



Curriculum Vitae

Education

- Doctor of Philosophy (Entomology) - Auburn University** **2018-2021**
- *Thesis:* Assessing the pollination contribution of bees within the southeastern United States
 - *Emphasis:* Entomology, Pollination Ecology, Crop Pollination, Wildlife Biology
 - *Honors:* Magna Cum Laude
- Master of Science (Entomology) – University of Florida** **2015-2017**
- *Thesis:* The native bees (Hymenoptera: Apoidea: Anthophila) of Coastal Dune Environments of Florida.
 - *Emphasis:* Pollination Ecology, Land Use, Wildlife Biology
 - *Honors:* Magna Cum Laude
- Bachelor of Arts (Biology) – High Point University** **2008-2012**
- *Honors:* Cum Laude
- North Carolina Teaching License- High Point University** **2012**
- Certified in secondary education
 - Biology, chemistry, and physics

Professional Employment

Research Entomologist **Current**

Currently work for the Auburn University Bee lab as a research entomologist. I am responsible for conducting multiple research experiments, supervising three technicians and one master's student.

Research Assistant **2014**

Assisted Dr. Joshua Campbell on a USDA funded research project examining forest management techniques and their effects on various insect groups. Duties included the setting up and taking down of colored pan traps and pitfall traps on the Green River Management Area near Hendersonville NC.

Taught full time Biology, Physics, and Chemistry classes at Northeastern High School in Elizabeth City, NC.



Research Experience

Current Research Projects

- **Stratified sampling within forested ecosystems** (Current)
 - I am conducting stratified sampling within Tuskegee National Forest to investigate how native bees utilize different strata of the hardwood forest.
 - I am collaborating with researchers from the USDA on a joint project across multiple states.
- **Assessing the pollination biology of Chinese Tallowtree (*Triadica sebifera*)** (Current)
 - I am conducting sweep netting surveys to determine the pollination requirements of Chinese Tallowtree and to determine which species of insect pollinators visit male and female Chinese Tallowtree flowers.
 - I am collaborating with researchers from Louisiana State University, The University of Georgia, The University of Florida and the United States Department of Agriculture.
- **Powerline Corridors and Pollinating Insects** (2018-Current).
 - Sponsored by Duke Energy and Alabama Power. We are examining vegetation management practices within powerline corridors to determine their effects on pollinating insects.

Past Research Projects

- **Pollination biology of Golden Kiwifruit – *Actinidia chinensis* var. *chinensis*** (2019-2020).
 - I conducted insect exclusion experiments and sweep netting surveys to determine the pollination requirements of two *Actinidia chinensis* var. *chinensis* cultivars grown in central Alabama.
- **Assessing the pollination contribution of two managed bee species on Golden Kiwifruit – *Actinidia chinensis* var. *chinensis*** (2020).
 - I monitored two commonly managed bee species (*Apis mellifera* and *Bombus impatiens*) and determined their contribution to the pollination of kiwifruit through pollen assays.
- **Assessing the attractiveness of native wildflowers to native pollinators** (2018-2019).
 - I investigated the attractiveness of several dozen wildflower species commonly recommended by the USDA-NRCS to native bees and other pollinator groups including Coleopterans, Dipterans, other Hymenopterans, and Lepidopterans.

- **Assessing the Pollination biology of native wildflowers (2018-2019).**
 - I conducted insect exclusion experiments and sweep netting surveys to determine the pollination requirements of several dozen wildflower species commonly recommended by the USDA-NRCS.
- **Assessing the health of commercial *Bombus impatiens* colonies after foraging on Alabama kiwifruit (2019).**
 - I comparatively assessed the health of *Bombus impatiens* colonies within and outside of a commercial kiwifruit orchard in central Alabama.
- **The effects of urbanization on the populations of native bees occurring within the coastal dune environments of Florida (2016-2017).**
 - I assessed the effects that urbanization has on native bee populations throughout the state of Florida. I set pan traps out within protected lands and urbanized sites over the course of an entire year.
- **Evaluated the introduction and establishment of *Dielis dorsata* (formerly *Campsomeris dorsata*) within Florida (2016-2017).**
 - Through monitoring surveys, I detected the presence and establishment on a non-native Scoliid wasp in Florida.
- **Pollination biology of Parasitic Beechdrops (*Epifagus virginiana*) (2013)**
 - I developed a monitoring program to describe the pollination biology of *Epifagus virginiana* within forested habitats of North Carolina and how ants contribute to the pollination of the plant.

Peer-reviewed Publications

- Abbate, A.P.**, Campbell, J.W., Vinson, E.L., Williams, G.R. 2021. The pollination and fruit quality of two kiwifruit cultivars (*Actinidia chinensis* var. *chinensis*- 'AU Golden Sunshine' and 'AU Gulf Coast Gold') (Ericales: Actinidiaceae) grown in the southeastern United States. *Journal of Economic Entomology*. doi: 10.1093/jee/toab075
- Campbell, J.W., Tsalickis, A., Cuminata, A., **Abbate, A.** 2021. Does allochthonous leaf litter structure terrestrial cave invertebrate assemblages? *Journal of Natural History*. Accepted.
- Abbate, A.P.**, Campbell, J.W., Kimmel, C.B., Kern, W.H. 2019. Urban development decreases bee abundance and diversity within coastal dune systems. *Global Ecology and Conservation*. 20: e00711.
- Abbate, A.P.**, Campbell, J.W., Bremer, J., Kern, W.H. 2018. The introduction and establishment of *Campsomeris dorsata* (Hymenoptera: Scoliidae) in Florida. *Florida Entomologist*. 101: 543-545.
- Abbate, A.P.**, Campbell, J.W. 2013. Parasitic Beechdrops (*Epifagus virginiana*): A Possible Ant-Pollinated Plant. *Southeastern Naturalist*. 12(3):661-665.

Publications in Preparation/Review

- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. Managed honey bees (*Apis mellifera*) and bumble bees (*Bombus impatiens*) are inadequate pollinators of kiwifruit (*Actinidia chinensis* var. *chinensis*) in Alabama. TBD.
- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. Assessing the attractiveness of 18 species of wildflowers to native bees (Hymenoptera) in the southeastern United States. Intended for *J. Applied Ecology*.
- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. Assessing the health of *Bombus impatiens* (Hymenoptera: Apidae) within a kiwifruit orchard in the southeastern United States. Intended for *Pollinator Ecology and Management*.
- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. The pollination requirements of three *Coreopsis* (Asteraceae) species in Alabama. TBD.
- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. The pollination requirements of *Baptisia alba* (Fabaceae). TBD.
- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. Vegetation management strategies on pollinators
- Abbate, A.P.**, Campbell, J.W., Williams, G.R. 2021. Assessing the pollination requirements of native wildflowers grown in the southeastern United States. TBD.
- Campbell, J.W., **Abbate, A.P.**, Straub, L., Williams, G.R. 2021 Comparing monitoring methods for pollinating insects within electric transmission right of ways. TBD.
- Abbate, A.P.**, Campbell, J.W., Kimmel, C.B., Kern, W.H. 2021. Urban development decreases wasp abundance within coastal dune systems. TBD.

Scientific Presentations

- Abbate, A.P.**, Williams, G.R., Campbell, J.W. 2019. *Presentation*. Pollination of kiwifruit (*Actinidia chinensis*) in Alabama. Entomological Society of America, St. Louis, MO. November 17-20.
- Campbell, J.W., **Abbate, A.P.**, Williams, G.W. 2018. *Poster session*. Collecting pollinators from right-of-ways (ROWs): A comparison of three commonly used collecting methods. Entomological Society of America, Vancouver, British Columbia, Canada. November 11-14.
- Abbate, A.P.**, W.H. Kern, J. Campbell. 2018. *Presentation*. The native bees (Hymenoptera: Apoidea: Anthophila) of coastal dune environments of Florida. Entomological Society of America, Vancouver, British Columbia, Canada. November 11-14.
- Abbate, A.P.**, W.H. Kern, J. Campbell. 2018. *Presentation*. The native bees (Hymenoptera: Apoidea: Anthophila) of coastal dune environments of Florida. Alabama Chapter of the Wildlife Society. July 20th.
- Abbate, A.P.** *Presentation*. 2018. Happenings at the Auburn University Bee Lab. Alabama Cooperative Extension System (ACES) 23rd Annual Beekeeping Symposium. February 3rd.
- Abbate, A.P.**, W.H. Kern, J. Campbell. 2017. *Presentation*. The native bees (Hymenoptera: Apoidea: Anthophila) of coastal dune environments of Florida. Florida Entomological Society, San Juan, Puerto Rico. July 16-21.

- Raid, R.N., D. Moreira, **Abbate, A.P.**, W.H. Kern. 2016. *Poster*. Addressing the threat posed by Africanized honey bees to south Florida agriculture. International Conference on Pollinator Biology, Health and Policy. Penn State University, Old Main, PA. August 14-17.
- Abbate A.P.** Russell, E., Campbell, J.W. 2013. *Presentation*. Parasitic beechdrops (*Epifagus virginiana*): a possible ant pollinated plant. Association of Southeastern Biologists. Charleston, WV.
- Abbate, A.P.**, Campbell, J.W. 2013. *Poster*. Parasitic Beechdrops (*Epifagus virginiana*): A Possible Ant-Pollinated Plant. ASB. University of Georgia, Athens, GA. 2012

Grants Funded

- Co-authored and Co-PI USDA-ADAI-SCB Grant (2020), Awarded \$24,000 to identify and quantify pollen forage sources of managed honey bees and bumble bees employed for kiwifruit pollination.
- Co-authored and Co-PI AAES Grant (2019), Awarded \$49,000 to evaluate the pollination requirements of two kiwifruit (*Actinidia chinensis*) cultivars grown in the southeastern United States.

Invited Lectures and Extension Talks

- Abbate, A.P. 2021.** Status of Pollinators. August 20th . Alabama Chapter Soil and Water Conservation Society Annual Meeting “Resources Challenges for the Conservationist: Global, regional and Local.”
- Abbate, A.P. 2021.** Best management practices for pollinator habitat in the southeast U.S. July 22nd. United States Department of Agriculture, Natural Resource Conservation Service, and Xerces Society.
- Abbate, A.P. 2020.** The status of our native bees and how to establish a wildflower meadow. Presentation. 13th At Home Beekeeping Series, Distance Learning for Beekeeping Clubs. October 27th. Louisiana State University, Auburn University, University of Florida, University of Georgia, University of Tennessee, Texas A&M and Mississippi State.
- Abbate, A.P. 2020.** The status of our native bees with veterinary links. Auburn University CVM ZEW Club. September 16th.
- Abbate, A.P. 2018.** Honey Bees and Pollinators. Coosa County Forestry Field Day, Goodwater, Alabama. October 23rd.
- Abbate, A.P. 2018.** Bee Informed Partnership & Sentinel Apiary Program. ALFA; Alabama Bee & Honey Producers. February 6th.
- Abbate, A.P. 2016.** Native pollinators and their biology. University of Florida Fort Lauderdale Research and Education Center. Bee College, Fort Lauderdale, FL.

- Abbate, A.P.** 2015. Integrating technology into the 21st century classroom. J.C Sawyer Elementary School. (For Pasquotank County Principals). Elizabeth City, NC.
- Abbate, A.P.** 2015. Integrating technology into the 21st century classroom. Northeastern High School Faculty Meeting, Elizabeth City, NC.

Teaching Experience

Teaching Assistant, Auburn University (Auburn, AL), 2020 & 2021.
ENTM 6500 & 6500 Lab - Bee Biology and Management

Instructor, Northeastern High School 2013-2014

Courses taught:

Biology

Chemistry

Physics

Teaching Assistant, High Point University (High Point, NC) 2012

BIO 3110 & 3110 Lab – General Botany

ENV 1110 – Environmental Science

Environmental Science Tutor, High Point University (High Point, NC) 2011-2012

Extracurricular

Auburn University

- Entomology Club Member 2018-Current

University of Florida:

- Entomology Club Member 2015-2017

High Point University:

- Biology Club Member 2011-2013

Bugapalooza at the Schiele Museum of Natural History

May 2013

- Invited guest at the Schiele Museum located in Gastonia, NC.
- Helped set up and run a booth to teach children and parents about insects.