

Outdoors

PowerSpurz and PowerArmz come in five colors and provide 70 hours of continuous LED light or 100 hours of pulsating light for shoes, backpacks, bicycles, tents, pets, wrists or upper arms. Each comes with batteries. Some attach with friction and tiny spikes for shoes, others with adjustable straps. Cost range: \$20-\$25. Online: www.4id.com.



PHOTOS BY GABE HEINRICH/CALLER-TIMES

Researcher Matt Strerck carries samples back to the boat at Cedar Bayou on Feb. 18 outside of Port Aransas. Researchers collect samples to see whether redfish are using the channel connecting the Gulf of Mexico and the Aransas Bay system.

BORNE ON BAYOU

■ Reopening the flow of Cedar pass is working as nature intended

ROCKPORT — Three tiny redfish resting in the palm of a man's hand may seem inconsequential.

But in reality the well-circulated photo of those juvenile redfish represents a monumental success two decades in the making.

That's because those special babies came from the seagrass beds of Mesquite Bay, where scientists estimate virtually none had been in years.

How did they get into the bay? Cedar Bayou carried them there from the Gulf of Mexico along a natural and ancient path that is meant to do just that for redfish, flounder, blue crabs, shrimp and other species. That's right, those tiny redfish were among the firstborn to ride on currents that had for years been denied by a silted-in pass historically separating San Jose and Matagorda islands.

The final buckets of sand blocking this once-popular fish pass were ceremoniously removed in September by a big yellow excavator, with Aransas County Judge Burt Mills at the controls. As swirling gulf waters rejoined with Mesquite Bay, Mills' unbridled grin was reflected in the faces of 150 cheering onlookers, many of whom never doubted water would again flow freely between the two islands.

Long live the pass and the myriad ecological benefits it provides to fish, birds, water quality and the overall productivity of the system, along with the economies that rely on a healthy ecosystem.



DAVID SIKES

OUTDOORS

CHECK OUT

Cedar Bayou timeline, 9C

If you think I'm overstating the significance of this effort, allow me to show support for my optimistic claim with the help of a dedicated team of researchers at the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University-Corpus Christi. The premise of their research is simple: Collect data on the state of the bay before the reopening of Cedar Bay, then compare those findings to data collected after the pass began flowing as it should.

You don't need to be a scientist to marvel at the stark differences they found.

In short, a thorough effort was conducted with numerous sampling visits to evaluate and inventory the bay waters north, south and west of the area where Cedar Bayou and nearby Vinson Slough once flowed into Mesquite Bay. This process took two years and involved about 20 researchers, 18 visits to the site and thousands of man hours analyzing the samples collected during the nearly three years.

See SIKES, 9C



Strerck collects samples at Cedar Bayou on Feb. 18 outside of Port Aransas. Currents in the Cedar Bayou had for years been denied by a silted-in pass historically separating San Jose and Matagorda islands, but sand blocking the pass were removed in September.

CEDAR BAYOU AERIAL PHOTOS

PRE-CONSTRUCTION, JULY 2014



POST-CONSTRUCTION, NOVEMBER 2014



Source: Daed & Harbor Engineering

JOURNAL MEDIA GROUP



Currents are carrying tiny redfish from the Gulf of Mexico through Cedar Bayou into Mesquite Bay for the first time in many years.

CONTRIBUTED PHOTO

OUTDOORS

Calendar

TEXAS DEER ASSOCIATION NIGHT OUT
The Corpus Christi Chapter of the Texas Deer Association Sportsmen's Night Out event is scheduled for 5 p.m. May 7 at the Solomon P. Ortiz International Center, 402 Harbor Drive. TDA is looking for hunts, volunteers and donations to benefit this fundraiser. Contact Heather or Verona at 210-767-8300.

SEA BANQUET

The annual Saltwater-Fisheries Enhancement Association banquet and fundraiser is scheduled for 5:30-11 p.m. May 14 at the American Bank Center. This year's grand prize raffle item is a 20-foot Shallow Stalker CAT boat with an Evinrude 150 E-TEC outboard. Raffle tickets are \$10 each or six for \$50. Auction and raffle items include outdoor gear, artwork, fishing/hunting packages, fishing equipment, vacation trips and more. Contact SEA at 886-1100 or email seaccadm@sbcglobal.net.

WILDLIFE CONSERVATION CAMP

The Texas Chapter of the Wildlife Society has posted a Friday registration deadline for its Wildlife Conservation Camp for high school students who have completed the ninth grade. This hands-on week of outdoor activities taught by wildlife professionals is scheduled for July 26 through Aug. 1 at the Texas Tech University Center in Junction. Students will study wildlife and plant identification, conservation ethics, habitat management, wildlife trapping and surveying, fishing, predator-prey dynamics, shooting sports and hunting safety. Email Stephen Ross at wildlifecampdirector@yahoo.com. Call 522-8989. Online: www.wildlifecamp.tx.org.

BLACKLOCK'S SHORE BIRD ID SHORT COURSE

The South Texas Botanical Gardens & Nature Center has scheduled a course on shore bird identification that includes how to identify alternative plumage for May 15-16. This course features a lecture by noted birding author Gene Blacklock from 6:15-9:15 p.m. May 15 and a 7 a.m. field trip the following day. The course will cover Coastal Bend shore birds, migration patterns, life histories and summer breeding plumage. Students should bring binoculars. Fee is \$45 for Botanical Garden members; \$60 for nonmembers. Class size is limited to 20, but must have a minimum of 12 students. Registration deadline is May 9. Call 558-1829.

KIDS SUMMER NATURE CAMPS

The South Texas Botanical Gardens & Nature Center and Navy Army Community Credit Union has scheduled six, weeklong Kids Summer Nature Camps for ages five through 12 at the center's 182-acre campus, 8545 South Staples St. Classes are from 9 a.m. to noon. Lessons include a visual appreciation of nature; understanding natural resources; and conservation of fragile environments, while fostering positive insights into stewardship of native habitats, birds and other wildlife of South Texas. Campers choose from sessions focusing on birds and reptiles, insects and spiders or recycling and repurposing, along with other learning and entertainment opportunities. About half the daily sessions are staged outside, while other time will be spent in the air-conditioned Education Station. Campers take home their projects and receive a Nature Camp T-shirt. Sessions start June 15 and run through July. The fee is \$75 for members; \$90 for nonmembers. Payment and parent/guardian signature is required upon registration. Online: www.southtob.org. Call 852-1200.

BASIC BIRDING FOR KIDS

The South Texas Botanical Gardens & Nature Center has scheduled a three-day birding class for kids eight through 13. Titled Blacklock's Basic Birding for Kids, the course runs from 9 a.m. to 1 p.m. June 29 through July 1 and covers bird identification techniques and bird biology. Blacklock and other birders will use games and challenges to introduce kids to birding. The fee is \$75 for members; \$90 for nonmembers. Class size is restricted to 15 students with an eight-student minimum. Prepaid registration deadline is June 25. Call 852-1200. Questions about the course: 558-1829.

FREE ENTRY TO PINS

Active duty members of the U.S. military and their dependents may get a free annual pass to Padre Island National Seashore by showing a valid military identification card. Disabled veterans, U.S. residents with permanent disabilities and senior citizens also are eligible for free entry. Online: www.nps.gov/findingpark/passes.htm. Call 949-8069.



Researchers Tara Toppings (left) and Matt Sterck look through samples they collected at Cedar Bayou on Feb. 18 outside of Port Aransas. Researchers found a substantial number of tiny redfish near the mouth of Cedar Bayou after it was opened. No juvenile redfish were recovered during pre-opening research. The seagrass beds were barren.

SIKES from 10C

No juvenile redfish were recovered and during the pre-opening research. The seagrass beds were barren.

By comparison, the seagrass beds during the same time period near the Aransas Pass, about 20 miles south at Port Aransas, and James Cavallo, 36 miles north near Port O'Connor, were alive with juvenile redfish. Sampling was conducted during fall, winter and spring, when you would expect to find juvenile fish settling into these nursery areas.

During pre-opening visits, researchers collected 150,694 organisms, including more than 9,000 fish representing 27 species. Most of these fish were older on average compared with ages of fish collected near the two open passes. They also collected 141,446 crustaceans representing seven species.

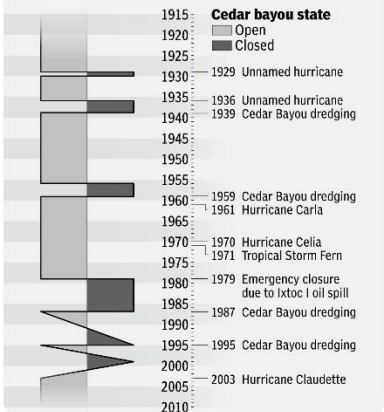
These data sets are what is known as baseline information, useful when comparing and contrasting before-and-after conditions.

Within weeks after Cedar Bayou opened, Quentin Hall and his team of Harte researchers began following the same sampling protocols they had performed during the previous two years. Again they dragged nets and collected hundreds of samples, and brought them back to the lab to pick through, sort, identify and then catalog the organisms found.

Eureka! We had opened the door to Mother Nature's hatchery, as Greg Stunz put it. Stunz oversees this research as director of the Center for Sportfish Science and Conservation at Harte. They found a substantial number of tiny redfish near the mouth of Cedar Bayou.

The "we" refers to the folks involved in this effort. They included conservation groups, angler organizations, community leaders, chambers of commerce, politicians, business owners and birders. In the beginning a feisty Rockport activist named Lynn Edwards led the fight. But a majority of the political will and funding came within the past six years.

CEDAR BAYOU TIMELINE



Source: Coast & Harbor Engineering

JOURNAL MEDIA GROUP



Samples collected at Cedar Bayou are placed in containers Feb. 18 outside of Port Aransas.

contributions provided additional funding.

Engineers at Coast and Harbor Engineering, which designed the channel, estimated the cost of keeping Cedar Bayou flowing could run between \$2 million and \$2.5 million every five to nine years. So Aransas County projected \$250,000 annually to maintain the flow.

The project involved the creation of two cuts from Mesquite Bay, 6 feet deep and 100 feet wide. These merge into a single channel and continue to the Gulf of Mexico at a southeast angle to aid in self-scouring the mouth. Dredge spoils were deposited on the San Jose Island side of the channel. The total length of Cedar Bayou is 8,500 feet, or 1.6 miles. The second cut, Vinson Slough, measures 7,700 feet, or 1.5 miles.

By October after the pass was opened, Hall and his team collected enough juvenile redfish in those same Mesquite Bay seagrass meadows to show Cedar Bayou is providing the link necessary to propagate a recruitment-based bay system. Other Gulf-dependent species, such as

shrimp, crabs and flounder, are following a similar pattern.

Just so you know, adult redfish, flounder and shrimp must escape the Gulf to release their eggs. Hall's research also involved inserting electronic tags in redfish to see whether they would take advantage of the newly dredged corridor. Yes, I'm happy to report they did and continue to use it.

After the eggs of these adults, which also include tarpon, are fertilized offshore and hatched, the tiny larvae drift on currents through the nearest fish pass into safe havens or seagrass nurseries where they mature, thus completing the cycle that nature designed. By shortening the distance to the nearest pass, it is reasonable to assume larval survival is boosted.

It is no secret that Cedar Bayou's flow has been intermittent for centuries. But much of the more recent blame for its diminished flow falls on man.

Nobody is disputing that Cedar Bayou has flowed and slowed at the whim of nature throughout its history. This dynamic is characteristic of

coastal ecosystems visited by hurricanes and droughts.

However, Cedar Bayou's flow was substantially hindered twice by man in recent history. Once in 1978 when the mouth of the pass was intentionally blocked to prevent spilled oil from entering the bays. And again in 1995 when a slug of spoils was deposited at the mouth of nearby Vinson Slough. This weakened the hydrological punch needed to keep Cedar Bayou flowing.

The viability of Cedar Bayou has not been the same since. In addition to these factors, let's not discount the negative hydrological impacts created by the Intracoastal Waterway, other Gulf passes and the reduction of freshwater inflow by the damming of rivers and over-allocation of water from those life-giving streams that feed the Aransas Bay complex.

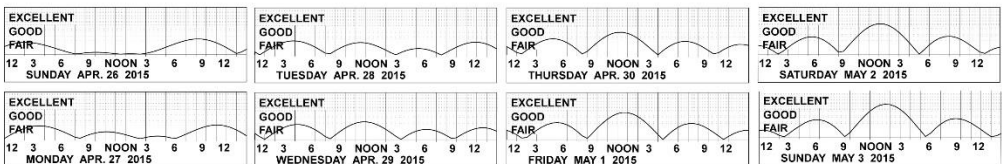
The pass was a mere trickle in 2008. Then it was dormant for six years, contributing virtually nothing to the ecosystem. If you look at the flow history from 1915 to the 1978 closure, Cedar Bayou has been open 85-90 percent of the time. This tells us something. It is a testament to the system's natural hydrodynamics and shows that it wants to be open and has the power to do it, according to Aaron Horine, a senior coastal engineer with Coast and Harbor Engineering and the project's construction manager representing Aransas County.

Since the grand reopening, the pass has returned to its perpetual search for equilibrium, which means the channel mouth will migrate north and south over time. Not to worry. Historically the Gulf opening of the pass has opened and closed, silted and scoured, within a 5,000-foot span of island. It moved 400 feet within 75 days of opening last year.

To some degree this is what Horine expected, because it's roughly what the engineering models predicted and what history has shown. In October researchers and engineers will begin the work that has occurred during the year with the channels and surrounding habitat to create a report card. This will involve everything from the biology of Mesquite Bay to the dynamics of the pass itself.

Cedar Bayou was an ecology restoration project and an ecologically responsible thing to do. It will be compiled into an ecological outlook necessary to gain a permit for the first maintenance dredging, whenever that may be. Ultimately it should become obvious the reopening of Cedar Bayou was an ecologically responsible thing to do.

David Sikes' Outdoors columns appear on Sunday and Thursday. Contact David at 361-886-3616 or david.sikes@caller.com. Twitter: @DavidOutdoors.



VEKTOR FISH & GAME ACTIVITY TABLES are computer-generated tables that indicate fishing and migration patterns based on positions of the sun and moon.