

Crystal Bishop

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Education

- 2019-2021 Warnell School of Forestry and Natural Resources, University of Georgia, GA
Master of Science in Forest Biology and Management
Expected graduation 2021
- 2011-2015 Young Harris College, Young Harris, GA
Bachelor of Science, Biology with minors in Chemistry and Religion
GPA 3.73/4.0

Work Experience

Publication

- 2015 Kasinak. J. E., Bishop. C, Wright. R, and Wilson. A. Grass Carp do not Consume the Nuisance Benthic Cyanobacterium, *Lyngbya wollei*. Journal of Aquatic Plant Management. 53:74-80. 2015

Presentations

- 2020 Bishop. C, Kane. M, Gandhi K.J.K., and Klepzig. K., Villari. Catrina. Effects of post-hurricane management practices on lower stem and root-feeding beetles and their fungal associates in longleaf pine forests. Warnell Symposium, Athens, Georgia.
- 2019 Bishop. C, Sheehan. T, Gandhi K.J.K., and Klepzig. K., Villari. Catrina. Effects of post-hurricane management practices on belowground beetles and their fungal associates in longleaf pine savannah. UGA Plant Center Retreat, Helen, Georgia.
- 2019 Benjamin M. Gochnour. Bishop. C, Brittany F. Barnes, Sheehan. T, Gandhi K.J.K., and Klepzig. K., Villari. Catrina. Effects of Post-Wind Disturbance Management on Bark and Wood Boring Beetles. UGA Warnell, Athens, Georgia.
- 2019 Bishop. C, Sheehan. T, Gandhi K.J.K., and Klepzig. K. Response of root infesting beetles and fungi to hurricane disturbance in longleaf pine forests. Southern Forest Insect Work Conference, Savannah, Georgia
- 2019 Bishop. C, Sheehan. T, Gandhi K.J.K., and Klepzig. K. Response of root infesting beetles and fungi to hurricane disturbance in longleaf pine forests. Georgia to Entomological Society, Lake Blackshear, Georgia.

2018 **Bishop. C**, Sheehan. T, Gandhi K.J.K., and Klepzig. K. Adaptive Silviculture for Climate Change: Insects as Early Indicators of Disturbance. Southern Forest Insect Work Conference, San Antonio, Texas.

2015 **Bishop. C** and Arnold P. T. An Examination of the Sex Ratio of Lab-Reared Emerging Adult *Sasajiscymnus tsugae* Beetles. Georgia Academy of Science, at Georgia College and State University, Milledgeville, Georgia.

Work

2019–present Graduate Assistant at Warnell School of Forestry and Natural Resources, University of Georgia. Hurricane Michael hit Ichauway causing a great amount of wind damage to the longleaf pine ecosystem. In an effort to better understand root-feeding beetles and their associated fungus and the potential pathogenicity of the fungus that they carry research is being conducted by both Villari lab working and the Jones Center at Ichauway.

2018-2019 Seasonal Technician I, the Jones Center at Ichauway. Assisted research associate in entomology and microbiology lab by building and placing insect traps, plating agar, assisting on research projects, feeding live insects, collecting and processing samples, and pinning local insects.

2017 Internship, Trinity River NWR Liberty Texas, American Conservation Experience. Assisted refuge biologist in daily tasks regarding wildlife refuge management including: removal of invasive plants via herbicide application, mainly Macartney Rose (*Rosa bracteata*) and Chinese tallow (*Triadica sebifera*), assisted USGS ecologists with establishing tree plots to monitor long term effects of Houston’s new water diversion on bottomland hardwood forests, mosquito disease surveillance surveys, trail creating and maintenance, and habitat management in hot humid conditions.

2012-2015 Lab Assistant, Hemlock Project Young Harris College. Assisted Dr. Arnold with rearing *Sasajiscymnus tsuge*, a natural predator of hemlock wooly adelgid (HWA). Took initiative to operate lab by assigning tasks, learning to sex beetles, and to notify Dr. Arnold about supplies and work progress. The organization works in conjunction with the US Forest Service. HWA began attacking eastern hemlocks in Virginia and has spread north and south causing ecological damage.

2014 Internship, National Science Foundation, University of Florida, REU, Whitney Lab. Palm Coast, Florida. Assisted Dr. Paul Linser in researching Carbonic anhydrase 4 within mosquitoes in an effort to better control the mosquito population. By using a confocal microscope and inflorescent dyes carbonic anhydrase 4 was surveyed within the Malpighian tubules of *Aedes aegypti*. Many hours spent with confocal microcopy, examining histology slides, and entering data into the lab computer.

2013 Internship, National Science Foundation, University of Auburn, REU School of Fisheries and Department of Biological Sciences. Auburn, Alabama. Assisted Dr. Alan Wilson and Jo-Marie Kasinak with warm-water ecology research. Specifically investigating grass carp control of the benthic Cyanobacterium *Lyngbya*. The research involved field collection of *Lyngbya*, water samples, aquaculture, and seining.

Academic Honors and Activities

2011-2015 Dean's List, Young Harris College
2012-2013 President's List, Young Harris College
2012-2014 President of Roots and Shoots Organization- Young Harris College
2014-2015 Vice-president of Wesley Fellowship
2015 Young Harris's who's who award