

MATTHEW J. ARESCO

Director
Nokuse Plantation
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EDUCATION

2005 – Ph.D. – Department of Biological Science, Florida State University

Advisor: Frances James, Dissertation Title: Ecological relationships of turtles in northern Florida lakes: a study of omnivory and the structure of a lake food web.
Degree date – April 29, 2005.

1998 – M.S., Zoology; Minor in Ecology – Auburn University, Alabama.

Advisor: Craig Guyer, Thesis Title: Growth and burrow abandonment of the gopher tortoise, *Gopherus polyphemus*, in slash pine plantations of southern Alabama.
Degree date – March 20, 1998.

1985 – B.A., English; Minor in Communications – Fairfield University, Connecticut

PROFESSIONAL EXPERIENCE

- 2006-2016 Director, Nokuse Plantation, Walton County, Florida. Responsible for the restoration, management, and operations of a private 54,400 acre preserve and conservation lands in Florida and Alabama all owned by Mr. M. C. Davis.
- 2002-2016 Founder and President of the Lake Jackson Ecopassage Alliance, Inc., a non-profit 501c3 charitable organization to develop broad-based public support and funding for the construction of a wildlife crossing on U.S. Highway 27 at Lake Jackson, FL (www.lakejacksonturtles.org). Worked with the Florida Department of Transportation and Leon County to design, fund, and construct the wildlife crossings. Constructed, monitored, and maintained a temporary fence system from 2000-2006 to prevent turtles, alligators, and other wildlife from being killed on >1 mile of US 27 at Lake Jackson.
- 2001-2004 Graduate Research Assistant - Florida State University – participated in surveys of wetland habitats for species diversity and monthly surveys of freshwater littoral communities and including censuses of populations of least killifish, *Heterandria formosa*. Maintained an experimental population of least killifish.
- 1998 Research Technician - Joseph W. Jones Ecological Research Center, Newton, Georgia - Coordinated a statistical analysis and interpretation of a gopher tortoise

database collected over four years on the Ichauway Preserve. Assisted in various ongoing field projects on the ecology of gopher tortoises and the longleaf pine ecosystem.

1996 - 1997 Research Technician - Gopher Tortoise Project - U.S. Forest Service, Conecuh National Forest, Alabama. Trapped tortoises to obtain life history and ecology data, surveyed burrows, GPS mapping of burrows, vegetation sampling, and habitat analysis

PUBLICATIONS

Peer Reviewed Research Papers

Aresco, M.J., J. Travis, and P. S. D. MacRae. 2015. Trophic interactions of turtles in a north Florida lake food web: prevalence of omnivory. *Copeia*: 2015(2).

Ennen, J. R., B.R. Kreiser, C. P. Qualis, D. Gaillard, M. Aresco, R. Birkhead, T. D. Tuberville, E. D. McCoy, H. Mushinsky, T. W. Hentges, and A. Schrey. 2012. Mitochondrial DNA assessment of the phylogeography of the gopher tortoise. *Journal of Fish and Wildlife Management* 3:110-122.

Butler, J. M., C. K. Dodd, Jr., M. Aresco., and J. D. Austin. 2011. Morphological and molecular evidence indicates that the Gulf Coast box turtle (*Terrapene carolina major*) is not a distinct evolutionary lineage in the Florida Panhandle. *Biological Journal of the Linnean Society* 102: 889-901.

Aresco, M. J. 2010. Competitive interactions of two species of freshwater turtles, a generalist omnivore and an herbivore, under low resource conditions. *Herpetologica* 66:259-268.

Aresco, M. J. 2009. Environmental correlates of the abundances of three species of freshwater turtles in lakes of northern Florida. *Copeia* 2009:545-555.

Aresco, M. J., and M. S. Gunzburger. 2007. Ecology and morphology of the common snapping turtle, *Chelydra serpentina*, in northwestern Florida. *Southeastern Naturalist* 6:435-448.

Palis, J. G., and M. J. Aresco. 2007. Immigration orientation and migration distance of four pond-breeding amphibians in northwestern Florida. *Florida Scientist* 70:251-263.

Palis, J. G., M. J. Aresco, and S. Kilpatrick. 2006. Breeding biology of a Florida population of the flatwoods salamander (*Ambystoma cingulatum*) during a drought. *Southeastern Naturalist* 5:1-8.

Aresco, M. J. 2005. The effect of sex-specific terrestrial movements and roads on the sex ratio of freshwater turtles. *Biological Conservation* 123(1):37-44.

Aresco, M. J. 2005. Mitigation measures to reduce highway mortality of turtles and other herpetofauna at a north Florida lake. *Journal of Wildlife Management* 69:549-560.

- Aresco, M. J. 2004. Reproductive ecology of *Pseudemys floridana* and *Trachemys scripta* in northwestern Florida. *Journal of Herpetology* 38(2): 89-96.
- Aresco, M. J., and M. S. Gunzburger. 2004. Effects of large-scale sediment removal on herpetofauna in Florida wetlands. *Journal of Herpetology* 38(2):275-279.
- Aresco, M. J. 2003. Highway mortality of turtles and other herpetofauna at Lake Jackson, Florida, USA and the efficacy of a temporary fence/culvert system to reduce road kills. In: C. L. Irwin, P. Garrett, and K. P. McDermott (eds.), 2003 Proceedings of the International Conference on Ecology and Transportation, pp. 433-449. Center for Transportation and the Environment, North Carolina State University, Raleigh, N. C.
- Aresco, M. J. and J. L. Dobie. 2000. Variation in shell arching and sexual size dimorphism of river cooters, *Pseudemys concinna*, from two river systems in Alabama. *Journal of Herpetology* 34(2): 313-317.
- Aresco, M. J. 1999. Habitat structures associated with juvenile gopher tortoise burrows on pine plantations in Alabama. *Chelonian Conservation and Biology* 3(3):507-509.
- Aresco, M. J. and C. Guyer. 1999. Growth of the tortoise *Gopherus polyphemus* in slash pine plantations of south-central Alabama. *Herpetologica* 55(4):499-506.
- Aresco, M. J. and C. Guyer. 1999. Burrow abandonment by gopher tortoises in slash pine plantations of the Conecuh National Forest. *Journal of Wildlife Management* 63:26-35.
- Aresco, M. J. and C. Guyer. 1998. Efficacy of using scute annuli to determine growth histories and age of *Gopherus polyphemus* in southern Alabama. *Copeia* 1998:1094-1100.
- Aresco, M. J. 1996. Geographic variation in the morphology and lateral stripe of the green treefrog (*Hyla cinerea*) in the southeastern United States. *Am. Midland Naturalist* 135:293-298.

Book Chapters

- K. H. Berry, and M. J. Aresco. 2014. Threats and conservation needs for North American tortoises, pp. 143 -158. In: *Biology and Conservation of North American tortoises*, D. C. Rostal, E. D. McCoy, and H. R. Mushinsky (eds.). Johns Hopkins University Press, Baltimore, MD.
- Aresco, M. J., M. A. Ewert, M. S. Gunzburger, P. A. Meylan, and G. L. Heinrich. 2006. Snapping turtle, *Chelydra serpentina*. In: *Biology and Conservation of Florida Turtles*, P. A. Meylan (ed.). *Chelonian Research Monographs* 3:44-57.
- Aresco, M. J. and R. M. Shealy. 2006. Escambia map turtle, *Graptemys ernsti*. In: *Biology and Conservation of Florida Turtles*, P. A. Meylan (ed.). *Chelonian Research Monographs* 3:273-278.

Aresco, M.J. 2004. Gopher tortoise, *Gopherus polyphemus*. In: Alabama Wildlife, Volume 3: Imperiled Amphibians, Reptiles, Birds, and Mammals, R. E. Mirarchi, M. A. Bailey, T. M. Haggerty, and T. L. Best (eds.), pp. 82-83. The Univ. of Alabama Press, Tuscaloosa.

Aresco, M.J. 2004. River frog, *Rana heckscheri*. In: Alabama Wildlife, Volume 3: Imperiled Amphibians, Reptiles, Birds, and Mammals, R. E. Mirarchi, M. A. Bailey, T. M. Haggerty, and T. L. Best (eds.), pp. 17-18. The Univ. of Alabama Press, Tuscaloosa.

GRANTS

Nongame Wildlife Grant, Florida Fish and Wildlife Conservation Commission, 2002-2004.
"Ecological relationships of the herbivorous Florida cooter (*Pseudemys floridana*) and the omnivorous yellow-bellied slider (*Trachemys scripta*) and their role in aquatic food webs in lakes of northern Florida". Project Number NG01-011.

Florida State University Dissertation Research Grant, 2001.

Graduate Student Research Grant, Graduate Fellowship Committee, Auburn University, 1996.

AWARDS

Graduate Student Leadership Award, Florida State University, April 2005

Florida Wildlife Federation, Wildlife Conservationist of the Year, 2004.

The Humane Society of Collier County, Walter Turken Award, January 2004.

Florida Chapter of the Sierra Club, Cypress Award, "For Contributing Greatly to the Public's Environmental Awareness", November 2003.

Leon County Humane Society, Purple Paw Award - award presented for saving over 8000 turtles from being road-killed on U.S. Highway 27 from 2000-2003, October 2003

Florida State University Student Profiles of Service Award, November 2001.

Leon County Board of County Commissioners, Certificate of Appreciation for wildlife mitigation work during the 1999-2000 dry-down of Lake Jackson, October 2001

Graduate Teaching Assistant of the Year, Auburn University, Department of Zoology and Wildlife Science, 1997

PROFESSIONAL AFFILIATIONS

Gulf Coastal Plains Ecosystem Partnership
IUCN/SSC Tortoise and Freshwater Turtle Specialist Group
Society for Conservation Biology
Chelonian Research Foundation
Alabama Partners in Amphibian and Reptile Conservation (Steering Committee)
Gopher Tortoise Council

Society for the Study of Amphibians and Reptiles
American Society of Ichthyologists and Herpetologists (Conservation Committee)
The Herpetologists' League, Inc.

SERVICE

IUCN/SSC Tortoise and Freshwater Turtle Specialist Group
ASIH Conservation Committee
Gopher Tortoise Stakeholders Group, Florida Fish and Wildlife Conservation Commission
Lake Jackson Ecopassage Scientific Advisory Group
Lake Jackson Ecopassage Alliance, Inc. – President
Friends of Lake Jackson, Inc. – Past-President and Board member
Peer Reviewer for Copeia, Southeastern Naturalist, Biological Conservation, Applied
Herpetology, Journal of Herpetology, Journal of Wildlife Management - 2003-2014

Specific Job Activities
Matthew J. Aresco
Director, Nokuse Plantation

1. Direct, organize, plan, and execute all restoration and management activities on 51,000 acres in Florida and 3400 acres in Alabama.
2. Timber management and forestry. Direct all timber sales, negotiate timber prices with timber buyer, determine and mark boundaries of timber sales, determine method of cut and mark leave trees, flag all sensitive areas within logging areas, mark log ramp areas, truck turnarounds, daily monitoring of logging operations, collection of logging tickets. Evaluate the health of timber stands and plan and direct all forest management activities that are necessary. Create and maintain accurate timber stand maps for all Nokuse forest land.
3. Reforestation. Direct, plan and implement all longleaf pine reforestation activities including mapping and selection of reforestation areas each year, purchase of seedlings, hiring and scheduling planters and herbicide contractors, supervising herbicide site prep, mechanical site prep and site prep burning required prior to planting, supervise planting of seedlings including setting spacing and density requirements. Ensure all site prep is completed on schedule each year so that seedlings are planted at proper time to ensure maximum survival. Evaluate and monitor seedling survival and make necessary adjustments where possible the following planting season.
4. Gopher Tortoise Biologist and Relocation Coordinator. Plan, supervise, and direct all gopher tortoise relocation projects including selecting relocation sites, directing enclosure construction and maintenance, land management, monitoring schedule, research, data collection, and data entry. Direct and coordinate Humane Society-funded relocation team in central Florida for all rescue relocations. Includes all permitting, compliance and reporting to Florida Fish and Wildlife Conservation Commission for all gopher tortoise relocation projects.
5. Wetlands Mitigation Bank Manager. Plan and execute all required restoration and management activities on Nokuse Wetlands Mitigation Bank according to DEP and USACOE schedule for credit release. Provide Mike Dentzau with information needed for his biennial reporting to DEP and USACOE.
6. Plan and supervise all road maintenance, gate repair, and fencing.
7. Direct and supervise Nokuse Plantation security including communicating problem areas with FWC officers, monthly meetings with officers to discuss security issues and solutions, and evaluating monthly security reports
8. Human resources management which includes daily supervision and direction of 2 full-time employees, 4 part-time employees, and FWC security officers, tracking daily work activities of Nokuse employees, and compiling and reporting monthly hours.
9. Hunt Club Manager. Manage the Nokuse hunt club consisting of 30 hunters. Communication rules access points, and maps to hunters, collection of hunt club fees each year, distribution of hunt club identification, direct point of contact for all issues.
10. Manage and supervise the prescribed fire program which includes planning and scheduling seasonal burn areas, prioritizing burn units, mapping all burn areas, evaluating burns, defining burn units and directing establishment of new firelines and maintenance of existing lines, determine where mechanical fuel reduction and hardwood midstory control should be used, working with Florida Forest Service on fire-related issues, attending regional fire meetings.
11. Wildlife biologist –monitoring and tracking the distribution and abundances and health of wildlife populations (both rare and common species) on Nokuse Plantation.
12. GIS specialist. Maintain Nokuse Plantation GIS database on ARC GIS 10. GIS mapping of all restoration and management activities. Provide GIS data of all rare species observations to agencies.

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- 13.. Work directly with State and Federal agencies, land appraisers, consulting firms, in support of sale of conservation easements, includes GIS mapping, legal descriptions, providing timber data, providing species data, and photographs.
 14. Special projects for M.C. Davis: mapping for other conservation projects and for-profit projects, projects such as locating and moving Cracker house and plantings.
 15. Supervise and direct all equipment repairs, maintenance and upgrades. Also supervise all repairs and maintenance to Nokuse shop, apartment and house. Monitor fuel usage and equipment hours.
 16. Direct point of contact for resolution of all issues with adjacent landowners including boundary disputes, encroachments, security issues, wildlife-related issues, trash dumping, and logging on adjacent lands.
 17. Research Coordinator. Supervise all outside research projects by university graduate students and others on Nokuse Plantation. Includes reviewing research proposals, approving research plans and research areas, providing access.
 18. Public relations and media relations. Deliver information of interest about Nokuse Plantation to the press, write and edit press releases, send out emails and update websites, and write articles. Main goal is to get coverage from journalists on different events or happenings.
 19. Plan and direct all invasive species control measures especially cogongrass and hogs. Plan and map annual cogongrass herbicide areas, determine herbicide rates and mixtures based on best available research and past experience. Evaluate and monitor success of spraying. Order all herbicides for cogongrass control. Monitor and supervise hog control efforts (trapping and shooting). Direct hog control efforts to most sensitive areas where most damage is being caused.
 20. Plan and supervise groundcover restoration efforts. Direct collection of seed on-site and coordinate acquisition of from seed off-site sources, select seed planting sites, establishment and maintenance of native groundcover seed nursery areas.
 21. Grant writer. Apply for all available grants and funding that are available for the array of projects that we conduct on Nokuse Plantation (a for-profit corporation). Includes research of possible grant funding sources, grant application, and, if grant is received, required reporting and/or inspections by the granting institution or agency (see attached for lists of grants received since 2010). Work with Gulf Coastal Plains Ecosystem Partnership and The Longleaf Alliance on partnership grants for Nokuse that we would not be able to apply for otherwise as a for-profit corporation.
 22. Purchasing and ordering. Responsible for purchasing, ordering, invoice-tracking of all supplies, tools, and equipment.

Grant Funding - Nokuse Plantation (2010 -2013)

2010-2013 – The Humane Society of the U.S. - Reimbursements for Costs of Gopher Tortoise Rescue Relocations - \$97,620.97

2013 – National Fish and Wildlife Foundation Grant - \$54,000 to Longleaf Alliance for Nokuse projects (\$25,000 gopher tortoise rescue relocations and \$29,000 for Establishment of Groundcover Seed Production Field)

2013 - FWC Landowner Assistance Program Grant - \$51,625.50

2012 - National Fish and Wildlife Foundation Longleaf Grant - \$44,500

September 2011 - USFWS Magnolia Creek Bridge and Stream Restoration - \$202,500

2010-2012 - FWC Multistate Sandhill Restoration Grant - \$72,500

2010 - My Space Longleaf Grant - \$155,000

Total: \$677,746.47