

Molly Norton Darr, Ph.D.

Department of Forestry and Environmental Conservation
Clemson University
261 Lehotsky Hall
Clemson, SC, 29634, USA

Phone: (703) 431-9579
mndarr@clemson.edu

https://www.clemson.edu/cafls/faculty_staff/profiles/mndarr

EDUCATION

Ph.D. Virginia Tech, Blacksburg, VA, May 2017

Major: Entomology

Advisor: Scott M. Salom

B.Sc. Virginia Tech, Blacksburg, VA, July 2009

Major: Wildlife Management

Advisor: Suzie Leslie

Non-degree Graduate, Canterbury University, Christchurch, New Zealand, February 2008

Major: Forestry

Advisor: Suzie Leslie

CURRENT POSITION

Postdoctoral Research Associate, Clemson University

October 2018 - Present

Dept. of Forestry & Environmental Conservation

Supervisor: Dr. David Coyle, (706) 372-8414, dcoyle@clemson.edu

Duties: I direct and maintain the Southern Forest Health and Invasive Species Program. This regional forest health program serves as a consistent source of forest health information for natural resource professionals throughout the southeastern U.S. region.

- *Education:* I provide Forest Health Protection (FHP) information to state forest and tree health personnel, including forest insect and pathogen detection, evaluation, prevention and control.
- *Development:* I work closely with university and state forest and tree health personnel across the southeastern U.S. to deliver Forest Health Protection educational materials (factsheets, reports and publications) to forestry and natural resource professionals, arborists, and landowners in the region.
- *Website maintenance:* I work with a diverse team of IT and Design professionals, as well as experts from across the U.S. to develop forest health related educational content. Website link: <http://southernforesthealth.net/>
- *Webinars:* I host and facilitate a webinar series that draws nearly 200 people per live webinar.
- *Speaking engagements:* I organize and participate in training workshops for state forestry agencies and university extension personnel. I deliver forest health information and provide technical training on behalf of the Southern Forest Health and Invasive Species program.
- *Research:* Currently developing an experimental research project to assess and control invasive *Elaeagnus pungens* on a 400-acre mixed forest stand in collaboration with the South Carolina Audubon Society.
 - *Collaboration:* Working with Janet Steele (Clemson Extension) and Becky Barlow (Auburn Extension) to expand the South Carolina chapter of the Women Owning Woodlands Program and collaborate with the Alabama

ForestHer initiative. Both programs were formed to address the needs of educating female forest owners and supporting women in forest leadership roles. Our goal is to create a multi-state network which hosts workshops and trainings, with topics ranging from treatment of invasive species and how to sell timber, to keeping forest land in the family, timber taxes and chainsaw use.

EXTENSION ACTIVITIES

Publications:

- Coyle, D.R., **M. Darr**, M. Bataineh, E. Day, L. Rieske-Kinney, and S. Salom. “Emerald ash borer in the southern U.S.: Identification, biology, and management strategies in urban and rural areas”. Southern Regional Extension Forestry Publication. *In Review*.
- **Darr, M.N.** and D. Coyle. “The Role of Biological Control in Forest Pest Management”. Forest Landowner Association Magazine. *In Press*.
- **Darr, M.N.** and D. Coyle. 2019. Hemlock Woolly Adelgid: Where do we stand? Entomology Today. <https://entomologytoday.org/2019/10/07/biological-control-hemlock-woolly-adelgid/>
- **Darr, M.N.** 2019. Hemlock Woolly Adelgid. Clemson Cooperative Extension - Home and Garden Information Center Blog. <https://hgic.clemson.edu/hemlock-woolly-adelgid/>
- **Darr, M.N.**, D. Coyle, and L. Burgess. 2019. Hemlock Woolly Adelgid: Biology and Management. Land-Grant Press by Clemson University. <https://lgpress.clemson.edu/publication/hemlock-woolly-adelgid-biology-and-management/>
- **Darr, M.N.** 2019. Lasagna Gardening. Clemson Cooperative Extension - Home and Garden Information Center Blog. <https://hgic.clemson.edu/lasagna-gardening/>
- **Darr, M.N.** and S. Salom. 2014. *Scymnus coniferarum*. Virginia Tech Cooperative Extension. <http://www.na.fs.fed.us/fhp/hwa/biology/mdarrfactsheet.pdf>.

Presentations:

- **Darr, M.N.** Hemlock Woolly Adelgid: Biology and Management. Clemson Extension Forest Health and Invasive Species Workshop, 18 April 2019, Greenville, SC.
- **Darr, M.N.** Hemlock Woolly Adelgid: Where do we stand? South Carolina Forestry Commission Forest Health Training Workshop, 8 April 2019, Columbia, SC.
- **Darr, M.N.** Forest Insects of Washington State. Washington Master Naturalist Program, 14 November 2018, Wenatchee, WA.
- **Darr, M.N.** The Wild World of Butterflies. Gilbert Linkous Elementary School, 7 October 2014, Christiansburg, VA.
- **Darr, M.N.** Looking forward: Career paths in entomology. VMNH Insect Festival, 10 May 2014, Martinsville, VA.
- **Darr, M.N.** Insect Orders. Virginia Master Naturalists Program, 10 April 2014, Blacksburg, VA.
- **Darr, M.N.** Pinning and Labeling Insects – Making a Collection. Smith Mountain Lake 4H Camp, 22 June 2013, Blacksburg, VA.
- **Darr, M.N.** Insects in your garden, Friends or Foes? Blacksburg Farmer’s Market, 25 May 2013, Blacksburg, VA.

- **Darr, M.N.** Insects and Arthropods in Your World. Science Museum of Western Virginia Grand Opening, 15 December 2012, Radford, VA.

Webinars: Organized and hosted, (rating, live, archived; total views as of 23 December 2019)

- Treating live trees for Formosan termites. Dr. Kevin Chase, Bartlett Tree Experts. 9 November 2019. SAF & ISA CEU's available. (4.5/5, 52 live, 2 archived, 54 total)
- Oak decline in the Southeastern United States. Dr. Ryan Blaedow, North Carolina Forest Service. 6 October 2019. SAF & ISA CEU's available. (4.3/5, 183 live, 455 archived, 638 total)
- Spotted Lanternfly in the southeastern United States. Ms. Lori Chamberlin, Virginia Dept. of Forestry. 4 September 2019. SAF & ISA CEU's available. (4.4/5, 155 live, 75 archived, 230 total)
- The shiny-capped Ganoderma species of the United States. Dr. Andrew Loyd, Bartlett Tree Experts. 29 May 2019. SAF & ISA CEU's available. (4.4/5, 104 live, 7 archived, 111 total)
- Invasive bamboo management in the southeastern U.S. Dr. Deah Lieurance, University of Florida. 24 April 2019. SAF & ISA CEU's available. (4.0/5, 166 live, 29 archived; 195 total)

Websites & Social Media:

- Website: Southern Regional Extension Forestry – Forest Health
 - I curate this website to deliver forest health and invasive species education to the southeastern U.S.
 - Available at <http://southernforesthealth.net/>.
- Facebook page: Forest Health & Invasive Species Outreach & Education Program (1,102 follows)
 - I curate forest and tree health information for the southeastern U.S. and is closely linked with the website of the same name (listed above).
 - Available at: <https://www.facebook.com/southernforesthealth/>

Workshops:

- Women Owning Woodlands/Ladies Engaged in Agricultural Development workshop: Co-developer, organizer and presenter at a workshop designed to teach female landowners about invasive species management. Columbia, SC. 28 March 2020.
- Women Owning Woodlands workshop: Co-developer, organizer and presenter at a workshop designed to teach female landowners about invasive species management and pesticide use. SFA & ISA credits available. Columbia, SC. 27 March 2020.
- Women Owning Woodlands workshop: Co-developed and organized a workshop designed to teach female landowners about forest health and stand management. Twelve female forestry experts from various natural resource backgrounds spoke to a group of 30 women of all ages and experience levels. Big Survey plantation, Colleton Co., SC. 5 October 2019.

Volunteer outreach activities:

- Skype A Scientist: Spoke about forestry and entomology with a class of 7th graders (about 30 students) at Oak Ridge Middle School in Marion, IA. 12 December 2019.
- Skype A Scientist: Spoke about forestry and entomology with 3 classes of 6th, 7th and 8th graders (about 70 students) at Pearson Middle School in Frisco, TX. 22 February 2019.

- Blue Ridge Highlands Regional Science Fair: Judge, Radford, VA. 9 March 2016.
- Hokie Bugfest: Created and presented: Forest Entomology & Biological Control Booth. Blacksburg, VA. 22 October 2016.
- Hokie Bugfest: Created and presented. Forest Entomology & Biological Control Booth. Blacksburg, VA. 17 October 2015.
- Hokie Bugfest: Created and presented. Forest Entomology & Biological Control Booth, Blacksburg, VA. 18 October 2014.
- Virginia Tech Entomology Day Camp: Co-developed, coordinated, instructed. Blacksburg, VA. 19 July 2014.
- Blue Ridge Highlands Regional Science Fair: Judge, Radford, VA. 20 May 2014.
- Falling Branch Elementary School Science Fair: Judge, Christiansburg, VA. 5 February 2014.

COLLABORATIONS AND WEBPAGES

- **Co-creator and co-editor of “*Virginia Forest Health Guide*”** (In progress) **2019 – Present**
Description: Updating Virginia’s Forest Health Guide to include a comprehensive list of forest health threats (insects, diseases, abiotic factors) complete with hosts, symptoms, timing and management recommendations for each issue.
Collaborators: Lori Chamberlain & Katlin Mooneyham (Virginia Dept. of Forestry); David Coyle (Clemson University)
- **“*Healthy Trees Healthy Lives*” Outreach committee** **2019 - Present**
Description: The Southern Group of State Foresters (SGSF) has created this campaign to increase the public’s collective understanding of how our health can be connected to the trees in our communities. The purpose of this subcommittee is to compile forest health related information from all the southern states in this region and present it to the public through a partnership with our Southern Region Extension Forestry Facebook page.
Collaborators: Lori Chamberlin (VDOF), Robert Trickle (NCFS), David Jenkins (SCFC), Doug Wood (SCFC)
- **WOW Network workshop planning committee** **2019 - Present**
Description: The Women Owning Woodlands project strives to bring topical, accessible, and current forestry information to woodland owners and forest practitioners through news articles, blogs, events, resources, and personal stories. They support women in forest leadership, women who manage their own woodlands, and all who facilitate the stewardship of forests. This planning committee coordinates the South Carolina branch Wow Network workshops.
Collaborators: Janet Steele (Clemson Extension), Amy McFadden (White Oak Forest Management), Jennifer Howard (Steward Terra Communications), Emily Oakman (FASC), Molly Rhodes (SC DNR), Grace-Anna Cooper (SCFC)
- **Co-creator and co-editor of “*The Feminist Forester*”** **2015 - 2018**
Blog: <https://feministforester.com>
Facebook: <https://www.facebook.com/feministforester/>
Collaborator: Dr. Jess Hartshorn

TEACHING EXPERIENCE

- **Teaching Assistant and Lab Instructor**, Virginia Tech **Fall, 2016**
Dept. of Entomology: Forest and Tree Pest Management, 3 credits
Supervisor: Dr. Scott Salom, (540) 231-2794, salom@vt.edu
 - Description: This graduate forest entomology course focused on the identification and ecology of biotic and abiotic influences on tree health. Specifically, the curriculum examined diagnosis of insect pests and diseases and integrated pest management strategies in both the forest and landscape setting.
 - Summary of Responsibilities:
 - Set up and facilitated laboratory classes and examinations.
 - Laboratory exercises involved insect and disease identification in the lab and field, practicing insect sampling techniques, exploring pest management programs using environmental impact assessment case-studies, and the creation of laboratory identification keys.
 - Development and implementation of group research projects.
 - Graded assignments and examinations for both lecture and lab classes.
 - Organized the course insect collection. Collected, identified, and pinned new insects.

- **Teaching Assistant**, Virginia Tech **Fall, 2015**
Dept. of Entomology: Insects in Human Society, 3 credits
Supervisor: Dr. Steve Hiner, retired
 - Description: This undergraduate entomology course aimed to facilitate an appreciation of the past, present, and future role of insects with human society. Topics included insect and arthropod identification, effects of insects on human history, surveillance of diseases transmitted by insects and their worldwide impact, insect monitoring techniques, conservation plans for beneficial insects, and management programs for insect pests.
 - Summary of Responsibilities:
 - Provided individual assistance during office hours.
 - Graded student assignments, essays, and examinations.
 - Proctored quarterly exams.
 - Course included online components using multiple educational systems (i.e. Blackboard, Scholar, and D2L Brightspace).

- **Extension Coordinator**, Virginia Tech **2013 - 2015**
W.B. Alwood Society (*Graduate Student Organization*), Dept. of Entomology
 - Summary of Responsibilities:
 - Volunteer recruitment and community outreach.
 - Scheduled and facilitated outreach events presented to the community by graduate students in the Department of Entomology.
 - Prepared and delivered lectures in classroom and outdoor settings, designed interactive presentations and activities and trained graduate student volunteers.
 - Co-created “Hokie Bug Camp”, which provided children (~400, ages 6-15) with interactive activities, led by academics, land managers, foresters, and local growers. The numbers of campers and staff has continued to expand

since 2013, and the camp continues to forge new relationships between the university and community.

- https://www.ento.vt.edu/4-H_Entomology/HokieBugCamp.html

REFEREED RESEARCH PUBLICATIONS

- **Darr, M.N.**, J. Hulcr, J. Smith, W. Hubbard, and D. Coyle. *In Review*. Meet them where they are: Facebook as an effective digital diagnostics tool for the natural resources. Journal of Extension.
- **Darr, M.N.**, R. Brooks, N. Havill, E. Hoebeke, and S. Salom. 2018. Phenology and synchrony of *Scymnus coniferarum* (Coleoptera: Coccinellidae) with multiple adelgid species in the Puget Sound, WA, USA. *Forests*. 9(9):558. DOI: 10.3390/f9090558.
- **Darr, M.N.**, S. Salom, R. Brooks, R. Foottit, G. Miller, and N. Havill. 2018. First report of *Pineus strobi* (Hartig, 1839) (Hemiptera: Adelgidae) in western North America. *Pan-Pacific Entomologist*. 94:40-42.
- **Darr, M.N.**, T. McAvoy, C. Brewster, and S. Salom. 2016. Field-cage evaluation of the survival, reproduction and feeding behavior of adult *Scymnus coniferarum*, a predator of *Adelges tsugae* (Homoptera: Adelgidae). *Environ. Entomol.* 45:1527-1535.

RESEARCH GRANTS AND AWARDS

- | | |
|--|-------------|
| • Women Owning Woodlands Travel Grant (\$1300) | 2019 |
| • Roger F. Anderson Outstanding Graduate Student Award (\$300) Southern Forest Insect Work Conference | 2017 |
| • J. M. Grayson Scholarship Award for outstanding Ph.D. student (\$1000) Virginia Tech, Dept. of Entomology | 2017 |
| • W.B. Alwood Extension Award (\$500) Virginia Tech, Dept. of Entomology | 2016 |
| • President's Prize - First Place Oral Presentation (\$500) Entomological Society of America, National Meeting | 2015 |
| • W.B. Alwood Travel Award (\$500) Virginia Tech, Dept. of Entomology | 2015 |
| • First Place Oral Presentation (\$350) 7 th Annual Forest Resources & Environmental Conservation Graduate Research Symposium | 2015 |
| • Gladys and Clarence Hill Travel Scholarship Award (\$400) Virginia Tech, Dept. of Entomology | 2014 |
| • Graduate Student Assembly GRDP Grant (\$500) Virginia Tech, Graduate Student Assembly | 2014 |

SYMPOSIUM LEADERSHIP AND ORGANIZATION

- Organizer/Moderator, Novel communication methods in scientific education, Symposium, Southern Forest Insect Work Conference: 2019
- Moderator, Women in Forest Entomology, Open Session, North American Insect Work Conference: 2016
- Moderator, Graduate Student Session, Southern Forest Insect Work Conference: 2015
- Moderator, Graduate Student Poster Session, Southern Forest Insect Work Conference: 2014

PROFESSIONAL PRESENTATIONS

Invited Academic Seminars:

- **Darr, M.N.** Using Facebook as a professional research tool in entomology. USDA-ARS, Appalachian Fruit Research Laboratory, 3 April 2020, Kearneysville, WV.
- **Darr, M.N.** Hemlock Woolly Adelgid: Biology and Management. Clemson University, 13 March 2020, Columbia, SC.

Invited Professional Presentations:

- Coyle, D.R. and **M. Darr**, Click! Post! Like! Using social media to promote forest entomology. Entomological Society of America, 17 November 2019, St. Louis, MO.
- **Darr, M.N.**, D. Coyle, J. Hulcr, J. Eickwort, J. Smith, and W. Hubbard. Meet them where they are: Facebook as an effective digital diagnostics tool for the natural resources. Entomological Society of America, 20 November 2019, St. Louis, MO.
- **Darr, M.N.**, D. Coyle, J. Hulcr, J. Eickwort, J. Smith, and W. Hubbard. Meet them where they are: Facebook as an effective digital diagnostics tool for the natural resources. Southern Forest Insect Work Conference, 26 July 2019, Savannah, GA.
- **Darr, M.N.** and B. Beers, Spotted Wing Drosophila: Where are they now, and what have we learned? Lake Chelan Horticultural Meeting, 25 January 2018, Chelan, WA.
- **Darr, M.N.** and B. Beers, Spotted Wing Drosophila: Management Strategies. 2018 Cherry Institute, 4 January 2018, Yakima, WA.
- **Darr, M.N.** Gray Hairstreak Butterfly: What do we know? G.S. Long Co. Grower's Meeting, Hop & Vine Session, 10 January 2018, Yakima, WA.
- **Darr, M.N.** A Review of Lepidopteran Orchard Pests. G.S. Long Co. Field Staff Meeting, 8 December 2017, Yakima, WA.
- **Darr, M.N.** Apple Leafcurling Midge: What do we know? G.S. Long Co. Field Staff Meeting, 10 November 2017, Yakima, WA.
- **Darr, M.N.** and J. Hartshorn. Women in STEM. UNC Asheville Osher Lifelong Learning Institute, 13 September 2017, Asheville, NC.
- **Darr, M.N.** and J. Hartshorn. Attraction of young, diverse communities to entomology. XXV International Congress of Entomology, 26 September 2016, Orlando, FL.
- **Darr, M.N.** Gender Roles in Science. Southern Forest Insect Work Conference, 23 July 2015, Fayetteville, AR.
- **Darr, M.N.** and S. Salom, S.M. Host Range Tests of *Scymnys (Pullus) coniferarum*, a Potential Biological Control agent for HWA. Virginia Forest Health Professionals Annual Conference, 3 February 2015, Staunton, VA.
- **Darr, M.N.** Youth programs in Entomology. Virginia Tech Department of Entomology Retreat on Youth Outreach and Extension Programs, 18 June 2013, Blacksburg, VA.

Submitted Oral Presentations:

- **Darr, M.N.** and S. Salom. Phenology and synchrony of *Scymnus coniferarum* (Coleoptera: Coccinellidae) and *A. tsugae* in Tacoma, Washington. USDA Interagency Research Forum on Invasive Species, 8 January 2017, Annapolis, MD.
- **Darr, M.N.** and S. Salom. Survey of *Scymnus coniferarum* (Coleoptera: Coccinellidae) and *A. tsugae* populations in Tacoma, Washington. XXV International Congress of Entomology, 26 September 2016, Orlando, FL.

- **Darr, M.N.** and S. Salom. An ecological snapshot: *Scymnus coniferarum* (Coleoptera: Coccinellidae) and its adelgid prey in Tacoma, Washington. North American Insect Work Conference, 12 May 2016, Washington, D.C.
- **Darr, M.N.** and S. Salom. Rearing and phenology evaluations of the potential biological control agent, *Scymnus (Pullus) coniferarum*. Entomological Society of America Annual Conference, 17 November 2015, Minneapolis MN.
- **Darr, M.N.** and S. Salom. Host Range Studies of *Scymnus coniferarum* (Coleoptera: Coccinellidae), a Potential Biological Control Agent of HWA. Annual Forest Resources and Environmental Conservation Graduate Research Symposium, 26 March 2015, Blacksburg, VA.
- **Darr, M.N.** and S. Salom. Host Range Tests of *Scymnus (Pullus) coniferarum*, a Potential Biological Control agent for HWA. USDA Interagency Research Forum on Invasive Species, 13 January 2015, Annapolis, MD.
- **Darr, M.N.** and S. Salom. Field and Laboratory Evaluations of the Potential Biological Control Agent, *Scymnus (Pullus) coniferarum*. Entomological Society of America National Meeting, 18 November 2014, Portland, OR.
- **Darr, M.N.** and S. Salom. Predation and Fecundity of *Scymnus (Pullus) coniferarum*, a Biological Control Agent for HWA. Southern Forest Insect Work Conference, 23 July 2014, Charleston, SC.
- **Darr, M.N.** and S. Salom. A continuation of field-cage evaluations with *Scymnus (Pullus) coniferarum*, a potential biological control agent for HWA. Entomological Society of America Eastern Branch Meeting, 19 March 2014, Williamsburg, VA.
- **Darr, M.N.** and S. Salom. Biology of *Scymnus (Pullus) coniferarum* and its potential as a biological control agent for HWA in Southwest Virginia. Southern Forest Insect Work Conference, 24 July 2013, New Orleans, LA.
- **Darr, M.N.** and S. Salom, Studies on *Scymnus (Pullus) coniferarum* and its potential as a biological control agent for HWA in Southwest Virginia. USDA Interagency Research Forum on Invasive Species, 9 January 2013, Annapolis, MD.

Submitted Poster Presentations:

- **Darr, M.N.** and S. Salom. Phenology and synchrony of *Scymnus coniferarum* (Coleoptera: Coccinellidae) and its prey in Tacoma, Washington. USDA Interagency Research Forum on Invasive Species, 12 January 2016, Annapolis, MD.
- **Darr, M.N.** and S. Salom. 2014 Field and Laboratory Studies of *Scymnus (Pullus) coniferarum* a Potential BC Agent for HWA. USDA Interagency Research Forum on Invasive Species, 14 January 2014, Annapolis, MD.
- **Darr, M.N.** and S. Salom. 2013 Field and Laboratory Evaluations of *Scymnus (Pullus) coniferarum* as a potential biological control agent for HWA in Southwest Virginia. Entomological Society of America Annual Meeting, 12 November 2013, Austin, TX.
- **Darr, M.N.** Student-driven community outreach & engagement in the Biological Sciences. Engagement Showcase, 10 April 2013, Blacksburg, VA.
- **Darr, M.N.** and S. Salom. Biology of *Scymnus (Pullus) coniferarum* and its potential as a biological control agent for HWA in Southwest Virginia. Southern Forest Insect Work Conference, 25 July 2012, Charlottesville, VA.

OTHER RELEVANT PROFESSIONAL EXPERIENCE

- **G.S. Long Co.** **September 2017 – September 2018**
Research Entomologist: Wenatchee, WA
Supervisor: Jeff Allen, (509) 949-9229, jallen@gslong.com
 - Performed tree fruit damage diagnostics and developed recommendations for pest insect and disease detection, prevention and management. Provided entomological and pathological expertise to crop advisors and growers.
 - Designed educational presentations relating to insect pests in the tree fruit industry. Delivered lectures and field demonstrations to stakeholders, interest groups, and the general public.
 - Determined management and research needs and prioritized studies in response to specific management questions. Designed and implemented research experiments (field and lab) investigating insect pest management approaches in an orchard setting.
 - Knowledge of pesticide use and application.
- **Washington State University, Dept. of Entomology** **July 2017 – March 2018**
Research Assistant: Wenatchee, WA
Supervisor: Elizabeth Beers, (509) 679-1010, ebeers@wsu.edu
 - Prepared and monitored bioassays with tree fruit pests during the field season.
 - Delivered research presentations at tree fruit grower public meetings and academic seminars.
- **Virginia Tech, Dept. of Entomology, Forest Entomology Lab** **August 2012 – May 2017**
Graduate Research Assistant: Blacksburg, VA
Supervisor: Scott Salom, 540-231-2794, salom@vt.edu
 - My dissertation project examined the predator insect *Scymnus coniferarum* as a potential biological agent of hemlock woolly adelgid. Working with a team of University and Federal researchers, this program included project conceptualization, design, implementation, data collection and synthesis, budget development and technician supervision.
 - Developed expertise on the importation and commercial collection of potential biological control agents in accordance with federal regulations. Experienced working in a quarantine laboratory environment.
 - Experienced working in the field in all weather conditions. Familiar with driving 4WD government state trucks and using GPS and topographic maps for navigational purposes in remote environments.
- **Virginia Tech, Dept. of Entomology** **December 2011 – August 2012**
Research Technician: Blacksburg, VA
Supervisor: Carrie Jubb, (540) 557-7529, cjubb@vt.edu
 - Assisted in rearing and maintaining *Laricobius nigrinus*, *Eucryptorrhynchus brandti*, and *Scymnus coniferarum* insect colonies.
 - Experienced in insect dissection and compound microscopy.
 - Organized and executed intra-state field monitoring surveys for *Ailanthus altissima* fungal damage.

- **US Geological Survey** **Summer 2011**
Field Technician: Moab, UT
Supervisor: Tamara Zelikova, tzelikov@uwyo.edu
 - Collected field data characterizing above and belowground carbon stocks inside and outside of grazer exclosures across a range of ecotypes.
 - Collected soil cores and non-destructively measured plant biomass for grasses, shrubs and trees. Processed soil samples in the lab, including soil sieving, grinding, and packing for CHN analysis.
- **Elements Wilderness Program** **September 2010 – June 2011**
Assistant Group Lead: Huntington, UT
Supervisor: Karen Scrafford, karen@elementswilderness.com
 - Directed and advised groups of young adults in Utah Wilderness in all weather conditions. Work schedule was 8 day/7 night shifts in wilderness, on-call 24/7. Ages of students ranged from 13-18, often struggling with mood dysregulation, oppositional defiance, and early to mid-stage substance abuse.
 - Led therapeutic processing groups and executed specialized treatment curriculums in the field with individual students. Led groups through cross-country hikes using orienteering skills (map and compass, GPS), safety drills, therapeutic initiatives, and lessons in basic wilderness survival skills, maintained control of the group in a positive and productive fashion.
- **Ozaukee-Washington Land Trust** **Sept. 2009 – August 2010**
Restoration Manager: West Bend, WI
Supervisor: Steve Henkel, shenkel@owlt.org
 - Developed long range management plans for the stewardship of both game and nongame species using Habitat Suitability Index Models and Habitat Evaluation Procedures (U.S. Fish and Wildlife Service).
 - Co-authored and assisted in research and development of numerous grants necessary for non-profit funding.
 - Promoted and implemented emerald ash borer primary damage and tree inventory surveys in accordance to the DNR's Urban Ash Management Guidelines. Developed an understanding of population viability analysis (PVA).
 - Scheduled and executed seasonal exotic invasive plant species control through the organization of volunteer workdays. Designed and coordinated public outreach education programs centered around habitat management techniques.
- **Ozaukee-Washington Land Trust** **Summer 2009 and Summer 2010**
Team Leader: Mequon, WI
Supervisor: Kristin Gies, kgies@mequonnaturepreserve.org
 - Supervised 12 interns between the ages of 17 and 19, directing the identification and eradication of invasive species on all OWLT properties during the summers.
 - Created a seasonal nature-based education curriculum and presented content to students from surrounding communities on a weekly basis. Directed 15-20 students at a time between the ages of 10 and 18.

- **Virginia Tech Biology Dept.** **Spring 2009**
Research Assistant: Blacksburg, VA
Supervisor: Unknown
 - Assessed the impact of forest canopy disturbance on the interactions between mosquito vectors and vertebrate reservoir hosts in LAC transmission dynamics.
 - Mosquito and small mammal trapping using Sherman and CDC Gravid traps.
- **Loudoun Wildlife Conservancy** **Summer 2007**
EPA Research Assistant: Leesburg, VA
Supervisor: Ron Circe, (703) 737-8894
 - Children's summer camp leader. Independently managed 15-20 students between the ages of 6 and 12. Organized and lead interpretive walks and interactive activities centered on habitat restoration, local ecology and basic wilderness survival.
 - Assisted in the development and publication of the County-wide Bluebird Nesting Program and program handbook.
 - Performed stream surveys from a long-term watershed management perspective. Collected quantifiable data on the physical habitat for benthic macro-invertebrate species.
- **Loudoun County Public Schools** **2007-2012**
Substitute Teacher: Loudoun County, VA
 - Carried out all duties assigned to facilitate the instructional process and to provide for a safe, educationally productive environment in the classroom. Classroom size averaged ~30 students. Experience with general and special education.

CERTIFICATIONS

- **South Carolina State Pesticide License** – Charleston, SC Exam scheduled **January 2020**
Licenses: Demonstration and Research Applicator, Certified Applicator
- **Washington State Pesticide License** – Wenatchee, WA **Feb 2018 – Feb 2019**
Licenses: Commercial Operator, Commercial Pest Control Consultant, Demonstration and Research Applicator, and Private Applicator
Categories: Agricultural Insect and Disease, Agricultural Weed
- **Future Professoriate Certification, Virginia Tech** – Blacksburg, VA **May 2017**
Description: This graduate certificate aims to prepare graduate students to become our future faculty and academic leaders by exposure to concepts that break the mold of existing practices in higher education.

PROFESSIONAL AFFILIATIONS

- Entomological Society of America
- Phi Sigma National Biological Honor Society
- Gamma Sigma Delta, The Honor Society of Agriculture

PROFESSIONAL SERVICE

- Program Chair, Southern Forest Insect Work Conference: 2019-2020
- Reviewer, *Agricultural and Forest Entomology*: 2019, 2020
- Judge, Graduate Student Session, Entomological Society of America: 2018, 2019
- Judge, Graduate Student Session, Southern Forest Insect Work Conference: 2019
- Entomological Society of America's Committee on Diversity and Inclusion: 2016, 2017
- Extension/Outreach Coordinator, W.B. Alwood Entomological Society: 2013-2016

PROFESSIONAL MEETINGS ATTENDED

- Entomological Society of America Annual Meeting, 17-21 November 2019, St. Louis, MO.
- Southern Forest Insect Work Conference, 22-26 July 2019, Savannah, GA.
- Lake Chelan Horticultural Meeting, 23 January 2018, Chelan, WA.
- Orchard Pest and Disease Management Conference, 10-12 January 2018, Portland, OR.
- USDA Interagency Research Forum on Invasive Species, 9-12 January 2017, Annapolis, MD.
- XXV International Congress of Entomology, 25-28 September 2016, Orlando, FL.
- North American Forest Insect Work Conference, 31 May-2 June 2016, Washington, D.C.
- Virginia Association of Forest Health Professionals Annual Conference, 29-30 January 2015, Blacksburg, VA.
- USDA Interagency Research Forum on Invasive Species, 11-14 January 2016, Annapolis, MD.
- Entomological Society of America Annual Meeting, 14-18 November 2015, Minneapolis, MN.
- Southern Forest Insect Work Conference, 21-24 July 2015, Fayetteville, AR.
- Forest Resources and Environmental Conservation Graduate Research Symposium, 26 March 2015, Blacksburg, VA.
- Virginia Forest Health Professionals Annual Conference, 3 February 2015, Staunton, VA.
- USDA Interagency Research Forum on Invasive Species, 12-15 January 2015, Annapolis, MD.
- Entomological Society of America Annual Meeting, 16-19 November 2014, Portland, OR.
- Southern Forest Insect Work Conference, 22-25 July 2014, Charleston, SC.
- Entomological Society of America Eastern Branch Meeting, 15-18 March 2014, Williamsburg, VA.
- USDA Interagency Research Forum on Invasive Species, 12-15 January 2014, Annapolis, MD.
- Entomological Society of America, 10-13 November 2013, Austin, TX.
- Southern Forest Insect Work Conference, 23-26 July 2013, New Orleans, LA.
- USDA Interagency Research Forum on Invasive Species, 8-11 January 2013, Annapolis, MD.
- Southern Forest Insect Work Conference, 24-27 July 2012, Charlottesville, VA.