

Laura McHenry, Ph.D.

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EDUCATION

Ph.D. Entomology

January 2020 – September 2024

Graduate Certificate: Geospatial Information Technology (GIT)

Virginia Polytechnic Institute and State University | GPA: 4.0/4.0

B.A. Biology

August 2009 - May 2013

Minors: Anthropology, Italian

Kenyon College | *Summa Cum Laude* | GPA 3.92/4.0

School for Field Studies in Kenya/Tanzania

January – May 2012

Semester Abroad in Wildlife Management and Ecology

Koobi Fora Field School

6-week course in Paleoanthropology in Turkana, Kenya

June – July 2011

RESEARCH EXPERIENCE

Ph.D. Dissertation Research

January 2020 – September 2024 | Virginia Polytechnic Institute and State University

Dissertation: Waggle Dance Your Own Way: Individuality, Network Structure, and an Herbicide Stressor in Recruitment, Foraging, and Neurobiology in the Honey Bee (*Apis mellifera*) L.

Directorate Fellow

May 2023 – August 2023

Prairie Pollinator Response to Patch Burn Graze Management (position 6-4)

US Fish & Wildlife Service | Waubay NWR, Waubay, SD

Project Intern

March – May 2018

Elephants & Bees Project | Save the Elephants | Sagalla, Kenya

Research Assistant

March – June 2014

Barbary Macaque Project | Lincoln University | Lincoln, United Kingdom

Field Station: Azrou, Morocco

Research Assistant

June-August 2013

Northern Virginia Community College & Cape Cod National Seashore

Tupper, TA, CA Bozarth, KS Jones, and RP Cook. 2014. Detection of *Batrachochytrium dendrobatidis* in the Eastern Spadefoot, *Scaphiopus holbrookii*, at Cape Cod National Seashore, Barnstable County, Massachusetts, USA. *Herpetological Review* 45(3) 445-447. (*Acknowledged*)

Independent Study – Research in Biology

January – May 2013

Kenyon College | BIOL 386

The Effect of Social Dominance and Handling Time on Food Choice in Carolina Chickadees (*Poecile carolinensis*)

Directed Research

April – May 2012

The School for Field Studies | Kenya/Tanzania

Assessment of Human Encroachment on the Riverine Environment, Water Quality, and Human Health Along the Nooltresh River System, Kenya.

Research Project

October – December 2012

Kenyon College | BIOL 262

Effects of Relative Food Abundance on Caching and Eating Behaviors in the Gray Squirrel (*Sciurus carolinensis*).

COLLEGIATE TEACHING EXPERIENCE

1. Teaching Assistantship: Medical and Veterinary Entomology Laboratory | Virginia Tech | Spring 2024 (F2F)

- **McHenry, L.C.** (2024, January 30) *Introduction to Arthropods*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, January 30) *Insect Anatomy*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, January 30) *Order Siphonaptera (fleas)*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, February 6) *Order Diptera (true flies)*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, February 20) *Class Acari (ticks and mites)*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, March 12) *Order Phthiraptera (lice)*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, March 12) *Molecular Methods of Arthropod and Pathogen Identification*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, March 26) *Venomous and Urticating Arthropods*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, April 2) *Forensic Entomology (early section)*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, April 2) *Forensic Entomology (late section)*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (2024, April 16) *Role of the Vertebrate Host*. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.

2. Teaching Assistantship: Insect Biology (Lecture and Laboratory) | Virginia Tech | Fall 2023 (F2F)

3. Teaching Assistantship: Insects in Human Society | Virginia Tech | Spring 2023 (online)

4. Teaching Assistantship: Insects in Human Society | Virginia Tech | Fall 2022 (F2F)

5. Teaching Assistantship: Medical and Veterinary Entomology Laboratory | Virginia Tech | Spring 2021 (online)

- **McHenry, L.C.** (January 2021). *Introduction to Insect Anatomy* [pre-recorded course video lecture]. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (February 2021). *Flea Identification and Importance* [pre-recorded course video lecture]. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.

- **McHenry, L.C.** (March 2021). *Venomous and Urticating Insects* [pre-recorded course video lecture]. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.
- **McHenry, L.C.** (April 2021). *Forensic Entomology* [pre-recorded course video lecture]. Medical and Veterinary Entomology Laboratory Course, Virginia Tech, Blacksburg, VA, United States.

6. Teaching Assistantship: Insects in Human Society | Virginia Tech | Fall 2020 (online)

WORK EXPERIENCE

ZooSchool Coordinator Oregon Zoo Portland, OR	September 2018 – September 2019
ZooSchool Education Assistant Oregon Zoo Portland, OR	January 2015 – September 2018
Environmental Educator Audubon Society of Portland Portland, OR	June 2015 – September 2017
Environmental Educator Burgundy Center for Wildlife Studies Capon Bridge, WV	June-August 2007-2010, 2012

GRANTS

1. **McHenry, L.C.**, M.J. Couvillon. (2021). Landscapes of Risk: Spatiotemporal Modeling of Honey Bee Pesticide Exposure via Pollen Harvest in Three Representative Landscapes. Project Apis Mellifera (PAm). (\$96,360). Not funded.
2. **McHenry, L.C.** The Effect of Herbicide Glyphosate on Honey Bee Foraging and Recruitment. (2021). Virginia Tech ENT Internal Graduate Research Mini-Grant Competition. Faculty Advisor: Dr. Maggie Couvillon. (\$750) **Funded.**
3. **McHenry, L.C.** Research Skills Training in Network Analysis to Enhance Dissertation Research on the Honey Bee Communication Network. (2022). Virginia Tech GPSS Graduate Research Development Program (GRDP). (\$2,000) Not funded.
4. **McHenry, L.C.** Hill Travel Award, Spring 2023. (\$500) **Funded.**
This competitive travel grant supported my travel to the 2023 ESA Eastern Branch conference.
5. **McHenry, L.C.** Virginia Tech GPSS Travel Fund Program, Spring 2022. (\$712) **Funded.**
This need-based travel grant supported my travel to the 2022 ESA Eastern Branch conference.
6. **McHenry, L.C., M.J. Couvillon.** Effect of Glyphosate Exposure on Brain Supply of Key Neurotransmitters in Honey Bees. (2023). Virginia Tech College of Agriculture and Life Sciences / Department of Entomology. (\$7,000) **Funded.**

REFEREED PUBLICATIONS

1. **McHenry, L.C.**, Schürch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, M.J. (2025). Individuality Impacts Communication Success in Honey Bees. *Current Biology* 35, R1-R3.

2. **McHenry, L.C.**, Schürch, R.S., Council-Troche, M., Gross, A.D., Johnson, L.E., Ohlinger, B.O., & Couvillon, M.J. (In Review with *Journal of Experimental Biology*) Sublethal Glyphosate Exposure Reduces Honey Bee Foraging and Alters Balance of Biogenic Amines in the Brain.
3. Couvillon, M. J., Ohlinger, B. D., Bizon, C., Johnson, L. E., **McHenry, L. C.**, McMillan, B. E., & Schürch, R. (2023). A volatilized pyrethroid insecticide from a mosquito repelling device does not impact honey bee foraging and recruitment. *Journal of Insect Science*, 23(6), 11. <https://doi.org/10.1093/jisesa/iead079>

TECHNICAL PUBLICATIONS

1. McHenry, L.C., McKellips, I., Johnson, L.E., & Couvillon, M.J. (2024). The worst and the best of bee research: a story in four snapshots. *The Beekeepers' Quarterly* 155: 26-27. [shared first-authorship among all authors].
2. **McHenry, L.C.** (2020) Notes from the Field: How Honey Bees Can Reduce Human-Elephant Conflict. *The Beekeepers Quarterly* 141: 38-39.

INVITED TALKS

1. **McHenry, L.C.** (19 February, 2025). *Of Elephants and Bees: How African Honey Bees Are Protecting Lives and Livelihoods in East Africa*. [Invited Talk]. Beekeeping Around the World Seminar Series. Penn State, United States.
2. **McHenry, L.C.**, Schurch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, M.J. (6 November, 2023). *Are You Speaking My Language? Individuality Shapes Waggle Dance Recruitment Outcomes*. [Invited Talk]. Entomological Society of America Eastern Branch Meeting 2023, Providence, RI, United States.

OUTREACH & EXTENSION

1. **Presenter: Hokie BugFest On The Go.** (2021, September 9.) Falling Branch Elementary, Christiansburg, VA, United States.
Role: Worked with a group of fellow presenters led by Dana Beagle to present live arthropod interpretation.
Audience: Elementary-aged students.
Participants: 3 classes x 30 students = 90 contacts.
2. **Presenter: Incredible Insects!** (28 Sept. 2021). Heritage Park Pavilion, Blacksburg, VA, USA.
Role: Co-led a 1.5-hr educational program with Morgan Malone and Pragma Chalise. Program combined live-arthropod presentation and interpretation with insect observations in the field and an insect-themed game.
Audience: a local cub scout troop, including young scouts and their troop leaders.
Participants: 15 participants.
3. **Presenter: McHenry, L.C.** (2022, February 5). *Can a weed-killer affect honey bee behavior?* Flip the Fair. Virginia Tech Center for Communicating Science and Roanoke Public Library, Roanoke, VA, United States.
Role: Created and presented a science-fair style trifold poster based on my Ph.D. research in a “flipped science fair” event, where graduate students presented and fifth graders evaluated contestants. **3rd place winner for “prettiest poster” category.
Audience: The general public, geared towards families with grade-school-aged children.
Contacts: Approximately 100 contacts.
4. **Presenter: McHenry, L.C.** (2022, April 1) *Honey Bee Research with Observation Hives at Virginia Tech*. Alphin Stuart Livestock Arena, Blacksburg, VA, United States.
Role: co-hosted group of alumni with Dr. James Wilson and Courtney Walls as part of the “Experience CALS” Alumni Event.
Audience: Virginia Tech Alumni interested in honey bees.
Participants: Approximately 20 participants.

5. **Presenter: Hokie BugFest On The Go.** (2022, September 27.) Critzer Elementary, Pulaski, VA, United States.
Role: Worked with a group of fellow presenters led by Dana Beagle to present live arthropod interpretation.
Audience: Elementary-aged students.
Participants: 3 classes x 30 students = 90 contacts.
6. **Presenter: Hokie BugFest Pollination Station** (8 October, 2022). Squires Student Center, Blacksburg, VA, United States.
Role: Interacted with HBF guests of all ages with an interactive display illustrating how solitary ground-nesting bees provision their underground nests.
Audience: General public / event attendees.
Contacts: Approximately 300 contacts.
7. **Presenter: McHenry, L.C.** (2023, 8 February). *Honey Bees Can't Handle Their Weed(killer)*. Nutshell Games 90-Second Flash Talk Competition, Virginia Tech Center for Communicating Science @ the Ann & Ellen Fife Theater, Moss Arts Center, Blacksburg, VA, United States.
Role: Presented a 90-second flash talk based on my Ph.D. research onstage at the Moss Arts Center.
Audience: The general public.
Participants: Approximately 100-person audience.

HONORS / AWARDS

1. **James M. Grayson Award Recipient** 2024
 Annual VT Department of Entomology Award (Ph.D. level) \$4,500 Scholarship Award.
2. **1st Place Winner, Student 10-Minute Paper Competition:**
McHenry, L.C., Schurch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, MJ. (2023, March 18-21). *Are You Speaking My Language? The Role of Individuality in Honey Bee Waggle Dance Communication and Recruitment*. [Conference presentation]. Entomological Society of America Eastern Branch Meeting 2023, Providence, RI, United States. Regional Award.
3. **1st Place Winner, Student 10-Minute Paper Competition:**
McHenry, L.C., Schurch, R.S., Council-Troche, M., Gross, A.D., Johnson, L.E., Ohlinger, B.O., & Couvillon, MJ. (2024, November 5-8). *Effects of sublethal glyphosate exposure on honey bee neurochemistry, foraging, and recruitment behavior*. [Conference presentation]. Entomological Society of America National Meeting 2024, National Harbor, MD, United States. National Award.
4. **Awardee, Distinguished Academic Scholarship**
 \$15,000/year, awarded each year 2009-2013 | Kenyon College

CONFERENCE PRESENTATIONS

3. **McHenry, L.C.,** Schürch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, M.J. (2022, April 24-26). Sublethal glyphosate exposure reduces foraging frequency but not persistency in honey bees. [Conference presentation]. Entomological Society of America Eastern Branch Meeting 2022, Philadelphia, PA, United States.
4. **McHenry, L.C.,** Schurch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, MJ. (2023, February 25). *Watch It Waggle: The Role of Individuality in Waggle Dance Communication and Recruitment*. [Conference presentation]. SAHRC 2023, Blacksburg, VA, United States.
5. **McHenry, L.C.,** Schurch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, MJ. (2023, March 18-21). *Are You Speaking My Language? The Role of Individuality in Honey Bee Waggle Dance Communication and Recruitment*. [Conference presentation]. Entomological Society of America Eastern Branch Meeting 2023, Providence, RI, United States. **** 1st Place Winner, Student Competition.**

6. ¹Johnson, L.E., **McHenry, L.C.**, Schürch, R.S., Ohlinger, B.O., & Couvillon, M.J. (2023, March 18-21). Sublethal glyphosate exposure reduces foraging frequency but not persistency in honey bees. [Conference poster]. Entomological Society of America Eastern Branch Meeting 2023, Providence, RI, United States.
7. **McHenry, L.C.**, Schürch, R.S., Johnson, L.E., Ohlinger, B.O., & Couvillon, M.J. (2023, November 5-8). *Effects of sublethal glyphosate exposure on honey bee neurochemistry, foraging, and recruitment behavior*. [Conference presentation]. Entomological Society of America Annual Meeting 2023, National Harbor, MD, United States. **** 1st Place Winner, Student Competition.**
8. **McHenry, L.C.**, Schurch, R.S., Council-Troche, M., Gross, A.D., Johnson, L.E., Ohlinger, B.O., & Couvillon, M.J. (2024, March 23). *Sublethal glyphosate exposure affects honey bee neurochemistry, foraging, and recruitment behavior*. [Conference presentation]. Southern Appalachian Honeybee Research Consortium (SAHRC), Raleigh, NC, United States.

UNIVERSITY COMMITTEE SERVICE

1. **CALS Graduate Student Transition Group: Student Engagement Working Group.** (VT College of Agriculture and Life Sciences, May - August 2020).
 - Collaborated with an interdisciplinary team of VT graduate students to develop written and visual resources and best practices for the transition to a fully-online fall semester of 2020. with a focus on student sensitivity and inclusivity. Work culminated in a presentation during the online event “CALS Faculty & Graduate Students in Conversation: Teaching Transition Showcase” which took place August 10-11, 2020.
2. **Ad Hoc Student Stipend Committee Member** (VT ENT Department, 2022).
 - Convened and collaborated with a committee of mixed faculty and student members to study and make recommendations on base student stipend steps for ENT.
3. **BeeCampus USA Committee Member**, (VT College of Agriculture and Life Sciences)
 - Habitat Monitoring Committee Member (2022-2024)
 - IPM Committee Member (2022-2024)
4. **Chief Organizer: Dr. Jessica Ware’s Visit to Virginia Tech**, VT Entomology Department (March 20-23, 2024).
 - Served as Chief Organizer for a three-day visit to Virginia Tech by Dr. Jessica Ware, Curator and Division Chair of Invertebrate Zoology at the American Museum of Natural History, PI at the Institute for Comparative Genomics, and Professor at the Richard Gilder Graduate School.

OTHER PROFESSIONAL / COMMUNITY SERVICE

1. **Virginia Academy of Science (VAS) Officer: Secretary**, VAS Entomology Section. (February 2023 – present)
2. **Graduate Student Liaison** to the Entomology Department Faculty (2023 academic year)
3. **Club officership:** Vice President (2022 academic year), W.B. Alwood Society
4. **Club officership:** Social Chair (2021 academic year), W.B. Alwood Society

RELATED COURSES / SKILLS

- Certified UTV Driver (USFWS / Department of Interior)
- ArcGIS Pro
- ERDAS Imagine
- R, RStudio
- Handheld GPS
- Language: Italian (advanced) | Swahili (basic) | Spanish (basic)

¹ Presenting author