo finally found a job as a press officer for an environmental organization in London, and when a position opened up at Thames21, a nonprofit group dedicated to cleaning up London’s rivers and canals, he moved there. He ran cleanups, supervised the removal of graffiti, and created a volunteer network.

Theo’s portfolio included the network of canals, which were mostly desolate backwaters rife with crime. “There were lots of people who lived close to the canals, but they were afraid to go near them because of drug activity,” he says. “They were quite sketchy places.” (Their banks have since been overdeveloped, he says, with upscale high-rises and pricey shops.)

Eventually, Theo saw the need to create an independent environmental group that didn’t rely on funding from Thames Water or the British government, as do many nonprofits, including Thames21. He also envisioned a group rooted in international environmentalism because he believed that was the only way to bring sufficient pressure on multinational corporations and governments that were among the world’s worst polluters.

“I had attended several of Waterkeeper Alliance’s international conferences and become friends with several Waterkeepers from different parts of the world,” he says. “I felt being a member of the Alliance would not only make me a more effective advocate in the UK but also allow me to work with other activists on a global level.”

As the London Waterkeeper, Theo prefers cooperation to

litigation. “What’s important is social cohesion, finding a way to solve problems without falling into extreme conflict,” he explains.

Yet, while he might wield a carrot more often than a stick, the stick is never far from sight. With Thames Water, for example, he is willing to allow the company a generous time frame to develop a mechanism for detecting and publicizing sewer overflows. It’s a process that took Copenhagen more than 10 years to complete, he acknowledges. Still, he is quick to spell out the consequences of needless delay.

“Right now, we are walking arm in arm toward a door marked ‘Sewer Overflow Notifications,’ ” he says. “It’s brightly lit with rainbows over it. But right next to that door is one marked ‘Court Action and Prosecution.’ If at any point they deviate from fulfilling their legal duties, we can step through the other door and we will see them in court.”

Striking that balance between cooperation and antagonism is one reason Theo has proved such a powerful advocate for the Thames. Dee O’Connell, chairwoman of London Waterkeeper’s board, points to a few of the other qualities that make him a strong advocate: passion, fearlessness and a scientific mind. She reached out to Theo several years ago after a massive fish kill on the River Lea, a tributary of the Thames that her house in East London faces. He was still working for Thames21 at the time, and he trained her as a “citizen scientist” so that she could collect water samples.

“I was despondent because it didn’t seem like anyone was doing anything or really cared,” recalls Dee, who with her husband owns two outdoor apparel shops, called the Brokedown Palace, in London. “But Theo wanted to create proper change and get to the root cause of the pollution. He was willing to speak out about it. That was really inspiring.”

She followed him to London Waterkeeper, where she volunteered along with hundreds of others to send letters to Thames Water demanding information about combined sewer overflows.

Since moving to the River Lea area 12 years ago, she has noticed a dramatic increase in the number of people using the water for recreation, including kayakers and paddle-boarders. As a result, she believes, people will pay attention to real-time alerts when they become available.

“I think his approach is clever because he is asking for something that’s achievable — information,” Dee says. “And it’s a long-term approach. When that information is public, people will be really shocked and they will put more pressure on Thames Water.”

Theo’s resolve to make Thames Water broadcast its overflows was strengthened during a vacation in Copenhagen with his wife and two young sons last year. He considered taking them swimming in the city center. “But,” he recalls, “I thought, ‘Hmm, it rained yesterday.’ I went online and saw that there was a red flag because sewers overflowed there. But 20 minutes out of town, it was green. That information meant we didn’t swim in sewage. We didn’t become ill. We had a wonderful day in the glorious sunshine, sitting

“ I HAD ATTENDED SEVERAL OF WATERKEEPER ALLIANCE’S INTERNATIONAL CONFERENCES AND BECOME FRIENDS WITH SEVERAL WATERKEEPERS FROM DIFFERENT PARTS OF THE WORLD. I FELT BEING A MEMBER OF THE ALLIANCE WOULD NOT ONLY MAKE ME A MORE EFFECTIVE ADVOCATE IN THE UK BUT ALSO ALLOW ME TO WORK WITH OTHER ACTIVISTS ON A GLOBAL LEVEL. ”

THEO ROUTINELY COLLECTS WATER QUALITY SAMPLES TO TEST FOR SEWAGE BACTERIA IN THE RIVER AT TOWER BRIDGE AS PART OF LONDON WATERKEEPER’S “A THAMES FIT TO SWIM” CAMPAIGN.



on the beach looking out at the Baltic Sea. That was our memory of the holiday.”

To pressure Thames Water to do the same as the Danish capital, in 2017 Theo enlisted hundreds of volunteers like Dee O’Connell to file requests for information about sewer overflows. Under British regulations that govern environmental information, if someone sends a letter or email asking about water quality, Thames Water has 20 days to respond. “That’s a very old-fashioned way of doing it,” he says.

Nonetheless, some 900 people sent requests to Thames Water about overflows. “Each one of these requests was legally binding, so they had to respond,” Theo explains. “We basically broke their system. Within three months, they contacted me and said: ‘We can’t cope. Please stop. Let’s meet.’”

The water company agreed to work toward posting current information on its website, starting with a pilot project near Henley-

on-Thames, about an hour west of London.

“The idea is to develop a system that will generate real-time information and then replicate it,” Theo says. “Loads of people already swim in Henley-on-Thames, so it’s a good place to test out the system.”

Theo is passionate about using existing environmental laws. He points to the additional water-quality rules that Britain was subject to after joining the European Union in the 1970s. As a result, the British government was found guilty in 2012 of violating the Urban Waste Water Treatment Directive.

Threatened with accumulating daily fines, the government agreed to upgrade five sewage plants in central London. That work was completed in 2016, and the following year, there were news reports of at least three sightings of harbor porpoises in the Thames. In January 2019, one was caught on video swimming in the river in front of the Houses of Parliament.

But certainly Theo would like to see new environmental laws in Britain, specifically to control highway runoff — a toxic stew of heavy metals that often ends up in rivers. A number of techniques are available to filter or divert runoff, but they are seldom used.

“There is no law or rule that says when a road is upgraded that this type of drainage must be installed,” he laments. “So lots of opportunities are being missed.”

Another problem is runoff from industrial sites, especially along tributaries of the Thames like the Lea. Industrial discharges are strictly regulated (if not always enforced), but not so factory properties, where drums of chemicals are sometimes stored.

“There’s no monitoring of anything getting washed off their premises,” he says. “It’s a loophole. If the company is storing something that’s leaking, that’s a significant amount of stuff getting into the water. It could be worse than anything coming out of a pipe.”

Standing on the north bank of the Thames near St. Paul’s

Cathedral on a hazy afternoon, Theo bends over to pick up vestiges of refuse deposited over centuries: fragments of clay tobacco pipes; roof tiles predating the Great Fire of London, and all manner of animal bones discarded by long-shuttered slaughterhouses. The occasional oyster shell hints at a distant past and a brighter future. Nearby, embedded in the 20-foot-high bulkhead, is a giant outfall pipe where sewage spills into the Thames when it rains. But, out on the river, next to Blackfriars Bridge, you can see a construction platform built in preparation for the super sewer expected to dramatically reduce the overflows.

“This is what investment in infrastructure looks like, but only because of environmental laws,” he says, looking toward the platform. “Without environmental laws, substantial environmental improvements are a pipe dream.” **W**



# PIONEERING JOURNALIST, PATH BREAKING WATERKEEPER

FROM BEIJING'S LITTERED BEIYUN TO SOUTHEASTERN CHINA'S PRISTINE AND WILD NU, BEIYUN WATERKEEPER YONGCHEN WANG IS A POWERFUL VOICE FOR CHINA'S RIVERS.

BY EUGENE K. CHOW

PHOTOS BY ©GIULIA MARCHI, COURTESY OF CULTURE TRIP

Were it not for the Chinese police officers following her, Yongchen Wang could be mistaken for a tourist, the way she meticulously documents every moment of her travels with her phone and video camera. But Yongchen is no tourist; she is one of China's earliest and most successful environmental activists.

That distinction long ago caught the attention of China's authorities, who closely monitor her activities. But Yongchen is unfazed by the scrutiny. For over two decades, she has steadfastly safeguarded her nation's waterways and worked with communities that have been adversely affected by the pollution that has accompanied the country's economic progress.

"[The police] just follow us. They never say no," she says casually. "But when they follow us they begin to understand what we're trying to do — that we're saving nature and their hometown."

Still, given China's heavy censoring of media and close watching of the Internet, Yongchen must be ever mindful of how she carries out her work. As she regularly details the environmental costs of economic development along the nation's rivers on WeChat, China's most popular social-media platform, authorities are poised to remove any content they deem incendiary, and in certain cases, detain those responsible. But as a former journalist, Yongchen has years of abundant experience deftly navigating China's unique media landscape.

"I know what it is to be careful," she says.

"I worked at National Radio for 30 years, so I have a good idea of what articles you can publish and what you can't."

Growing up in Beijing during the Cultural Revolution, the outdoors had a special meaning for her. Every weekend, her father would take her and her brother to the lake at nearby Yuyuantang Park.

"It was an important time that influenced me," she recalls. "I became very interested in the rivers, the trees and the birds."

And when she grew up to be a reporter, her passion for environmental activism was reawakened. It fully blossomed in 1988 when she worked on a story about the trees in Beijing's Xiangshan Park, where every autumn locals gathered in large numbers to marvel at the changing colors of the leaves. But, she observed, this annual ritual was beginning to take a toll. When she visited the park she saw the trees had been badly damaged by people trampling on the roots, pulling off leaves, and even breaking off entire branches. This sight left a deep impression on her.

"That was the first time I saw nature destroyed, and I realized that it was not only for humans — that we have to share nature with the birds and the trees. It was at that moment I began to think that I could do something to protect the environment through media."

Yet it wasn't until six years later, while on a trip to the United States to report on nongovernmental organizations and their place in U.S. society, that she became aware of the important role NGOs played in spurring change.

"Across the globe there were people like me who weren't living for money. We were all working for equality and justice."

**YONGCHEN**  
**WANG**  
 BEIYUN WATERKEEPER



“ I CONSIDER IT MY DUTY TO BE A VOICE FOR CHINA’S RIVERS AND FOR THE NATURAL WORLD, BECAUSE, IN SPITE OF THEIR ENORMOUS IMPORTANCE TO CHINA’S FUTURE AND TO THE PEOPLE’S WELL-BEING, THEY CANNOT SPEAK FOR THEMSELVES. ”



ABOVE AND OPPOSITE PAGE, YONGCHEN ALONG THE BAHE RIVER, A TRIBUTARY OF THE BEIYUN. ONE OF CHINA’S EARLIEST AND MOST SUCCESSFUL ENVIRONMENTAL ACTIVISTS, SHE METICULOUSLY DOCUMENTS HER PATROLS WITH PHOTOS AND VIDEO.

“From that experience, I learned that preserving nature requires not only government action, but also public participation,” she says.

So, in 1996, Yongchen founded Green Earth Volunteers (GEV), one of China’s first environmental NGOs, with a mission to use the power of media to raise awareness of environmental issues and spark a broader movement to care for nature in China.

Recalling GEV’s early years, Yongchen says, “At first we just wanted to encourage people to love nature. To spend time in nature and understand it, doing activities such as bird-watching and cleaning up garbage.”

Then, in 2003, Yongchen’s work with Green Earth Volunteers and her personal journey as an activist reached a critical turning point when she learned about the government’s plans to build the world’s largest cascade of dams along one of China’s last free-flowing international rivers, the Nu. Originating high atop the Tibetan plateau, the mighty Nu River flows through China’s Three Parallel Rivers National Park — an ecological wonder that is home to a quarter of the world’s animal species, many of them endangered — to its delta at the Andaman Sea in Burma. That same year, UNESCO declared it a World Heritage Site, stating that it “may be the most biologically diverse temperate ecosystem in the world.” But just one month after the Nu had earned this distinction, China’s government announced plans to dam the river, thereby imperiling it.

“That’s when I grew to have a special concern for rivers,” Yongchen remembers. “China’s biggest environmental problem is dams because, after they are built, the biodiversity disappears. With pollution, you can close a factory, but the dams disrupt nature itself and you can’t bring it back.”

Leaving Beijing’s dense urban landscape far behind, Yongchen

repeatedly travelled to the remote stretches of the Nu River to block the dam project by describing the potential devastating impacts on the environment — and on local communities; the Nu River Gorge is home not only to a vast array of wildlife, but also to a third of China’s ethnic minority groups, and the dams threatened to displace over 50,000 people.

Yongchen’s coverage helped shine an international spotlight of the issue, drawing reporters from Japan, the United States, France, and elsewhere to the region. And an even bigger breakthrough came in 2004, when, using contacts she had developed as a reporter, she delivered to then-Premier Wen Jia Bao a memo detailing the ecological importance of the Nu River and the devastating threat of the proposed dams. He responded by halting the project, pending further study of the environmental impacts.

But in the 15 years since Premier Wen’s announcement, state hydropower firms have battled fiercely to dam the Nu, while Yongchen and other environmental activists have resolutely defended the area’s pristine waters. She has regularly returned to the river to document its region’s beauty and the lives of the ethnic groups and their unique relationship to the world that is threatened by the dams.

But the Nu River is not the only waterway in China threatened by dams, and Yongchen has kept a watchful eye on other important rivers that are similarly imperiled. In 2006, she began leading a team of scientists, writers and reporters from major news outlets on an annual journey along the largest tributaries of the Yangtze, an undertaking dubbed “The Decade River Project.” Its goal has been to document the effects of hydropower development on these rivers through the eyes of the people who depend on them for their

livelihoods. In 2010, Yongchen launched a second Decade River Project along the tributaries of the Yellow River.

Her experiences along the Nu River taught her that media was just one method of environmental advocacy. So, beyond reporting, she has sought to use every tool at her disposal to protect rivers. One crucial moment was a visit to the United States in 2006, shortly after hearing about the work of Waterkeeper Alliance, to attend her first Waterkeeper conference. There she learned how Waterkeeper groups carried out their work, and how they often used the power of legal action, which she describes as “one of the main pillars of Waterkeeper Alliance’s effectiveness.” It was, she says now, a watershed experience for her. “Many of the members of Green Earth Volunteers were reporters and using legal tools was beyond our expertise.”

Equally important as any new tactic she learned at the conference was a profound realization that she was “not alone on this planet,” that “across the globe there were people like me who weren’t living for money. We were all working for equality and justice.” Inspired by these like-minded activists, Yongchen joined Waterkeeper Alliance and founded Beiyun Waterkeeper, China’s first Waterkeeper organization, under the umbrella of Green Earth Volunteers.

With the support of the Alliance, Beiyun Waterkeeper began monitoring the heavily strained Beiyun water system, which serves Beijing’s 21.5 million residents. The Beiyun program built on Green Earth Volunteer’s weekly river walks, which were intended to connect urban residents to nature — much like Yongchen’s weekly journey to her local lake as a child. But the group also incorporated many of the tactics Yongchen learned through the Alliance, so that now the

weekly walks include patrolling the city’s waterways for pollution and illegal dumping and testing for water quality. Whenever illegal activities are found, the group immediately reports them to local government officials, who track down those responsible.

Each morning, Yongchen issues a daily roundup of national environmental news that is widely circulated on social media and has become essential reading for those interested in environmental issues. And, recognizing the power of the Waterkeeper model, Yongchen has played a central role in building a similar network within China to support its nascent environmental NGO movement. In 2010, Yongchen brought together 13 of these groups, several of them Waterkeeper organizations, to launch the China River Watch Action Network, which shares knowledge, coordinates action, and provides mutual support. It has quickly grown to include 66 organizations.

Now retired as a journalist and well into her second career as an environmental activist, Yongchen shows no sign of slowing down. She maintains a grueling travel schedule, spending weeks at a time in China’s most far-flung regions. But she would not have it any other way, for it is a labor of love.

“As an environmentalist,” she says, “I consider it my duty to be a voice for China’s rivers and for the natural world, because, in spite of their enormous importance to China’s future and to the people’s well-being, they cannot speak for themselves.” **W**

*Eugene K. Chow writes on foreign policy and military affairs. His work has been published in Foreign Policy, The Week, and The Diplomat.*



## SWAMP KID

KEMP BURDETTE HOPSCOTCHED THE WORLD,  
BEFORE RETURNING TO DEVOTE HIS LIFE  
TO STANDING UP FOR HIS HOMETOWN RIVER.

BY ELLEN SIMON

PHOTOS BY ©COLBY KATZ, COURTESY OF CULTURE TRIP

**K**emp Burdette is showing a visitor a stretch of the Black River – blackwater rich with spider lily, otter, flocks of anhinga, and personal history.

That listing wreck of a houseboat? He and his dad lived on it when Kemp was in his teens.

That gutted house on stilts, stripped to the studs after the river rose 20 feet following Hurricane Florence in September 2018? His dad, an Army Corps of Engineers carpenter, built it 25 years ago. Those beams? Kemp made them from wood salvaged from a decommissioned dam. That thick-forested swampy island, the one you could kayak around in 10 minutes, with land solid enough for maybe a couple of tent platforms? His dad bought it as a gift for Kemp when he turned 21.

That stench? That's brand new. It might be chicken waste; industrial-sized poultry operations have opened in the Cape Fear watershed only recently.

Spend time listening to almost any Waterkeeper and you can start scripting a movie, based on a true story. The one on Kemp Burdette, North Carolina's Cape Fear Riverkeeper, would be a doozy.

First, there's the Cape Fear River, with 6,500 miles of tributaries, enough to stretch from its mouth, just east of Wilmington, N.C., to Baghdad. Its watershed is larger than New Jersey, and encompasses everything from the Black River's swamps, which are home to the world's oldest cypress tree, to ditched streams inching out of huge industrial hog operations. And it's threatened by almost every water problem in the world.

Developers are gobbling wetlands and

spitting out strip malls. Dredging and sea level rise have resulted in increased salinity, which is killing stands of cypress, leaving behind ghost forests of dead trees. A DuPont spin-off spent four decades secretly releasing a toxic compound called GenX just upstream from the intake pipe for Wilmington's drinking water.

No watershed in the world has a higher density of industrial pork-growers than the Cape Fear, where five million hogs live cheek-to-rump. These crowded, foul-smelling operations are to the idyllic red-barn family farm what a multinational steel smelter is to a blacksmith shop. All the pigs and all their poop are crammed onto the area's hurricane-prone floodplain. The nearly 500 million gallons of waste is stored, untreated, in Olympic-swimming-pool sized open-air cesspools. Breached, overflowing cesspools are accidents that have already happened, and are waiting to happen again. After Hurricane Florence, Kemp says, "The river stunk for a month. Stunk so bad, you could barely walk in downtown Wilmington. Dead fish were everywhere."

A ballooning poultry industry, its chickens and turkeys crammed into barns every bit as crowded as the hogs, is also infesting the watershed, operating under such scant state regulation that government agencies don't even know where the poultry barns are.

Then, there's the movie's protagonist, Kemp.

Navy rescue swimmer, Fulbright Scholar, Peace Corps volunteer, Kemp Burdette has swum the waters of the Marianas Trench, helped save the crew of a burning Japanese fishing boat, and helped uncover illegal dumping by Duke Energy, America's largest

If Kemp were an adult character in a novel, he'd be Carl Hiassen's swamp-smart eco-warrior, Skink. If he were a child character, he'd be Huck Finn.

# KEMP BURDETTE

CAPE FEAR RIVERKEEPER



“AFTER HURRICANE FLORENCE, THE RIVER STUNK FOR A MONTH. STUNK SO BAD, YOU COULD BARELY WALK IN DOWNTOWN WILMINGTON. DEAD FISH WERE EVERYWHERE.”

LEFT, KEMP ALONG THE BANKS OF THE CAPE FEAR ESTUARY NEAR WILMINGTON, WHERE HE SPENT HIS CHILDHOOD. OPPOSITE PAGE, CANOEING ON THE BLACK RIVER, A TRIBUTARY OF THE CAPE FEAR RIVER.

utility, with the aid of video shot on a mobile phone wrapped in the cover of a Bible.

If this makes you envy him, consider: he’s genuinely nice and rather modest, slightly reserved, unflappable. He coaches his two daughters’ soccer teams; chops basil when his lady friend, Krissy Kasserman, National Factory Farms Campaigner at Food & Water Watch, makes pizza, and fights like a water moccasin to protect the Cape Fear and its tributaries. To prepare for these fights, he works out at 6 a.m. each day at a YMCA and watches Bruce Lee movies, where one wiry guy calmly takes on 50.

If Kemp were an adult character in a novel, he’d be Carl Hiaassen’s swamp-smart eco-warrior, Skink. If he were a child character, he’d be Huck Finn. On a TV news program, he’d be introduced by Rachel Maddow.

In fact, he was. She remarked, “I do not say this often, but check this guy out. His name is Kemp Burdette. Kemp Burdette, he’s a Riverkeeper...”

#### THE BLACK RIVERKEEPER

Kemp Magnus Wilkes Burdette (his dad’s name is Wilkes; Magnus was a great grandfather) was not a well-behaved child. He was a swamp kid, and nothing in school interested him as much as working his way as far up the Black River and its cypress swamps as possible. He cut class a lot. When he wasn’t in the swamp, he was in the history room at Wilmington, N.C. public library, studying old maps.

One of nearby Wrightsville Beach’s youngest ever ocean-rescue swimmers, his academic record suggested ... something other than academics. Like the Navy. It was as good a place as any for a water-kid itching to see the world; one who’d lived, for a time, on a boat.

He enlisted, won his boot camp class’s Ironman competition, qualified as a rescue swimmer, and was shipped to San Diego for four months of training. He learned to jump out of a helicopter into rough seas, disentangle ejected pilots from the lines of their parachutes, extract crashed, sunken pilots out of their face masks and 400-pound seats, and provide in-the-water critical care. After graduation, he rescued the crew of that fishing boat — from a life raft — and retrieved a lot of dummy missiles in extremely rough seas.

Post-Navy, he decided that he had something to prove academically, and enrolled at the University of North Carolina, Wilmington.

“I slept in the library, practically,” he says.

He won departmental scholarships in history and geology. His senior honors thesis was about the ballast rocks on Cape Fear’s Campbell Island. Everything in that part of the state is sand eroded from the Appalachians, which were once higher than the Himalayas. Nature left no rocks in North Carolina east of Raleigh; every rock in this part of the state came from someplace else. Starting in colonial times, tall ships arriving in the port of Wilmington and making their way upriver dumped ballast stones on places like Campbell Island. The streets of Wilmington, at the time, were paved with ballast.

Kemp’s paper disproved a Harvard geologist’s theory about the origins of some of the stones, which were made of silica from the dissolved skeletons of marine plankton. The esteemed geologist claimed they were from the Cliffs of Dover. Instead, Kemp proved that some of the fossils in these ballast stones were from the Caribbean. The paper was published in the journal “Southeastern Archeology,” and remains one of the world’s most-cited papers on ballast.

It helped Kemp win a Fulbright Scholarship, which took him to his next port of call: Newfoundland, where he studied the crash of the province’s fishing industry. It began with waters once so rich with fish it was hard to sail through them, and ended after ever-larger ships and their nets depleted the fishing stocks, devastating the people and leaving them with little but alcohol, drugs, and stories of better days.

It was then, Kemp recalls, that he decided he had to fight to protect what he loved. He remembered a book he’d read in college, one of the few he’d brought with him to Newfoundland. He’d heard Robert F. Kennedy, Jr. speak in Wilmington about “The Riverkeepers,” which Kennedy had co-authored with the first Riverkeeper, John Cronin. Waiting in line to get his copy signed, Kemp thought of the river he loved best, the Black River, which fed into the Cape Fear.

“I asked him to sign my book, ‘To the Black Riverkeeper.’ He looked at me like, ‘You little dipshit!’” Kemp recalls.

But Kennedy signed it. “And now I am the Black Riverkeeper,” Kemp says.

#### A SENSE OF HISTORY

Kemp Burdette is speaking to the monthly meeting of the 550-member North Brunswick Newcomers Club, right after the guy who owns House of Pickleball.



Brunswick, North Carolina is the fourth-fastest growing county in the United States, flooded with so many Northern retirees that Newcomers, one of several similar clubs, graduate after three years to make room for newer Newcomers. Leland, where its meetings are held, was for most of Kemp’s life an unregistered-cars-on-blocks-with-Confederate-flag-decals-on-the-rear-windows type of place. Now it supports a brand-new, sun-drenched Cultural Arts Center.

For the House of Pickleball, Newcomers meetings are like a pond stocked with potential customers. For Kemp, it will be a good outing if he catches one supporter.

There’s plenty he could say. He could tell the crowd about the eight-year fight Cape Fear River Watch and partners successfully waged against Titan Cement, defeating a proposed coal-burning factory that would have sucked 20 million gallons of freshwater a day from the local aquifer.

He could talk about how his love for old maps, kindled in the Wilmington public library, led him to a canal alongside a Duke Power coal plant cooling pond, and how he asked Waterkeeper Alliance senior advisor Rick Dove, a Vietnam War vet, to fly over that plant. And how Dove photographed a truck pumping noxious liquid from the pond into an adjacent canal.

He could tell how the next day he popped into his flat-bottomed jonboat with two staff members from Waterkeeper Alliance, and bushwhacked through overgrowth to the canal until they motored up to a Duke employee on a bridge, who warned them, “Your cruise stops here.” How Kemp turned the boat around, as if to go away quietly, then made a U-turn, revved up the motor, hopped over a boom, and made his way up the canal, Bruce Lee with the brio of the Dukes of Hazzard. How a uniformed sheriff waiting on the bridge on their way back informed them that the water belonged to Duke, as

one of his companions shot video of him with her phone in its Bible-shaped case. And how the encounter made it to the Rachel Maddow show on MSNBC.

He could tell them how his organization, Cape Fear River Watch, was part of a phalanx of activists who waged a successful fight with Duke Power over coal ash, leading the company to plead guilty to nine felony counts, one of which was the illegal dumping of 61 million gallons of effluent into that canal, which is just upstream from a drinking-water intake that serves the town of Sanford, N.C. How Duke and its subsidiaries agreed to pay \$102 million in fines and restitution. And how the sheriff’s office apologized.

He could tell them how fish in 11,000-acre man-made Sutton Lake, a local fishing spot, had been deformed by Duke’s discharges of dangerous levels of selenium. How he and an old friend nicknamed “Nature Boy” waded neck-deep into the lake with seine nets, caught 400 fish and delivered them to a Wake Forest University professor, whose microscopic studies proved that the selenium had caused deformities of the fishes’ spines, mouths and gills so severe that one-fourth of them would never reach adulthood.

Or how DuPont spun off a company, Chemours, to manufacture GenX, used in the production of Teflon, knew it was toxic, and, nevertheless spent four decades pumping wastewater containing GenX into the Cape Fear. How Riverkeeper, working with the Southern Environmental Law Center, sued the state, then the company, and won a consent decree requiring Chemours to pay a \$12 million penalty, stop discharging its wastewater into surface waters, and cut toxic-air emissions by 99 percent.

Or how Cape Fear River Watch staff are wrestling alligators out of swamps, because they’re at the top of the food chain, to test them for GenX. (They’re using marlin-grade fishing rods, 200-pound lines, weighted barbless hooks, and duck tape.) Or how the organization is recruiting 400 people in Wilmington to give blood, urine, and home drinking water samples as part of a health study on GenX funded by the National Institutes of Environmental Health.

He could tell them about the thousands of hours he’s spent fighting factory hog and poultry operations that pollute neighbors’ well-water with their waste; how, disproportionately, African-American, Native American, and Latino neighbors can’t enjoy iced tea on their porches or hang their wash out to dry because the spray of untreated hog waste sends literal storms of putrid, noxious mist into the wind, while the poultry operations leave giant hills of waste to bake in the sun, or wash into the river when it rains.

But, looking out at the auditorium crowded with retirees in pastel golf shirts, Kemp goes a different route.

This, he reasons, is a crowd that will respond best to pictures of the animals that depend on these waters. So that’s what he gives them. At the slide of a mother deer and her fawn, the audience coos.

Afterward, the man who looked the most interested joins a small group waiting to ask him questions. His question: Would a reverse-osmosis filter — to remove noxious particles — be best to guarantee him and his wife clean water?

Kemp responds evenly, fairly, in a way that won’t offend him, saying that no one should have to spend thousands to ensure their own clean water; that the real responsibility rests with the polluter, who should be paying to ensure clean drinking water for everyone.

What he’s found is that after he leaves, some of the Newcomers will sign up for the Cape Fear River Watch newsletters. Then maybe they’ll come out on a paddle. Then they’ll join.

Like a patient fisherman, he’s sussed out the waters, and will work for his catch as long as it takes. **W**



## RUST REMOVER

JILL JEDLICKA IS LEADING THE WAY AS HER REGION RECOVERS FROM THE TOXIC LEGACY OF ITS INDUSTRIAL PAST AND BUILDS A THRIVING WATER-BASED ECONOMY.

BY LISA W. FODERARO

PHOTOS BY ©MARK SCHÄFER, COURTESY OF CULTURE TRIP

It is a raw, blustery afternoon in downtown Buffalo, the winds so strong that Lake Erie looks more like an ocean as waves crash over a break wall snaking across the Outer Harbor. But Jill Jedlicka, the Buffalo Niagara Waterkeeper, is undeterred, steering her Subaru Outback past some of the successes from the last decade that have transformed the Buffalo waterfront from an exploited eyesore into a regional draw.

There is Canalside, the renovated inner harbor where the Buffalo River flows toward Lake Erie and where, on weekends, families descend on new cafes, museums and boat tours. Just south is Buffalo RiverWorks, a grain elevator that was repurposed into a sports-and-entertainment complex (and painted to resemble a giant six-pack of beer). Then there are more tranquil spots. Perhaps Jill's favorite is Red Jacket Park, a few bends in the river to the east, where a wetland restoration was one of the first projects she undertook as a young environmentalist in county government. "Buffalo Niagara Waterkeeper has helped lead so much of this community's revival for decades," Jill says, proudly. "And that's involved everything from re-imagining our waterfront to advocating for the federal and state investments that have made reconnecting to it possible."

As if on cue, a great blue heron lifts off from a diaphanous patch of lily pads. "One area where I think Waterkeeper has led is in giving people hope for a future in which this river does not have to be a toxic mess for the next generation, that it can be a healthy, thriving waterfront again," she says, watching the heron pump its wings toward the opposite shore. "Saying that over and over again — and getting people to believe it — is just

as important as all the technical work that gets done."

At 44, Jill oversees one of the largest Waterkeeper organizations in the world, with an annual budget of \$8 million and two dozen staff members. Together, they are relentless advocates for the Buffalo and Niagara Rivers, as well as two Great Lakes and 15 major tributaries. Restored shorelines and new docks for kayaks and paddleboards may be the most visible manifestation of an environmental turnaround that The Buffalo News dubbed "almost miraculous." But much of the most critical work has taken place out of the public eye: beneath the rivers' surface and in countless meetings across decades among elected officials, governing agencies, corporate leaders and, of course, Waterkeeper.

In the mid-2000s, the federal government gave Friends of the Buffalo River (Waterkeeper's predecessor, founded in 1989) the task of coordinating the cleanup and restoration activity on the Buffalo River. As a way to jump-start the remediation, the group signed a \$2 million cost-sharing agreement with the Army Corps of Engineers to pay for a study of contaminated sediment on the river bottom. "I laugh because at the time we didn't have two nickels to rub together," recalls Jill, who was working with the Friends group at the time.

But she and her colleagues, frustrated by the slow pace of progress, wanted to make a statement. After all, in the 1980s the International Joint Commission, an organization established by the United States and Canada, had designated the Buffalo and Niagara Rivers so-called "Areas of Concern" in the Great Lakes basin, two of more than two dozen toxic hot spots on the American

"I remember seeing how beautiful the landscape was out there, and that was the moment when I realized you have to speak up for things you believe in."

# JILL JEDLICKA

BUFFALO NIAGARA WATERKEEPER

“ I WENT TO BLOCK PARTIES, CHURCHES AND FESTIVALS, AND ULTIMATELY PEOPLE SAID THEY WANTED TO BE ABLE TO SWIM IN THE RIVER AND EAT THE FISH. IT’S PRETTY SIMPLE. YOU DON’T PULL \$100 MILLION TOGETHER OVERNIGHT. BUT IT ALL STARTED WITH REALLY ENGAGING THE COMMUNITY. ”

side of the border. Those designations followed another dubious distinction: the Buffalo River was considered biologically dead as far back as the 1960s. The industrial activity that had emerged alongside the Erie Canal and powered Buffalo’s economy had also scarred the rivers so vital to its success.

After Friends of the Buffalo River signed the agreement with the Army Corps, their persistent efforts helped convince the New York State Department of Environmental Conservation (DEC) to cover the local share of the study, though the Friends group did provide in-kind services and remained an active partner. “Part of our strategy was to get others to the table,” Jill explains. “It worked.”

The analysis of more than 1,000 core samples of Buffalo River sediment led to the successful dredging of a million cubic yards of contaminated muck along a six-mile stretch. The work was finally completed a few years ago. “We had a whole stew of things, but there were four chemical drivers — PCBs, lead, mercury and PAHs,” or polycyclic aromatic hydrocarbons, a group of potentially carcinogenic pollutants, Jill says. “We found contamination 20 feet down.”

For Jill, who grew up outside Buffalo in the town of Lancaster, a passion for the environment in general, and the region’s watershed in particular, is practically a family inheritance. Her great-uncle on her father’s side, Stanley Spisiak, owned a jewelry store, but was nicknamed “Mr. Buffalo River” for his crusading advocacy. In the 1960s, he coaxed then-Senator Robert F. Kennedy and later President Lyndon B. Johnson to visit the Buffalo River and neighboring waterways. The tour prompted Johnson to issue an order halting the discharge of dredge spoils into Lake Erie.

Although Jill never met her great-uncle, owing to the sprawling nature of her family, she developed an appreciation of his work as she pursued a career in the environment. Spisiak was her maiden name, and so professors at the State University of New York at Buffalo, where she majored in environmental studies, asked if they were related, as did the first person to interview her for a job.

“The era when he lived and was doing this kind of work — I mean, people were literally trying to kill him,” she says, referring to his activism beginning in the 1940s. “The stories we’ve heard were about when he was testifying about different kinds of pollution happening at Bethlehem Steel. He was thrown down the stairs and beat up and shot at in his jewelry store. He was an environmentalist before the term was coined.”

As Jill tells it, she grew up in a tight-knit family that valued hard work. Her parents were not outdoorsy — the closest they got to nature was the golf course — but they encouraged her interest. “Even as a little girl, I was outside all the time, playing in the woods, playing in the streams near our house,” she recalls. “I used to catch tadpoles and toads, and I would take them home and build little homes for them.”

It was not until high school that her love of the natural world

morphed into something resembling a vocation. In her sophomore year, her public high school chose Jill to participate in a leadership conference in Seattle and Portland. She was bowled over by the grandeur. “I remember seeing how beautiful the landscape was out there,” she says, “and that was the moment when I realized you have to speak up for things you believe in.”

She came home and set to work starting a recycling program in her school. It was the early 1990s, long before such programs were commonplace. After graduating from SUNY Buffalo, she struggled to find a job in her chosen field, largely because of budget cuts amid a recession. So she took a position as a program director at a local Y.M.C.A., where she met her husband. She also decided to go back to school for an M.B.A., attending classes at night. Then came her break — a job with Erie County as an environmental education specialist. Her first assignment: community engagement and habitat restoration along the Buffalo River.

After five years with the county, the move to Friends of the Buffalo River, where she had served on the board, was natural. She had just finished a maternity leave and took a part-time position there as a consultant. The group broadened its focus over the years, becoming Friends of the Buffalo Niagara Rivers in 2003, then Buffalo Niagara Riverkeeper in 2005 and, finally, Buffalo Niagara Waterkeeper in 2017.

Over the years, both in her role with the county and at Waterkeeper, Jill has focused on building relationships. She points out that Buffalo, in addition to its moniker of the Queen City of the Lakes (for its industrial might in the late 19th and early 20th centuries), is known as the “City of Good Neighbors.” “It’s a small town and everybody knows each other,” she says. “We’re all kind of in it together, so even as our jobs or roles change, you still have those networks and those connections.”

With the goal of harnessing as much goodwill as possible for the region’s waters, she makes a point of striking a nonpartisan tone while refraining from knee-jerk antagonism. Brian Higgins, a congressman who represents Buffalo, praises Jill’s advocacy. “She has an emotional intelligence and intuitiveness in dealing with politicians and corporate leaders,” he says, adding that her laser focus has contributed to Buffalo’s recent economic resurgence. “Waterfront development is not the entire renaissance, but it’s a big part of it.”

Indeed, Jill finds measured words even for a major polluter of the past generation, Honeywell. One piece of legislation that yielded significant funding was the Great Lakes Legacy Act of 2002, which provided a cost-sharing mechanism for corporations and government. (Another was the Great Lakes Restoration Initiative, which began in 2010.) She noted that the Legacy Act was invaluable for orphaned waterways like the Buffalo River, where scores of factories were shuttered long ago.



JILL AT GRAND ISLAND ALONG THE UPPER NIAGARA RIVER, WHERE BUFFALO NIAGARA WATERKEEPER HOSTS FREQUENT PADDLES FOR THEIR SUPPORTERS.

“Why should one company pay for the mess of a hundred companies?” she asks. “That’s not right. Honeywell was still working along the river and doing some cleanup. And they helped bring other responsible parties to the table on their own.”

All told, some \$100 million has poured into the Buffalo River over the past 15 years from all levels of government, nonprofit groups and private industry. Most of the money went toward sediment removal, but about a quarter helped fund the creation of green infrastructure and public access, as well as habitat restoration. Jill believes that the time she and her team spent talking to residents about what they wanted from their river paid off.

“I don’t think anybody ever asked people in this region that question before,” she says. “I went to block parties, churches and festivals, and ultimately people said they wanted to be able to swim in the river and eat the fish. It’s pretty simple. You don’t pull \$100 million together overnight. But it all started with really engaging the community.”

Despite the organization’s name, the Buffalo River, to date, has garnered more attention from Waterkeeper than the Niagara River. That’s partly because the state’s Department of Environmental Conservation is overseeing efforts to deal with toxic sediment in the Niagara. And the river, an international waterway, benefits from New York’s strong relationship with Canada. Still, the group advises the state DEC on the cleanup, and is monitoring water quality and restoring habitat on the upper and lower Niagara River.

Along the Buffalo River, work to improve habitat across 17 sites is almost finished. “At one site, for the first time we actually saw a bunch of turtle eggs that had hatched,” Jill says. “We see belted kingfishers, herons and egrets. There’s a peregrine that nests nearby. You can physically see the greening of the shoreline.”

Two outstanding issues are combined sewer overflows (CSOs) and nonpoint source pollution. CSOs occur when wastewater treatment plants that process both stormwater and sewage are overwhelmed, resulting in the discharge of raw sewage into waterways. Non-point source pollution includes road runoff, pesticides, animal waste and litter — what Jill calls “all the stuff you cannot grasp.” The Buffalo Sewer Authority has committed a half-billion dollars under a consent decree to staunch the overflows through a combination of gray infrastructure (holding tanks) and green infrastructure (bioswales, rain gardens, porous surfaces).

If there is one thing that nags at Jill, despite her organization’s extraordinary success, it is complacency. “The biggest challenge is to make sure that people don’t feel like the job is done,” she says, driving along the Outer Harbor. “It’s that apathy that allows people to repeat the past. We’re not going to get another \$100 million to restore this river again.”

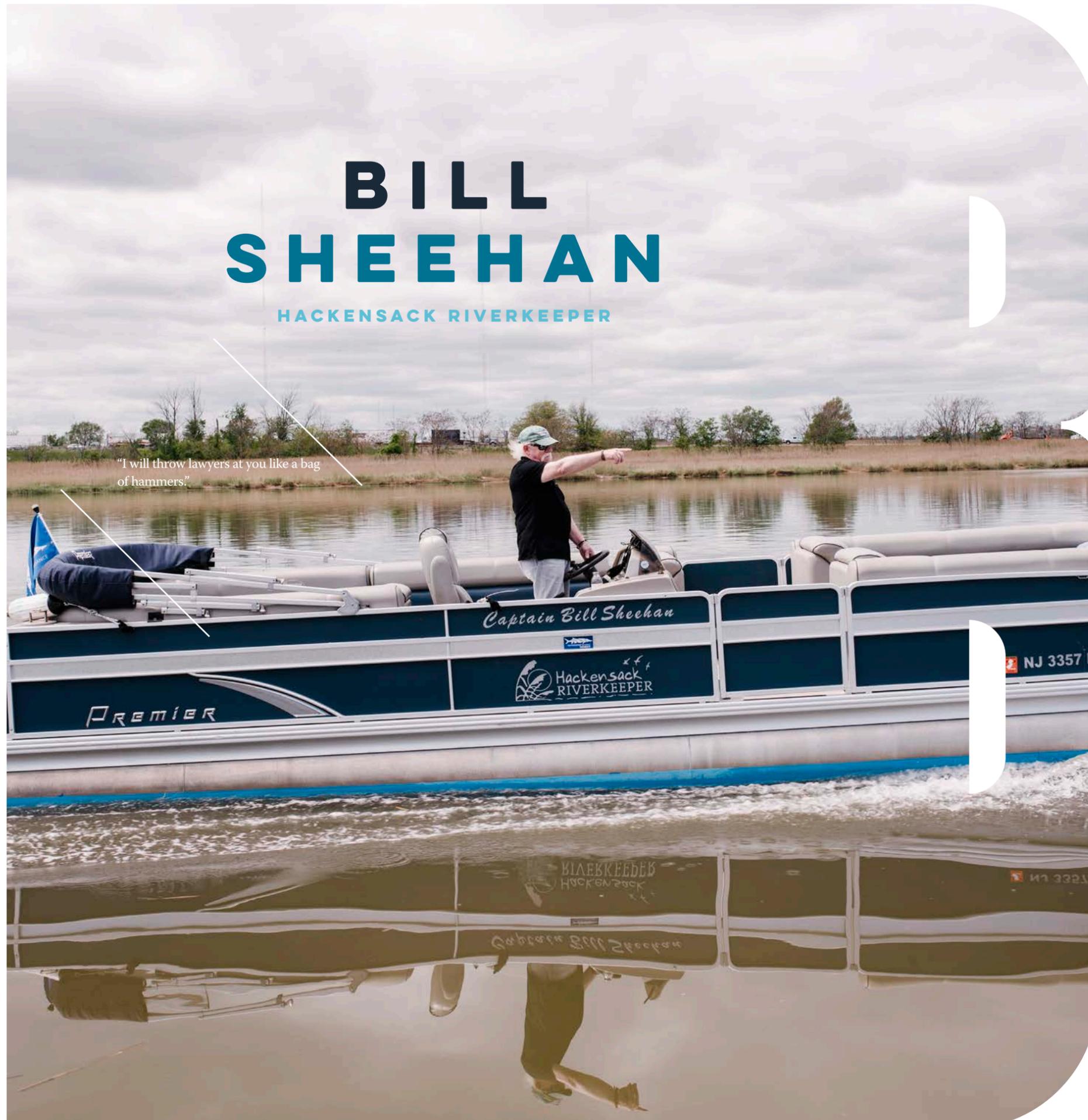
And partnerships, Jill points out, will remain key to the vitality of both Waterkeeper and the region’s rivers. Along a one-mile stretch of the Scajaquada Creek in Buffalo, for instance, Waterkeeper recently partnered with the Sewer Authority to complete a seven-year, \$6 million restoration effort. This was a landmark achievement, Jill points out, because it was the first in-the-ground project for a creek that had a 100-year history of contamination.

“We saw trout spawn up that creek this past season,” she says. “It’s incremental and never quick enough for the people who are on the outside looking in. But we’re getting there.” **W**

# BILL SHEEHAN

HACKENSACK RIVERKEEPER

"I will throw lawyers at you like a bag of hammers."



## JERSEY BOY

FOR THREE DECADES, CAPTAIN BILL SHEEHAN HAS SKILLFULLY STEERED A MOVEMENT TO CLEAN UP AND PROTECT HIS NATIVE RIVER AND WETLANDS.

BY LISA W. FODERARO

PHOTOS BY ©JOHN FRANCIS PETERS, COURTESY OF CULTURE TRIP

As a kid growing up in northern New Jersey in the 1960s, Bill Sheehan bounced from one town to another. There was a basement apartment in a farmhouse in the north end of Secaucus, a rental hard by the Pulaski Skyway in Jersey City, and a four-story walkup in Union City. Over the years, he attended six grade schools and two high schools.

"My dad was a longshoreman and barge captain and they were always chasing rent," Bill says of his parents. "Wherever we could get the best deal, that's where we would move."

But there was one constant: the Hackensack River. Flowing 45 miles from suburban Rockland County, New York, to Newark Bay in New Jersey, the river formed the backdrop of his youth and the spine of the Meadowlands, long considered one of the largest and most polluted wetlands in the New York region.

Sixty years ago, during Bill's childhood in Secaucus, there were more hog and vegetable farms along the Hackensack than industrial sites. Still, it was hardly the idyllic backdrop of a post-World War II American boyhood.

"In those days, if you didn't have school, your parents would tell you to go out and play," he remembers. "But they also said, 'Stay away from that damn river.' The water was horrible. It stank. It smelled like raw sewage and there were dead animals in the river. That was one thing the farmers would do. If they had a dead horse or a dead hog, they'd throw it in the river."

He and his friends figured out ways to play along the Hackensack anyway. They climbed inside giant cardboard boxes and rolled along the riverbanks, flattening the tall phragmites as they spun. They explored makeshift trails that snaked along the shore. And as Bill grew older, he ventured south by boat into Newark

Bay and on to Raritan Bay, where he fell in love with fishing.

It was fishing that, decades later, would take him back to the Hackensack River – and into his current act as the river's chief protector and advocate.

PHRAGMITES, GARBAGE, AND JIMMY HOFFA

The Meadowlands is known to many who drive on the New Jersey Turnpike as a vast sea of phragmites, or common reeds, west of the Hudson River, where the Hackensack meanders in the distance. These wetlands are where the body of the controversial Teamsters union chief Jimmy Hoffa is rumored to be buried, and where, for many years, public officials and developers saw only a worthless swamp dotted with garbage dumps.

"If somebody had come along and had an idea to fill the whole thing in with concrete and build officer towers on it, they would have said, 'Thank goodness,'" Bill says, only half-joking.

By 1969, some 5,000 tons of garbage a day were being dumped in the Meadowlands from 118 New Jersey communities and New York City. Heavy industry was also in full swing, with more than a dozen plants, including Standard Chlorine, Universal Oil Products and Scientific Chemical Processing, making or processing inks, chlorine, mercury and oil, among other chemicals, on the Hackensack River and its tributaries. They left behind hundreds of acres contaminated with PCBs, dioxins and other toxins, and by the 1980s, the U.S. Environmental Protection Agency had designated several of the former factories Superfund sites.

Before heavy industry swept across it, the



“THE SPECIES-LIST FOR THE MEADOWLANDS IS HOVERING AROUND 275 SPECIES OF BIRDS AND 70 SPECIES OF MARINE LIFE,” BILL SAYS PROUDLY. “THE WATER QUALITY IS BETTER NOW THAN IT’S BEEN AT ANY TIME IN MY LIFETIME, FOR SURE.”

Meadowlands was an important source of salt hay. According to “The Meadowlands: Wilderness Adventures on the Edge of a City” by Robert Sullivan, salt hay farmed there was used from the 1700s to mid-1900s in stables and icehouses, as well as in the manufacture of bricks, glass, crockery and asphalt. And a dense forest of white cedar had covered nearly half of the Meadowlands, its straight-grained wood valued for boat-building and roof shingles.

On a tour of the Hackensack River with local high-school students last summer, Captain Bill, as he is nicknamed — he holds a 25-Ton Launch/Tender Master’s license from the U.S. Coast Guard — navigates a pontoon boat south along the river from Carlstadt, N.J., past the old, the new and the timeless. There are rusted rail bridges stuck in an upright position, obsolete telegraph towers and abandoned factories, along with shiny hotels, office complexes and the occasional marina. Turning into one of the many side channels, Bill shows the students the nature that persists — indeed, thanks in no small part to his efforts, today thrives — in the Meadowlands.

Red-winged blackbirds belt out a raspy trill from the reeds, while snowy egrets and black-crowned night herons forage for

food in the mud. A diamondback terrapin scuttles into the water from a rock as our boat approaches.

“The species-list for the Meadowlands is hovering around 275 species of birds during the course of the year and 70 species of marine life,” Bill says proudly. “The water quality is better now than it’s been at any time in my lifetime, for sure.”

DRUMMER, DISPATCHER,  
RIVERKEEPER

Before Bill, who is 69, became an environmental crusader, he was a drummer. Even now, if you squint at his handlebar mustache, shark-tooth pendant and arm tattoos, you can see the rocker who started playing gigs in local nightclubs at age 15. He kept playing into the 1970s. “When disco took over, I got out of the business,” he says. “All the bars wanted to hear disco, and I was a drummer. I wasn’t a rhythm machine.”

While he was “waiting for disco to die out,” Bill drove a taxi, then became a dispatcher for a cab company in Union City. By that time, he was on his second marriage and his drumming days were fast receding in the rearview mirror.

“You know, it was a job,” he says of the

“ I WAS FASCINATED BY THE IDEA THAT THIS GUY WAS RIDING AROUND SAN FRANCISCO BAY, TAKING NAMES, SUING POLLUTERS AND KICKING ASS. I WAS LIKE, ‘WOW, THAT’S A GREAT JOB. HOW DO YOU GET A JOB LIKE THAT?’ ”

taxi industry. “But it gave me the opportunity to buy a boat.”

For some reason, Bill was always drawn to pontoon boats, those somewhat clunky, flat-bottomed craft that rely on two cylindrical tubes to float. By the mid-1980s, he had worn his wife down with his endless talk of their charms. One day, she told him to just go buy one. “I called up my nephew,” Bill recalls, “and said, ‘Before she changes her mind, we are going boat-shopping.’”

That purchase, in 1986, enabled Bill to indulge his passion for recreational fishing. Although he was still working 12-hour days for the taxi company, he started spending what free time he had with a rod and reel out on the water. When it rained, well, he’d “turn on the TV and watch other people fish.”

And on a fateful Saturday morning in 1988, when Bill’s TV was tuned to ESPN, his career as Hackensack Riverkeeper was born. Between programs about fishing, there were short profiles of people who had managed to make a career of the outdoors, and Bill learned about Michael Herz, founder of San Francisco Baykeeper, which was the fourth Waterkeeper organization formed, after Hudson Riverkeeper, Long Island Soundkeeper, and Delaware Riverkeeper.

“I was fascinated by the idea that this guy was riding around San Francisco Bay, taking names, suing polluters and kicking ass,” he says. “I was like, ‘Wow, that’s a great job. How do you get a job like that?’”

But life was busy and Bill put the idea on hold, until a few years later, when he came across an article in *The Fisherman* magazine about NY/NJ Baykeeper, which was looking for volunteers. He soon joined the group’s boating auxiliary.

“If there was a pipe and you didn’t know what it was, you would take a picture



“WETLANDS ARE OUR KIDNEYS,” BILL SAYS. “THEY FILTER STORMWATER AND THEY PROVIDE WILDLIFE HABITAT, AS WELL AS BUFFERS AGAINST FLOODS.”

and send it to Baykeeper and say, ‘What’s this?’ ” he recalls. “Because my boat was on the Hackensack River, I became the eyes and ears in the Meadowlands.”

It wasn’t long before Bill had the idea of forming his own group focused entirely on protecting the Hackensack. He started small, with a nonprofit group called “Hackensack Estuary and River Tenders,” or HEART. But Andy Willner, founder of NY/NJ Baykeeper, urged him to become an official Riverkeeper, so Bill reached out to John Cronin, who was then Hudson Riverkeeper, and in 1997 received permission to use the Riverkeeper trademark.

By then, the passage of the federal Clean Water Act, in 1972, had resulted in the building of sewer systems in Secaucus and many other cities, so the river no longer emitted swoon-inducing odors. But industrial pollution was at an all-time high, along with other threats to the remaining acres of wetlands. Bill set to work taking on one polluter and developer after another, often with the help of the Rutgers Environmental Law Clinic,

which was later folded into the Eastern Environmental Law Center.

An early victory involved Hartz Mountain Industries, a major developer in the Meadowlands. After the company bought up acres of wetlands, it hatched a plan in the 1980s to fill in Mill Creek Marsh and build about 2,800 townhouses. Bill’s relentless campaign against the project eventually turned residents and officials in Secaucus against it as well.

“It was the first time Secaucus stood up to Hartz Mountain,” he recalls. “The residents were concerned about the quality-of-life impacts, and I was concerned about the river. Wetlands are our kidneys. They filter stormwater and they provide buffers against floods, as well as wildlife habitat.”

After years of legal and regulatory challenges, Bill and his lawyers prevailed. In the 1990s, Hartz Mountain sold the land to the Hackensack Meadowlands Development Commission, which restored it into a 209-acre wetland preserve called Mill Creek Marsh Trail. “Now we have a mile and a half of trails and it’s open to the

public,” Bill says.

“I WILL THROW LAWYERS AT YOU LIKE A BAG OF HAMMERS.”

Sitting on one of Riverkeeper’s two pontoon boats docked on the Hackensack in Carlstadt’s River Barge Park, Bill talks about that battle and others — including those against Honeywell International, Standard Chlorine and the Mills Corporation, a shopping-mall developer — with the nostalgia of a boxer reviewing his epic moments in the ring. He has stopped massive real-estate developments from rising on the wetlands and forced corporate polluters to take on complex, costly cleanups of former industrial areas. As with the Hartz Mountain development, he also has often walked away with a donation of parkland or money. Several years ago, for instance, he got a tip that a hotel was dumping raw sewage into the river. It turned out that the pipes under the hotel had collapsed, and instead of proper repairs being made, tunnels had



“THE REMEDIAL WORK MIGHT NOT BE DONE IN MY LIFETIME,” BILL SAYS. “BUT EVENTUALLY IT WILL GET CLEANED UP TO THE POINT WHERE PEOPLE CAN EAT THE FISH AGAIN AND NOT WORRY ABOUT GETTING IN THE WATER. THAT’S OUR GOAL.”

“ THE BIGGEST PROBLEM THAT I HAVE IS THE LOCATION OF THE HACKENSACK RIVER – MEANING IN THE MIDDLE OF THE HISTORICALLY BLIGHTED MEADOWLANDS – AND THE FACT THAT NOBODY HAD A RELATIONSHIP WITH IT. ”

been dug that led to a large pit from which sewage-contaminated wastewater was pumped into the Hackensack.

“Luckily, I was at a point in my career where I understood the difference between a criminal violation and a civil violation,” recalls Bill, who called the state Attorney General’s office. A week later, agents raided the property and charged the hotel owner with violating the Water Pollution Control Act. The owner pleaded guilty in state court and, as part of a plea deal, made a \$75,000 donation to Hackensack Riverkeeper.

“People have to understand that I’m not fooling around with this,” Bill says of his pugnacious advocacy. “I’m not here to play nice. When I have to be that bad guy – look out! I will get as many lawyers as I need and I will throw them at you like a bag of hammers.”

Former NY/NJ Baykeeper Andy Willner says Bill seems to have been born for the role of Hackensack Riverkeeper.

“From day one, there was no stopping him. He’s a natural advocate. He very quickly became an extraordinary public speaker and one of the most knowledgeable naturalists I know.”

Just as important as fighting polluters was building a constituency for the river.

“All the challenges I’ve talked about are really not unusual,”

Bill says. “If you talked to 100 Waterkeepers, you’d probably find that 99 of them have many of the same issues. The biggest problem that I have is the location of the Hackensack River” — meaning in the middle of the historically blighted Meadowlands — “and the fact that nobody had a relationship with it.”

So, in 1999 he started renting canoes and kayaks, first at Laurel Hill Park in Secaucus and later at Overpeck County Park in Bergen County. Between the rentals and the river cruises aboard the pontoon boats, about 10,000 people a year now explore the river.

While the organization charges as little as \$15 for a two-hour kayak rental, the income adds up, enabling Bill to hire 25 summer seasonal workers. Rental income, grants, and donations have brought in more than \$10 million since Hackensack Riverkeeper’s inception. It now has an annual budget of \$800,000 and six full-time employees.

To illustrate how far the group has come in its quest to create a constituency, Bill shares an anecdote from his early years fighting for the Hackensack. It was the mid-1990s, when he was still volunteering for NY/NJ Baykeeper, and he was meeting Anthony Just, then mayor of Secaucus, for the first time. “I walked into his office and said, ‘I want to talk to you about the

river,’” he remembers. “And he looked at me and said, ‘What river?’ I said, ‘What river? What river goes through this town? The Hackensack River!’”

Bill says a critical milestone came in 2004 when the New Jersey Meadowlands Commission developed a new master plan to rezone the remaining 8,400 acres of wetlands for conservation. (An equal area had already been lost to development or the creation of garbage dumps.) Now, all but 200 of those saved acres belong to the State of New Jersey or the Meadowlands Conservation Trust, which Bills chairs.

As much as Bill enjoys recounting past progress, he spends more time pondering the work that remains, attacking problems that include contaminated sediment on the river bottom and combined sewer overflows, which happen when waste-treatment plants handling both stormwater and sewage are overwhelmed by rain and must discharge everything into the river untreated. During the Obama administration, Bill petitioned the Environmental Protection Agency to determine whether the lower part of the Hackensack qualified for inclusion on the National Priorities List, known commonly as the Superfund list. After taking 400 core samples and reviewing pertinent literature,

the EPA agreed that it did. A listing as a Superfund site could have yielded significant money from former polluters, but the New Jersey Department of Environmental Protection, under Gov. Chris Christie, refused to sign off.

“Christie didn’t want the river listed as a Superfund site on his watch,” observes Bill, who is now trying to convince environmental officials in the administration of Gov. Phil Murphy to approve a listing. “If I had to go after each of the companies that polluted this river, I would have to live to be 700 years old. By getting it listed, the remedial work might not be done in my lifetime, but they’ll be working on it. Eventually it will get cleaned up to the point where people can eat the fish again and not worry about getting in the water. That’s our goal.”

In addition to everything else Bill has mastered as Hackensack Riverkeeper, from carcinogenic compounds to litigation strategies to public relations, he has also learned to adjust his sense of time.

“A lot of the projects don’t happen overnight,” he says. “Being in the taxi business, I was on a five-minute schedule – always. ‘Okay, I’ll be there in five minutes. Be there in five minutes.’ When I got into this business, I had to ratchet it back. Now it’s: ‘In a couple of years, or maybe 20 years. But it’ll get done.’ ” **W**



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CULTURE TRIP IS A TRAVEL SITE AND APP THAT CELEBRATES WHAT'S SPECIAL AND UNIQUE ABOUT PLACES, PEOPLE, AND CULTURES ACROSS THE GLOBE. WITH AN INTERNATIONAL NETWORK OF LOCALLY BASED WRITERS, FILMMAKERS, PHOTOGRAPHERS, AND ILLUSTRATORS, THEY PUBLISH STORIES AND VIDEOS DESIGNED TO INSPIRE PEOPLE TO FALL IN LOVE WITH THE WORLD AROUND THEM - AND PROVIDE TRAVEL-PLANNING TOOLS THAT HELP USERS GO BEYOND THEIR CULTURAL BOUNDARIES.

At Waterkeeper Alliance, we know the importance of local advocates. We have grown and connected a global network of grassroots activists for 20 years. These activists, known as Waterkeepers, share a vision: drinkable, fishable, swimmable water for everyone, in every place. Today, we are more than 300 Waterkeeper groups strong and growing—with a plan to protect 20 million square miles of waterways over the next 20 years.

Culture Trip has partnered with Waterkeeper Alliance to present the Waterkeeper Warriors project, which chronicles 20 Waterkeepers who are fighting and winning some of the most important clean-water battles of the past 20 years, as well as confronting some of the greatest environmental challenges of our time. Culture Trip captures stunning images of these true environmental heroes, such as Captain Bill Sheehan, who was born and raised along New Jersey's Hackensack River where he founded Hackensack Riverkeeper in 1997. Captain Bill is widely credited with the resurrection of the Hackensack River and the Meadowlands Estuary. Another guardian of our waters is Yongchen Wang, the Beiyun Waterkeeper, who waged a successful 10-year campaign to save the Nu River, one of China's last free-flowing rivers, from plans to build 13 large hydropower dams.

Culture Trip photographers were dispatched to locations around the globe to capture the spirit of these Waterkeeper Warriors who are at the heart of a global movement that protects clean drinking

water and the irreplaceable water sources of nearly a billion people. Finn Beales, an award-winning travel, lifestyle, and commercial photographer based in the United Kingdom, photographed London Waterkeeper Theo Thomas, who has been one of the most outspoken and independent voices for London's rivers for nearly two decades. Jane Hahn, a Korean-American independent photographer who has covered the continent of Africa for over ten years, photographed Mbacke Seck, the Hann Baykeeper and Africa's first Waterkeeper. Mbacke has, for more than two decades, led the fight against the industrial and municipal pollution that is destroying Hann Bay, once one of the world's most pristine and productive bays. And, among many more, Rose Marie Cromwell, an award-winning photographic and video artist, captured Miami Waterkeeper Rachel Silverstein, who has won significant victories in litigation over illegal coral reef damage that has catalyzed the rescue of several hundred threatened staghorn corals, and is leading efforts to prevent similar damage from occurring again.

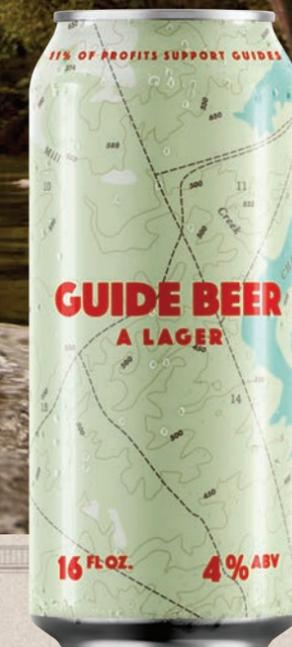
The full body of work is presented online, in the two 20th Anniversary editions of Waterkeeper Magazine, and as a traveling photo exhibit that invites global citizens to discover the diversity of the world's waterways, from Cambodia and Senegal to London and Peru, and the important role Waterkeeper Alliance is playing in protecting them. **W**



CONGRATULATIONS  
**20 YEARS**  
WATERKEEPER MAGAZINE

**FOR THOSE WHO SHOW US THE WAY™**

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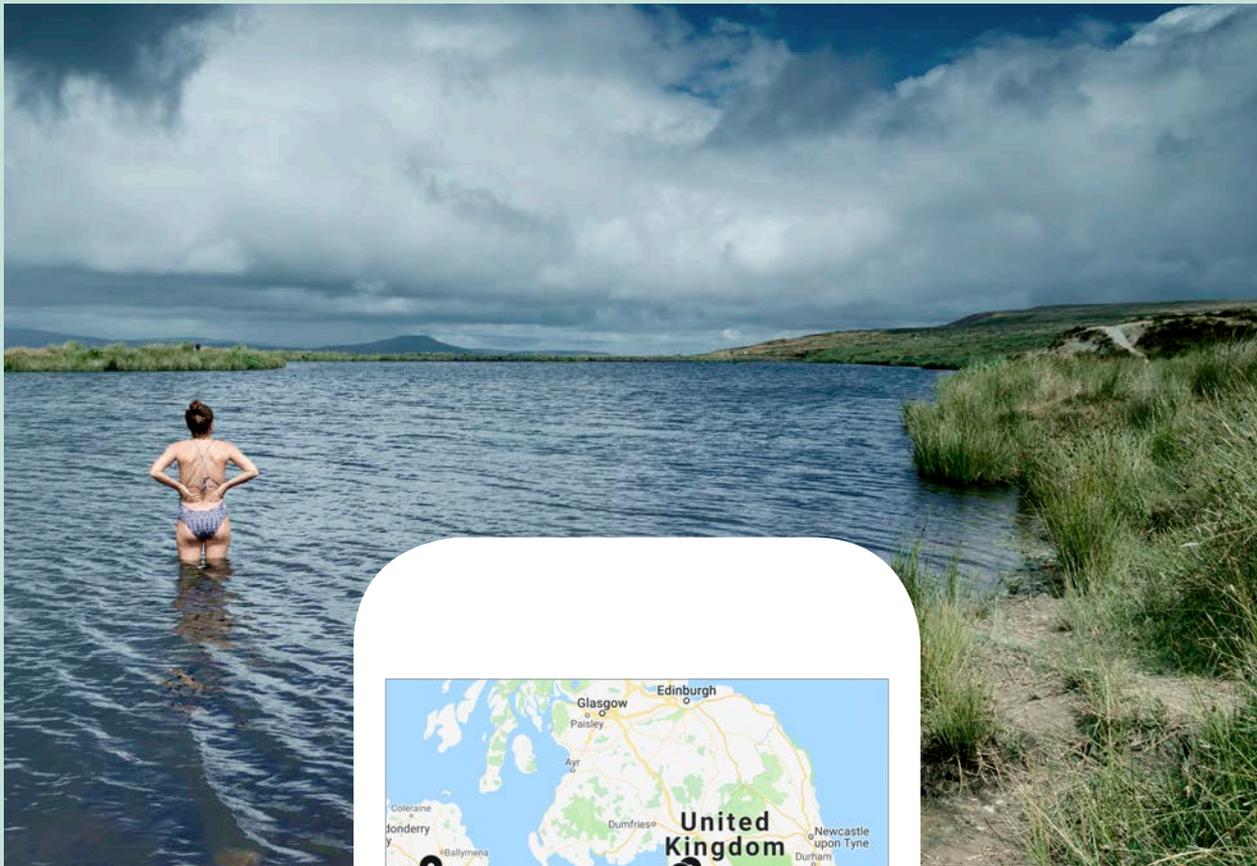
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