

Field Notes

*News from the Panama City Ecological Services/
Fish and Wildlife Conservation Field Office*



Gulf Sturgeon Volunteers Make Fall Population Survey Possible

by Frank Parauka

Thanks to 37 volunteers and a dozen Fish and Wildlife Service employees, the Yellow River Gulf sturgeon population survey went off without a hitch. This is the second year of the fall population survey, which will provide more information about Gulf sturgeon population demographics in the Yellow River.

Many volunteers donated their energy and time to help out, including partners from Florida Fish and Wildlife Conservation Commission, U.S. Environmental Protection Agency, Eglin Air Force Base, Choctawhatchee Riverkeeper, National Marine Fisheries Service, U.S. Army Corps of Engineers, and Florida State Parks.

In addition, Service personnel from the regional office and field offices located at Panama City, Vero Beach, and Eglin Air Force Base along with volunteers from Welaka National Fish Hatchery and St Vincent National Wildlife Refuge provided their time and equipment that helped make the survey a success. Volunteers ranged in age from retirees to local high school and college students, to even a couple of excited grade-schoolers!

Largely, volunteers assisted the Panama City Fish and Wildlife Conservation Office lead with setting nets to capture Gulf sturgeon, data collection, and tagging efforts. They collected, measured, weighed and tagged 129 Gulf sturgeon from September 26 through October 23.

More than 30% of the fish were captured during the last week when the water temperature dropped from 60 degrees. The weather the first few weeks had been exceptionally mild and the Gulf sturgeon were not moving downstream in numbers but waiting for a cue (cooler temperatures) to signal that it was time to migrate to the marine waters to overwinter and feed.

The week of October 17, the air temperature plunged to 37° F and we collected 25 Gulf sturgeons in one day!



Becky Hemmer from the FL DEP volunteers with sturgeon sampling, credit FWS.

The fish ranged in size from 20 inches to 82 inches total length and weighed from $\frac{3}{4}$ pound to 121 pounds.

Year classes (juveniles, sub adults and adults) were well represented in our sample. We estimated the Gulf sturgeon population in the Yellow River at 1,032 individuals as calculated using the Petersen capture-mark-recapture methodology.

The 2011 Gulf sturgeon population estimate of 1,032 is lower than the 2010 population estimate of 1,200 fish. New netting protocols this year dictated that all nets had to be out of the water before nightfall, which excluded our standard night time check which in studies conducted last year and in previous years had accounted for 20% of the fish collected. The Gulf sturgeon population for 2011 would be very similar to the 2010 estimate with the 20% factor included.

Nineteen of the 129 fish collected during the study had been tagged prior to 2011, with the majority of the recaptures

resulting from studies conducted in the Yellow River from 2001 through 2009. Although Gulf sturgeon have a strong homing instinct to return to their natal river, it is not uncommon for fish to venture into other river systems as with this year's collection which included fish from the Blackwater (6), Escambia (1) and Apalachicola (1) rivers.

Twenty adult Gulf sturgeons were surgically implanted with five year battery life acoustic transmitters in order to assist researchers in documenting movement and habitat use of the fish during the overwintering period in marine waters.

Altogether, the effort was largely successful and would not have been possible without our dedicated volunteers! The Service is thankful for their time and commitment towards the further understanding and conservation of this spectacular fish.

Local Biologists Become “Outdoor Women”

by Melody Ray-Culp

Florida’s Fish and Wildlife Conservation Commission (FWC) sponsored another Becoming an Outdoor Woman (BOW) experience, expanding its venue deeper into the panhandle during a sunny, adventure-filled fall Saturday in Panama City.

Twenty-five ladies signed on to hone their skills, whether to develop confidence and self-sufficiency in the great outdoors, or to spend quality time more comfortably with the men in their lives in the woods or on the water.

At the basic wilderness survival session, ladies built a shelter, made fires using flint and magnifying lens, and cultivated their compass skills under the expert tutelage of Rich Abrams, from FWC’s Division of Marine Fisheries Management. Biologist Patty Kelly from the Panama City Field Office refined her archery skills to encourage her young son who expressed interest in the sport. “I gave 8” assisting at survival and at the afternoon kayaking session on Deer Point Lake, and doing reconnaissance before the event to scout out the new location with program director Lynne Hawk, who is based in south Florida. Other sessions during this one-day mini-BOW introduced ladies to pan fishing, reading the woods, shotgun shooting and hunting, and handgun shooting and hunting. Each lasted 3.5 hours, and each participant got to choose two.

Every year the FWC offers full-weekend programs in south and central Florida, where participants choose four sessions from a comprehensive menu of 26 offerings, including the popular Primitive Chef – because no one should be underfed when exploring the wilderness!

Top to bottom: BOW participant puts finishing touches on her shelter; BOW ladies making fire; BOW kayakers on Deer Point Lake, all credit USFWS/ Melody Ray-Culp.



Candidate Conservation Agreements Can Help Imperiled Species

by Denise Rowell



The Panama City crayfish is a candidate species involved in a CCA, credit Lisa Keppner.

When a critter is close to extinction, conservationists with the U.S. Fish and Wildlife Service take protective measures to restore the species. Adding imperiled wildlife to the Endangered Species List is the last line of defense for the animal. But the list of troubled plants, fish and animals is growing. Currently, the Service is working on a backlog of 435 species in the Southeast Region that may need protection under the Endangered Species Act. In other words, they are “candidates” for listing. While biologists collect data on these species, the Service is taking proactive measures to help boost other populations...and help keep them off the list.

In order to stop these candidate species from federal listing, more field offices are taking advantage of Candidate Conservation Agreements (CCAs), and Candidate Conservation Agreements with Assurances (CCAAs). These are formal conservation agreements between the Service, Federal agencies, States, Tribes and non-governmental organizations who **voluntarily** commit to implement specific actions designed to remove or reduce threats to species. These agreements would cover Federal and non-Federal land, as well as private land.

The Endangered Species Act is designed to help those species desperate to survive. With the help of CCAs and CCAAs, hopefully candidate species won't have to reach the brink of extinction. Together, the partners can take proactive steps to enhance fish, wildlife and their habitats.



Both photos credit USFWS/Ted Martin

Out in the Field: Nature in the Raw

by Ted Martin

During a November 2011 photographic excursion on the beach adjacent to Indialantic, Florida, I witnessed what I thought was a nonbreeding laughing gull (*Leucophaeus atricilla*) eating a crab. But to my surprise, when I examined my digital photograph more closely, it was a baby green sea turtle (*Chelonia mydas*). When the gull dropped the little guy for a better grip, I rushed them, and luckily for the sea turtle the bird didn't have time to grab him and carry him away. The little guy in the attached photograph was literally snatched from the jaws of death and reintroduced, unharmed, into the surf later that night on the outgoing tide.

I observed over the next few days, gulls posting themselves along the beach during rough seas and incoming tides, watching for sea turtle wash backs. Unfortunately, I was not close enough to rescue the five other turtles I saw the gulls swallow whole that day. From a marine biologist's perspective, I was amazed to see how methodically the gulls posted themselves along the shoreline during the incoming tide, and at times, even flew out beyond the breakers to paddle from one patch of incoming sargassum weed to another searching for baby sea turtles.

I know the food chain is all part of nature, but it sure made me feel good that evening when I released that baby sea turtle back into the Atlantic Ocean.

Local Student Tells Story of the Service through New Media

by Denise Rowell

The Panama City Field Office has been selected to participate in a pilot program that reaches out to high school students, and encourages them to explore the world of the great outdoors. The Fish and Wildlife Youth Ambassadors Program gives lucky students the opportunity to utilize new media to promote conservation awareness.



Student Anthony Harrelson blogs and writes about the hard work of Service biologists, credit USFWS.

Facebook, Twitter, Flickr and YouTube have opened new doors to communication. The selected Youth Ambassador would use these tools to spread the message of the U.S. Fish and Wildlife Service.

Anthony Harrelson of Newpointe Bay High School is currently representing the Panama City Field Office. Anthony's hobbies include fishing, kayaking, swimming, diving, and boating. To qualify for the Youth Ambassador Program, Anthony had to have a minimum B average, excellent writing skills, interest in wildlife and conservation, and leadership skills. As a Youth Ambassador, Anthony frequently updates the Panama City Field Office Facebook page. To see what Anthony and our office has been up to, check out our page at <http://www.facebook.com/usfwspanamacity>.



GIS Coordinator Paul Lang gives "Flat Stanley" a lesson on mapping.

Meet the Staff: Paul Lang

What is your role at the Panama City Field Office?

I serve as the Geographic Information System (GIS) Coordinator for the Panama City Field Office and am a Spatial Ecologist. As the GIS Coordinator, I oversee the overall GIS program and guide the activities, direction, and priorities of the program. I provide guidance and supervision of two GIS staff biologists.

As a spatial ecologist, an ecologist that looks at the relationship between organisms and their environment within a spatial or locational context, I leverage the power of the GIS to help address conservation questions and issues that the office faces. Lately, much of my time has been focused in the world of spatial modeling, particularly prioritization modeling. I use the GIS to help us prioritize resources within our ecosystems, be it species habitats or other ecological resources like wetlands, so we are able to take a more strategic approach to conservation implementation.

How does GIS and mapping fit into conservation?

GIS affords us the opportunity to look at the world in ways that we previously could never do. With GIS we can "take a step back" and look at the world from "farther away." This allows us to see things (patterns, processes, relationships) that may not be apparent from our normal view or difficult to identify over large areas.

Longtime Biologist Retires After Remarkable Career



Frank Parauka (left) holds a Gulf sturgeon with biologist Jeff Powell.

Biologist Frank Parauka has retired from the U.S. Fish and Wildlife Service after forty-four years of service. Frank is best known throughout the panhandle for his work with the Gulf sturgeon. The Panama City Field Office is planning a retirement party for Frank. The date will be announced at a later time. We'll miss you, Frank!

Another very powerful aspect of the GIS is that we can take large amounts of data, and multiple data sets, called layers, related to ecological features (e.g., vegetation, hydrology, soils, etc.) and look at the relationships between them and among them. Many time to help predict or prioritize important areas for the conservation of species and our natural resources.

Where do you see the future of GIS in the USFWS?

I think the future of GIS in the Service can be seen by the trend within the world today. GIS is touching the lives of everyone each and every day. We turn on our navigation system to get directions to an unknown location - the GIS is guiding you. We use our phone app to see where a near by restaurant is - the GIS is guiding you. You sit down with Google Earth and explore the incredible aerial imagery of places you would like to go see or places you used to live - the GIS is guiding

you. It is becoming common place and an important part of our daily lives. The Service is no different.

We have more and more professionals dedicated to leveraging the power of GIS to support our mission. We have an ever growing number of staff turning to GIS for maps, to see where things are, etc. Here in our office I have seen a tremendous shift toward GIS. Thirteen years ago when I came here we had one copy of GIS software. It was on one computer that maybe one staff member knew how to use, but essentially it was just collecting dust on the shelf.

Today, all the staff have GIS on their computers, we have a staff of three full-time GIS specialists, and more than three quarters of the staff use GIS at some level on a regular basis. I don't see the trend changing. I see the Service asking more and harder questions relating to the spatial relationship of species and their environment.

Fishery Biologists Focus on Yellow River

by Channing St. Aubin



Channing St. Aubin scopes out potential Gulf sturgeon habitat in the Yellow River, credit USFWS.

The Panama City Fisheries and Wildlife Office (PCFWO) divides personnel into Eco-teams based on similar landscape features such as Bays and Estuaries, Coastal, Upland/Pine Forest, Wetlands, and Rivers. The Rivers Eco-team consists of 12 core team members with multiple aquatic disciplines such as hydrology, GIS, ichthyology, malacology, and freshwater biology to combine talents, to focus on aquatic needs, and to provide additional resources.

During the first quarterly meeting in 2011, the Rivers Eco-team determined the need to choose a project that would be modeled into Strategic Habitat Conservation (SHC) format, would be scaled to the landscape/watershed level, allowing the whole group to “team build”. The chosen project was the “Dripping Rock” area of the Yellow River in southern Alabama. Previous work had been completed by the Service, including a Gulf sturgeon egg pad study and a stream restoration project, eliminating a source of sediment input. This area is designated as Critical Habitat for Gulf sturgeon and also candidate species of freshwater mussels.

The project was designed to be completed in SHC format, with Biological Planning outlining the need to collect additional habitat data in two to three phases. Phase

one consisted of an initial mussel survey and physical habitat reconnaissance of potential spawning areas for Gulf sturgeon. Phase two, will include side scan sonar mapping of potential spawning areas. Phase three consists of using a Vemco Positioning System (VR2W) to take advantage of the increased number of acoustic tagged Gulf sturgeon in the Yellow River; correlate the potential spawning areas with the known presence of Gulf sturgeon, and develop a passive bioacoustic sampling protocol of spawning events.

The Conservation Design aspect will focus on developing habitat maps that will highlight priority areas for Gulf sturgeon and candidate mussels in the Yellow River. The Outcome-based Monitoring aspect increases the understanding of the habitat, allowing researchers to apply the knowledge gained to better assess the potential spawning areas and timing of spawning events.

The Conservation Delivery aspect will use passive sampling of spawning females and active sampling for Gulf sturgeon eggs and or juvenile fish, thus providing critical information in protecting spawning reaches from upstream degradation of water quality and quantity, as well as developing new tools to provide monitoring data to populations.

Gulf World and the Service Reach Out to Kids

by Laura Jenkins

The Girl Scouts in Bay County got a special lesson in wildlife, thanks to Gulf World and the U.S. Fish and Wildlife Service Panama City Field Office (PCFO).



A “biologist-in-training” flashes a smile, credit USFWS.

The PCFO joined many other wildlife groups to teach girl scouts about conservation in the panhandle. We set up an exhibit highlighting the mission of the Service, including the Biologist-in-Training (BIT) program. More than 300 Girl Scouts participated, and hopefully many girls will earn the BIT patch.



Is that biologist Laura Jenkins, or a sea turtle, credit USFWS.

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We'll Miss You Betsy!!



The Panama City Field Office would like to pay tribute to Betsy Knight, who passed away last month at the age of 73. Betsy had a deep love for animals, and she rehabbed dozens of abandoned bear cubs in Florida. Betsy has long been a friend to conservationists across the country, and a void is now felt in the wildlife community. Hopefully, her work will live on through all who love animals.

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