

## BETSIE B. ROTHERMEL

Archbold Biological Station  
123 Main Drive, Venus, FL 33960

brothermel@archbold-station.org  
(863) 465-2571 ext. 231

### EDUCATION

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2003	University of Missouri-Columbia	Ph.D. Biological Sciences Advisor: Dr. R.D. Semlitsch
1994	Pennsylvania State University	M.S. Ecology, Conservation Biology option Advisor: Dr. R.H. Yahner
1990	Cornell University	B.S. Natural Resources

### PROFESSIONAL POSITIONS

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2016-present	<u>Associate Research Biologist and Program Director</u> , Restoration Ecology and Herpetology Program, Archbold Biological Station, Venus, FL	
2008-2016	<u>Assistant Research Biologist and Program Director</u> , Restoration Ecology and Herpetology Program, Archbold Biological Station, Venus, FL	
2006-2008	<u>Assistant Professor</u> in Department of Biology and <u>Principal Investigator</u> , The Center of Excellence for Field Biology, Austin Peay State University, Clarksville, TN	
2006-2009	<u>Adjunct Faculty</u> , Odum School of Ecology, University of Georgia	
2003-2006	<u>Assistant Research Scientist</u> (February – May 2006); <u>Postdoctoral Research Associate</u> (September 2003 – January 2006), University of Georgia, Savannah River Ecology Lab, Aiken, SC. Faculty Mentor: Dr. J.W. Gibbons.	
1998-1999	<u>Resource Management Assistant</u> , Georgia Department of Natural Resources, State Parks & Historic Sites Division, Atlanta, GA – Coordinated a pilot project to develop recommendations for conserving biodiversity in four state parks. Developed GIS maps and educational materials for park personnel.	
1996-1998	<u>Director of Education</u> (June 1997 – June 1998) & <u>Volunteer Coordinator</u> (January 1996 – June 1997), Georgia Wildlife Federation, Conyers, GA – Coordinated the Backyard & Schoolyard Wildlife Habitat programs. Conducted public outreach and handled requests for information. Managed a 500-person volunteer program, special events and field projects, including stream monitoring and wildlife surveys. Produced newsletters for environmental educators and GWF members.	
1995	<u>Stewardship Assistant</u> , The Nature Conservancy of Georgia, Atlanta, GA – Wrote fire management plans and served on fire crew. Monitored rare plant populations. Assisted with preserve management and supervised volunteers.	
1992	<u>Staff Assistant</u> , Zoo Atlanta, Atlanta, GA – Co-led Junior Zoo Crew, a youth volunteer program.	
1990-1991	<u>Assistant Scientist</u> , Versar, Inc. Columbia, MD – Conducted monitoring of estuarine systems for US EPA's Environmental Monitoring and Assessment Program.	

## RESEARCH INTERESTS

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- Population biology, behavioral ecology, and natural history of amphibians and reptiles
- Restoration of agriculturally impacted wetlands and fire-suppressed sandhill
- Disturbance dynamics and community ecology of seasonal wetlands
- Amphibian disease ecology

## PUBLICATIONS

<https://orcid.org/0000-0002-3951-2623>

† graduate student, + undergraduate or post-baccalaureate intern

## PEER-REVIEWED PUBLICATIONS

Stemle L<sup>†</sup>, **Rothermel BB**, Searcy CA (2022) GPS technology reveals larger home ranges for immature Gopher Tortoises. *J Herpetol* 56:172-179 [doi: 10.1670/20-128]

Castellón TD, **Rothermel BB**, Beck JL, Fort JL, O'Connor KM (2022) Divergent size-class distributions of Gopher Tortoise burrows in scrub and flatwoods habitats of peninsular Florida. *Chelonian Conserv Biol* 21:112-121 [doi: 10.2744/CCB-1523.1]

Earl JE, Blomquist SM, Harper EB, Hocking DJ, Hunter, Jr ML, Johnson JR, Osbourn MS, Patrick DA, Popescu VD, Rittenhouse TAG, **Rothermel BB** (2022) Amphibian biomass export from geographically isolated wetlands: temporal variability, species composition, and potential implications for terrestrial ecosystems. *Diversity* 14(3), 163 [doi:10.3390/d14030163]

Kominoski JS, Fernandez M<sup>+</sup>, Breault P, Sclater V, **Rothermel BB** (2021) Fire severity and post-fire hydrology drive nutrient cycling and plant community recovery in intermittent wetlands. *Ecosystems* 25:265-278 [doi:10.1007/s10021-021-00653-5]

Bauder JM, Breining DR, Bolt MR, Legare ML, Jenkins CL, **Rothermel BB**, McGarigal K (2020) Movement barriers, habitat heterogeneity, or both? Testing hypothesized effects of landscape features on home range sizes in Eastern Indigo Snakes. *J Zool* 311:204-216 [doi: 10.1111/jzo.12777]

Castellón TD, Anderson CD, **Rothermel BB**, Beck JL (2020) Differential effects of elevation and microtopography on Gopher Tortoise burrow distributions in southern Florida. *Copeia* 108:140-150 [doi:10.1643/CH-19-228]

Howell HJ<sup>†#</sup>, **Rothermel BB**<sup>#</sup>, White KN<sup>+</sup>, Searcy CA (2019) Gopher Tortoise demographic responses to a novel disturbance regime. *J Wildl Manage* 84:56-65 [doi:10.1002/jwmg.21774]  
<sup>#</sup>joint first authors

McHugh SW<sup>+</sup>, White KN, **Rothermel BB**, Tuberville TD, Zamudio KR (2019) Nesting and false nesting behaviors of Gopher Tortoises (*Gopherus polyphemus*). *Herpetol Rev* 50:453-459

Yuan ML<sup>†</sup>, White KN, **Rothermel BB**, Zamudio KR, Tuberville TD (2019) Close kin mating, but not inbred parents, reduces hatching rates and offspring quality in a threatened tortoise. *J Evol Biol* 32:1152-1162 [doi:10.1111/jeb.13518]

Howell HJ<sup>†</sup>, Mothes CC<sup>†</sup>, Clements SL<sup>†</sup>, Catania SV, **Rothermel BB**, Searcy CA (2019) Amphibian responses to livestock use of wetlands: new empirical data and a global review. *Ecol Applications* 29:e01976 [doi:10.1002/eap.1976]

- White KN<sup>†</sup>, **Rothermel BB**, Zamudio KR, Tuberville TD (2018) Male body size predicts overall reproductive success but not within-clutch paternity patterns in Gopher Tortoises (*Gopherus polyphemus*). *J Heredity* 109:791-801
- Bauder JM, Breining DR, Bolt MR, Legare ML, Jenkins CL, **Rothermel BB**, McGarigal K (2018) Multi-level, multi-scale habitat selection in a wide-ranging, federally threatened snake. *Landscape Ecol* 33:743-763
- Castellón TD, **Rothermel BB**, Bauder JM (2018) Gopher Tortoise burrow use, home range, seasonality and habitat fidelity in scrub and mesic flatwoods of southern Florida. *Herpetologica* 74:8-21
- Robertson JM, Fitzpatrick SW, **Rothermel BB**, Chan LM (2017) Fire does not strongly affect genetic diversity or structure of a common treefrog in the endangered Florida scrub. *J Heredity* 109:243-252
- Tucker RC, **Rothermel BB**, Daskin JH (2017) Preparing Florida pasture for grassland restoration: Seedling establishment after herbiciding and tilling. *Nat Areas J* 37:39-48
- Bauder JM, Breining DR, Bolt MR, Legare ML, Jenkins CL, **Rothermel BB**, McGarigal K (2016) The influence of sex and season on conspecific spatial overlap in a large, actively-foraging colubrid snake. *PLoS ONE* 11(8):e0160033
- Bauder JM, Breining DR, Bolt MR, Legare ML, Jenkins CL, **Rothermel BB**, McGarigal K (2016) Seasonal variation in Eastern Indigo Snake (*Drymarchon couperi*) movement patterns and space use in peninsular Florida at multiple temporal scales. *Herpetologica* 72:214-226
- Rothermel BB**, Miller DL, Travis ER, Gonynor McGuire JL, Jensen JB, Yabsley MJ (2016) Disease dynamics of red-spotted newts and their anuran prey in a montane pond community. *Dis Aquat Org* 118:113-127
- Castellón TD, **Rothermel BB**, Nomani SZ (2015) A comparison of line-transect distance sampling methods for estimating Gopher Tortoise population densities. *Wildl Soc Bull* 39:804-812
- Noss CF<sup>+</sup>, **Rothermel BB** (2015) Juvenile recruitment of Oak Toads (*Anaxyrus quercicus*) varies with time-since-fire in seasonal ponds. *J Herpetol* 49:364-370
- Yuan ML<sup>+</sup>, Dean SH<sup>+</sup>, Longo AV, **Rothermel BB**, Tuberville TD, Zamudio KR (2015) Kinship, inbreeding, and fine-scale spatial structure influence gut microbiota in a hindgut-fermenting tortoise. *Mol Ecol* 24:2521-2536
- Scott DE, Yanes Y, **Rothermel BB**, Pilgrim M, Romanek CS (2015) Efficacy of labeling wetlands with enriched <sup>15</sup>N to determine amphibian dispersal. *Wetlands* 35:349-356
- Drake DL, Ousterhout BH, Johnson JR, Anderson TL, Peterman WE, Shulse CD, Hocking DJ, Lohraff KL, Harper EB, Rittenhouse TAG, **Rothermel BB**, Eggert LS, Semlitsch RD (2015) Pond-breeding amphibian community composition in Missouri. *Am Midland Nat* 174:180-187
- Bateman PW, Fleming PA, Jones BC, **Rothermel BB** (2014) Defensive responses of Gopher Tortoises (*Gopherus polyphemus*) are influenced by risk assessment and level of habituation to humans. *Behaviour* 151:1267-1280
- Rothermel BB**, Castellón TD (2014) Factors influencing reproductive output and egg size in a southern population of Gopher Tortoises. *Southeastern Nat* 13:705-720

- Rothermel BB**, Travis ER, Miller DL, Hill RL, McGuire JL, Yabsley MJ (2013) High occupancy of stream salamanders despite high *Ranavirus* prevalence in a southern Appalachians watershed. *EcoHealth* 10:184-189
- O'Connor JH<sup>+</sup>, **Rothermel BB** (2013) Distribution and population characteristics of African Jewfish and Brown Hoplo in modified wetlands in south Florida. *Am Midland Nat* 170:52-65
- Jones MEB, Armien AG, **Rothermel BB**, Pessier AP (2012) Granulomatous myositis associated with a novel alveolate pathogen in an adult Southern Leopard Frog (*Lithobates sphenoccephalus*). *Dis Aquat Org* 102:163-167
- Castellón TD, **Rothermel BB**, Nomani SZ (2012) Gopher Tortoise (*Gopherus polyphemus*) burrow densities in scrub and flatwoods habitats of peninsular Florida. *Chelonian Conserv Biol* 11:153-161
- Semlitsch RD, Todd BD, Blomquist SM, Calhoun AJK, Gibbons JW, Gibbs JP, Graeter GJ, Harper EB, Hocking DJ, Hunter ML, Jr., Patrick DA, Rittenhouse TAG, **Rothermel BB** (2009) Effects of timber harvest on amphibian populations: understanding mechanisms from forest experiments. *BioScience* 59:853-862
- Todd BD, Luhring TM<sup>†</sup>, **Rothermel BB**, Gibbons JW (2009) Effects of forest removal on amphibian migrations: implications for habitat and landscape connectivity. *J Appl Ecol* 46:554-561
- Chatfield MWH, **Rothermel BB**, Brooks C, Kay J<sup>+</sup> (2009) Detection of *Batrachochytrium dendrobatidis* in amphibians from the Great Smoky Mountains of North Carolina and Tennessee, USA. *Herpetol Rev* 40:176-179
- Vazquez VM<sup>†</sup>, **Rothermel BB**, Pessier AP (2009) Experimental infection of North American plethodontid salamanders with the fungus *Batrachochytrium dendrobatidis*. *Dis Aquat Org* 84:1-7
- Todd BD<sup>†</sup>, **Rothermel BB**, Reed RN, Luhring TM<sup>†</sup>, Schlatter K<sup>+</sup>, Trenkamp L<sup>+</sup>, Gibbons JW (2008) Habitat alteration increases invasive fire ant abundance to the detriment of amphibians and reptiles. *Biol Invasions* 10:539-546
- Graeter GJ<sup>†</sup>, **Rothermel BB**, Gibbons JW (2008) Habitat selection and movement of pond-breeding amphibians in experimentally fragmented pine forests. *J Wildl Manage* 72:473-482
- Hocking DJ, Rittenhouse TAG, **Rothermel BB**, Johnson JR, Conner CA, Harper EB, Semlitsch RD (2008) Breeding and recruitment phenology of amphibians in Missouri oak-hickory forests. *Am Midland Nat* 160:41-60
- Rothermel BB**, Walls SC, Mitchell JC, Dodd, CK, Jr., Irwin L, Green DE, Vazquez VM<sup>+</sup>, Petranksa JW, Stevenson DJ (2008) Widespread occurrence of the amphibian chytrid fungus *Batrachochytrium dendrobatidis* in amphibian populations in the southeastern USA. *Dis Aquat Org* 82:3-18
- Graeter GJ<sup>†</sup>, **Rothermel BB** (2007) The effectiveness of fluorescent powdered pigments as a tracking technique for amphibians. *Herpetol Rev* 38:162-166
- Gibbons JW et al. (25<sup>th</sup> of 25 authors) (2006) Remarkable amphibian biomass and abundance in an isolated wetland: implications for wetland conservation. *Conserv Biol* 20:1457-1465

- Rothermel BB**, Semlitsch RD (2006) Consequences of forest fragmentation for juvenile survival in spotted (*Ambystoma maculatum*) and marbled (*A. opacum*) salamanders. *Can J Zool* 84:797-807
- Todd BD<sup>†</sup>, **Rothermel BB** (2006) Assessing quality of clearcut habitats for amphibians: effects on abundances versus vital rates in the Southern Toad (*Bufo terrestris*). *Biol Conserv* 133:178-185
- Rothermel BB**, Luhring TM<sup>+</sup> (2005) Burrow availability and desiccation risk of Mole Salamanders (*Ambystoma talpoideum*) in harvested versus unharvested forest stands. *J Herpetol* 39:619-626
- Rothermel BB** (2004) Migratory success of juveniles: a potential constraint on connectivity for pond-breeding amphibians. *Ecol Appl* 14:1535-1546
- Rittenhouse TAG, Doyle MC<sup>+</sup>, Mank CR<sup>+</sup>, **Rothermel BB**, Semlitsch RD (2004) Substrate cues influence habitat selection by Spotted Salamanders. *J Wildl Manage* 68:1151-1158
- Boone MD, Semlitsch RD, Fairchild JF, **Rothermel BB** (2004) Effects of an insecticide on amphibians in large-scale experimental ponds. *Ecol Appl* 14:685-691
- Rothermel BB**, Semlitsch RD (2002) An experimental investigation of landscape resistance of forest versus old-field habitats to emigrating juvenile amphibians. *Conserv Biol* 16:1324-1332
- Boone MD, Bridges CM, **Rothermel BB** (2001) Growth and development of larval Green Frogs (*Rana clamitans*) exposed to multiple doses of an insecticide. *Oecologia* 129:518-524
- Balcom BJ**, Yahner RH (1996) Microhabitat and landscape characteristics associated with the threatened Allegheny Woodrat. *Conserv Biol* 10:515-525

#### NATURAL HISTORY AND GEOGRAPHIC DISTRIBUTION NOTES

- Bakley TD<sup>+</sup>, **Rothermel BB** (2021) *Gopherus polyphemus* (Gopher Tortoise), Plastic ingestion. *Herpetol Rev* 52:630-631
- Harman MEA<sup>+</sup>, **Rothermel BB**, Heupel Greene A (2020) *Anaxyrus quercicus* (Oak Toad), Aberrant coloration. *Herpetol Rev* 51:559-560
- Lawson GR<sup>+</sup>, Norden AW, **Rothermel BB** (2019) *Anolis cristatellus* (Crested Anole), Geographic distribution. *Herpetol Rev* 50:524
- White KN<sup>†</sup>, **Rothermel BB**, White MT (2017) *Aspidoscelis sexlineata sexlineata* (Eastern Six-lined Racerunner), Reproduction. *Herpetol Rev* 48:185-186
- White KN<sup>†</sup>, **Rothermel BB**, White MT (2017) *Sceloporus woodi* (Florida Scrub Lizard), Nest site. *Herpetol Rev* 48:200-201
- Rothermel BB**, Forsburg ZR<sup>+</sup>, Phillips NC<sup>+</sup> (2013) *Osteopilus septentrionalis* (Cuban Treefrog), Post-invasion spread. *Herpetol Rev* 44:656-657
- Rothermel BB**, Jensen JB, Camp CD, Schwaner TD (2007) *Desmognathus folkertsi* (Dwarf Black-bellied Salamander), Geographic distribution. *Herpetol Rev* 38:213

#### BOOKS AND BOOK CHAPTERS

- Rothermel BB** (2008) *Hyla cinerea* In: Jensen J, Camp C, Gibbons JW, Elliott M (eds). *Amphibians and Reptiles of Georgia*. University of Georgia Press, Athens, GA
- Rothermel BB**, Gibbons JW (2008) *Virginia valeriae* In: Jensen J, Camp C, Gibbons JW, Elliott M (eds). *Amphibians and Reptiles of Georgia*. University of Georgia Press, Athens, GA

- Bishop CA, Cunnington DC, Fellers GM, Gibbs JP, Pauli BD, **Rothermel BB** (2003) Physical habitat and its alteration: a common ground for exposure of amphibians to environmental stressors. Pp 209-241 In: Linder G, Krest SK, Sparling DW (eds). *Amphibian Decline: An Integrated Analysis of Multiple Stressor Effects*. SETAC Press, Pensacola, FL
- Semlitsch RD, **Rothermel BB** (2003) A foundation for conservation and management of amphibians. Pp 242-259 In: Semlitsch RD (ed). *Amphibian Conservation*. Smithsonian Institution Press, Washington, DC
- McCullum J, **Rothermel B**, Rabolli C (1996) *Georgia Wildlife Viewing Guide*. Georgia Wildlife Press, Conyers, GA

#### TECHNICAL REPORTS

- Rothermel BB**, Fedders R (2022) Initial Outcomes of Gopher Tortoise (*Gopherus polyphemus*) Translocation at a Long-term Recipient Site in Southern Florida. Final report to The Fish & Wildlife Foundation of Florida. 43 pp.
- Rothermel BB**, Voves KA (2022) Population Monitoring of Gopher Tortoises (*Gopherus polyphemus*) at Avon Park Air Force Range. Final Report for 2022 to USFWS. Cooperative Agreement F17AC00807-07. 75 pp.
- Rothermel BB**, Fort JL, O'Connor KM, Beck JH (2017) Population Monitoring and Management of Gopher Tortoises (*Gopherus polyphemus*) and Eastern Indigo Snakes (*Drymarchon couperi*) at Avon Park Air Force Range. Final Report for 2014-2017 to USAF. Cooperative Agreement W9126G-12-2-00013. 142 pp.
- Castellón TD, **Rothermel BB** (2012) Population Survey and Monitoring of the Gopher Tortoise (*Gopherus polyphemus*) at Avon Park Air Force Range. Final Report for 2008-2011 to USAF. Cooperative Agreement W81XWH-06-2-0026. 253 pp.
- Rothermel BB**, Travis ER (2011) Establishment of an Amphibian Monitoring Program in the Southern Blue Ridge. Final Report for 2008-2010 to the Georgia DNR Wildlife Resources Division. 151 pp.

#### RESEARCH GRANTS

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|-----------|---|
| 2022-2023 | U.S. Fish & Wildlife Service: Population monitoring of Gopher Tortoises at Avon Park Air Force Range, Florida. BB Rothermel. \$211,802  |
| 2022      | Florida Fish & Wildlife Conservation Commission: Initial outcomes of Gopher Tortoise relocation at a long-term recipient site in southern Florida. BB Rothermel. \$34,842   |
| 2021-2022 | Disney Conservation Fund: High-resolution tracking of juvenile Gopher Tortoises. PI: BB Rothermel, co-PI: CA Searcy. \$50,000   |
| 2021-2024 | NSF Bridging Ecology and Evolution: Testing eco-evolutionary effects of genetic drift and gene flow in stressful environments. Award No. DEB-2016569. PI: S Fitzpatrick, co-PIs: BB Rothermel, G Bradburd. Total award \$858,309 ( <i>Archbold subaward \$105,830</i> ) |

- 2019-2020 Florida Cattle Enhancement Fund: What is the optimal grazing regime to maintain wetland forage production? PI: EH Boughton, co-PIs: G Sonnier, BB Rothermel. \$16,257
- 2019 Florida Fish & Wildlife Conservation Commission: Walking versus riding: an assessment of relative effectiveness of two methods for conducting Gopher Tortoise burrow surveys. BB Rothermel, LL Smith. \$6,792
- 2015-2018 NSF CSBR Natural History Collections: Transforming accessibility to the rich, site-based, multi-taxon collection of Archbold Biological Station. Award No. DBI-1458229. PI: H Swain, co-PIs: M Deyrup, R Bowman, E Menges, B Rothermel. \$449,164
- 2015-2016 Riverbanks Zoo Conservation Support Fund: Mating system and male reproductive success in a high-density Gopher Tortoise population. TD Tuberville, BB Rothermel, K Zamudio, KN White. \$3,722
- 2014-2017 U.S. Department of Defense: Population surveys of Gopher Tortoises and Eastern Indigo Snakes at Avon Park Air Force Range, Florida. BB Rothermel. \$377,222
- 2014-2015 Riverbanks Zoo Conservation Support Fund: Characterizing social interactions among Gopher Tortoises: a pilot study with implications for translocation and long-term conservation. TD Tuberville, BB Rothermel. \$4,800
- 2012-2014 Disney Worldwide Conservation Fund: Restoring habitat for Gopher Tortoises. BB Rothermel. Three annual awards, total \$74,900
- 2008-2011 U.S. Department of Defense: Population monitoring of Gopher Tortoises at Avon Park Air Force Range, Florida. BB Rothermel. \$394,613
- 2008-2010 Georgia DNR Nongame Conservation Section: Establishment of an amphibian monitoring program in the Southern Blue Ridge of Georgia. BB Rothermel. \$101,529
- 2007 NPS Appalachian Highlands Research Grant: Prevalence and potential threat of an emerging disease to amphibians in the Appalachian Highlands. BB Rothermel, M Chatfield. \$2,000
- 2006 Declining Amphibian Populations Task Force Seed Grant: Assessing the susceptibility of North American plethodontid salamanders to chytrid fungal infection. BB Rothermel, VM Vazquez. \$2,000
- 2004-2007 NPS: Incidence of chytrid fungal parasitism in southeastern national parks. J.W. Gibbons, BB Rothermel. \$46,243
- 2003-2008 NSF Collaborative Research: Land-use practices and persistence of amphibian populations. Award No. DEB-0242874. PI: R.D. Semlitsch, co-PIs: ML Hunter, JP Gibbs, JW Gibbons, BB Rothermel. Total award \$1,200,000 (*UGA share*: \$283,452)

#### **RESTORATION FUNDING**

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- 2017-2018 USDA Wetlands Reserve Program: Landowner agreement for gully repair - Cutthroat Seep WRP on the Archbold Reserve. BB Rothermel (Project Director), HM Swain. \$81,216

- 2015-2024 USFWS Partners for Fish and Wildlife: Sandhill restoration and management for Gopher Tortoises at Archbold Biological Station. KN Main (Project Director), BB Rothermel, ES Menges. \$10,000
- 2014-2018 USDA Wetlands Reserve Program: Landowner agreement for wetland restoration - Cutthroat Prairie WRP and East Prairie WRE on the Archbold Reserve. BB Rothermel (Project Director), HM Swain. \$554,615
- 2013-2017 USDA Wetlands Reserve Program: Landowner agreement for wetland restoration enhancements - Mary's Creek, Frances Creek, and Cutthroat Seep WRPs on the Archbold Reserve. BB Rothermel (Project Director), HM Swain. \$497,360
- 2007-2008 US EPA Regional Environmental Priorities (REP): Enhancement of watershed protection measures in the karst region of Pleasant Grove Creek, Kentucky. AN Barrass (Project Director), BB Rothermel, M Wilson, DM Rogers. \$75,000

## RESEARCH PRESENTATIONS

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### INVITED PRESENTATIONS (last 10 years)

- Rothermel BB, Fedders R, Molter M, Draxler J (2022) Initial outcomes of Gopher Tortoise translocation at a long-term recipient site in southern Florida. Virtual talk. FFWCC Gopher Tortoise Research Symposium
- Rothermel BB (2020) Demographic consequences of habitat alteration and inbreeding for a Gopher Tortoise population in southern Florida. Ohio University, Biological Sciences seminar
- Rothermel BB (2019) Demographic and behavioral responses of Gopher Tortoises to altered disturbance regimes in southern Florida. University of Florida, Department of Wildlife Ecology and Conservation seminar
- Rothermel BB, Royal EJ (2017) Driven by extremes: Pond community structure on an ancient sand ridge in Florida. Invited poster. HL/SSAR/ASIH Symposium – The Science, Management, and Policy of Amphibian Conservation: Extending the Legacy of Ray Semlitsch
- Rothermel BB, Smith LL (2013) Living on the edge: Challenges and considerations for managing Gopher Tortoise habitats with fire. Invited talk. The Wildlife Society, 20<sup>th</sup> Annual Conference, Effects of Wildland Fire and Fire Management on Herps Symposium

### CONTRIBUTED PRESENTATIONS AT PROFESSIONAL MEETINGS (first-authored, last 10 years)

- Rothermel BB, Fedders R, Molter M, Draxler J (2022) Initial outcomes of Gopher Tortoise translocation at a long-term recipient site in southern Florida. Talk. Gopher Tortoise Council Annual Meeting
- Rothermel BB, McKee R, Tuberville TD, West A, White KN, Yuan ML, Zamudio KR (2022) Relative body size and genetic relatedness affect female social networks in Gopher Tortoises (*Gopherus polyphemus*). Talk. Joint Meeting of Ichthyologists & Herpetologists
- Rothermel BB, Moore CL, Stemle LR, Searcy CA (2021) Seasonal and habitat-specific growth rates of juvenile Gopher Tortoises in south-central Florida. Talk (virtual). Gopher Tortoise Council Annual Meeting



- Rothermel BB, Fort JL, O'Connor KM, Beck JL (2021) Gopher Tortoise abundance and juvenile site-occupancy on a military training range in southern Florida. Poster (virtual). Joint Meeting of Ichthyologists & Herpetologists
- Rothermel BB, West A (2020) Restoring sandhill and managing ruderal habitat for Gopher Tortoises at Archbold: Initial results and lessons learned. Poster (virtual). Gopher Tortoise Council Annual Meeting
- Rothermel BB, Howell HJ, White KN, Searcy CA, Tuberville TD, Yuan ML, Zamudio KR (2019) Demographic consequences of habitat alteration and inbreeding for a Gopher Tortoise population in southern Florida. Talk. Joint Meeting of Ichthyologists & Herpetologists
- Rothermel BB, Fort JL, O'Connor KM, Beck JH (2017) Gopher Tortoise abundance and patterns of juvenile recruitment in scrub communities at Avon Park Air Force Range, FL. Talk. Gopher Tortoise Council Annual Meeting
- Rothermel BB, White KN, White MT, Zamudio KR, Tuberville TD (2016) Patterns of reproductive output in Gopher Tortoises inhabiting modified sandhill in southern Florida, USA. Talk. Joint Meeting of Ichthyologists & Herpetologists
- Rothermel BB, Castellón TD (2012) Contrasting patterns of Gopher Tortoise habitat use and burrow size distributions in Florida scrub and mesic flatwoods. Talk. World Congress of Herpetology

## **CONSERVATION AND PUBLIC OUTREACH**

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### **WETLAND RESTORATION**

- Provided technical input and oversight for six wetland restoration projects encompassing 1,503 acres on the Archbold Reserve and funded via the USDA Wetlands Reserve Program (WRP). Reviewed restoration plans and engineering drawings/specifications and communicated detailed comments to USDA-NRCS prior to construction.

### **EMERGING DISEASES/INVASIVE SPECIES**

- Gave presentations on amphibian diseases (Lake Wales Ridge Ecosystem Working Group, 2010) and invasive cichlids (Central Florida Invasive Species Workshop, 2014)

### **GOPHER TORTOISE CONSERVATION**

- Hosted regional meeting on tortoise ecology and management on central Florida ridgeland in 2015, attended by 100 people representing > 20 organizations
- Hosted 40<sup>th</sup> Annual Meeting of the Gopher Tortoise Council held at Archbold Biological Station in 2018, attended by 140 people
- Contributed to USFWS Species Status Assessment as member of Gopher Tortoise Expert Team
- Supervised intern-led production of a three-part series *Getting to Know the Gopher Tortoise* [<https://www.youtube.com/user/ArchboldExpeditions>]
- Co-wrote and produced film *Queen of Red Hill: A Remarkable Tale of Tortoises and Conservation in Florida* [<https://www.youtube.com/watch?v=r8X18LeBc4I>]
- Led two Tortoise Tracker family events and gave six public lectures on Gopher Tortoise ecology and conservation since 2013

## **REGIONAL/NATIONAL HERPETOLOGICAL CONSERVATION**

- Regularly provide scientific information to agencies managing at-risk reptile and amphibian species in Florida
- During 7-year tenure as Chair of the Conservation Committee for the Society for the Study of Amphibians and Reptiles, coordinated and helped draft and distribute SSAR's comments and letters advocating greater protection for imperiled species and actions to address threats such as overharvesting, habitat loss, agricultural chemicals, and introduction of fungal pathogens

## **TEACHING**

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### **FORMAL COURSES TAUGHT**

- 1999            Introductory Biology, University of Missouri – taught 4 lab sections per week
- 2006-08        Diversity of Life, Austin Peay State University – Lecture and lab sections of a biology course for non-science majors (4 semesters)

### **LECTURES GIVEN IN COURSES**

- 2004            Amphibian and Reptile Conservation, Davidson College
- 2007            Amphibian Ecology and Conservation, University of Tennessee-Knoxville
- 2009, 2012      Conservation of Amphibians & Reptiles, University of Florida
- 2011            Water, Wetlands, & Wildlife, University of Tampa
- 2011            Environmental Science, Bridgewater College
- 2014, 2016      Herpetology, Boston University
- 2016            Herpetology, University of South Florida – St. Petersburg
- 2017            Conservation Biology, Concordia College
- 2018, 2020, 2022    Advanced Ecology, Wabash College
- 2019            Biology of Amphibians & Reptiles, Eckerd College

## **MENTORING**

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### *Postdoc advising*

- 2009-2011    Traci D. Castellón

### *Graduate advising*

- 2007-2008    Lacey Robertson, M.S., Austin Peay State University

### *Thesis committees*

- 2005            Gabrielle Graeter, M.S., University of Georgia
- 2009            Tyler Lawson, M.S., College of Charleston
- 2015            Caitlyn Debevec, M.S., University of Central Florida
- 2016            Audrey Wilson, M.S., University of Florida
- 2017            K. Nicole White, M.S., University of Georgia
- 2022            Leyna Stemle, Ph.D., University of Miami

### *Undergraduate and intern research*

Savannah River Ecology Lab NSF REU students:

2004 Thomas Luhring (University of Georgia), Aaliyah Green (Rutgers University)  
2005 Rachel Mahan (University of Missouri), Lester Trenkamp (Southern Utah University),  
Karen Schlatter (McGill University)

Archbold research interns:

2009 Ray Grater (Kutztown University)  
2010 Zachery Forsburg (Shippensburg University), José Lopez (SUNY-ESF), Naima Phillips (Lewis & Clark College)  
2011 Alexander Biggs (University of North Carolina-Wilmington), Susan Caster (University of Georgia), Jason O'Connor (University of Miami)  
2012 Kevin Moses (Howard University), Clay Noss (University of Florida)  
2013 Samantha Dean (Cornell University), Livvy Jones (Washington University-St. Louis)  
2014 Harrison Goldspiel (Brandeis University), Gabriel Kamener (University of Florida), Michael Yuan (Cornell University)  
2015 Amanda Chang (Princeton University)  
2016 Jonathan Carcione (Princeton University), Ethan Royal (Stetson University)  
2017 Simon King (Appalachian State University), Elizabeth Shadle (University of Rhode Island)  
2018 Madison Harman (Duke University)  
2019 Garrett Lawson (Arkansas Tech University)  
2020 Dylan Winkler (University of Texas)  
2021 Chelsea Moore (SUNY Buffalo State)  
2022 Jack Christie (Oregon State University), Emily Jones (Bryn Mawr College)  
2023 Theresa Fonseca (University of Chicago), Carolyn Jessop (Clarkson University)

Disney-funded summer tortoise interns (2013-2015): Candida Dale (USF), Samantha Dillon (South Florida State College), Sophia Finn (Eckerd College), Gabriel Kamener (Edison State College), Ethan Noel (UF), Brianna Price (USF), Nicole Salvatico (UCF), Lexi Siegle (FGCU), Zachary Steele (USF)

## **ARCHBOLD ADMINISTRATIVE RESPONSIBILITIES**

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**ARCHBOLD RESERVE:** From 2009 to 2019, I served as the primary liaison with USDA Natural Resources Conservation Service for Wetlands Reserve Program easements on the Archbold Reserve, coordinating WRP restorations funded via agreements between USDA and ABS. I continue to provide scientific oversight for Reserve environmental monitoring and land management (e.g., exotics control, prescribed fire).

**ARCHBOLD ANIMAL USE COMMITTEE:** As Chair of this committee, I handle review of animal use applications submitted by visiting investigators wishing to conduct research on vertebrate animals.

**VISITING RESEARCH & INSTRUCTION:** As director of the Restoration Ecology and Herpetology Program, I regularly host visiting scientists and classes using ABS as a field site for research or instruction related to these program areas, thereby facilitating use of the field station for many studies on which I am not a co-PI.

**COLLECTIONS MANAGEMENT:** I serve as curator of Archbold's wet collection of ~2,600 reptile and amphibian specimens and ~200 fish specimens.

## PROFESSIONAL SERVICE

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2004-2014 Wharton Conservation Center Advisory Panel, Georgia Wildlife Federation  
2015-present Board Member, C. H. Wharton Conservation Center  
2007-2015 Chair, Conservation Committee, Society for the Study of Amphibians and Reptiles  
2018-2020 Chair, Student Poster Award Committee, Society for the Study of Amphibians and Reptiles  
2016-2022 Raymond D. Semlitsch Research Award Committee, Herpetologists' League  
2017-2020 Co-Chair and Past Co-Chair, Gopher Tortoise Council  
2020-present Chair, Student Awards Committee, Gopher Tortoise Council

Reviewer (2016-2023): *Animal Conservation, Behavioral Ecology, Biological Invasions, Copeia, Diseases of Aquatic Organisms, Florida Scientist, Ecological Applications, Herpetologica, Herpetological Conservation and Biology, Herpetological Review, Journal of Wildlife Management, Natural Areas Journal, Southeastern Naturalist*

## PROFESSIONAL AFFILIATIONS

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Ecological Society of America  
Society for Conservation Biology  
The Wildlife Society

American Society of Ichthyologists & Herpetologists  
Society for the Study of Amphibians and Reptiles  
Gopher Tortoise Council