

COMMUNITY CONSERVATION: STRENGTHENING COMMUNITIES THROUGH LAND CONSERVATION

GALVESTON BAY FOUNDATION

Beautiful Life in the Muddy Water

Teenagers in Houston, Texas, get to know Galveston Bay through a yearlong wetland restoration project.



Students harvest their wetland grasses in NRG ponds. All photos courtesy of Galveston Bay Foundation

Every fall, Rani Henderson asks teenagers to wade up to their waists in a muddy pond so they can harvest marsh grass. “They think I’m crazy,” she says. “They start off screaming like it’s going to eat them or something.” The teens are starting a school-year long wetland restoration project through “Hip to Habitat,” a program of Galveston Bay Foundation (GBF) where Rani is the director of education.

Micaela Bermea was there last year, her senior year in high school.

“All the girls and some of the guys are like, ‘Ew, no, I’m not going in that muddy gross water!’” she recalls.

The muck in question is a manmade pond at NRG Energy’s Cedar Bayou Eco-Center near Houston. The kids hold back at first, but eventually start having fun, even painting camouflage on their skin with the mud. Micaela says, “You feel accomplished even though you smell terrible and you have mud in your shoes and a ruined pair of shorts and shirt. I could tell a lot of people loved it, in spite of getting dirty. It’s worth it, and you learn so much more than just learning from a textbook.”

The students dig up marsh grasses to take back to their school, where

they look after them in blue kiddie pools. For a few months, the plants go dormant. (That’s when Michaela’s principal wanted to know why they were growing dead plants.) Then they take off, sending out bright green shoots from their roots. A single plant might multiply ten or 20 times. In the spring, the students take their expanded collection of marsh grasses and plant them in a wetland restoration area at the edge of Galveston Bay.

OUT OF TOUCH WITH GALVESTON BAY

When GBF started Hip to Habitat in 2006, it served 73 students from three schools. Since then, it’s grown to

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Students plant their grasses at a restoration site on Galveston Bay.



Students prep their cultivated grasses for a restoration site.

include 1,200 students at up to 15 middle and high schools, including many of Houston's inner city schools. The students learn about the science of Galveston Bay throughout the year, following a curriculum that GBF developed to meet state education standards.

Bob Stokes, the president of GBF, says, "Galveston Bay is a giant body of water but it doesn't have a ton of public access. Many of these kids live a mile, two miles, five miles from the Bay but they never get to the Bay. This gives them an opportunity to recognize that the Bay is there, to participate in the Bay, and not be scared of the Bay."

Micaela, who has lived her whole life in Deer Park, a suburb of Houston, grew up thinking that Galveston Bay was ugly. The bay is an estuary, where freshwater from rivers and bayous meets the saltwater of the Gulf of Mexico. It's shallow, and waves churn up sediments from the bottom, which can turn the water an opaque green or brown.

The Bay also faces challenges that include erosion, loss of wetlands, poor water quality flowing in, and industrial pollution. Still, Galveston is the second most productive bay in the U.S., after the much larger Chesapeake Bay.

Ninety-five percent of important fishery species in the Gulf of Mexico

rely on Galveston Bay during at least part of their life cycle. The Bay is also famous for the spring bird migration, as flocks on their way north from Central and South America stop to feed and rest.

Micaela says, "I always thought it was, not dirty per se, but it's not a beautiful beach like a beach in California or a beach in Florida. So I never really went to Galveston."

HANDS-ON LEARNING

Her perspective changed last spring when her class went to plant their marsh grasses in Anahuac, on the edge of the Bay. They got a firsthand look at erosion, where waves

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— Kristen Knoedler, science teacher

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"Knowing that you did something to help stop erosion, it's a really good feeling. You feel really accomplished, and that was the one of the first times I felt that."

— Micaela Bermea, college student and Hip to Habitat alum



Students seine and identify the organisms.

kept breaking off the edge of the shoreline. It looked like a little cliff.

Educators from GBF explained why the students' project was important. "They were teaching us about the life in the water and the pH and the salinity. Them telling us while we're actually doing it—testing the water and collecting the shrimp or the fish and learning what species they are—was one of the best learning experiences of my life so far," Micaela says.

She was there with her AP Environmental Studies class, taught by her favorite high school teacher, Kristen Knoedler. Kristen says most of her students learn better through fieldwork than just books and lectures. "I find it a lot easier for them to understand the material when it's hands-on versus me up there talking away."

The project also helped classmates connect. Micaela says, "At first I didn't

really know anyone and I didn't really care to meet anyone. But after spending time with them, I made some pretty good friends. It's more than just a class, I would say—it's more of a bonding experience."

NEWFOUND RESPECT

After they planted their grasses, Rani calculated the dollar value of their work, adding up benefits from carbon sequestration to blue crab habitat—which came out to a jaw-dropping figure. It also made an impression that the landowners were so appreciative of their work, Micaela says. "I had a newfound respect for the Bay because I saw that there are people who care about the Bay. And I realized that I was just kind of being ignorant not really caring about it until I took the class and I learned how there are marine life and wildlife that need to be preserved and there are

plants that need to be preserved. It has beautiful life living in it."

Now, Micaela is studying sociology at San Jacinto College, in Pasadena. She says her environmental science class last year changed her for the better. "It made me into the person I am today. Before that I was thinking forensic science or criminal justice, but now I'm focusing it all around people and the environment and animals."

It wasn't just her career direction that changed but her involvement in her community—for instance, she started fostering dogs from the animal shelter. She says, "Just knowing that you did something to help stop erosion, it's a really good feeling. You feel really accomplished, and that was the one of the first times I felt that."

FIND MORE

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