

2016

University of North Florida Environmental Center Annual Report 2016

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2016 ANNUAL REPORT



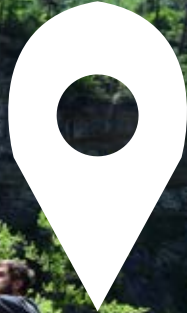
UNF

Environmental Center



YEAR IN SUMMARY

19 PARKS VISITED



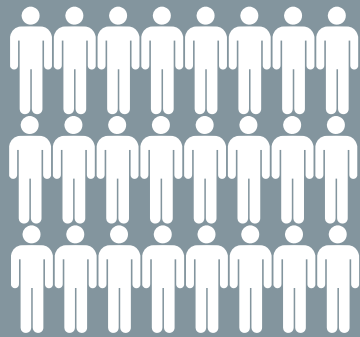
\$ 71 K
NEW GIFTS
399 K
NEW GRANTS



12,933
LITTERED CIGARETTE
BUTTS PICKED UP

24

STUDENT
EMPLOYEES



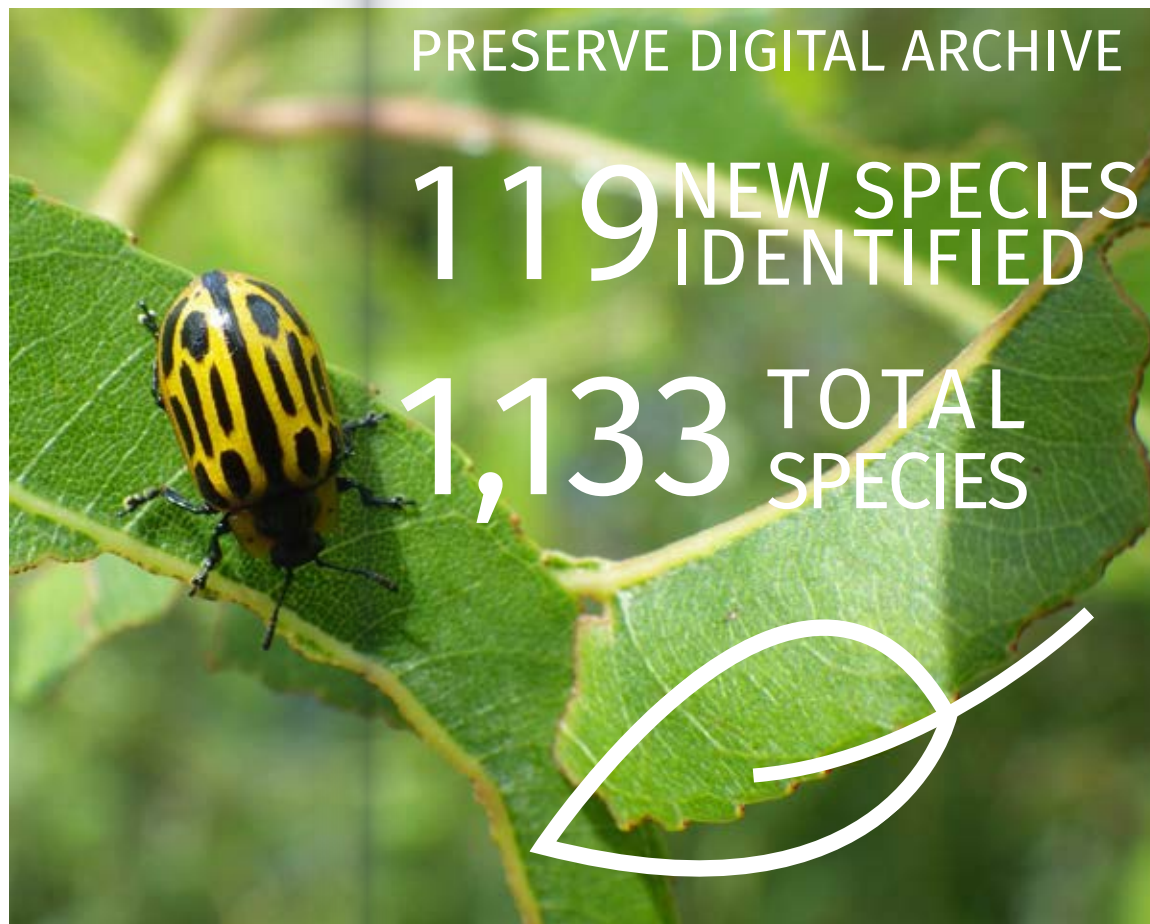
252 STUDENT
VOLUNTEERS



PRESERVE DIGITAL ARCHIVE

119 NEW SPECIES
IDENTIFIED

1,133 TOTAL
SPECIES



12

COMMUNITY
EVENTS



600 LBS



OF BOOKS
COLLECTED



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STUDENT COALITION

Cover Photo: Justin Lemmons



This year's annual report documents and celebrates the accomplishments of an amazing team of passionate individuals who have come together to work toward a shared mission. Our projects fall into one of three focus areas: Parks and Preserves; Rivers, Coasts and Springs; and Sustainability. These categories directly reflect the unique needs of the Northeast Florida region and the UNF campus. In order to address these needs, we believe that it takes a diverse team (from all disciplines) comprised of UNF students, staff, faculty and, importantly, community members who provide different perspectives, experience and skills, and are anxious to collaborate in order to achieve our goals.

The Center could not make as much progress toward its goals without the contributions of our student staff members and volunteers. We are so proud of their accomplishments this year, and we are very focused on creating even more opportunities to get more students involved next year. As a direct result of the leadership provided by James Taylor (Center Coordinator), as Chair of the UNF Sustainability Committee, the team also includes UNF departmental representatives who are committed to continuing the tradition of environmental responsibility and campus sustainability. This year, over 20 faculty members have directly contributed their time and expertise to the mission of the Center. We are particularly grateful to our faculty Board members for their contributions and guidance. It is also noteworthy that all three of the former Center Directors (Dr. Ray Bowman, Dr. Radha Pyati and Dr. Stuart Chalk) continue to be actively involved in the Center. Finally, our community collaborators round out our team and keep us grounded by reminding us of the realities and challenges we face in achieving our mission in the "real world."

Our mission includes research as well. This year, our "Seed Grant" initiative is supporting faculty doing some really interesting research. Dr. Pyati's signature project called the "St. Johns River Report" was funded for three more years, and we received a two-year grant to develop the "Duval Maritime Management Plan" in collaboration with JU and the NEFL Regional Council. In addition to our applied-research activities, we are pleased to announce that our signature annual transformational learning opportunity called the "St. Johns River Experience" is now a credit-bearing course for the student participants.

Creating the next generation of environmental leaders is now the top priority of our mission. Current longtime environmental leaders in the region have been very clear that they think the Center can make the biggest measurable impact on the region by focusing on environmental leadership development. Hence, we are very excited to report on the accomplishments from our "pilot year" of the new Environmental Leadership (ELP) program. And, we are very proud to welcome Maria Mark to our team as the full-time ELP Coordinator! Maria brings a wealth of experience and credentials to our team, and has done an amazing job since she joined us last fall.

Finally, we are very grateful for the generous support of our donors. Since the Center's business model dictates that the vast majority of our programs must be supported by donations from the community, our donors are truly essential members of our team!

J. David Lambert, Ph.D.
Director
UNF Environmental Center

CREDITS

Written by: James W. Taylor and Maria Mark
Designed by: Natalie Sassine and Tiffany Torres

PARTNERS



PROFESSIONAL STAFF



J. David Lambert, Ph.D.
Director



Maria Mark
Coordinator



James W. Taylor
Coordinator

MEET THE TEAM

STUDENT STAFF



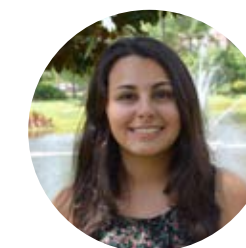
Katie Nicholson
Volunteer Coordinator

Major: Coastal Biology



Natalie Sassine
Communications

Major: Fine Arts



Tiffany Torres
Graphic Designer

Major: Graphic Design



Joey Vocek-Gordan
Video Productions

Major: Video Production

DONORS

Cummer Family Foundation
Felburn Foundation
UNF Foundation Board
Charles "Chuck" Ged
James W. Taylor
J. David Lambert, Ph.D.
Radha Pyati, Ph.D.

HOW TO SUPPORT US

All of our programs are 100 percent funded with grants and private donations. If you would like to learn more about supporting our programs, please contact:

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Director of Development, Academic Affairs Office
lee.anderson@unf.edu
(904) 620-5213

EXECUTIVE BOARD

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Associate Professor
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Erin Largo-Wight, Ph.D.
Associate Professor
Department of Public Health
Brooks College of Health

Brian Zoellner, Ph.D.
Assistant Professor
Department of Foundations and Secondary Education
College of Education and Human Services

To help stimulate the creation of multidisciplinary research projects related to the environment, the Environmental Center offers grants to faculty, or teams of faculty, from all six UNF colleges. The grants are intended to support environmentally-related research that subsequently results in

the preparation and submission of a proposal to an external funding agency. The grants are competitively awarded to the most meritorious proposals, but there is an emphasis in projects that create effective collaborations between faculty members and students from diverse disciplines.

SEED GRANTS

Willingness to Pay for Safe Drinking Water: A Contingent Valuation Study in the City of Jacksonville

Dr. Chris K. Johnson
Dr. Chiradip Chatterjee
Dr. Russell Triplett

Department of Economics and Geography

Dr. Parvez Ahmed
Department of Accounting and Finance

The objective of this study is to examine how measures of socioeconomic background, social capital and media exposure influence the willingness-to-pay (WTP) for water quality improvement. The purpose of this study is threefold. First, we will estimate residents' monetary valuation for the improvement of tap water quality. Second, we will explain the influence of social capital and other socioeconomic factors on WTP. Finally, since Jacksonville's tap water quality has attracted both positive and negative media attention, we will investigate to what extent the media attention influenced the monetary valuation for the improvement of tap water quality.

We propose a household phone survey of randomly selected residents in the City of Jacksonville by the Public Opinion Research Laboratory at UNF with a target sample size between 500 and 1,000 respondents. Students enrolled in Business and Economic Statistics (ECO 3411) will staff the phone bank. This will help to offset costs and offer students practical exposure to data collection procedures and the mechanics of random sampling. Looking ahead, we plan to use this data in support of proposal(s) for external funding for a more detailed in-person survey within the JEA service area and to develop a GIS map of water quality differentials across zip codes.

Metallic Nanorods as Effective Environmentally Benign Biofilm Inhibitors

Dr. Stephen Stagon
Department of Mechanical Engineering

Dr. Amy Land
Department of Chemistry

The U.S. Navy estimates that biofouling increases drag on the hulls of its ships by up to 40 percent, resulting in an annual cost of over \$1 billion. Biofouling occurs through a multistep process, beginning with the attachment of microorganisms and the formation of a biofilm, which larger fouling organisms preferentially attach to. Biofilm formation may be mitigated using two approaches: chemical or mechanical. Chemically, surfaces are coated with a toxic substance that kills the biofilms if they are to attach. This approach is environmentally negative, as the toxins are often nonspecific and impact organisms in the entire marine ecosystem. Mechanically, surfaces can be featured in such a way that the biofilm forming microorganisms physically cannot attach or find them nonpreferable. While there is literature detailing the interaction of biofilm forming microorganisms on microstructured surfaces, there is almost no investigation of the effects of nanostructured surfaces.

In this project we aim to investigate the effects of nanofeatured surfaces, being metal nanorods, made of environmentally benign materials on the formation of marine biofilms. This project may result in a novel means of preventing biofilm formation and will serve as preliminary data to attract funding from the Navy or the National Science Foundation.



Photo: Jennifer Grissom



Photo: Jennifer Grissom

COMMUNITY PROGRAMS

Jacksonville Environmental Symposium

Partner: City of Jacksonville
Environmental Protection Board

20.40 Talks Series

Partner: U.S. Green Building Council

"Solar and Renewable Energy"
"Vision, Growth and Energy in Jacksonville"

Green Carpet Film Series

Partner: U.S. Green Building Council

"Who Owns Water"
"Sand Wars"
"Tapped"
"Water Blues, Green Solutions"
"Cowspiracy"
"The Future of Energy"

Sierra Club Program: NPS Urban Agenda

Partner: National Park Service and
Sierra Club of Northeast Florida

Eagle Watch Volunteer Training

Partner: Duval and Florida Audubon

Public Service Lecture

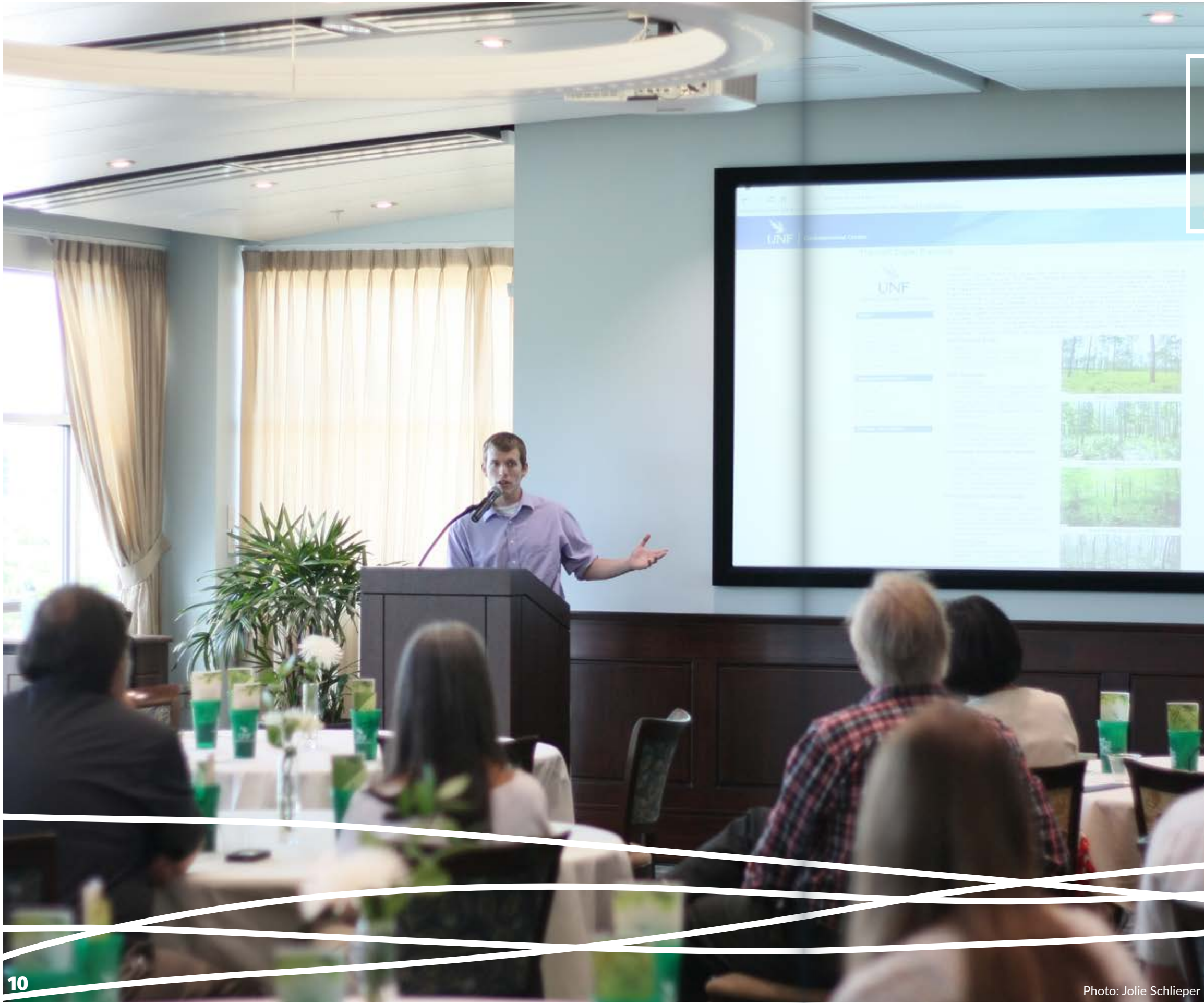
Partner: UNF Department of Political
Science and Public Administration

Natural Wonders of Northeast Florida

Partner: UNF Continuing Education

Screening of "Forgotten Coast"

Partner: UNF Eco Adventure



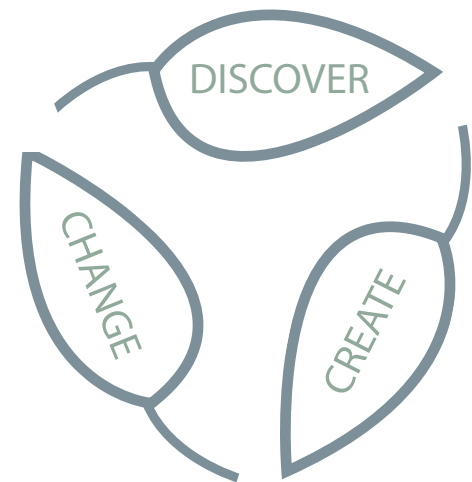
ENVIRONMENTAL LEADERSHIP PROGRAM

As the “silver tsunami” of environmental leaders grows, the pool of our next generation of environmental leaders is shrinking. In 2016, the Environmental Center (ECenter) answered the growing need with a solution – the official launch of the Environmental Leadership Program (ELP). It is designed specifically to engage freshmen and sophomores, who are passionate about cultivating a more just and sustainable environment, and retain them in the ELP throughout their college tenure, so they have sufficient time to develop a community project that addresses a local environmental need.

The students are “project leaders” because they are required to “lead” their project. The skills gained range from business proposal development to public speaking to leadership development.

At the conclusion of their project, they have a project portfolio that documents their project from “creation to implementation,” giving them solid career-building experience and a competitive edge from other similarly-situated graduates. Meet our project leaders!

PROJECT LEADERS



SHOSHANNA ALAMINA

Major: Anthropology
Hometown: Corozal, Belize
Project Title: St. Johns River Lower Basin Report

"Participating in the ELP has been a wonderful and positive experience. I am very grateful to have been selected for this program. This new venture as a project leader has given me the opportunity to focus on the St. Johns River, which is one of the most important features of Jacksonville."



AMY BROWNFIELD

Major: Biology
Hometown: Jacksonville, Fla.
Project Title: St. Johns River Experience

"My work as a project leader planning the spring class provided invaluable experience. I have gained experience in public speaking, marketing, budgeting, prioritizing tasks, verbal and virtual communication, interviewing, and geographic information systems (GIS). These skills will be extremely useful as I work toward my goals."



KIM DALY-CREWS

Major: Biology
Hometown: Weston, Fla.
Project Title: Citizen Science-Jacksonville Zoo and Gardens and Sawmill Slough Preserve

"I valued my time spent working at the Environmental Center and being part of the ELP. The skills learned while developing the citizen science program were invaluable. The ELP Program is an invaluable asset to UNF, and I look forward to seeing it grow into something even more wonderful than it already is."



ASHLEIGH ELKINS

Major: Biology
Hometown: West Palm Beach, Fla.
Project Title: Coastal Pollution Tracking and Action Plan

"Since participating in the ELP, I've learned about the importance of group effort, how to develop an idea into action, ways to enhance my public speaking skills, writing memos and much more. This opportunity has really allowed me to grow as a student and is giving me the skills to become a community leader."



MATT GROTH

Major: Biology
Hometown: Ft. Lauderdale, Fla.
Project Title: Sawmill Slough Preserve Natural Trail Interpretation

"As project leader, I was able to pursue my interests in the UNF Sawmill Slough Preserve. My project included doing ecological research and maintaining the Preserve's natural habitats. The Environmental Leadership Program has made a lasting impact on me and has given me a great experience working as a leader."



RENEE HUTCHINS

Major: Anthropology
Hometown: Jacksonville, Fla.
Project Title: Beyond the Trail: Park Discovery Series

"The ELP gave me many opportunities to network with park managers to understand the different management skills needed to manage these parks. The ELP goes much deeper than one would expect from an internship, and I am certain my experiences will significantly impact my career as a park ranger."



CAITLIN KENGLE

Major: Civil Engineering
Hometown: Boynton Beach, Fla.
Project Title: Garbage on the Green and Campus Sustainability

"I had the opportunity to start working at the ECenter in August 2014, before the ELP existed. During my two-year tenure, I saw the growth of the Center and the ELP parallel my own growth as a student, employee, and person."



SEAN LAHAV

Major: Political Science
Hometown: Boynton Beach, Fla.
Project Title: Discovering Northeast Florida's "Special Places"

"The ELP has helped me grow, mature and excel as a rising environmental leader. I also better understand the complexities behind environmental work by working with the people who are dedicated to being stewards. The ELP is an exceptional program that has significantly impacted my life and future career."



MADISON MASTERS

Major: Anthropology
Hometown: Lakeland, Fla.
Project Title: Tree Rx: Prescribing Urban Trees for Community Health

"The Environmental Center has given me numerous positive experiences as a project leader in the Environmental Leadership Program. I have gained real-world experience in professional environments, networking with the community's business professionals, and public speaking. The experience gained will be a great asset as I enter the work force."



DANIEL NOREZ

Major: Public Health
Hometown: Chihuahua, Mexico
Project Title: Tree Rx: Prescribing Urban Trees for Community Health

"The ECenter and ELP have given me the best opportunities for real world application of my major. My resume is very professional with the experiences gained from working there. As the ELP grows, the future generations will do amazing things, and I will be proud to have been a part of the program."



KEVIN O'HALLORAN

Major: International Relations
Hometown: Lakeland, Fla.
Project Title: Jacksonville Sustainability Report

"My ELP experience has been an overall rewarding experience. Having the opportunity to work with the USGBC linked me to an organization I hope to stay involved with throughout my career. The opportunity to network with community leaders has been a great resource as I enter the Jacksonville job market."



KELLY RHODEN

Major: Public Health
Hometown: Charleston, S.C.
Project Title: Tree Rx: Prescribing Urban Trees for Community Health

"The Environmental Center has given me a tremendous amount of experience, particularly in public speaking, project management and team work. I have learned so much about the professional world as well as the environmental world. I have gained and built relationships with many of my co-workers and community members."



DANIELLE TIPLEY

Major: Biology
Hometown: Fort Pierce, Fla.
Project Title: Sawmill Slough Preserve Algae Inventory

"Working with the Environmental Center and the Environmental Leadership Program was an overall positive experience. Through these opportunities, I was able to improve on certain skills like emotional intelligence and my potential as a leader. They allowed me to go further with my research than I would have been able to do on my own."



Photo: Jolie Schlieper



RIVERS, COASTS AND SPRINGS

The landscape of Northeast Florida is defined by water. The St. Johns River, the longest river in Florida, runs through Jacksonville and empties into the Atlantic Ocean, forming an expansive saltmarsh estuary. And like much of Florida, Jacksonville has miles of beautiful coastline.

Through partnerships with organizations like the St. Johns Riverkeeper, Florida Springs Institute and the City of Jacksonville Environmental Protection Board, the Environmental Center is focused on getting faculty and students involved with research and community-based learning.

ST. JOHNS RIVER EXPERIENCE



The St. Johns River Experience is a unique full-immersion course that combines classroom activities and experiential learning to facilitate a deep understanding of the St. Johns River, its importance to surrounding communities and the issues threatening its future. The course is designed to challenge students, both mentally

and physically through classroom lectures, assigned readings, student presentations and lab work. The highlight of the St. Johns River Experience is the weeklong trip during spring break, in which students have an opportunity to explore the river's watershed through kayaking, hiking, swimming and boating.



Trip Leader:
James W. Taylor
Environmental Center

Academic Leader:
Dr. Rick Troendle
Department of Chemistry

Outings Leader:
Jake FitzRoy
Eco Adventure

Student Leader:
Amy Brownfield
Environmental Center

2016 Students

Kathleen Nicholson, freshman
Coastal Environmental Science

Matt Dent, senior
History

Shawna Melby, junior
Ecology and Evolutionary Biology

Ali Schweers, sophomore
Psychology

Billy Howard, freshman
Ecology and Evolutionary Biology

Zach Sincage, sophomore
Economics

Kai Lister, junior
Chemistry

Nikki Adams, junior
Ecology and Evolutionary Biology

Myranda Parker, junior
Biology



FLORIDA SPRINGS INSTITUTE PARTNERSHIP

The Howard T. Odum Florida Springs Institute (FSI) is focused on improving the understanding of the ecology of the springs and fostering the development of science-based education and management actions needed to restore and protect springs throughout Florida. The Environmental Center regularly collaborates with FSI on both research and educational programs.



Research

The Environmental Center is involved in ongoing research being conducted by FSI. The Environmental Center has provided expert advice and has deployed water quality probes. In addition, the Environmental Center encourages UNF students to participate in research opportunities provided by FSI.

Give Springs a Break

In addition to research, FSI aims to improve understanding of springs ecology and the need to

restore and protect springs throughout Florida. Give Springs a Break is an annual weekend event focused on college students from throughout the state. At the event, students learn from experts, network with other like-minded students and enjoy the recreational opportunities springs provide. This year the Environmental Center was a sponsor of Give Springs a Break and provided volunteer assistance. There were a total of 22 college students in attendance, 11 of whom were UNF students.

MARITIME MANAGEMENT PLAN

The Environmental Center received a two-year grant to develop the "Duval Maritime Management Plan" for the City of Jacksonville. The grant is a collaborative effort with the Northeast Florida Regional Council and Jacksonville University's Marine Science Research Institute. The UNF team is comprised of Dr. J. David Lambert, Dr. Raphael

Crowley (Civil Engineering) and Mackenzie Sanchez, a graduate student in the Coastal Engineering program. The objectives of this applied-research project are to assess the current status of maritime facilities (such as boat ramps), determine current and future needs (with community input), and develop a long-term plan that assures future public access to our river and coastal resources.

STATE OF THE RIVER REPORT



Photo: Kathy Stark

The Eighth Annual State of the St. Johns River Report was published in the summer of 2015 by a team of scientists from UNF, Jacksonville University and Valdosta State University. This project, supported by the City of Jacksonville Environmental Protection Board, has provided an annual baseline of the lower basin's health since 2008. The 2015 report revealed the following findings: nutrient concentrations in the basin are decreasing gradually, but a concomitant drop in chlorophyll-a has not

been seen; fecal coliform levels are decreasing in the tributaries, but are not yet close to final target levels; and both fisheries and threatened and endangered species are stable. Members of the report team discussed these findings with several media outlets, including the Florida Times-Union, WJCT, Action News, and WJXT, as well as several City of Jacksonville Citizen Planning Advisory committees. Please visit www.sjrreport.com for more information.

UNF Principle Investigator: *Radha Pyati, Ph.D.*

JU Principle Investigator: *Lucy Sonnenberg, Ph.D.*





PARKS AND PRESERVES

With over 80,000 acres of parks and preserves, Jacksonville is home to the largest urban park system in the entire country. From upland pines to swamps to coastal marshes, Jacksonville has it all when it comes to diverse ecosystems.

UNF even has its own nature preserve. The 382-acre Sawmill Slough Preserve is a living laboratory that provides students and faculty with opportunities to explore nature and conduct research.

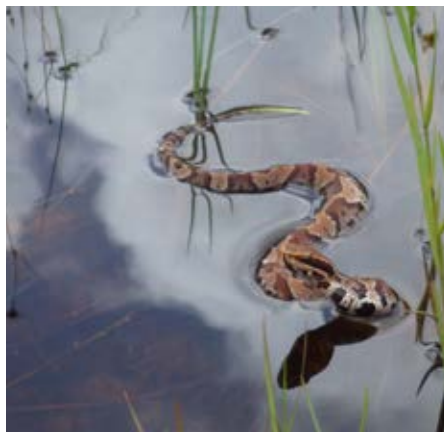
Through partnerships with organizations like Timucuan Parks Foundation, National Park Service, North Florida Land Trust, Florida State Parks and the City of Jacksonville, the Environmental Center is focused on getting faculty and students involved with research and community-based learning.



SAWMILL SLOUGH PRESERVE



The Sawmill Slough Preserve (SSP) is a 382-acre protected area located on the UNF campus. The area was designated a preserve by President John A. Delaney in May 2006. Winding through the preserve are the Robert W. Loftin Nature Trails, named after the distinguished UNF professor. The SSP is a campus asset that serves as a living laboratory and provides students and faculty with amazing opportunities to connect with nature, provide inspiration for art, conduct research and much more.



DIGITAL ARCHIVE

The Environmental Center launched the Digital Archive in 2015 to be a scientific, cultural and historical archive of the Sawmill Slough Preserve. The online scientific and educational resource documents years of research and management efforts.

Visit the Digital Archive at preserve.unf.edu.



PROJECT LEADER: MATT GROTH

As a way to help educate people about the diversity in the SSP and encourage people to explore the area, Project Leader Matt Groth began developing trail interpretations. While this has previously been done for the nature trails, this would be the first attempt creating digital versions for the trails. The project involved conducting research on the types of habitats, flora and fauna hikers would see on each trail. In addition, a digital tour of each trail will be created to give people a glimpse of the preserve's beauty.



PROJECT LEADER: KIM DALY-CREWS

Citizen science utilizes the help of volunteers to collect data for scientific research. The data collected by volunteers is submitted to national programs to help achieve a common goal. The process not only engages the community, but also encourages scientific discovery and improves the community's connection and understanding of natural systems. Citizen science programs help promote awareness and conservation of plants,

animals and natural resources with the general public. Citizen science is an excellent way to achieve both missions of the Jacksonville Zoo and Gardens and the Environmental Center. The Citizen Science Volunteer Corps is an existing program in the Jacksonville Zoo and Gardens education department. The goal of the collaboration between the Environmental Center and the Jacksonville Zoo and Gardens is to increase the range of citizen science opportunities at both institutions.

CITIZEN SCIENCE



CURRENT PROJECTS:

- Wildlife cameras
- Mammal monitoring
- Bird monitoring
- Phenology monitoring
- Tree frog monitoring
- Water quality monitoring



WILDLIFE CAMERA

As part of the inventory process, Environmental Center project leaders deployed wildlife cameras throughout the Preserve. The cameras help capture elusive species that roam the preserve. This process has been very rewarding and has helped confirm multiple species, including a bobcat and, most recently, a coyote.





BEYOND THE TRAIL PARK DISCOVERY SERIES



PROJECT LEADER: RENEE HUTCHINS

“Beyond the Trail: A Park Discovery Series” gave students and community partners a behind-the-scenes experience by visiting local parks and learning from the park managers about managing and operating their specific parks. They visited a national park, a Florida

state park and a City of Jacksonville preservation park where they learned about the history, culture, flora and fauna unique to each park. Each park visit included time for students to network with community partners, comprised of business leaders, civic leaders, environmental engineers and nonprofit leaders.



Timucuan Ecological and Historic Preserve



St. Johns River tour and Kingsley Plantation



Kathryn Abbey Hanna Park



Big Talbot Island State Park



EXPLORING NORTHEAST FLORIDA'S SPECIAL PLACES

All Photos: Sean Lahav



PROJECT LEADER: SEAN LAHAV

“Exploring Northeast Florida’s Special Places” is a project focused on showcasing the natural beauty found in Duval County. Partnered with the UNF Environmental Center and Public Trust Environmental Legal Institute of Florida, Sean Lahav set out in the spring of 2016 to create a video series that highlights one of the most expansive park systems in the United States.

The project will feature video episodes dedicated to each park, showing the recreational amenities, ecology, history, and cultures each has to offer. Each episode will include an interactive map, detailed footage of the park and fun facts. The vision is to inspire people to explore their park system and develop a sense of environmental awareness to ensure the preservation of these special places now and for future generations.

FEATURED PARKS:

- Alimacani Park and Boat Ramp
- Betz Tiger Point Preserve
- Big Talbot Island State Park
- Camp Milton Historic Preserve
- Castaway Island Preserve
- Cedar Point (NPS)
- Cedar Point Preserve
- Dutton Island Preserves
- Fort Caroline National Memorial
- Fort George Island Cultural State Park
- George Crady Bridge Fishing Pier State Park
- Huguenot Memorial Park
- Jacksonville-Baldwin Rail Trail
- Julington-Durbin Preserve
- Kathryn Abbey Hanna Park
- Kingsley Plantation
- Little Talbot Island State Park
- Pumpkin Hill Creek Preserve
- State Park
- Reddie Point Preserve
- Seaton Creek Historic Preserve
- Sal Taylor Preserve
- Theodore Roosevelt Area
- Thomas Creek Preserve
- Tideviews Preserve



SUSTAINABILITY

Jacksonville is the largest city in area in the contiguous U.S. and with more than 800,000 people in the metropolitan area. It is continually growing to meet demand. Furthermore, Jacksonville, like many cities in Florida, will be impacted by climate change and sea level rise. City leaders will need to look to sustainability for ways to balance economic needs with environmental and social needs.

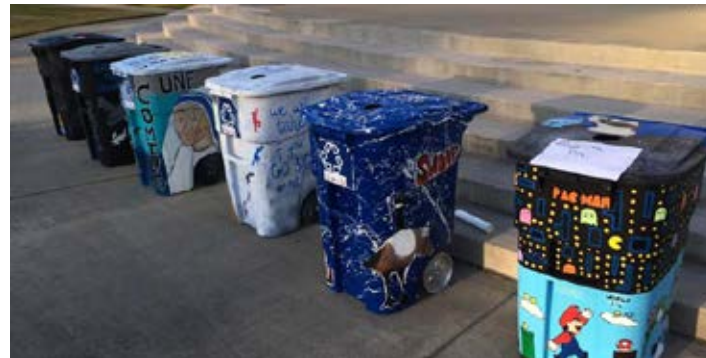
The UNF campus serves as a perfect laboratory for students to gain an understanding of sustainability in practice. With nearly five million square feet of building space and a total population of nearly 20,000 students, faculty and staff, UNF has plenty of operational challenges. Student project leaders help identify and address needs on campus through research and program development.

The community also presents plenty of opportunities to work with organizations such as U.S. Green Building Council, Groundwork Jacksonville, Northeast Florida Regional Council, Jacksonville Electric Authority and the City of Jacksonville. Through this interaction, the Environmental Center helps faculty and students to get involved with research and community-based learning.

CAMPUS SUSTAINABILITY

UNF has a long-standing commitment to environmental stewardship and sustainability. The campus features a nature preserve, 13 LEED-certified buildings, water bottle filling stations and many other sustainable features. For its efforts, UNF has been recognized by organizations such as Sierra Club, Association for the Advancement of Sustainability in Higher Educa-

tion and Princeton Review. The Environmental Center serves an important role in campus sustainability. Environmental Center staff chairs the campus Sustainability Committee, student project leaders organize volunteer and educational programs and research assistants conduct applied research to better understand UNF's environmental impact.



BIN WARS: RECYCLING BIN DESIGN COMPETITION AT UNF HOMECOMING 2016



ALTERNATIVE TRANSPORTATION DAY DURING CAMPUS SUSTAINABILITY MONTH



PROJECT LEADER CAITLIN KENGLER AT FLORIDA UNDERGRADUATE RESEARCH CONFERENCE 2016



"SWOOPIN UP THE BUTTS" CIGARETTE BUTT LITTER CLEANUP AT UNF HOUSING



UNF'S FIRST ELECTRIC VEHICLE CHARGING STATION INSTALLED AT UNF HICKS HALL



TEXTBOOK AND INK CARTRIDGE COLLECTION BIN LOCATED OUTSIDE OF THE UNF BOOKSTORE



All Photos: Keily Rhoden

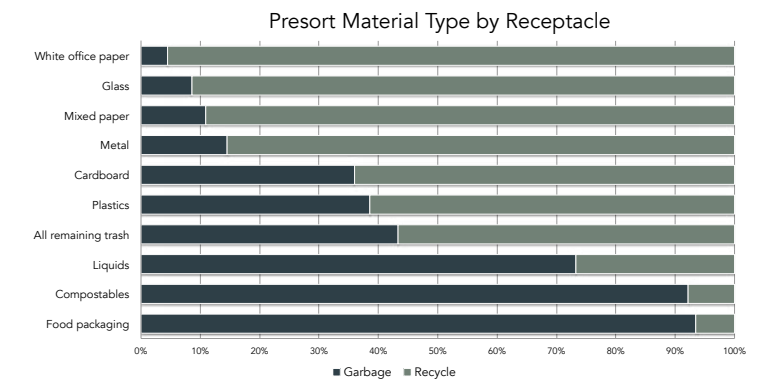
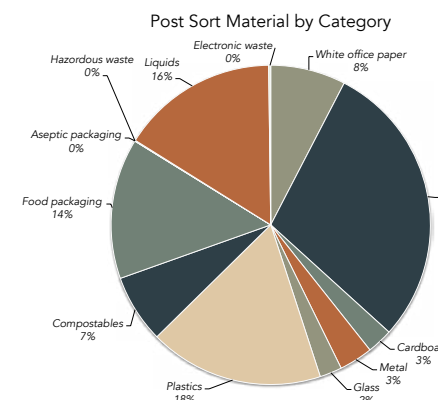
GARBAGE ON THE GREEN

Coordinated by the Environmental Center, with the support of Physical Facilities, "Garbage on the Green" utilizes student volunteers to conduct a campus waste audit. The event provides volunteers with a fun and interactive educational

opportunity about waste reduction, recycling and litter prevention. Having a direct experience with campus sustainability, an event like Garbage on the Green gives students, faculty and staff a dynamic perspective on the ecological impact they make in their everyday lives.

PROJECT LEADER: CAITLIN KENGLER

AUDIT RESULTS



SUSTAINABILITY OUTREACH



Educating the public about sustainability and how they can make a difference is an important, yet difficult task. The U.S. Green Building Council (USGBC) North Florida region took up that challenge and developed the LiveSMART (Sustainable Materials and Resources Trailer) program to provide direct education to the general public on how to make their homes more sustainable. The USGBC wants to create smart consumers and help families save money while also being environmentally responsible. The mobile unit will be deployed at community events such as festivals, professional games, home and patio shows, schools, home owner associations, business campuses and churches.

PROJECT LEADER: KEVIN O'HALLORAN

As one of the sponsors of the LiveSMART trailer, the Environmental Center has been involved in the development of outreach materials. ELP Project Leader, Kevin O'Halloran, facilitated the creation of electronic educational materials, which will be sent to visitors who are interested in learning more about sustainable living. The materials cover a wide range of topics, including energy efficiency, water conservation, household chemicals and much more.



TREE Rx: PRESCRIBING URBAN TREES FOR COMMUNITY HEALTH A PARTNERSHIP WITH GROUNDWORK JACKSONVILLE

PROJECT LEADERS: KELLY RHODEN, MADISON MASTERS, DANIEL NOREZ

Groundwork Jacksonville partnered with the ELP to assist with assessing the tree canopy in Springfield/Eastside to determine the best opportunities for planting the right tree in the right place. The health benefits of trees were also part of this assessment, which included respiratory benefits, crime reduction, eco-system services and property values and developing an outreach education brochure. Project Leader, Madison Masters, conducted the tree canopy assessment utilizing ArcGIS and field work. Kelly Rhoden and Daniel Norez researched the benefits of trees and developed a white paper based on their research. They are currently creating the outreach brochure.



The LiveSMART trailer was debuted at Greenbuild, an international conference and expo organized by the USGBC. The conference took place in Washington, D.C. on Oct. 5 through Oct. 7. Faculty and students from the Environmental Center, including Project Leader Kevin O'Halloran, attended the conference.



STUDENT COALITION

The Student Coalition is a student-led organization focused on attracting students interested in adventure, nature and conservation. Launched this year, the Student Coalition has already attracted many students and organized a number of great programs including day trips to local parks, camping trips, volunteer events and educational programming. The Student Coalition provides students with leadership and networking opportunities.

In addition to providing students with opportunities for adventure, the Student Coalition will also be a mechanism for recruiting future project leaders for the Environmental Leadership Program.



PROVIDENCE CANYON
CAMPING TRIP
LUMPKIN, GEORGIA



TALLULAH GORGE
CAMPING TRIP
TALLULAH FALLS, GEORGIA



PROVIDENCE CANYON
CAMPING TRIP
LUMPKIN, GEORGIA



YOGA BEACH CLEANUP
JACKSONVILLE BEACH,
FLORIDA



DEVILS DEN
CAMPING TRIP
WILLISTON, FLORIDA



TALLULAH GORGE
CAMPING TRIP
TALLULAH FALLS, GEORGIA



"SWOOPIN' UP THE
BUTTS" CLEANUP
UNF STUDENT UNION



BIG TALBOT HIKE
AND CLEANUP
JACKSONVILLE, FLORIDA



CLEANUP ALONG ST. MARYS
RIVER WATERFRONT
ST. MARYS, GEORGIA

