

Patricia Bohls

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Working on a Ph.D. in Entomology

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Education

B.A. Hiram College, Hiram, OH: May, 2015
Dual Major: Neuroscience and Environmental Studies
Minor: Biology
G.P.A. 3.72

Research Experience

Ph.D. Candidate, Fall 2015 – Present

U.C. Davis, Entomology and Nematology Department, Dr. Elina Niño

Independent Study, August 2014 – May 2015

Hiram College, Biology Program, Dr. Jennifer Clark

- Conducted a wasp survey at the James H. Barrow Field Station comparing wasp diversity in newer vs. older growth forests
- Developed a citizen science butterfly program at the James H. Barrow Field Station
- Sorted and identified invertebrate samples from Eagle Creek

Research Assistant, May 2014 – August 2014

Hiram College, James H. Barrow Field Station, Dr. Jennifer Clark

- Conducted a butterfly population study at the field station's Monarch Waystation
- Compared the population and species differences of butterflies in a field before and after a controlled burn
- Surveyed Eagle Creek and Silver Creek to assess quality using abiotic measurements, invertebrate kick samples, and electroshocking to sample fish and crayfish

Independent Research, August 2012 – April 2014

Hiram College, Neuroscience Program, Dr. Thomas Koehnle

- Extensively compared the anti-predator behavior of the two color morphs of the eastern gray squirrel
- Conducted an anti-predator behavior study on the eastern gray squirrel

National Science Foundation's Research Experience for Undergraduates, June 2013 – August 2013

Fordham University, Louis Calder Center, Dr. Evon Hekkala

- Conducted an experiment on the possible hybridization of the sunfish in Calder Lake and compared it to various temporal, spatial, and ecological factors
- Observed sunfish above and in water
- Collected sunfish fry by snorkeling, fished for individual sunfish and took small fin clippings, collected data on sunfish nests
- Used statistical programs to analyze data
- Analyzed DNA samples with microsatellite analysis
- Conducted genetic analyses of Eastern Chipmunk populations to try and determine separate species status rather than subspecies status

Research Assistant, May 2012 – August 2012

Hiram College, James H. Barrow Field Station, Dr. Thomas Koehnle

- Studied eastern gray squirrels with a variety of population sampling procedures, including home range studies, time area counts, and transects
- Conducted an anti-predator behavior study on the eastern gray squirrel, extensively comparing the behavior of the two color morphs of the eastern gray squirrel

Independent Study, November 2011 – May 2012

Hiram College, Neuroscience Program, Dr. Thomas Koehnle

- Compared the anti-predator behavior of the two color morphs of the eastern gray squirrel

Publishable Research

P.A. Bohls, M. Nelson, K. Cooper, and J. Clark, **Short-term effects of a prescribed burn on butterfly abundance and diversity in a restored northeastern Ohio prairie**, accepted by the Ohio Biological Survey

P.A. Bohls and T. J. Koehnle, **Modulation of Anti-Predator Behavior by Coat Coloration in the Eastern Gray Squirrel (*sciurus carolinensis*)**, in preparation

Teaching Experience

Teaching Assistant, 2014 – 2015 Academic Year

Hiram College, Basic Exposition I

- Attends class and assists students in basic writing skills, including clear thinking and wording, effective organization, insightful analysis, strong detail, and grammatical precision

Teaching Assistant, 2013 - 2014 Academic Year

Hiram College, Introduction to Biology

- Held weekly study sessions to improve students' study habits and course material comprehension

Writing Center Assistant, January 2013 – Present

Hiram College, Writing Center

- Assisted students in improving their writing styles and essays

Writing Assistant, Spring 2014 Semester

Hiram College, "The State of the World's Fisheries" Freshmen Seminar

- Assisted students academically, with a focus on struggling students and essay writing

Teaching Assistant, Fall 2013 Semester

Hiram College, "The Science of Being Human" colloquium

- Assisted first year students in adjustment to college environment
- Held study sessions for struggling students

Teaching Assistant, Fall 2012 Semester

Hiram College, "Rebels and Reformers in American History" colloquium

- Assisted first year students in adjustment to college environment
- Held study sessions for struggling students

Public Outreach and Extension

Planning Ahead for Your First Hives, Summer 2014

- Taught lecture on honey bee biology
- Assisted with hands-on practice modules

Moth Night, Summer 2014

Hiram College, James H. Barrow Field Station

- Part of National Moth Week to increase awareness of moths and conservation issues
- Included an informative presentation, specimens, and handouts on moths
- Light setup to attract moths with collaborators from the Cleveland Museum of Natural History

Butterfly Citizen Science Project, Summer 2014 – Spring 2015

Hiram College, James H. Barrow Field Station

- Created a transect in accordance with the Ohio Lepidopterist's Society through the James. H. Barrow Field Station representing a variety of habitats
- On October 5th, 2014 community members were trained in how to walk the transect and identify local butterfly species in order to contribute to a database to track long-term changes in butterfly population

Invited talks

P.A. Bohls. E.L. Niño. Winter 2016. What's BEEn happening at the UC Davis E.L. Niño bee lab. **Oral Presentation at the American Honey Producer's Association Convention.**

Presentations

P.A. Bohls. M. Nelson, K. Cooper, and J. Clark. Spring 2015. Short-term effects of a prescribed burn on butterfly abundance and diversity in a restored northeastern Ohio prairie. **Oral Presentation at Midwest Ecology and Evolutionary Biology Conference.**

P.A. Bohls, J. Clark. Spring 2015. Lepidopteran citizen science and butterfly surveys at the James H. Barrow Field Station. **Poster Presentation at the Ohio Natural History Conference.**

P.A. Bohls, A. J. Acus-Souders, L. J. Brewer, K. N. Cooper, and J. M. Clark. Fall 2014. Catching Butterflies and Attracting Moths. **Poster Presentation at Hiram College's Celebration of Research Symposium.**

J. M. Clark, K. N. Cooper, Z. C. Nemeč, S. E. Piccolomini, M. Zielinski, M. T. Nelson, A. J. Acus-Souders, **P.A. Bohls**, and L. J. Brewer. Summer 2014. Using multiple methods to establish baselines to measure success of the Eagle Creek restoration project. **Poster Presentation at Ecological Society of America Conference.**

P.A. Bohls. T. J. Koehnle. Spring 2014. Modulation of Anti-Predator Behavior by Coat Coloration in the Eastern Gray Squirrel (*Sciurus Carolinensis*). **Oral Presentation at Midwest Ecology and Evolutionary Biology Conference.**

P.A. Bohls, E. Miller, E. R. Hekkala, and R. Coffey. Fall 2013. Ecological Factors Influencing Nesting and Hybridization among Sympatric Sunfish Species in an Isolated Lake. **Poster Presentation at Hiram College's Celebration of Research Symposium.**

P. A. Bohls, E. Miller, E. R. Hekkala and C. Zolnik. Summer 2013. Genetic Testing of the Distribution of Two Subspecies of the Eastern Chipmunk (*Tamias striatus*). **Oral Presentation at Fordham University REU Symposium.**

P.A. Bohls and T. J. Koehnle. Spring 2013. Analyzing Personality of the Eastern Gray Squirrel (*Sciurus carolinensis*) Based on Anti-Predator Behavior by Coat Coloration. **Oral Presentation at Midwest Ecology and Evolutionary Biology Conference.**

P.A. Bohls and T.J. Koehnle. Fall 2013. Analyzing Personality of the Eastern Gray Squirrel (*Sciurus carolinensis*) Based on Anti-Predator Behavior by Coat Coloration. **Poster Presentation at Midwest/Great Lakes Undergraduate Research Symposium.**

P.A. Bohls and T.J. Koehnle. Fall 2012. Analyzing Personality of the Eastern Gray Squirrel (*Sciurus carolinensis*) Based on Anti-Predator Behavior by Coat Coloration. **Poster Presentation at Hiram College's Celebration of Research Symposium.**

Awards

American Association of Professional Apiculturists Research Scholarship Award, Fall 2015

- \$1000 research grant

Honey and Pollination Center Graduate Student Travel Award, Fall 2015

- \$500 travel grant

Graduate Student Travel Award, Fall 2015

- \$500 travel grant

Trustee Scholarship, Fall 2011

- Full tuition scholarship to Hiram College

Girl Scout Gold Award, Summer 2011

- Highest Girl Scout Award
- Active member of Girl Scouts since 1998

Dean's List, August 2011 – May 2015

- Cumulative GPA of 3.65 or higher at Hiram College

Study Away Experience

Political Science 291: U.S. – Mexican Relations, Spring 2015

- Learned about US. – Mexican relations and traveled to Mexico City, Mexico
- Met with the Minister of the Economy of Mexico

Interdisciplinary 318: Natural History in the Early 21st Century, Fall 2014

- Trip to the Galapagos Islands focusing on the natural history of endemic wildlife
- Snorkeling near daily

Interdisciplinary 303: Wolves and Civilization, Summer 2014

- Trip to Northwoods, a campsite owned by Hiram College in the Upper Peninsula of Michigan
- Examined the complexities of the natural and political relationship between humans and wolves

Political Science 280: Panama/Globalization, Spring 2014

- Learned about Panama and its ties to globalization and traveled to Panama City, Panama
- Met with the head of the President of Panama's cabinet

Biology 380: Herpetology, Spring 2013

- Trip to the American Southwest including Zion National Park, Grand Canyon National Park, and a field station in the Sweeney Granite Mountains
- Studied behavior and lifestyles of various reptiles and amphibians in correspondence with their environment

Political Science 280: U.S. – Cuban Relations, Spring 2013

- Explored issues surrounding U.S. foreign policy towards Cuba and traveled to Cuba

Interdisciplinary 250: Comparative Health Issues in the Developing Country of Zambia, Fall 2012

- Studied health issues from multiple disciplines such as nursing and psychology
- Analyzed the intentional and unintentional causes of the health and wellbeing of the Zambian people
- Explored the relationship between animal-human interactions and health issues in Zambia

Certifications

FrogWatch USA volunteer, Spring 2013

P.D.I.C. scuba certified, Fall 2014

Extracurricular

Garfield Scholars, Fall 2012 – May 2015

- Develops responsibilities of public leadership by developing expertise in matters of public policy, both foreign and domestic
- Holds two seminars a year on major political issues with renowned speakers
- Yearly crisis simulation focusing on international political issues

Stone Soup Vegetarian Cooperative, Fall 2011 – May 2015

- Cooperative of community and vegetarian food, involved three shifts a week
- General Manager, 2014/2015 Academic Year
- Secretary, 2013/2014 Academic Year

Cross Country, Fall 2007 – Fall 2014

- Cross Country Captain, Fall 2014
- 8 year Letter Winner
- Academic All American, Fall 2012 and 2014
- North Coast Athletic Conference Academic Honor Roll, Fall 2013

Professional Societies

American Association of Professional Apiculturists

Eastern Apicultural Society

Entomological Society of America

International Bee Research Association

International Union for the Study of Social Insects, North American Section