



SAWMILL SLOUGH PRESERVE, UNIVERSITY OF NORTH FLORIDA

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History

The University of North Florida was established in 1972. The undeveloped area of UNF campus is primarily wetland habitat and conservation land. Historically, the land was used for logging and turpentine production by the Skinner family, and was passed down from generation to generation. Land sold and donated to UNF by the Skinner family has led to much growth of the campus.⁸ Unfortunately, due to lack of records and data, the historical biodiversity of the land is unclear.

The Sawmill Slough Preserve is 382 acres of natural area that was officially designated as a preserve in 2006 by UNF President John Delaney.^{5,6,7} Originally, the natural area was considered a bird sanctuary in order to protect it from hunting and development. Members of the Sawmill Slough Conservation Club (SSCC), or "Sloughies," played an integral role in the design and management of the preserve. Plans for road development led to a petition to set aside land for conservation purposes. Old timber roads were transformed into recreational trails by the SSCC and subsequently dedicated to its advisor, Dr. Robert W. Loftin.⁹ Furthermore, the SSCC President and UNF Lead Ranger, John M. Golden, was instrumental in the design and philosophy of the preserve and kept up the nature trails for over 20 years.^{3,4} The spirit of the Sawmill Slough has been kept alive through dedication to environmental education, conservation and research.

As stated in the official designation, the purpose of the preserve is to "assure that the Sawmill Slough Preserve will persist in a natural condition."⁷ The preserve Curator, Mr. Chuck Hubbuch, has accepted the responsibility of natural resource management and related activities in the preserve. As a personal hobby, Mr. Hubbuch created species inventory lists for the preserve, with a particular focus on plants, which act as historical benchmarks. The knowledgebase and passion that Mr. Hubbuch shares not only enhances the quality of the preserve but also encourages others to appreciate and respect nature. Partnership between the UNF Environmental Center, Mr. Hubbuch and UNF Physical Facilities has promoted growth of the natural assets inventories and helped pave a path for ongoing and future projects in the preserve.



Dr. Robert "Doc" Loftin in the Sawmill Slough (left).
Petition against the campus loop road entering the
Sawmill Slough (right).



Management

The UNF Environmental Center works closely with the preserve Curator, Mr. Chuck Hubbuch, and UNF Physical Facilities.

➤ Recreation, Education, Research

- Eco-adventures, Eco-camp
- Biology, Chemistry, Fine Arts and other coursework

➤ Prescribed Burns

- 5 year burn plan to encourage the growth of understory plant biodiversity

➤ Invasive Plant Control

- Removal of tallow, camphor and chinaberry trees as well as other exotic pest plants to allow native species to flourish

➤ Campus Natural Assets Inventory (CNAI)

- Presence/Absence benchmarks

- Plants (550+)
- Birds (163+)
- Reptiles/Amphibians (61+)
- Insects/Invertebrates (170+)
- Mammals (21+)
- Fish (7+)

➤ Water Quality Monitoring

- Inflow/Outflow of preserve

➤ Digital Archive

- Online inventory
- Interactive map



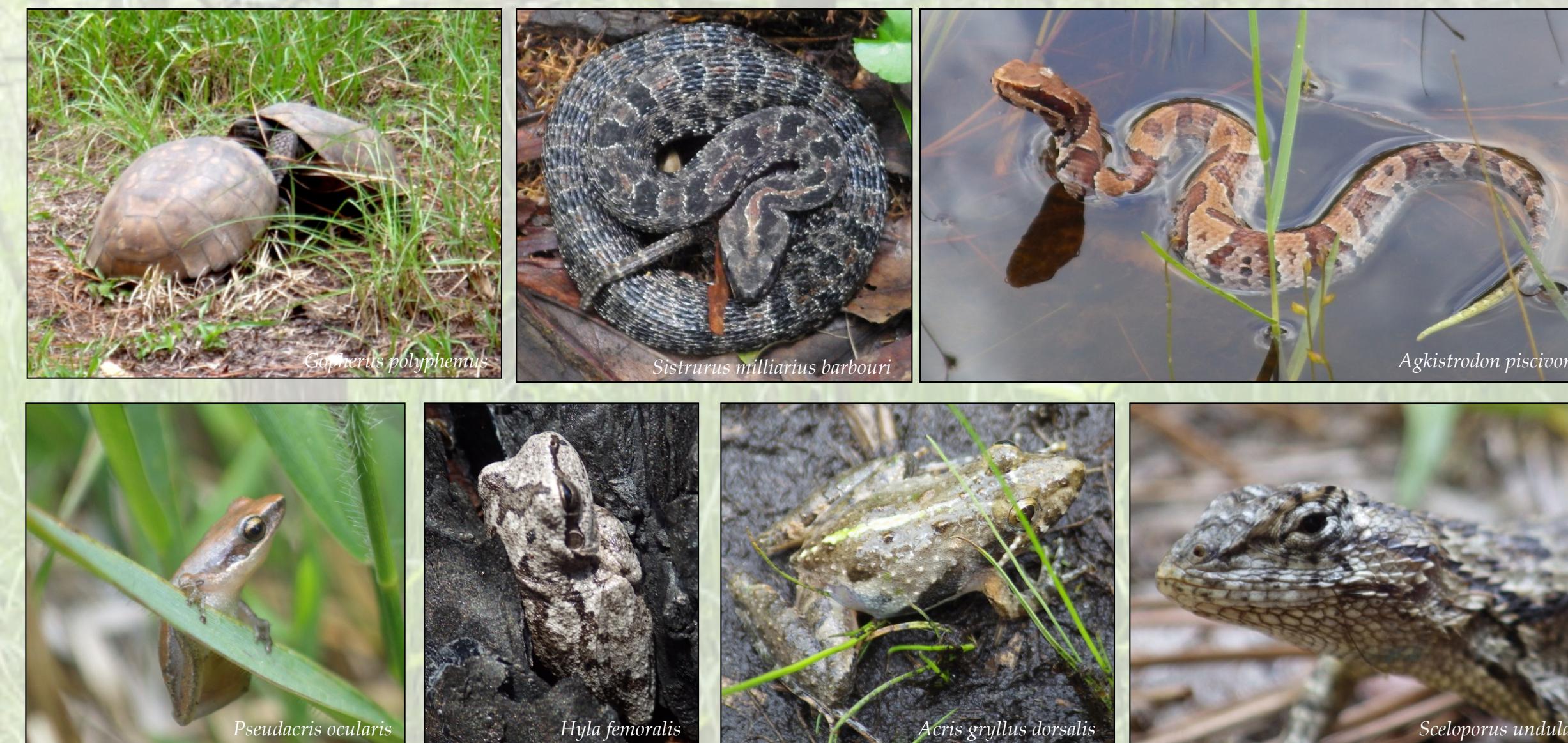
Justin Lemmons helping with pest plant control (top).
Adam Bauernfeind charming a black racer (right).



White-tailed deer utilizing wildlife culvert along UNF Eco-road.



Pandion haliaetus
Bubul virginianus
Mycteria americana



Gopherus polyphemus
Sistrurus miliarius barbouri
Agkistrodon piscivorus
Pseudacris ocularis
Hyla femoralis
Acris gryllioides
Sceloporus undulatus



Arphia granulata
Schinia sanguinea
Acanthocinus aedilis
Perithemis tenera
Chalcophora georgiana
Schistocerca obscurum
Strymon melinus
Brunneria borealis
Chrysomela scripta



Lygodesmia aphylla
Platanthera cristata
Sarracenia minor
Utricularia juncea
Polygala cruciata
Lilium catesbeianum
Drosera brevifolia



Mr. Chuck Hubbuch, Preserve Curator



June 2013 controlled burn in gopher tortoise habitat.

Discussion

Florida is home to a rich biodiversity and proper conservation plans are crucial for protecting rare species and their habitats.²⁴ The mission of the preserve is to encourage natural biodiversity. Some species may have been lost due to lack of habitat or past land management practices, such as logging and lack of fire.

Fire plays a vital role in promoting biodiversity among understory plant communities and is known to benefit carnivorous plants.^{1,2} The preserve contains 11 carnivorous plant species and various FL threatened species such as the hooded pitcher plant (*Sarracenia minor*), pine lily (*Lilium catesbaei*), crested fringed orchid (*Platanthera cristata*) and gopher tortoise (*Gopherus polyphemus*). The ongoing inventory lists not only act as historical benchmarks, but as guidance for future research and investigations as well. Plant, bird and reptile/amphibian lists are the most complete, and over 36 plant species have been vouchered for Duval County by Mr. Hubbuch and prior Environmental Center staff. Inventories of insects/invertebrates, fish and lichens have begun to receive more attention. Assessment of candidates suitable for reintroduction is also an area of interest. Further research is needed to support expansion of the preserve, build inventories and monitor ecosystem health and biodiversity.

Research

- Anthony Rossi, Ph.D
 - Hooded pitcher plant, turkey oak, bay trees and ambrosia beetle
- Daniel Moon, Ph.D.
 - Hooded pitcher plant, baccharis
- Joseph Butler, Ph. D.
 - Gopher tortoise monitoring
- Kelly Smith, Ph.D.
 - Water quality monitoring and fish sampling
- Kerry Clark, Ph.D
 - Ticks and associated diseases

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References 1. Bartholot, W., S. Potenski, R. Seiter, and I. Haeser. 2007. *The curious world of carnivorous plants: a guide to their biology and cultivation*. Portland, OR: Timber Press, Inc.

2. Dowd, J.J. and R.L. Myers. 1990. *Ecosystems of Florida*. University of Central Florida Press: Orlando, FL.

3. Glitzenstein, J.S., W.J. Platt, and D.R. Strong. 1995. Effects of fire regime and habitat on tree dynamics in north Florida longleaf pine savannas. *Ecological Monographs* 65(4): 441-476.

4. Kautz, R.S. and J.A. Cox. Strategic habitats for biodiversity conservation in Florida. *Conservation Biology*, 15(4): 857-867.

5. Woodward, M.W. 1993. *Fight on! A twenty-year history of the Sawmill Slough conservation club*. Michael W. Woodward: Jacksonville, FL.

6. Woodward, M.W. and E.B. Wiggins. 2003. *Fight on! A thirty-year history of the Sawmill Slough conservation club*. Michael W. Woodward and Erin B. Wiggins: Jacksonville, FL.

7. http://www.unf.edu/physicalfacilities/Sawmill_Slough_Preserve.aspx

8. http://www.unf.edu/recreation/eco/activities/2013/05/20/bsm-inventory.pdf

10. http://www.unf.edu/publishrelations/media_relations/press/2013/UNF_Building_Honors_A_C_Skinne_families.aspx

11. http://www.unf.edu/recration/eco/Adventure/trails.aspx