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Coastlines

GEORGIA

December 2022 • Vol. 5, Iss. 2

Redfish outlook

CRD seeks to balance development and human population growth with conservation of the state's saltwater game fish

Also inside:

Welcome aboard CRD's newest research vessels
Volunteer ties state record for Florida pompano • DNR hosts Career Academy
CoastFest Art Contest winner chosen • CRD rolls out 'virtual reality' dives to reefs

Magazine of the Georgia Department of Natural Resources • Coastal Resources Division

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Coastlines Georgia is a quarterly publication of the Coastal Resources Division, Georgia Department of Natural Resources.

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and Paul Medders

Common Acronyms

Throughout Coastlines Georgia, we have shortened the use of certain names of organizations to avoid repetition. The following acronyms are used for brevity:

CRD - Coastal Resources Division of DNR

DNR - Georgia Department of Natural Resources

EPD - Environmental Protection Division of DNR

NOAA - National Oceanic and Atmospheric Administration

WRD - Wildlife Resources Division of DNR



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Tyler Jones/CRD

CoastFest attendees visit the CRD Touch Tanks as part of the CRD Pavilion exhibit on 2020 at Mary Ross Waterfront Park. CoastFest is scheduled to return to Mary Ross on Saturday, April 22, 2023.

EDITOR'S CORNER

CoastFest set for Earth Day

Hurricane Ian knocks plans off track, but CRD vows 'Show Must Go On'

By TYLER JONES

PUBLIC INFORMATION OFFICER
COASTAL RESOURCES DIVISION

It's been a tough couple of years for one of CRD's favorite outreach opportunities.

Since the Covid pandemic of 2020, we've been unable to host our annual CoastFest event in its normal fashion. We came very close this year, with everything set in place until Hurricane Ian loomed on our horizon and forced us to make the difficult call to scrap our "First Saturday in October" scheduled date.

There are a lot of logistics that

go into CoastFest, not the least of which are giant tents that would have acted like sails if we'd seen the impacts of Ian we initially expected.

But we know how much the public, especially children, love CoastFest, and CRD is as committed as ever to bringing back this beloved event. Instead of canceling the 2022 CoastFest, we have rescheduled it for April 22, 2023, again at Mary Ross Waterfront Park. Coincidentally, this is also Earth Day, making CoastFest the perfect way to celebrate Georgia's natural resources with CRD and other organizations working to protect our coast.

We hope to see you all at CoastFest on Earth Day 2023, rain or shine! ▀

Marine tech named employee of quarter

STAFF REPORT

COASTAL RESOURCES DIVISION

A marine technician who works on CRD's Marine Sportfish Population Health Survey was named the Employee of the Quarter for the last quarter of 2022.

Dillon Metz, 25, of Brunswick, came to CRD as a part-time technician in May 2018, and became a full-time employee in February 2021. His job



Metz

responsibilities include CRD's gill and trammel net surveys, assisting with the Carcass Recovery Program, maintaining equipment including CRD vessels and sampling gear, and assisting in outreach events.

Ryan Harrell, a CRD marine biologist and Metz's supervisor,



Tyler Jones/CRD

Dillon Metz, right, helps a student learn how to tie an improved clinch knot June 4 at Liberty Ship Park in Brunswick as part of the CRD Golden Isles Fishing Event. Metz was named Employee of the Quarter for the last quarter of 2022.

described Metz as "a very hard worker who is always volunteering to take on more responsibility (and) always willing to assist anybody who needs help, whether it be other fisheries

projects or Tony Smith (CRD maintenance) around campus."

Metz is a graduate of the College of Coastal Georgia, where he studied biology with a concentration in coastal ecology. ▀

CRD makes annual donation to Toys for Tots

CRD employees in mid December made their annual donation to Toys for Tots. This year, the division donated more than \$300 worth of toys for children. The donations were coordinated by Cindy Ridley (pictured right), executive assistant to the director. Items donated included books, puzzles, educational items like toy microscopes and geology kits, and stuffed animals. All of the donated materials will be given to children in Glynn County. ▀





Welcome aboard

New vessels support CRD mission, staff



Tyler Jones/CRD photos

The crew of the R/V Reid W. Harris, operated by the Coastal Resources Division of the Georgia Department of Natural Resources, wave hello as they conduct the Ecological Monitoring Trawl Survey in Sapelo Sound on June 8, 2021, on the opening day of Georgia's commercial shrimp season.

**By Capt. ELLIS JOHNSON and
Capt. ROBERT OVERMAN**
VESSEL SUPPORT UNIT
COASTAL RESOURCES DIVISION

The mission of CRD takes its staff throughout the Georgia coast.

Whether we're monitoring wetlands on Sapelo Island, surveying permit compliance from the air, or diving to inspect artificial reefs miles offshore, we're never far from the water.

Two new vessels that recently joined the CRD fleet will help staff achieve those diverse missions by providing the perfect platform for our mission of balancing protection of the coast's resources and the growth anticipated along our 105-mile coast.

RESEARCH VESSEL REID W. HARRIS

The R/V Reid W. Harris was built by Wesmac Custom Boats in Surry, Maine. Her keel was laid Nov. 19, 2018 and launched June 3, 2020.

The vessel is named after the late State Rep. Reid W. Harris, who

sponsored the Coastal Marshlands Protection Act of 1970. Harris, who lived on St. Simons Island was concerned about a proposal to mine phosphate from Georgia's marshes and beaches and drafted the bill to prevent such activity. The Coastal Marshlands Protection Act has been hailed as a model for conservation and because of this law, Georgians today enjoy vast views of the state's more than 360,000 acres of pristine marshlands.

The Harris entered service after a christening at CRD in July 2020. The vessel's sponsor, Betsy Harris, who broke the ceremonial champagne bottle on its bow, is the granddaughter of the late state representative. The Harris replaced the R/V Anna, which served CRD from 1970 until 2020. The Harris will continue the mission of ecological monitoring along Georgia's coast. The Harris was ordered in 2018 and cost approximately \$1.5 million.

At 54-feet in length, the vessel



Cameron Brinton and Robert Overman/CRD
At top, the R/V Reid W. Harris transits the St. Simons Sound. **Above,** the R/V Reid W. Harris is moored at Isle of Hope Marina in Chatham County.

has a 17-foot, 6-inch beam, a 6-foot draft, and displaces 65,000 pounds. Its 1,000 horsepower Caterpillar engine can propel the vessel to cruising speeds of more than 16 knots. The Harris can generate its own power with a 16-kilowatt Northern Lights generator.

She has a fuel capacity of 1,200 gallons and can carry 100 gallons of potable water. She is equipped with a hydraulic aft boom which can lower to deploy trawl fishing gear as well as a stainless-steel



CRD Capt. Robert Overman pilots the R/V Reid W. Harris.

hydraulic winch for the deployment and retrieval of a 40-foot otter trawl shrimp net. Previously on the Anna, crews trawled the net from the side of the vessel. With the new Harris, the trawl can be conducted off the back of the boat, making it easier to handle. Additionally, the introduction of new aluminum doors make the net lighter and easier to work with.

The Harris can carry up to 15 passengers, but normally has a crew of six when out sampling during the Ecological Monitoring Trawl Survey (EMTS). (Note: See *Coastlines*, Vol. 5, Iss. 1 for more on the EMTS.) The vessel has a spacious climate-controlled cabin with bench



CRD marine techs Jared Chrisp and Kirsten Pope enter data aboard the R/V Reid W. Harris.

seating. The galley has a full-size refrigerator, stove and microwave. The bathroom, or "head," has its own sink, toilet, and shower. The Harris also has sleeping quarters with four bunks for overnight ventures. CRD crews generally spend one night aboard each month.

The vessel's primary role is to conduct the EMTS, sampling 36 stations each month in Georgia's rivers, sounds, and offshore waters.

The trawl is pulled approximately 15 minutes at each station. The catch of shrimp, crabs, and fish is sorted, measured and weighed. All data is then entered into an onboard laptop. This critical in monitoring the health of the ecosystem, comparing current and past data. The survey also plays an important role in determining the best time to open or close Georgia's state waters to shrimping.



Cameron Brinton/CRD

The R/V Glynn assists in the deployment of rocks to Offshore Artificial Reef F on Feb. 25.

RESEARCH VESSEL GLYNN

The second new vessel in CRD's purview is the R/V Glynn. Also built by Wesmac Custom Boats in Surry, Maine, her keel was previously laid to become a Lobster boat for Capt. Linda Greenlaw, a best-selling author of books with maritime themes and the only female swordfishing boat captain on the East Coast of the United States. She was featured in the 1997 book "The Perfect Storm" and the film by the same name.

CRD ordered the partially completed vessel in January 2020 to be completed and converted to a longline survey vessel at a cost of \$848,200.

The Glynn was received and entered service in November 2021, replacing the R/V Marguerite and continuing the mission of conducting the Coastal Longline Survey for sharks and adult red drum, artificial reef habitat monitoring, and sonar array studies.

The Glynn is a 46-foot Maine lobster-style vessel with a 14-foot,



CRD photos

Above, CRD staff reel out the line during the Coastal Longline Survey aboard the R/V Glynn. Right, CRD marine tech Carmela Stock holds an adult red drum during the Coastal Longline Survey aboard R/V Glynn.

6-inch beam. It has a draft of nearly 5 feet and displacement of 26 gross tons. Its 700-horsepower Scania diesel engine can propel the vessel to cruising speeds of more than 16 knots. The Glynn can generate its own power with a 6-kilowatt Northern Lights generator. It has a fuel capacity of 650 gallons and can carry 40 gallons of potable water. She is equipped with a hydraulic longline winch with 3,000-foot line and 60 snap gangions with 60 15/0 circle hooks.

The Glynn can carry up to 14 passengers, but normally has a



crew of six when out sampling. The Glynn's primary role is Long Line Surveys of Red Drum and Coastal sharks, which encompasses state and federal waters off the coast of Georgia. The Glynn's secondary role is conducting Diving operations to monitor the artificial reef fish habitat with placement and periodic inspection of sonar arrays. The Glynn is the primary DNR vessel on scene while monitoring the off load and placement of artificial reef material. ▀

'Lemon Shark' selected as CoastFest art contest winner

STAFF REPORT COASTAL RESOURCES DIVISION

An 8th grader from a Camden County middle school was selected as the grand prize winner for the 2022 CoastFest Art Contest.

Madalyn Dixon of St. Marys Elementary School in St. Marys was selected by a committee of CRD employees following the art show at the Brunswick Library in October.

Her artwork, entitled "Lemon Shark", was chosen for its creative play on words and humorous depiction of the species *Negaprion brevirostris*, commonly known as a lemon shark. It will be featured on the next CoastFest T-shirt.

Madalyn and her class will be congratulated with a pizza party or ice cream social with her class after the first of the year. She will also receive a framed original of her artwork and a complimentary T-shirt from CRD.

Her work was chosen from among hundreds of pieces of art submitted to the CoastFest Art Contest, which is open to school children in elementary, middle, and high school.

Last year's winner was a red drum illustrated by Shelby Williams of Glynn Academy. Those T-shirts will be sold at the make-up CoastFest on Earth Day on April 22 at Mary Ross Park in Brunswick. ▀



Illustration by Madalyn Dixon
'Lemon Shark' by Madalyn Dixon, an 8th grader at St. Marys Middle School, was chosen as the next CoastFest art contest T-shirt winner.

HONORABLE MENTIONS



Four other pieces of student art were in the running for the T-shirt contest. They included: 1. 'Untitled' by Nora Witherow, 7th grade, Needwood Middle School; 2. 'Circle of Life' by Mallory Reiss, 11th grade, Glynn Academy; 3. 'Triple Threat' by Summer Raines, 11th grade, Glynn Academy; 4. 'Blue Horizon' by Cate Murphy, 11th grade, Glynn Academy.

David Cannon/Provided photos
A red drum's tail is seen in the marsh as it feeds.

Redfish outlook

As coastal Georgia's population grows, CRD aims to upgrade fishing regulations

By **TYLER JONES**
PUBLIC INFORMATION OFFICER
COASTAL RESOURCES DIVISION

Although he's not a Georgia native, Jared DiVincent, who now lives on St. Simons Island, has definitely learned to call the place home. One of the things that drew him here was the coast's natural beauty, abundant resources, and not least of all, red drum fishing opportunities.

"When I first moved here, my introduction to saltwater fishing was on redfish," DiVincent said, using a nickname for the state's official saltwater game fish, red drum (*Sciaenops ocellatus*). "Eleven years ago, when I moved here from Colorado, I'd already

been fishing for trout in mountain streams. But even out West, people talked about the redfish along the Georgia coast."

It didn't take DiVincent long to get hooked.

"I immediately found the local fishing outfitter, Bedford Sportsman South, also known locally as St. Simons Outfitters," he said. "I met the owner, Larry Kennedy Sr., and some other local guides, who introduced me to the year-round fish to pursue: redfish. He taught me the ins and outs of the 8-to-10-foot tides we have here. I immediately loved the fact that you could sight-fish for them on the flats during a flood tide and in the skinny creeks at low

tide. It's such a unique pursuit for anyone interested in fishing."

DiVincent is one of the lucky ones who've been able to take their hobbies and passions and turn them into a career.

In 2017, he and another angler and professional falconer, opened On The Fly Outfitters in downtown Brunswick after Bedford Sportsman South closed its doors on St. Simons Island. The specialty tackle and fly-rod shop sees many a visitor looking for the right gear to target red drum, he said.

"Redfish are the perfect fish to get more anglers into the sport because they offer so much variety of pursuits year-round,"

he said. "This is the main species visitors look to target and it has a tremendous impact on our tourist-based and local economy."

DiVincent and his customers aren't alone in their love for red drum. It's one of the top-three most popular saltwater angling species in the state. In 2021 alone, Georgia anglers took more than 5.1 million fishing trips, catching a little over a million redfish and keeping about 261,000 of them, according to data from NOAA Fisheries' Marine Recreational Information Program (MRIP), a state-regional-federal partnership that estimates total recreational catch.

And there's good reason these fish are sought by anglers, said Sean Tarpley, a CRD marine technician who works on the Division's Marine Sportfish Population Health Survey, an in-house CRD survey that helps biologists understand the status of the state's most popular

marine sport fish.

"A lot of anglers target spotted seatrout because of its year-round abundance," he said. "But very few anglers even begin to compare the sporting qualities of spotted seatrout to those of red drum. If you know where to look, red drum can be found cruising Georgia's waters giving anglers an opportunity for a true fight."

Although red drum can be found from Massachusetts to Texas, Georgia's relatively unspoiled estuarine environments provide a particularly diverse habitat for these fish. Red drum are a long-lived fish that have a complex lifecycle. They depend on a variety of habitats during different stages of their life and can live more than 40 years, weighing in excess of 90 pounds. The state record for red drum was set by Richard Price of Decatur, Ga., in 1986. He caught a 46-pound, 7-ounce specimen offshore at Artificial

Reef KC, about 9 nautical miles east of Wassaw Island. That record is not currently eligible for a challenge, due to Georgia's upper-end slot limit of 23 inches. The international record was set in 1984 at 94 pounds, 2-ounces, caught in North Carolina.

Red drum spawn at the mouths of estuaries, and tides transport the larvae up rivers and creeks, where they grow into juvenile fish for the first three-or-so years of their lives. During this important stage of development, juvenile red drum, called "puppy drum" during their first year, feed on crustaceans like fiddler crabs, mollusks such as clams and oysters, and small fish including mullet and mudminnows.

As red drum mature—to about age 4 for males and 6 for females—they begin to venture out of creeks and sounds to nearshore environments off the beaches of Georgia's barrier islands.



“As the fish grow in size, so do their appetites,” Tarpley said. “Adult red drum feed on mullet and larger baitfish, blue crabs, and shrimp.”

When red drum reach spawning age, they return annually to the mouths of estuaries to spawn, Tarpley said.

“Because of their lifecycle, red drum habitat can vary,” he said. “Tidal creeks with oyster reefs and deep holes tend to hold fish. They also prefer vertical structures, such as docks and bridge pylons. Anglers also report catching red drum around jetties or rock piles.”



Provided photo

An angler holds a red drum that has been tagged by CRD as part of the Cooperative Angler Tagging Program. To report a tagged fish, visit www.CoastalGaDNR.org/FishTag.

On top of putting up an exciting fight for even the most skilled angler, red drum are also known to be excellent table fare. The smaller red drum are generally preferred to their larger and older counterparts, so long as they meet the minimum legal size of 14 inches. It’s not uncommon for coastal folks to prize redfish fillets for blackening or pan searing. Once red drum grow to 23 inches total length, they become ineligible for harvest under Georgia law.

The red drum’s combination of being an exciting game fish, having high food value, and a broad range of habitat puts unique pressures on this fishery. This prompted Georgia in 1986 to implement a 14-inch minimum size for red drum, and a two-fish limit

for fish over 32-inches.

Since then, Georgia has taken other steps to conserve red drum for future generations. Through a variety of fisheries-dependent and fisheries-independent surveys, the state in 2002 arrived at its current limit of five fish per angler, per day, with only fish between 14 and 23 inches harvestable.

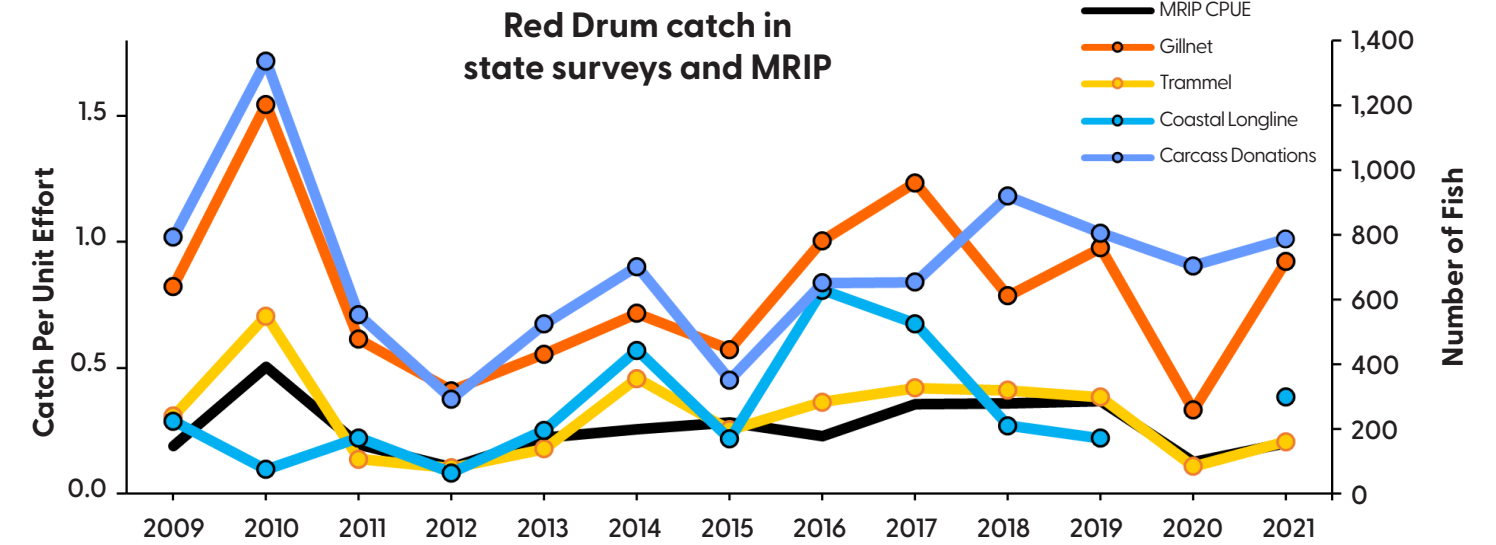
“Georgia has a long history of implementing regulations to protect red drum and their habitat in order to conserve the population and provide angler opportunities,” said Jared Flowers, Ph.D., head of CRD’s Research and Surveys Unit. “Harvest of red drum in the federal exclusive economic zone [three to 200 miles offshore] has been prohibited since 1989.

The state implemented game fish status for red drum in 2013, which prohibits the sale, purchase, and transportation of the species, effectively ending commercial harvest.”

Those management approaches appear to be working, based on data gathered by CRD and regional stock assessments, Flowers said.

“Data suggest that red drum numbers are variable, but stable over time,” Flowers said. “Years 2019 and 2020 saw a decline in numbers throughout the state, but 2021 saw a rebound. These annual fluctuations were in-line with patterns of red drum abundance observed in the past.”

When all CRD’s surveys that encounter red drum are



What does this graph show? Each graph line represents data gathered from a survey for red drum. The **Gillnet**, **Trammel**, and **Coastal Longline** surveys are known as fisheries-independent surveys, meaning they are conducted in-house by CRD staff independently of the public. The **Carcass Donation** and **MRIP** surveys are fisheries-dependent surveys, meaning they are based on data gathered from members of the public. Each survey shown on this graph varies between years, but are stable over time. Likewise, each survey show similar trends to the others, indicating the trends agree.

compared with data from NOAA Fisheries’ MRIP survey, the trends indicated a similar pattern of annual fluctuations, suggesting a clear signal in population data, Flowers noted.

But just because the population is stable now doesn’t promise it will be tomorrow, Flowers cautioned.

“Coastal Georgia’s human population has been steadily increasing over the past decade or more,” he said. “The data we have show red drum are not currently undergoing overfishing, and recruitment is relatively stable, but fishing effort--the number of fishing trips--is steadily increasing and showing no sign of slowing down. In the long run, this could impact the

availability of fish to anglers.”

Like most things in nature, it’s hard to pinpoint one single factor that impacts red drum populations, said Doug Haymans, CRD director.

“The population health is likely driven by broad environmental factors,” Haymans said. “There are other threats that include fishing effort, increased targeting of adult red drum, also called ‘bull reds,’ which sometimes die after being released, and possible regional population shifts caused by climate change and coastal development.”

CRD biologists and policy advisors aren’t the only ones noticing the winds of change impacting red drum. A 2021 Angler Satisfaction Survey

conducted by an industry-leading scientific survey company on behalf of CRD found a marked decrease in angler satisfaction from a similar survey in 2017. Satisfaction in the red drum fishery for recreational anglers dropped 10 percent, and for fishing guides, that satisfaction rate dropped by 21 percent since 2017.

DiVincent, the fly and tackle shop owner, echoed those sentiments.

“Even in the decade I have lived here, there is a noticeable increase in fishing pressure,” he said. “I see many more boats on the water. As co-owner of On The Fly Outfitters, we have seen tremendous growth in the past five years we have been

1957: Gill net use prohibited in Georgia’s estuarine waters (Except for shad)

1986: 14-inch minimum-size and only two fish over 32 inches

1989: Year-round season, 14-inch minimum size, 10 fish daily creel limit and only two fish over 32 inches; Federal exclusive economic zone closed to harvest

1991: 14-inch minimum size; 5 fish daily creel limit; 1 fish over 27-inches

1992: Possession limit of 5 fish
1993: 14-27-inch slot

2002: 14-23-inch slot; 5 daily creel; 5 possession limit

2013: Game fish status implemented

2022: CRD proposes updated regulations



CRD surveys that collect red drum data include:

Marine Sportfish Population Health Survey: Samples smaller red drum with gillnets and trammel nets in estuaries

Coastal Longline Survey: Encounters large adult red drum offshore in state waters

Escapement Project: Targets older juveniles in estuaries with acoustic tags that can be detected outside the state as fish age and emigrate from coastal waters

Carcass Recovery: Samples legal-size fish from recreational anglers who donate carcasses

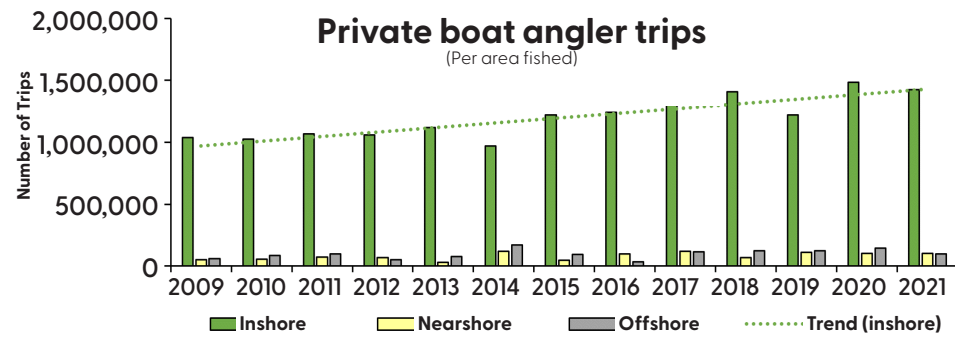
Cooperative Angler Tagging: Samples red drum of various sizes caught by anglers

MRIP: Dockside intercept survey that gathers information about angler red drum catch and mail survey to estimate fishing effort



David Cannon/Provided

An angler holds a red drum.



What does this graph show? Inshore fishing trips aboard private boats has increased about 40 percent since 2009.

in business. With that increase, we are also receiving increased feedback from [for-hire charter] captains and anglers expressing their concern of the lack of redfish inshore and, more specifically, lack of larger redfish inshore. Most of the fish we are seeing on the flats in spring and summer months are under 17-inches these days, which is cause for concern for me.”

From 2017 to 2021, an average of 94 percent of all red drum harvested in Georgia came from inshore fishing trips aboard private boats, according to NOAA Fisheries’ MRIP survey. Another important metric that caught the attention of CRD biologists is the volume of private boat angling trips over the past 10 years. That number has increased 40 percent, according to NOAA Fisheries’ MRIP survey.

Taking note of the decrease in angler and guide satisfaction, as well as the increase in fishing pressure, CRD in 2022 embarked on an effort to recommend new, upgraded red drum regulations aimed at conserving the fish for future generations.

Haymans said that although he knows any change in fishing regulations can be controversial, CRD’s goal is to balance development and growth of



Donna McDowell/CRD

Caleb O’Neal, a CRD marine technician, inserts a dart tag in an adult red drum as part of the Coastal Longline Survey aboard the R/V Glynn.

the coast with protection of its natural resources for future generations. Any decision going forward will be recommended carefully, including consideration of both public input and the best available science. 🐟

More Information

Use your smartphone to scan this code to view additional information on red drum.



The link includes reports and videos from the public hearings and town halls.



Tyler Jones/CRD

The beaches of Tybee Island are seen from the air on June 8, 2021. A new beach water quality map provides real-time information about swimming advisories and is available now at GaHealthyBeaches.org.

Beach advisories move to real-time map

By TYLER JONES

PUBLIC INFORMATION OFFICER
COASTAL RESOURCES DIVISION

Georgia’s beach water quality and swimming advisories are moving exclusively to a new, real-time map that will allow the public to find information on the go.

The Georgia Healthy Beaches advisory map at GaHealthyBeaches.org is available on mobile and desktop platforms for beach goers to pinpoint their location and find current advisories, as well as parking, first aid, and amenity information.

“This move to an online, real-time application will give the public the best available information and streamline the process for advising beach goers,” said Ed Zmarzly, the coordinator of CRD’s Healthy Beaches program.

CRD and local authorities will continue to use existing signage

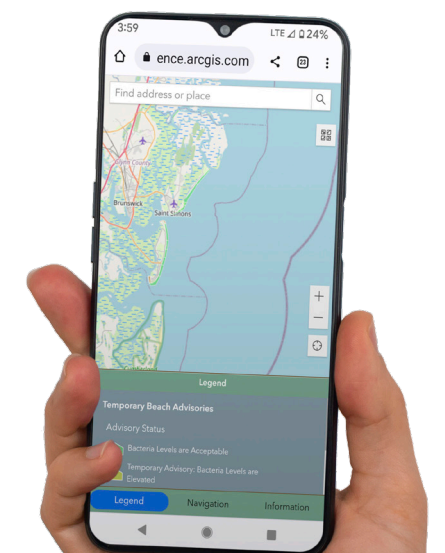
that also indicates when a beach is under advisement.

The new map is an ArcGIS platform that shows the most up-to-date advisements for particular beach segments. Users can zoom in to their particular location and see green zones for clear beaches and orange for beaches under advisement. The map also provides links to local beach conditions, rules and laws governing particular beaches, and seasonal lifeguard stations.

Previously, CRD sent all beach advisories out via a mass email system. The decision to discontinue the emails and move to a real-time web map was made to provide the public with the most up-to-date advisories and avoid confusion.

“This map is a great resource for folks planning a day at the beach, whether they’re swimming, surfing, or fishing,” Zmarzly said.

The Georgia Healthy Beaches program is a cooperative program between CRD and the Georgia Department of Public Health. It is funded through a grant from the U.S. Environmental Protection Agency. 🐟



CRD Illustration

The Georgia Healthy Beaches map is available online at GaHealthyBeaches.org. Frequent beach goers may want to bookmark the link for quick access.

COLUMN

Seasons of the Saltmarsh

Silverling:

 The closest thing to snow that coastal Georgia gets

By **PAUL MEDDERS**
MARINE BIOLOGIST
COASTAL RESOURCES DIVISION

As fall gives way to winter and longer days are just around the corner, it's a good time to reflect on how our seasons change and the natural processes we've just seen. The last few months are the time of year when primary production—turning the sun's energy into green plant matter—nearly stops, especially with the keystone of the saltmarsh, smooth cordgrass (*Spartina alterniflora*).

Most plants either bloom in the early spring or late summer to fall. *Spartina* is a late fall bloomer. Late fall is a great time to bloom because it is the end of the growing season and resources have been accumulated, making something like seed production possible.

For *Spartina*, it seems frivolous because most of its migration and expansion happens by uses of a rhizome. A rhizome is a horizontal stem that is a much better bet than sending a seed into the air hoping for it to land in just the right place to reproduce.

Many plants use a rhizome to store energy for lean times when primary production is slow. We, as humans, enjoy those rhizomes as a food source such, as a potato or even ginger root. If you've ever enjoyed a cold root beer, or crunchy potato chip, you have rhizomes to thank.

Producing seeds is a risky proposition, no matter what time of year plants do it. The live oak, and its acorn, is a great example of expending large amounts of energy hoping to replace yourself just once. Marine fish use the same strategy. They produce millions and millions of eggs in their lifetime, with the hopes of replacing themselves when one single fertilized egg will spawn at just the right time, with the right salinity, the right tide stage, favorable wind directions, surviving the gauntlet of things that eat free-floating larva we would call zooplankton, and finally land amongst the safety of the saltmarsh—the “nursery” as we call it.

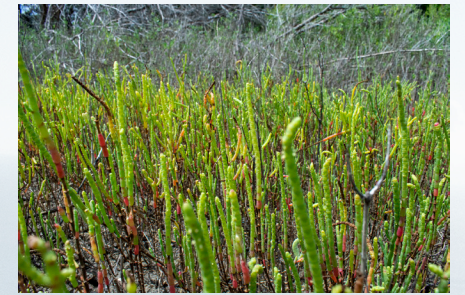
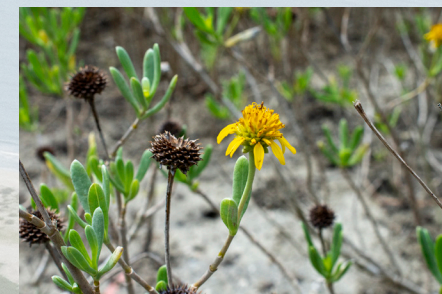
Another saltmarsh plant blooming this time of year is the perennial shrub Silverling

(*Baccharis glomeruliflora*). Silverling (also called High Tide bush, Mullet Bush, or Groundsel Tree) is one of fourteen jurisdictional delineating plants defined in the Coastal Marshlands Protection Act (CMPA) of 1970. The CMPA is the landmark Georgia legislation that has been the benchmark of marshlands protection for more than fifty years.

Marshlands are defined as any area covered by the extent of the intertidal zone. Standing at the upland edge of the marsh looking towards open water and defining the marshland is relatively easy. The hard part is defining the marsh edge when you look down at your feet or look behind you towards the upland. So, where is this line? The truth is it is a relatively dynamic thing and can change over time.

One of the methods used in the CMPA to define this marsh-upland interface is by using the presence or absence of fourteen jurisdictional species as defined in the law. These plants are smooth cordgrass (*Spartina alterniflora*), black needlerush (*Juncus*

Selected CMPA jurisdictional plants

**Big cordgrass (seedhead)****Silverling****Woody glasswort****Bigelow glasswort****Sea ox-eye daisy****Big cordgrass**

roemerianus), saltmeadow cordgrass (*Spartina patens*), big cordgrass (*Spartina cynosuroides*), saltgrass (*Distichlis spicata*), coast dropseed (*Sporobolus virginicus*), bigelow glasswort (*Salicornia bigelovii*), woody glasswort (*Salicornia virginica*), saltwort (*Batis maritima*), sea lavender (*Limonium nashii*), sea oxeye (*Borrchia frutescens*), silverling (*Baccharis halimifolia*), false willow (*Baccharis angustifolia*), and high-tide bush (*Iva frutescens*).

This time of year, the silverling is easy to spot. Think back to your childhood memories of the warming summer. Maybe the first time your mom let you out

of the house barefoot, you went out to the front yard and found a dandelion, or what some call a blow ball, waiting ready for the wind to disperse its 200 to 400 seeds. But alas, you beat the wind to it. You pull the dandelion from the ground blowing with all the breath in your little lungs and then you make a wish!

The silverling and the dandelion are both members of the plant family Asteraceae or “daisy.” The Silverling does not have the star-shaped flower like most in the Daisy family, but its seed dispersal method is just like the ole’ Blow Ball. Look as you ride old Coastal Highway 17, and you will see these salt tolerant shrubs dispersing their

seeds. When the timing is right it looks like what us south Georgia coastal-plain dwellers imagine snow must look (except for us, the snow is not crystalized water, but tens of thousands of seeds floating in the wind).

Now its your turn. Grab a plant ID book or download an app to your smartphone and head out to the saltmarsh.

This time of year, look for the silverling. It should be easy to spot. Then see if you can find the other thirteen jurisdictional plants too. If the bird-nerds can have a bird list they carry everywhere, you can have a coastal plant list, too. What are you waiting for?

Get out there. ▀

DIVE! DIVE! DIVE!

CRD launches virtual reality program to take students, public to artificial reefs

Cameron Brinton/CRD

A screen-grab from a 360-degree video shot by CRD diver and marine biologist Cameron Brinton shows the sunken steel-hull shrimp trawler Captain Conner at Artificial Reef DRH about 15 nautical miles east of Little St. Simons Island. CRD is using 360-degree cameras and virtual reality goggles to let the public “dive” down to artificial reefs.

STAFF REPORT
COASTAL RESOURCES DIVISION

A hundred and twenty youngsters from a Glynn County elementary school recently took a dive with CRD biologists to visit one of the state’s newest additions to an artificial reef—all without ever getting their feet wet.

About a year ago, CRD biologists, divers, and educators began gathering footage using 360-degree cameras. So far, the footage has been shot on artificial reefs, aboard CRD research vessels, and even in the air during a flight

with DNR’s Law Enforcement Division’s helicopter.

“We’ve been looking for new ways to bring people along with us when we are working to conserve Georgia’s coast,” said Tyler Jones, CRD public information officer. “A lot of times, it’s hard to bring a big group on a boat or in the field, so we started experimenting with using virtual reality to let people see what we see and experience the mission of CRD.”

In early December, third graders from Glynn County’s Sterling Elementary School were

the first large group to use the two new virtual reality goggles in an outreach setting. The students each got to “dive” down to Artificial Reef DRH and see the shrimp trawler Captain Conner, which was added to the reef in August 2021.

“The kids really seemed to love it,” Jones said. “They were excited, and I think that experience really makes a lasting impression.”

CRD will continue to roll out new virtual reality experiences in 2023, with a large-scale deployment of the system at CoastFest, set for April 22. ▶



Cindy Ridley/CRD

Left: Compliance and Enforcement Unit lead Buck Bennett talks to Sterling Elementary School third graders about habitat creation done by CRD prior to the students using the virtual reality goggles on Dec. 9. **Middle, Right:** Sterling Elementary School students “dive” down to the sunken shrimp trawler Captain Conner at Artificial Reef DRH using virtual reality goggles. In all, 120 students got to take the trip during their visit to Coastal Regional Headquarters.

Tourney volunteer bags record-tying fish

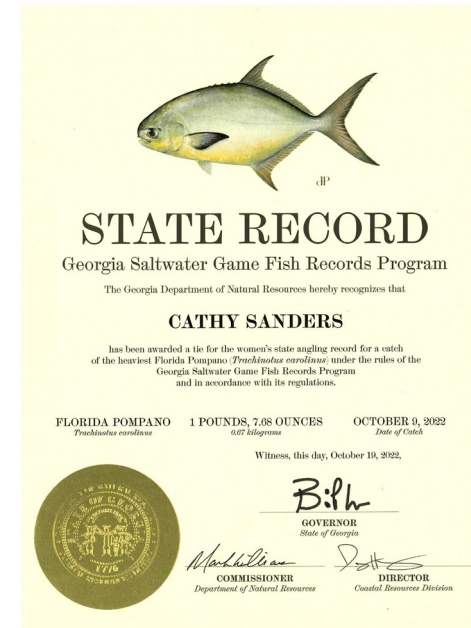
Woman helping with Kids Can Fish Foundation redfish tournament ties state record from 1982

By TYLER JONES
PUBLIC INFORMATION OFFICER
COASTAL RESOURCES DIVISION

A Florida woman has tied the Georgia Saltwater Game Fish Record for Florida Pompano (*Trachinotus carolinus*) after her catch was certified by the Georgia Department of Natural Resources (DNR) this week.

Cathy Sanders of Palm Coast, Fla., landed the 1-pound, 7.68-ounce Florida Pompano while surf fishing on St. Simons Island on Oct. 9. Her catch is tied with the previous record holder, Laura Cheek, who landed a 1-pound, 7-ounce Florida Pompano on Sea Island in 1982. Sanders’ Florida Pompano was 12 inches fork length.

Sanders was volunteering with the Kids Can Fish Foundation’s Running of the Bulls youth tournament when she caught the fish. She was surf fishing with a 12-foot Okuma Rockaway rod and Okuma Rockaway 6000 reel. As bait, she used Fishbites EZ Crab (Electric Chicken) with Sinker



CRD

The newly redesigned Georgia Saltwater Game Fish Record certificate.

Guys glass beads and salted shrimp on 20-pound high visibility monofilament. Her terminal rig was a 2/0 circle hook on a double drop rig with 3-ounce Guy Sputnik sinker.

Sanders is the first recipient of a newly designed state record certificate, which now features an image of the record-setting species, a gold-color embossed state seal, and signatures from the governor, commissioner of DNR, and director of DNR’s Coastal Resources Division, which administers the Georgia Saltwater Game Fish Records Program.

Under the rules of the Georgia Saltwater Game Fish Records



Provided photo

Cathy Sanders of Palm Coast, Fla., poses with her record-tying Florida Pompano on St. Simons Island on Oct. 9.

Program, Sanders’ catch qualified as a tie because it weighed more than the current record, but did not exceed the record by more than 4 ounces.

Sanders name has been added to the list of current and past record holders maintained at CoastalGaDNR.org/SaltwaterRecords and will be listed in the 2023 Georgia Sport Fishing Regulation Guide. ▶

GEORGIA SALTWATER GAME FISH PROGRAM

For the current list of men’s and women’s saltwater fishing records, as well as information on how to submit a catch to the Georgia Saltwater Game fish Record, please visit CoastalGaDNR.org/SaltwaterRecords.

Applications should include color photographs. There are minimum weights for several species.

For more information on the Georgia Saltwater Game fish Program, contact CRD’s public information officer, Tyler Jones, at tyler.jones@dnr.ga.gov or 912-262-3140.

Et Cetera ...

NEWS BRIEFS

DNR hosts inaugural Career Academy for high schoolers

In an effort to attract the next generation of conservation professionals to work for the Department, the Coastal Resources, Wildlife Resources, State Parks and Law Enforcement divisions hosted the first-ever Career Academy in July. This week-long, overnight program is designed to give high school students hands-on experience working with DNR to learn about career paths. Twenty-two students from across the state took part in the program and spent the first half of the week at Charlie Elliott Wildlife Education Center in Mansfield, then traveled to the 4-H camp on Jekyll Island.

While at CRD, students went aboard the R/V Reid W. Harris as part of CRD's trawl survey, took a marsh and beach walk, went surf fishing, and learned about other aspects of the program.

Applications for the 2023 Career Academy were collected in November, and more than 200 students applied. Acceptance letters will go out in early 2023.

Staff partners with local officials to prep for hurricane

CRD staff coordinated with local municipalities ahead of Hurricane Ian in late September. Staff assisted with emergency removal of temporarily authorized equipment to help minimize potential storm debris. Staff also



Above, CRD Marine Biologist Eddie Leonard, left, and Marine Technician Jared Chrisp interact with Career Academy students aboard the R/V Reid W. Harris during an trawl survey. **Below,** a crashed plane is removed from the marsh in Chatham County.

consulted with local municipalities post-hurricane to assist with any emergency authorizations needed as a result of storm damage from Ian.

CRD ensures crashed plane's removal from marsh

CRD's Compliance and Enforcement Unit observed the removal of a V35A Bonanza single-engine aircraft that crashed Oct. 22 in the marsh next to the Medway River near Savannah. The aircraft was salvaged by SeaTow and floated to Half Moon Marina in Midway, where a crane hoisted it onto a flatbed truck. After a mechanic removed the wings, the aircraft was taken to a storage facility where the National Transportation Safety Board and Federal Aviation Administration will inspect it as part of an ongoing



investigation. The U.S. Coast Guard rescued the aircraft's pilot shortly after the crash and he is safely home with his family.

Anglers rewarded for red snapper carcass donations

CRD partnered with NOAA Fisheries and the South Atlantic Red Snapper Research Program (SARSRP) again this year to collect data on harvest, discards, fishing effort, fin clips and ages for fish harvested during the red snapper

recreational mini-season from July 8-9. Anglers were encouraged to donate their carcasses for a chance to win one of two \$50 Academy Sports gift card. The two winners of the gift cards this year were Captain Ricky Perez and Scott Revels (far left in photo) both from Glynn County. A very special thanks to all the anglers and captains who participated in this year's data collection efforts. We depend on their voluntary participation to collect these valuable samples.



Above, Ricky Perez and Scott Revels were rewarded with \$50 gift cards to Academy Sports for participating in red snapper carcass donation during the 2022 mini-season. **Below,** Marine Biologist Cason Kinstle installs a new navigation light in Bull River.

CRD marine chief named chair of South Atlantic Fishery Management Council

Chief of Marine Fisheries Carolyn Belcher, Ph.D., was elected chair of the South Atlantic Fishery Management Council at its September meeting. Belcher's term is for two years. The SAFMC is responsible for federal fishery management of 55 species from three to 200 miles offshore in North Carolina, South Carolina, Georgia, and eastern Florida.

Coastal Incentive Grant cycle opens for pre-applications

CRD's Georgia Coastal Management Program (GCMP) announced the availability of the new cycle of Coastal Incentive Grants (CIG). Since 1998, the GCMP has administered the CIG program to provide federal financial assistance to eligible applicants that help support the mission of the GCMP, which is "to balance the economic development in Georgia's coastal area with the preservation of natural, environmental, historical, archaeological, and recreational resources for the benefit of

Georgia's present and future generations." CIGs have funded more than 450 projects in 20 years, representing \$40 million in funds (including match).

GCMP staff take part in resiliency workshop for Coastal Georgia

CRD along with NOAA, UGA Marine Extension/Georgia SeaGrant, and Georgia Emergency Management and Homeland Security Agency hosted the first "Building a Resilient Coastal Georgia: Partners and Funding" workshop Sept. 8 in Savannah. More than 80 local, state and federal agencies, NGOs, academia, and private sector representatives participated. The workshop allowed attendees to learn about resilience work in coastal Georgia, discussion of strategies to address barriers to funding opportunities, identify planning and hazard mitigation opportunities as well as discover how green infrastructure and nature-based solutions can benefit a community.



Shellfish staff install new lights at mariculture zone

Shellfish and Water Quality Program staff recently installed new signs and Coast Guard-approved lights on the pilings in the Bull River Mariculture Zone in Chatham County. These lights and signs will help notify boaters of potential hazards associated with floating aquaculture gear within the newly established commercial mariculture zone in Bull River just north of Pa Cooper Creek. ▀

- Staff reports

Sign up for news releases at CoastalGaDNR.org.

DRIVE GEORGIA WILD



'Drive Georgia Wild' with this specialty license plate from the Georgia Dept. of Natural Resources.

For just \$25 more, you can help build artificial reefs and essential fish habitat.

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