



The BFA Fall 2018 NEWSLETTER

Hope Everyone finds themselves and their loved ones doing well as the days grow shorter, darker and the cooler temperatures of fall take over our region.

Please mark your calendar for our Annual Fall Picnic & Fundraiser

Saturday, 17 November 2018

11:00 AM – 2:30 PM

1615 East LaRua Street, Pensacola

What's our purpose? The Bream Fishermen Association (BFA), an all-volunteer organization, promotes environmental stewardship through water quality monitoring by implementing programs that educate and improve the quality of our environment for all persons, plants and animals; from the headwaters of creeks to the Gulf of Mexico. Originally organized in the 1970s because of catastrophic environmental degradation (i.e., Cuyahoga River, 1969 catching on fire, etc.) the BFA has been active in this community as a partner with several state and federal agencies and coordinates a water quality monitoring program that continues to this day. Simply put ***“BFA represents and promotes the science side of environmental stewardship”***.

The efforts of our organization may not be apparent but our contribution to the region is noteworthy. Monetizing these efforts and services prove difficult; much like monetizing good health, we often take our health for granted until problems arise.

A study recently published in the **National Academy of Sciences** examined whether many environmental nonprofit groups are beneficial, that is, assumed to provide public goods. Grant and Langpap (*Private provision of public goods by environmental groups, Oct 2018*) reviewed extensive literature examining why donors join and give to nonprofits. Their research found that few studies, in fact none directly tests whether donations provide public goods.

How do we know that a donation made to a charity is effective? We can total up the funds raised by a civil society group, but this measure misses if, and how well, the money translates into public good. Water pollution in the United States is still a problem, despite the 1972 Clean Water Act. Grant and Langpap examined the accounts of more than 2000 nonprofit groups working on watershed restoration in the United States from 1996

to 2008. **The presence, number, and relative wealth of watershed groups was associated with improved dissolved oxygen in the water, as well as increased fishing and swimming amenities.**

Nonprofit groups tend to be local and often highly knowledgeable, and their presence also influences other watershed stakeholders to comply with governmental regulations. This analysis points to nonprofit organizations as an effective mechanism for helping to resolve large-scale collective action problems.

Our Region is fortunate to have a strong synergy amongst ‘sister nonprofit groups’ working on many watershed level programs and restoration projects in the Panhandle. One, **St. Andrew Bay Resource Management Association (RMA), aka St. Andrew Bay Watch**, is non-profit 501(c)3 citizens' group whose members are committed to the proper management of St. Andrew Bay and adjoining bays, lakes, tributaries and wetlands. RMA recognizes that the St. Andrew Bay system is Bay County's most valuable natural resource, and that the bay plays a key role in the local economy. The RMA and their water quality program have been dealt a big blow by Hurricane Michael, but opportunities exist for state and federal agencies to provide financial support to facilitate their program.

Another ‘sister group’, the **Choctawhatchee Basin Alliance (CBA)** is also a non-profit organization responsible for sustaining healthy local waterways through monitoring, education, restoration, and research. CBA has been working in the Dune Lakes, the bay, the river and the Gulf of Mexico.

The **Friends of Perdido Bay** are another ‘sister in the group’ to the west of us which have focused their decades-long efforts on the Perdido Bay system. Each of these groups, RMA, CBA, BFA and the Friends of Perdido Bay are **community based, hands-on, and dedicated to improving their bays and inflowing waters for water quality and habitat**. All continue to accomplish remarkable achievements on shoe-string budgets.

Each of these groups and the BFA can take pride in knowing that through our collective efforts, coupled with those of academically based programs (i.e., **Lake Watch, SeaGrant, UF IFAS, UWF and FSU**), and concerned citizens are making a difference in the overall local quality of our natural resources and especially water quality. Can we do better? Always! Can we do more? Sure. Where to start? **Education, it's the common thread!**

Education is always the key and our region is benefitting from this approach. Allow me to ‘connect the dots’...the **FL Master Naturalist Course Series** is propagating wonderfully informed and stellar students in our region, many of whom are retirees, who are working to promote native species, identification and eradication of invasive species, improving soils, growing the science of living shorelines, monitoring bird populations, to name a few. Couple those graduates with the local **Audubon Chapter** and **Native Plant Society**, and our area is teeming with naturalists. Other programs provide foundations to bring awareness of natural resources and functioning ecosystems into the classroom, such as Escambia County's (EsCo) **Washington High School** which has a very successful **Marine Science Academy** that works together with the University of West Florida, the FL Dept of Environmental Protection (FDEP) and SeaGrant, to offer hand's-on opportunities to interested students. Similar programs have been introduced at **West Florida High School** and **Escambia High School**.

Many students who have successfully completed these programs have gone on to **pursue higher levels of education** to further their studies and are now working in their field. Currently, the **Escambia County Restore Coordinator** is a one such graduate, others include L. Ketzler (USFWS, Padre Island TX) and Dr. J. Hemming (USFWS, Daphne AL) and there are many others peppered throughout the region.

Another example of a recent annual educational initiative is “**BFA in partnership with the FDEP and UWF**”. BFA hosted a water quality sampling class in which 29 of the 35 attendees were **UWF Hydrology Students**. This class provides a hand's-on learning opportunity with an emphasis on the regulatory components required to collect water samples for

analysis. Several students who have participated in these courses during previous years are now incorporating these techniques (foundations) in their graduate studies; some are comparing recent samples to the historic database assembled by this organization over the decades. The purpose of the **BFA Water Quality Sampling Class** is to train interested citizens in proper techniques so they may participate in the BFA monthly water quality sampling program.



Photo 1. Students learn how to use a Van Dorn sampling apparatus to collect water samples.

The **Pilot - Project Oyster Pensacola (POP)** continues through the end of the year, as we continue to collect data and interpret our findings. As many may recall, our effort at securing a permit from the state took longer than anticipated (April 2018) before we could provide baby oysters to our participants. Oyster baskets have been deployed roughly eight months with some unexpected and interesting results. Participants will receive a short report detailing survival and growth of their oysters, water quality and habitat conditions over time, as compared to other nearby water bodies within the study.

Interested in participating next year? Please contact us at TheBreamFishermen@gmail.com for reservations and details. Don't have a dock or access to the water? No worries, we have received many inquiries from waterfront owners who have offered to allow access to their dock for this project.

Indian Bayou in Santa Rosa County was the recipient of stormwater runoff which carried fine particles of silt and clay into surface waters during 2016-18, concurrent to interstate road expansion in the area. Documentation correlated to rain events ultimately gained attention by local county, state and federal agencies. Simultaneously BFA secured a small grant from Patagonia (clothing) to fund additional studies including **eDNA** (Blackfin Shiner and Salt Marsh Top Minnow), **transects** of different parts of the bayou including the feeder creek which has been the conveyance for sedimentation, **sand-silt-clay analysis** from sediment cores in transect areas, **nutrient** and **microbial community changes**, an aquatic-bioassessment as well as a **bird survey** for several seasons throughout the year. A final report will be available in early 2019.

Another BFA related initiative includes the **Carpenter Creek-Bayou Texar Restoration and Revitalization Project**. BFA highlighted this watershed, in-part because of the 50-year BFA database we have assembled - which was submitted and selected as one of the top projects received. This multi-phase effort looks at the entire watershed **holistically** and outlines the steps required to return this impaired ecosystem back into a healthy creek, which feeds one of the three urban bayous (**Texar**) in the Pensacola area. EsCo released the Request for Proposals (RFP) in August and received

~several responses. It remains to be seen if this project gained the attention of experienced firms that have a good track record, or if this project will be left in the hands of an unqualified firm who may very well be the lowest bidder.

Other efforts on **Carpenter Creek** include several students from the **Dixon School of the Arts & Sciences** and the **Sacred Heart Cathedral School** which are investigating water quality conditions, microplastics and presence/absence of aquatic **insects*** (insects as water quality indicators) in the upper creek system. Other groups, **Emerald Coast Keepers** and **Cooperative Invasive Species Management Areas (CISMA)** are organizing **creek clean-ups, invasive species (flora) identification** and removal, and assisting the city & county in **point source identification**.

Insects* can be viewed as the Indicator Species for the overall health of a region. In **healthy aquatic ecosystems**, water quality contains **low nutrients and few sediments**, the water chemistry is **highly oxygenated**, and the riparian zone habitat is well vegetated with native species providing a cool, fast flowing and partially shaded canopy. **Woody material**, including fallen trees provide **vital bank stabilization in highly erodible sandy soils**, like those found here.

A July 2018 article by The Guardian (***Where have all our insects gone?***) discusses what a group of entomologists are calling the most alarming indication of ecological apocalypse. This call to action was based on data collected by **amateur entomologists in Germany** who began employing strictly standardized ways of collecting insects in 1989. They used special tents called 'malaise traps' to capture thousands of samples of insects in flight over dozens of different **nature reserves**.

Their findings revealed a remarkable pattern over a 27-year period, namely the annual average weight of insects (biomass) found in the traps fell by 76%. Equally alarming, was the discovery that there was a greater decrease of insects (biomass) in the summer, a time when insects should be reaching their peak. These observations were noted in areas deemed nature reserves, that is - areas known to receive special protection.

Entomologists have observed meteorological patterns can influence insect biomass as fluctuation, but steady insect biomass declines over three decades have led entomologists to suspect that habitat change lie at the heart of the problem. Flies, moths, bees, ladybirds, butterflies and beetles have been declining. Why should we care about insects? Our freshwater **fishery is dependent of aquatic insects**, our marshes depend on insects, many species of **birds are dependent on insects**, and insects are responsible for keeping our soils fertile, degrading waste, pollinating our orchards and gardens and controlling pests. The **World Wildlife Fund** recently published a study that global population of mammals, birds, fish, reptiles and amphibians have declined by 60% from 1970 to 2014, on average.

Our region has **complex ecosystems**, which create a multifaceted conundrum when restoration or enhancement projects are attempted. A **healthy, functioning ecosystem is resilient**, some can even repair itself and can withstand tropical storm events, drought, and lightning strikes. Scientists are in their infancy in understanding the complexity of ecosystems and how they function. For example, the science of **fire ecology and management** is growing today, but less than 80 years ago, civilized man considered fire a threat and stopped the practice of burning.

As our coastal communities continue to grow, there will be a greater impact on our coastal waters. Groups like **Defenders of Wildlife, National Wildlife Federation** and **Gulf Restoration Network** are committed to uniting and empowering people to protect and restore the natural resources along the Gulf Region. Funding is always challenging, but the BP Oil Spill resulted in a sliver of silver lining in the form of fines. The **Environmental Law Institute** published a fact sheet (Oct 2018) which explains how much money was received from the 2016 settlement (\$16.67 Billion), and how that money is slated to go to regions, through one of three processes: **Natural Resources Damage Assessment (NRDA)**, the **Restore Act**, and the **National Fish and Wildlife Foundation (NFWF)**. To date, \$3.22 B have been spent leaving \$13.45 B remaining. www.ELI-Oceans.org/Gulf



Photo 2. The new stormwater pond at the Bill Gregory Park (Bayou Chico Watershed) at W Street was funded by a NFWF grant for the City of Pensacola with pass thru assistance by EsCo. This stormwater pond was designed to treat 38 acres of stormwater before entering the Maggie’s Ditch, a small tributary.

Given these vast sums, and the many well positioned non-profit groups in the area, the environment stands to benefit. The EsCo region (Perdido & Pensacola Bays) will be getting a new **Estuary Program**, and there are plans in the works which indicate that Choctawhatchee and St Andrew Bays, each, will be getting the same for their bay systems. Applications for the EsCo Estuary Program Director may be found at <https://www.governmentjobs.com/careers/escambia/jobs/2256426/estuary-program-director-pensacola-and-perdido-bays>.

As our **knowledge and understanding** of these **landscape level ecosystems increase**, our community leaders and decision makers will hopefully begin viewing these complex systems in a new light. That is precisely the approach suggested for a flooding/drainage issue plaguing several streets near the bay in the small community of **Innerarity Point**. The area is suffering sins from the past, that is from fifty years of development in a low-lying area in which a coastal wetland system has been fragmented by roads and ditched to drain water straight into the bay. While this issue is likely repeated throughout areas within the county and region, this particular area lends itself to reconnecting the fragmented wetland system, restoring the hydrology, removing invasive species and returning the larger wetland system back into a healthy functioning ecosystem, so it may perform as it was designed.

The **challenge for this project** is that while funds are available to repair and restore watersheds ‘when they are deemed impaired’ this project is located in an older, smaller, rural area with mainly septic systems adjacent to lower Perdido Bay, which according to the state of FL is not impaired. What happened to being proactive? The county could be the first in the region to apply a Landscape-scale, Community-based Conservation Approach to a flooding problem, while applying updated and innovative technology to a stormwater and flooding issue and thereby reconnecting 38 acres of wetlands.

At this writing, several UWF Depts and EsCo Depts are planning a meeting to discuss collecting site specific data to develop a feasibility study. A **feasibility study** is an **analysis** used in measuring the ability and likelihood to complete a project successfully including all relevant factors. Project managers use **feasibility studies** to determine potential positive and negative outcomes of a project before investing a considerable amount of time and money into it.

The Bream Fishermen Association is a not-for-profit organization dedicated to promoting environmental conservation and recreational opportunities for anglers, hunters, campers and people invested in related outdoors activities. It is the objective of the BFA to support, develop, and implement programs that will:

- 1) Improve the quality of our environment;
- 2) Protect and maintain our present wilderness type lakes, rivers, swamps, marshes, bays, forests, and beaches in their natural undeveloped state;
- 3) Advance the causes of plant, marine, and wildlife preservation; and
- 4) Environmental education and outreach.

The vision for the Bream Fishermen Association is the re-connection of communities to their watersheds through a thriving regional watershed monitoring approach. The activities of citizen volunteers through this organization foster the appreciation, conservation, restoration, and appropriate management of our area waters. The desired outcomes for the resources are increased biological diversity and productivity from head-water streams to our panhandle bays.

The BFA has a long legacy of assisting county, state and federal partners in area-wide water quality monitoring. Through these monthly efforts, citizens have become aware and engaged in their area waters and are becoming better stewards for the environment.

Membership is open to all individuals who support these objectives. Please join the BFA by sending us your contact information (name, mailing address, phone, and email) be sure to notify us if you prefer to receive notices and announcements by mail or email, and \$20 annual dues to our mailing address:

Bream Fishermen Association

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