

# Hannah K. Levenson, PhD

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## EDUCATION

### **Ph.D., North Carolina State University, 2021**

Entomology (Behavior, Ecology, Evolution & Systematics)

Biology (Ecology & Evolution)

### **B.S., North Carolina State University, 2015**

Environmental Technology & Management

### **B.A., North Carolina State University, 2015**

Design Studies, *Magna Cum Laude*

Minor - Environmental Studies

## EXPERIENCE

### **RESEARCH SCHOLAR**

Oct 2024 - Present

Specialty Crops Integrated Pest and Pollinator Management Lab (SCIPPM),  
North Carolina State University, Raleigh NC

Head of the SCIPPM lab. Responsible for research on Integrated Pest and Pollinator Management in specialty crops, particularly improving the management of *Drosophila suzukii* and protecting beneficial organisms – including pollinators and natural enemies – in human modified landscapes.

### **POSTDOCTORAL RESEARCH SCHOLAR**

June 2021 – Sep 2024

Specialty Crops Integrated Pest and Pollinator Management Lab (SCIPPM),  
North Carolina State University, Raleigh NC

Lead researcher for the SCIPPM lab and co-PI of a USDA SCRI grant. Conducting collaborative work across 11 different projects, which include 5 public agencies, 12 universities, 2 nonprofit organizations, and 9 commercial farmers.

### **GRADUATE RESEARCH ASSOCIATE**

July 2017 – May 2021

NCSU Apiculture Program, North Carolina State University, Raleigh NC

Designed and implemented multi-faceted projects evaluating the complex relationship of planted pollinator habitat as a conservation tool on bee species populations, bee health, and crop yield. Coordinated logistics and executed pollinator field survey research over 4 years across 16 NCDA&CS and NCSU Experimental Agricultural Research Stations.

### **PRE-GRADUATE DEGREE EXPERIENCES**

*Field Research Technician at North Carolina State University*

Feb 2016 – July 2017

Designed and conducted an independent research project – *Disease interactions between native, wild, and honey bees in northern Perú* – with 5 local beekeepers, 6 Peace Corps Volunteers, local beekeepers, and 2 researchers at La Universidad Nacional Toribio Rodríguez de Mendoza de Amazonas in Chachapoyas, Perú

*Biology Technician – Wildlife Toxicology at Smithers Viscient LLC* Feb 2015 – Aug 2015

Collected samples from crops, honey bee hives, and conducted Digital Colony Condition Assessments to evaluate colony health in NC, CA, and SD. Assisted in the management of 300+ honey bee hives.

*Field Assistant at North Carolina State University*

May 2014 – Aug 2014

Constructed 16 artificial patch reefs in The Abacos, The Bahamas. Performed fish and seagrass surveys, collected samples of seagrass, ocean water, mangrove leaves, and sediment. Assisted teaching a week-long sea creature identification course.

## **MEMBERSHIPS**

Entomological Society of America

2018 – Present

North Carolina Pollinator Conservation Alliance

2019 – Present

North American Raspberry and Blackberry Association

2024 – Present

## **HONORS AND AWARDS**

### **AWARDS**

Entomological Society of America Early Career Professional Recognition Symposium, November 2023

North Carolina State University (NCSU) Department of Entomology and Plant Pathology Excellence in Entomology Award, June 2021

North Carolina Entomological Society (NCES) 3-Minute Thesis Competition – 1<sup>st</sup> Place, October 2020

North Carolina State Beekeepers Association's J.T. Ambrose Student Award, July 2020

NCSU College of Agriculture and Life Sciences Research Foundation Competition – 2<sup>nd</sup> Place, March 2020

NCES Outstanding Ph.D. Student, October 2019

National Science Foundation Graduate Research Fellowship Program – Honorable Mention, October 2019

Southern Sustainable Agriculture Research and Education (SARE) Graduate Student Grant (\$16,000), August 2019

NCSU Entomology Graduate Student Symposium 10-Minute Presentation 1<sup>st</sup> Place, March 2019

Syngenta Bee Research Award (\$25,000), December 2018

NCES Outstanding Masters Student, October 2018

NCSU Biology Research Award (\$1,500), March 2018

### **TRAVEL GRANTS AND FELLOWSHIPS**

ESA Travel Award (\$500), November 2023

NCSU Impact Scholar (\$1,000), January 2022

NCSU STEM Externship Fellow (\$1,500), May 2021

NCSU Graduate Student Association Travel Award (\$1,500), April 2020

NCSU Center for Environmental Farming Systems Graduate Fellow (\$10,000), July 2019

International Pollinator Conference Travel Award (\$500), March 2019

Garden Club of America's Centennial Pollinator Fellowship (\$4,000), March 2019

NCES Travel Award (\$250), October 2018

NCSU Graduate Student Association Travel Award (\$500), April 2018

## **RESEARCH ACTIVITIES**

### **RESEARCH INTERESTS**

I am a community ecologist broadly interested in investigating how humans impact the environment and exploring ways to mitigate those impacts. To do this, I research pest and beneficial insect communities (including pollinators and natural enemies) in human modified environments (mostly agricultural settings). Some of my research highlights include:

- Improving spotted wing drosophila management in berry crops
- Surveying SWD parasitoid species across North Carolina
- Evaluating the establishment of a classical biological control agent of SWD
- Surveying pollinator communities in specialty crops
- Exploring nesting habitat requirements of wild bees in blackberries and blueberries
- Documenting the impacts of garden maintenance on overwintering stem-nesting bees
- Evaluating the impacts of land use conversion to solar on pollinators
- Creating an expert designed pollinator habitat plan and installing the habitat on small farms across North Carolina

### **RESEARCH GRANTS**

*USDA SCRI Grant: Moving from Crisis Response to Long-Term Integrated Management of SWD: A Keystone Pest of Fruit Crops in the United States, Sep. 2020 – Aug. 2024*

Total Award \$5,355,186, NCSU Subaward \$419,621

Lead PD: Dr. Ash Sial, Co-PIs: Burrack, Walton, **Levenson**, Walgenbach, Loeb, Hoelmer, Daane, Rodriguez-Saona, Chiu, Isaacs, Beers, Gallardo, Zalom, Gomez, Wang, Northfield, Hoheisel, Kelsey, Fanning

*NC Blueberry Council\*: Promoting a Holistic Approach to Pollinating Blueberries, Feb. 2023 – April 2024*

Total Award \$10,253

PI: Dr. Elsa Youngsteadt, Co-PI: Tarpy

Develop a knowledge base of wild bees on NC blueberry farms including nesting habitat and evaluating the potential use of augmented nesting habitat.

*SSARE On-Farm Research Grant\*: Designing Ecologically Beneficial Habitat for Diverse Farming Systems, April 2024 – March 2026*

Total Award \$30,000

PI: Dr. Angel Cruz

Creating an expert designed pollinator habitat plan, installing on NC Farms, and evaluating the benefit to pollinators.

*USDA CPPM Grant\*: Fruit Sampling to Reduce Pesticide Inputs in the Era of Spotted-Wing Drosophila, Sep. 2023 – Aug. 2025*

Total Award \$324,904, NCSU Subaward \$70,386

PI: Dr. Rufus Isaacs, Co-PIs: Walton, Burrack, Walgenbach

Developing decision tree management centered around fruit sampling for berry growers to improve SWD management and evaluating impacts on SWD parasitoids.

NC Blueberry Council\*: Promoting a Holistic Approach to Pollinating Blueberries, Feb. 2023 – April 2024

Total Award \$11,278

PI: Dr. Elsa Youngsteadt, Co-PI: Tarpy

Develop a knowledge base of wild bees on NC blueberry farms including nesting habitat and evaluating the potential use of augmented nesting habitat.

\*Not listed as PI due to institutional policy, but contributed significantly to writing and conducting of research to the level of co-PI

## PEER REVIEWED PUBLICATIONS

Gariepy, T.D., Abram, P.K., Adams, C., Beal, D., Beers, E., Beetle, J., Biddinger, D., Brind'Amour, G., Bruin, A., Buffington, M., Burrack, H., Daane, K.M., Demchak, K., Fanning, P., Gillett, A., Hamby, K., Hoelmer, K., Hogg, B., Isaacs, R., Johnson, B., Lee, J.C., **Levenson, H.K.**, Loeb, G., Lovero, A., Milnes, J.M., Park, K.R., Prade, P., Regan, K., Renkema, J.M., Rodriguez-Saona, C., Neupane, S., Jones, C., Sial, A., Smythman, P., Stout, A., Van Timmeren, S., Walton, V.M., Wilson, J.K., & Wang, X. (2024)

Widespread establishment of adventive populations of *Leptopilina japonica* (Hymenoptera, Figitidae) in North America and development of a multiplex PCR assay to identify key parasitoids of *Drosophila suzukii* (Diptera, Drosophilidae). *NeoBiota*, 93: 63-90. Doi: 10.3897/neobiota.93.121219

**Levenson, H.K.** & Burrack, H.J. (2024) Pollinator communities in a blackberry cropping system under intense pest management. *Acta Horticulturae*, 1388: 197-200

**Levenson, H.K.**, Metz, B.N., & Tarpy, D.R. (2024) Effects of study design parameters on estimates of bee abundance and richness in agroecosystems: a meta-analysis. *Annals of the ESA*. doi: 10.1093/aesa/sae001

Ruzi, S.A., Youngsteadt, E., Cherveney, A., Kettenback, J., **Levenson, H.K.**, Seth Carley, D., Collazo, J., & Irwin, R.E. (2023) Bee species richness varies through time in an urbanizing landscape of the southeastern USA. *Global Change Biology*. doi: 10.1111/gcb.17060

**Levenson, H.K.** & Tarpy, D.R. (2023) Planted pollinator habitat in agroecosystems: how does the pollinator community respond? *Frontiers in Ecology and Evolution*. 11.1060834. doi: 10.339/fevo.2023.1060834

**Levenson, H.K.** & Tarpy, D.R. (2022) Effects of planted pollinator habitat on pathogen prevalence and interspecific detection between bee species. *Scientific Reports*. 12.7806. doi: 10.1038/s41598-022-117343

**Levenson, H.K.**, Sharp, A.E., & Tarpy, D.R. (2022) Evaluating the impact of increased pollinator habitat on bee visitation and yield metrics in soybean crops. *Agriculture, Ecosystems & Environment*. 331:10701. doi: 10.1016/j.agee.2022.10701

## PEER REVIEWED PUBLICATIONS IN REVIEW

**Levenson, H.K.**, Du Clos, B., Smith, T.A., Jepsen, S., Everett, J.G., Williams, N.W., and Woodard, S.H. A call for standardization in wild bee data collection and curation. *Journal of Melittology*.

**Levenson, H.K.\***, Carril, O.M.\*, Turley, N.E., Maffei, C., LeBuhn, G., Griswold, T., Williams, N.M., Hung, K.L.J., Irwin, R.E., Du Clos, B., and Woodard, S.H. Standardized protocol for collecting community-level bee data. *Journal of Melittology*.

Strange, J.P., López-Urbe, M.M., Whiteman, L., Danforth, B.N., Jha, S., **Levenson, H.K.**, Du Clos, B., Koch, J.B.U., and Woodard, S.H. Standardized protocol for collecting bee samples for parasite and pathogen data. *Journal of Melittology*.

López-Urbe, M.M., Strange, J.P., Whiteman, L., Danforth, B.N., Jha, S., Branstetter, M.G., Koch, J.B.U., **Levenson, H.K.**, Du Clos, B., and Woodard, S.H. Standardized protocol for collecting bee samples to generate molecular data. *Journal of Melittology*.

Todd, L.E., Suchoff, D.H., and **Levenson, H.K.** A survey of beneficial insects in southeastern US sesame (*Sesamum indicum* L.) fields. *Agricultural and Forest Entomology*.

### PEER REVIEWED PUBLICATIONS IN PREP

**Levenson, H.K.**, Van Timmeren, S., Babu, A., Isaacs, R., Sial, A.A., Walton, V., and Burrack, H.J. Improved detection of spotted-wing drosophila (*Drosophila suzukii*) infestation through monitoring early life stages at the edge of crop fields. *TARGET: Pest Management Science* October 2024.

Cariveau, D.P.\*, Inouye, D.W.\*, Williams, N.M., Burns, C.T., Lane, I., Hung, K.L.J., Irwin, R.E., Melathopoulos, A., Isaacs, R., **Levenson, H.K.**, Du Clos, B., and Woodard, S.H. Standardized protocol for collecting plant-pollinator interaction data. *TARGET: Journal of Melittology* October 2024.

Du Clos, B., Seltmann, K.C., Turley, N.E., Maffei, C., Tucker, E.M., Lane, I., **Levenson, H.K.**, and Woodard, S.H. The Wild Bee Data Standard. *TARGET: Journal of Melittology* October 2024.

### SCIENTIFIC PRESENTATIONS

**Levenson, H.K.** (2024) Identification of Native Bees. NCSU Apiculture Program's BEES Academy, Wilson, NC. [34 contacts]

**Levenson, H.K.** (2024) Between two thorns: Unveiling the hidden ecosystem within blackberry fields. (INVITED). Entomological Society of America Southeastern Branch Meeting, Augusta, GA.

**Levenson, H.K.** (2024) Using applied pollinator ecology to support pollinator populations. (INVITED). Mason Pharr Symposium, Raleigh, NC.

**Levenson, H.K.** (2023) Applied Pollinator Ecology in a Diverse Agroecosystem: From Row Crops to Specialty Crops. (SELECTED PRESENTER). ESA Early Career Professionals Symposium, National Harbor, MD.

**Levenson, H.K.** and Du Close, B. (2023) Tiered Systems for Collecting Bee Data. US National Native Bee Monitoring RCN Sampling methods Workshop, Gibraltar, OH.

**Levenson, H.K.** & Burrack, H.J. (2023) Pollinator communities in a blackberry cropping system under intense management of an invasive pest. ISHS Rubus and Ribes, Portland, OR.

**Levenson, H.K.**, Burrack, H.J., Isaacs, R., Walton, V.M., Van Timmeren, S. (2023) Improvements in spotted-wing drosophila monitoring and management in berry

crops. (INVITED). Entomological Society of America Southeastern Branch Meeting, Little Rock, AK.

**Levenson, H.K.** (2023) Applied pollination ecology in a diverse agroecosystem: from row crops to specialty crops. (INVITED). MSU Entomology Seminar, East Lansing, MI.

**Levenson, H.K.** and Burrack, H.J. (2022) Enabling IPPM Strategies in Caneberries. Entomological Society of America Annual Meeting, Vancouver, CA.

**Levenson, H.K.** (2022) Considerations for studying bees in agroecosystems. ESA Sampling Method Development for the US National Native Bee Monitoring RCN, Vancouver, CA.

**Levenson, H.K.** (2022) Pollinator communities across North Carolina: from the individual to the agroecosystem. (INVITED). Entomological Society of America Southeastern Branch Meeting, San Juan, PR.

**Levenson, H.K.** & Burrack, H.J. (2022) North Carolina Update 2021. WERA1021: Spotted Wing Drosophila Biology, Ecology, and Management Annual Meeting, Virtual.

**Levenson, H.K.** (2020) The Who, What, and How of Native Bees. (INVITED) NC Vegetation Management Association's Annual Meeting, Virtual.

**Levenson, H.K.** (2020) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. NCPA Annual Meeting, Virtual.

**Levenson, H.K.,** Sharp, A.E. & Tarpy, D.R. (2020) Evaluating the impacts of augmented pollinator habitat on surrounding cropping systems. Entomological Society of American Annual Meeting, Virtual.

**Levenson, H.K.** & Tarpy, D.R.\* (2020) Native bee communities across North Carolina: from the individual to the agroecosystem. (INVITED). Entomological Society of American Annual Meeting, Virtual. \*presenting author

**Levenson, H.K.** & Tarpy, D.R. (2020) Evaluating the impact of augmented pollinator habitat on surrounding cropping systems. Southern Appalachian Honey Bee Research Consortium Annual Meeting, Boone, NC.

**Levenson, H.K.** (2020) Pollinator communities across North Carolina: what their populations look like and how we can support them. (INVITED – KEYNOTE SPEAKER). Montgomery Community College Pollinator Conference, Troy, NC.

**Levenson, H.K.** & Tarpy, D.R. (2019) Native bee communities across North Carolina: from the individual to the agroecosystem. NCDA Superintendent Annual Meeting, Raleigh, NC.

**Levenson, H.K.** & Tarpy, D.R. (2019) Evaluating the connectedness of pollinator networks between augmented pollinator habitat and adjacent cropping systems. Entomological Society of American Annual Meeting, St. Louis, MO.

**Levenson, H.K.** & Tarpy, D.R. (2019) Native bee communities across North Carolina: from the individual to the agroecosystem. (AWARD PRESENTATION). North Carolina Entomological Society, Raleigh, NC.

**Levenson, H.K.** & Tarpy, D.R. (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. CEFS Board Meeting, Raleigh, NC.

**Levenson, H.K.** & Tarpy, D.R. (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. (SELECTED PRESENTER). International Pollinator Conference, Davis, CA.

- Levenson, H.K.** & Tarpy, D.R. (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. (NOMINATED PRESENTER). NCSU Graduate Research Symposium, Raleigh, NC.
- Levenson, H.K.** & Tarpy, D.R. (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. NCSU Entomology Student Research Symposium, Raleigh, NC.
- Levenson, H.K.** & Tarpy, D.R. (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. (INVITED). Entomological Society of American Eastern Branch Meeting, Blacksburg, VA.
- Levenson, H.K.** & Tarpy, D.R. (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. Southern Appalachian Honey Bee Research Consortium Annual Meeting, Charlotte, NC.
- Levenson, H.K.** & Tarpy, D.R. (2018) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. Entomological Society of American Annual Meeting, Vancouver, CA.
- Levenson, H.K.** & Tarpy, D.R. (2018) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. Ecological Society of America Annual Meeting, New Orleans, LA.
- Levenson, H.K.** & Tarpy, D.R. (2018) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. (INVITED). Entomological Society of American Southeastern Branch Meeting, Orlando, FL.
- Levenson, H.K.** & Tarpy, D.R. (2018) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. NCSU Entomology Student Research Symposium, Raleigh, NC.
- Levenson, H.K.**, Goethe, J.K. & Tarpy, D.R. (2018) Disease interactions between native bees, wild bees, and honey bees in northern Peru. Southern Appalachian Honey Bee Research Consortium Annual Meeting, Wake Forest, NC.
- Levenson, H.K.** & Tarpy, D.R. (2017) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. NCDA Superintendent Annual Meeting, Raleigh, NC.
- Levenson, H.K.** & Tarpy, D.R. (2017) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. Southern Appalachian Honey Bee Research Consortium Annual Meeting, Greensboro, NC.
- Levenson, H.K.** & Tarpy, D.R. (2016) Pollinator habitat study. NCDA Superintendent Annual Meeting, Raleigh, NC.

## **EXTENSION ACTIVITIES** (Number of Contacts: 13,397)

### **PEER REVIEWED EXTENSION PUBLICATIONS**

- Levenson, H.** & Youngsteadt, E. (2019) The Bees of North Carolina: An Identification Guide. *NCSU Extension*. <https://uncpress.org/book/9781469659022/the-bees-of-north-carolina/> [56,885 page views]

### **EXTENSION FACT SHEETS**

- Levenson, H.** & Walgenbach, J. (2022) What the 2022 Spotted Lanternfly Detection Means for NC Grape Growers. *NC Cooperative Extension Fact Sheet*.



[https://grapes.ces.ncsu.edu/wp-content/uploads/2022/09/NCSU-SLF-Ext-Doc\\_Final.pdf?fwd=no](https://grapes.ces.ncsu.edu/wp-content/uploads/2022/09/NCSU-SLF-Ext-Doc_Final.pdf?fwd=no)

## WEBSITES

Youngsteadt, E., **Levenson, H.**, & Adams, N. Hymenoptera of North Carolina. *North Carolina Biodiversity Project*.

<https://auth1.dpr.ncparks.gov/hymenoptera/index.php>

Irwin, R., Keller, J., **Levenson, H.**, Seth Carley, D., Tarpy, D., & Youngsteadt, E. Pollinators. NC State Extension. <https://pollinators.ces.ncsu.edu/>

## EXTENSION PRESENTATIONS

**Levenson, H.K.** and Youngsteadt, E. (2024) Bee Biology and Identification Workshop. NCSU, Raleigh, NC. [19 contacts]

**Levenson, H.K.** and Youngsteadt, E. (2024) Managing perennial stems for overwintering pollinators. (INVITED). NC Cooperative Extension, The Great Southeast Pollinator Census, Virtual. [322 contacts]

**Levenson, H.K.** (2024) Pollinator Identification Workshop. (INVITED). NC Wildlife Federation, Durham, NC. [34 contacts]

**Levenson, H.K.** and Youngsteadt, E. (2024) Managing perennial stems for overwintering pollinators. (INVITED). Extension Master Gardener Volunteer Continuing Education Webinar, Virtual. [196 contacts]

**Levenson, H.K.** (2024) The Who, What, and How of Native Bees. (INVITED). Nash County Master Gardener Pollinator Symposium, Nashville, NC. [85 contacts]

**Levenson, H.K.** (2024) North Carolina Bumble Bees: Biology, Diversity, Threats. (INVITED). Chatham Conservation Partnership, Virtual. [326 contacts]

**Levenson, H.K.** (2024) Using applied pollinator ecology to support pollinator populations. (INVITED). Bedford Club, Raleigh, NC. [28 contacts]

**Levenson, H.K.** (2024) Incorporating biological control into IPM programs for SWD in caneberries. NARBA, Wilmington, NC. [45 contacts]

**Levenson, H.K.**, Tarpy, D.T., Youngsteadt, E. (2024) Promoting a holistic approach to pollinating blueberries. (INVITED). NC Bladen County Blueberry Grower Meeting, Elizabethtown, NC. [64 contacts]

**Levenson, H.K.**, Walton, V.M., Burrack, H.J. (2024) Improvements in spotted-wing drosophila monitoring and management in berry crops. SCRI Annual Stakeholder Meeting, Virtual. [131 contacts]

**Levenson, H.K.** (2024) Panel member for the Farm Bureau's workshop on Native Plants in the NC Nursery Industry. (INVITED). JC Raulston Arboretum, Raleigh, NC. [75 contacts]

**Levenson, H.K.** (2023) Bee Field Collection and Identification. NCPA Pollinator Field Day, Mills River, NC. [70 contacts]

**Levenson, H.K.** (2023) Bee Field Collection and Identification. (INVITED). NC Cooperative Extension, The Great Southeast Pollinator Census, Virtual. [800 contacts]

**Levenson, H.K.** (2023) Pollinator Identification Workshop. (INVITED). NC Wildlife Federation, Durham, NC. [12 contacts]



**Levenson, H.K.** (2023) Supporting pollinator communities in NC agroecosystems. (INVITED). NC Botanical Garden, Chapel Hill, NC. [20 contacts]

**Levenson, H.K.**, Burrack, H.J., Isaacs, R., Walton, V.M., Fanning, P., Van Timmeren, S. (2023) Improvements in spotted-wing drosophila monitoring and management in berry crops. SCRI Annual Stakeholder Meeting, Virtual. [105 contacts]

**Levenson, H.K.** (2023) Release of a novel parasitoid for SWD control. (INVITED). NC Blackberry and Raspberry Grower Association Meeting, Rose Hill, NC. [30 contacts]

**Levenson, H.K.** and Burrack, H.J. (2023) Improvements in SWD Monitoring and Management. (INVITED). NARBA, Tampa, FL. [50 contacts]

**Levenson, H.K.** (2022) Enabling IPPM Strategies in Caneberries. (INVITED). Moore County Beekeepers Association Meeting, Vass, NC. [21 contacts]

**Levenson, H.K.** (2022) How Researchers are Supporting Native Bees at the Local, State, and National Levels. (INVITED). Oakwood Garden Club, Raleigh, NC. [25 contacts]

**Levenson, H.K.** (2022) Bee Field Collection and Identification. NCPCA Pollinator Field Day, Kinston, NC. [40 contacts]

**Levenson, H.K.** (2022) The Who, What, and How of Native Bees. (INVITED). Raleigh Parks and Rec: Environmental Lecture Series, Virtual. [18 contacts]

**Levenson, H.K.** & Youngsteadt, E. (2022) Native Bees: Documenting Occurrences and Planning Conservation. (INVITED). Future of Conservation Forum, Chapel Hill, NC. [20 contacts]

**Levenson, H.K.** (2022) The Who, What, and How of Native Bees. (INVITED). Forsyth County Master Gardener Club Meeting, Virtual. [28 contacts]

**Levenson, H.K.** (2022) The Who, What, and How of Native Bees. (INVITED). North Carolina Botanical Garden's Garden Guide Training, Chapel Hill, NC.

**Levenson, H.K.** (2022) The Who, What, and How of Native Bees. (INVITED). NCDA Earth Day Presentation Series, Raleigh, NC. [18 contacts]

**Levenson, H.K.** (2022) Improvement in SWD monitoring and management. (INVITED). Southeast Regional Fruit and Vegetable Conference, Savannah, GA. [40 contacts]

**Levenson, H.K.** (2021) Identification of Native Bees. NCSU Apiculture Program's BEES Academy, Monroe, NC. [20 contacts]

Youngsteadt, E. & **Levenson, H.K.** (2021) Native Bee Diversity and Identification. NCPCA Pollinator Field Day, Virtual. [100 contacts]

**Levenson, H.K.** (2021) The Who, What, and How of Native Bees. (INVITED). NCSU Staff Senate Pollinator Week, Virtual. [28 contacts]

**Levenson, H.K.** (2021) The Who, What, and How of Native Bees. (INVITED). NCSU Staff Senate, Virtual. [20 contacts]

**Levenson, H.K.** (2021) The Who, What, and How of Native Bees. (INVITED). North Raleigh Rotary Club Meeting, Virtual. [20 contacts]

**Levenson, H.K.** (2020) The non-honey bees: native bees active this time of year. NCSU Apiculture Program: Hive Chat, Virtual. [589 contacts]

**Levenson, H.K.** (2020) Pollinator communities across North Carolina: from the individual to the agroecosystem. (INVITED). Haywood County Beekeepers Association Meeting, Virtual. [14 contacts]

**Levenson, H.K.** (2020) Bee Field Collection and Identification. NCPCA Pollinator Field Day, Virtual. [220 contacts]

- Levenson, H.K.** (2020) Identification of Native Bees. NCSU Apiculture Program's BEES Academy, New Bern, NC. [45 contacts]
- Levenson, H.K.** (2020) Native bees: diversity, biology, and identification tricks. (INVITED). NCSU Extension Agent Training Video.
- Levenson, H.K.** (2020) The bees in your backyard. (INVITED). Springdale Garden Club Meeting, Raleigh, NC. [14 contacts]
- Levenson, H.K.** (2019) Evaluating the connectedness of pollinator networks between augmented pollinator habitat and adjacent cropping systems. Chatham County Beekeepers, Pittsboro, NC. [100 contacts]
- Levenson, H.K.** (2019) Identification of Native Bees. NCSU Apiculture Program's BEES Academy, Bolivia, NC. [20 contacts]
- Levenson, H.K.,** Favre, M. & Youngsteadt, E. (2019) Mini-Bee Identification Workshop. NCPCA Pollinator Field Day, Raleigh, NC. [20 contacts]
- Levenson, H.K.** (2019) Bee Field Collection and Identification. NCPCA Pollinator Field Day, Raleigh, NC. [60 contacts]
- Levenson, H.K.** (2019) Identification of Native Bees. NCSU Apiculture Program's BEES Academy, Pittsboro, NC. [20 contacts]
- Youngsteadt, E & **Levenson, H.K.** (2019) Native Bee ID. (INVITED). Master Gardner College, Raleigh, NC. [20 contacts]
- Levenson, H.K.** and Youngsteadt, E. (2019) Bee Biology and Identification Workshop. NCSU, Raleigh, NC. [20 contacts]
- Levenson, H.K.** (2019) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. Moore County Beekeepers Association, Carthage, NC. [20 contacts]
- Levenson, H.K.** (2019) Bees as Social Insects. (INVITED). Midnight Bee Supply – Bee School, Vass, NC. [20 contacts]
- Levenson, H.K.** and Youngsteadt, E. (2018) Bee Biology and Identification Workshop. NCSU, Raleigh, NC. [17 contacts]
- Levenson, H.K.** (2018) Bee Field Collection and Identification. NCPCA Pollinator Field Day, Salisbury, NC. [100 contacts]
- Levenson, H.K.** (2018) Temporal and spatial dynamics of pollinator communities across NC agroecosystems. (INVITED). Wake County Beekeepers Association Meeting, Raleigh, NC. [26 contacts]
- Levenson, H.K.** (2018) Native pollinators and pollinator interactions. (INVITED – FEATURED SPEAKER) National Honey Bee Veterinary Consortium, Raleigh, NC. [20 contacts]
- Levenson, H.K.** (2018) Pollinator Habitat Study. (INVITED). Wake County Beekeepers Association Meeting, Raleigh, NC. [100 contacts]
- Levenson, H.K.** (2017) Pollinator Habitat Study. (INVITED). Orange County Beekeepers Association Meeting, Hillsborough, NC. [20 contacts]
- Levenson, H.K.** & Blanchard, V. (2016) Pollinator Habitat Study. (INVITED). Person County Beekeepers Association Meeting, Roxboro, NC. [20 contacts]

## **POPULAR PRESS**

PBS: SCI NC. (2024) "Harvesting Science"

Entomology Today. (2024) "Estimating Bee Communities is a Tall Task, Analysis Shows"

Entomology Today. (2023) "How One Entomologist Applies Lessons Learned in Design, Marine Biology"

WUNC: North Carolina Public Radio. (2023) "North Carolina researchers are learning what it takes to bring back the bees"

The News & Observer. (2022) "Carpenter bees can be a spring buzzkill. Here's how to get rid of them (or coexist)"

NCSU Extension: Homegrown. (2020) "Bee, Wasp, or Fly? Identifying N.C. Bees" [7525 contacts]

NC State University News. (2020) "The Buzz About Native Bees"

NCSU Extension: Homegrown. (2019) "Growing a Pollinator Garden" [1624 contacts]

Oregon State University: PolliNation Podcast. (2019). "Regional bee communities (and the plants they like)"

## **TEACHING ACTIVITIES**

### **CLASSES TAUGHT**

**Levenson, H.K.** (2023) SWD Management in Small Fruits. (INVITED GUEST LECTURE). ENT 641, NCSU.

**Levenson, H.K.** (2023) Balancing Pollinator Health and IPM. (INVITED GUEST LECTURE). ENT 762, NCSU.

**Levenson, H.K.** (2023) Management of Arthropods in Small-fruit Production Systems. (INVITED GUEST LECTURE). ENT 762, NCSU.

**Levenson, H.K.** (Spring 2019) Teaching Assistant. ENT 201: Insects and People, NCSU.

**Levenson, H.K.** (2018) Native bees and pollinator interactions. (INVITED GUEST LECTURE). ENT 203: Field Section, NCSU.

**Levenson, H.K.** (Fall 2017) Teaching Assistant. ENT 203: An Introduction to the Honey bee and Beekeeping, NCSU.

### **UNDERGRADUATES AND ASSISTANTS SUPERVISED**

2024: 5, 2 co-advised	2021: 2	2018: 5
2023: 4, 3 co-advised	2020: 2	2017: 3
2022: 4	2019: 6	2016: 1

## **PROFESSIONAL SERVICE**

### **COMMITTEES SERVED**

Northeastern Naturalist Guest Editor, 2024 – Present

Journal of Melittology Special Edition Guest Editor, 2024 – Present

Proposal Review Committee: NCSU OUR Research Awards (INVITED), 2023 – Present

NCSU DEPP Departmental Postdoctoral Representative, 2023 – Present

NCSU Consumer and Youth Horticulture Working Group, October 2021 – Present

NC Pollinator Conservation Alliance Committee Member, January 2018 – Present

Being an Ally in Academia Seminar Series Executive Committee Member, 2022 – 2023

NCSU Entomology Graduate Student Association Co-Seminar Chair, 2019 – 2020

NCSU DEPP Departmental Social Committee Member, 2018 – 2019

NCSU Entomology Graduate Student Association Co-Social Chair, 2018 – 2019

### **UNDERGRADUATE PROGRAMS MENTOR**

BeeMORE, Summer 2018, 2019, 2021, 2022, 2024

- BeeMORE “Boot Camp” Presenter 2017, 2018, 2019, 2021, 2022, 2023, 2024

CEFS ASPIRE, Summer 2022, 2023

### **MEETING ORGANIZER**

US National Native Bee Monitoring RCN - Sampling methods for the US National Native Bee Monitoring RCN. Workshop, Co-Organizer. Gibraltar Island, Ohio. 2023.

Entomological Society of America - The Future of Native Bee Monitoring: Developing Sampling Methods for a US National Strategic Plan. Conference Workshop, Co-Organizer. Vancouver, Canada. 2022.

Entomological Society of America - Pollinator and soybeans: impacts, complications, and future directions. Conference Symposium, Co-Organizer. Virtual. 2020.

### **EXTENSION SERVICES**

NCSU Insect Identifications: 13

Georgia SWAP: 2024

North Carolina SWAP: 2024

NatureServe Canada: 2021

Endangered Species Act Review – Data contributor: 2021

### **INVITED PEER REVIEWS**

BMC Ecology and Evolution: 2024

Journal of Economic Entomology: 2021, 2022, 2023, 2024

Discover Applied Sciences: 2024

Apidologie: 2019, 2023

AZASH: 2023

Ecosphere: 2023

Annals of ESA: 2023

Microbial Ecology: 2023

Frontiers in Ecology and Evolution: 2021, 2023

Frontiers in Cellular and Infection Microbiology: 2022

Scientific Reports: 2021, 2024

Insects: 2020, 2020

Sustainability: 2020

Ecology Letters: 2020

**Letters of Recommendation – Graduate School Applications: 2**

**Letters of Recommendation – Job Applications: 5**

### **OUTREACH EVENTS**

JC Raulston Arboretum Summer Camp 2021 [20 contacts]

Bugfest, North Carolina Museum of Natural Sciences 2015, 2016, 2017, 2018, 2019  
[30,000 attendees, yearly]  
Brain Awareness Night, North Carolina Museum of Natural Sciences 2016, 2017  
Pollinator Garden, Gregg Museum 2017 [200 attendees]  
Native Bees, Festival for the Eno 2017 [20,000 attendees]

### **TRAINING**

Adult Mental Health First Aid Certification, December 2022  
Agricultural Leadership Institution (SELECTED ATTENDEE), 2022  
NCSU STEM EXTERNSHIP (SELECTED PARTICIPANT), 2021  
Inclusive STEM Teaching Project, 2021