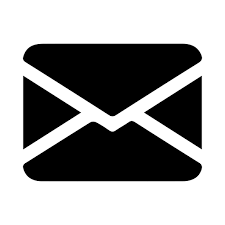
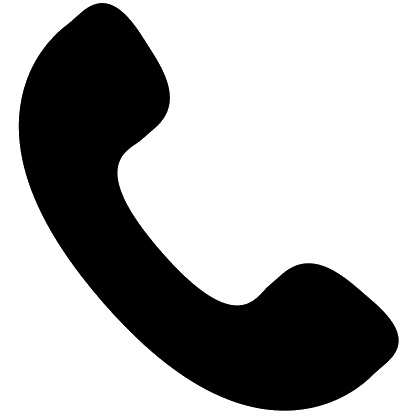
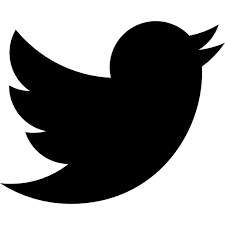
Hannah M. Carroll

Curriculum Vitae

 [hcarroll@iastate.edu](mailto:hcarroll@iastate.edu)  515-991-4058  hannahcarroll  hmcarro  0000-0003-3343-3358

# Education

**PhD Candidate, Ecology and Evolutionary Biology, Environmental Science** 2012—present  
Iowa State University, Ames  
Dissertation: “Late Quaternary Paleoecology of the North American Midcontinent”  
Advisors: Dr. Lynn G. Clark and Dr. Alan D. Wanamaker

**Bachelor of Science, Environmental Science** 2008  
University of Washington, Tacoma  
Thesis: “Evaluating Conditions in In-Situ Mesocosms”  
Advisor: Dr. Bonnie J. Becker

# Teaching

*Indicates redevelopment or co-redevelopment of existing course*  
**Indicates development of new course**

### Iowa State University, Ames

Teaching Assistant - Biol 312L: Ecology Laboratory, field and laboratory components 2018—2019  
Teaching Assistant - Biol 212L: Principles of Biology Laboratory II 2019  
Instructor - EnSci 490: Independent Study 2014—2018  
Instructor - **EnSci 203: Exploration of Environmental Science** 2014—2018  
Instructor - *EnSci 202: Exploration of Environmental Issues* 2013—2017  
Instructor - **EnSci 204X: Applied Exploration of Environmental Science I** 2015—2017  
Instructor - **EnSci 205X: Applied Exploration of Environmental Science II** 2016—2017  
Instructor - Biology 486xw: Aquatic Ecology Online 2016  
Teaching Assistant - Biology 394: Study Abroad: Maya Mountains & Calabash Caye,  
   international field course 2015  
Teaching Assistant - Biology 486xw: Aquatic Ecology Online 2013—2015  
Instructor - *Biology 486L: Aquatic Ecology Laboratory*, field and laboratory components 2013

### University of Washington, Tacoma

Undergraduate Teaching Assistant - TESC 442: Marine Ecology, field course 2008

# Grants

##### Total = $19,591

Geological Society of America Graduate Student Research Grant, 2019  
   “Paleoecology of the Tallgrass Prairie-Ozark Forest Ecotone” $2,500  
Geological Society of America Graduate Student Research Grant, 2018  
   “Late Quaternary Paleoecology of the Tallgrass Prairie-Ozark Forest Ecotone” $2,500  
Iowa State University Department of Ecology, Evolution, and Organismal Biology, 2016  
   Harry and Audrey Finch Scholarship (Finch Funds Award),  
   “Paleoecological Investigation of the Tallgrass Prairie-Ozark Forest Ecotone” $1,500  
Iowa State University Department of Ecology, Evolution, and Organismal Biology, 2016  
   Lois Tiffany Scholarship Award, “Holocene Paleoecology of the Midwestern United States” $750  
Iowa State University Department of Ecology, Evolution, and Organismal Biology, 2015  
   Harry and Audrey Finch Scholarship (Finch Funds Award),  
   “Paleoecology of the bamboo thickets of eastern Bolivia” $2,000  
Iowa State University College of Liberal Arts and Sciences Curriculum Development Grant, 2014  
   awarded to redevelop Biol 488 - “Identification of Aquatic Organisms Online Course.” $1,000  
Association for the Sciences of Limnology and Oceanography (ASLO) Student Travel Award $500 2014 **Significant contributor**, Downing, J.A., C. Filstrup, and C. Williams, Twin Lakes, Iowa 2013  
   Diagnostic and Feasibility Study (Total award $209,854, palynology portion $5,790)  
**Significant contributor**, Downing, J.A., C. Filstrup, and C. Williams, Silver Lake, Iowa 2013  
   Diagnostic and Feasibility Study (Total award $210,086, palynology portion $3,051)

# Awards and Honors

Iowa State University Professional and Scientific Team CYtation Award 2017  
   Presented to the members of the ISU Stormwater Management Committee.  
   This award honors a team that: 1) has performed above and beyond the call of duty,  
   2) has done something extraordinarily well, and  
   3) has acted in such a way as to make a significant impact on the institution within the past year.  
Iowa State University Teaching Excellence Award 2016  
   This award honors the top 10% of graduate students at ISU for outstanding teaching,  
   as evaluated by their academic departments.  
Participant, {GeoChronR} Workshop 2016  
   Competitive–entry 3–day workshop hosted at Northern Arizona University  
   in time–uncertain data analysis using the GeoChron package for R.  
   NSF-funded; travel, room and board, and workshop entry expenses paid.  
   Organizers: Nick McKay, Julien Emile-Geay  
DNR Star Award 2009  
   Washington Department of Natural Resources, Olympia, WA

# Manuscripts in Preparation

**Carroll, H.M.**, L.G. Clark, A.D. Wanamaker, and B.J. Wilsey. In prep. Pollen of ragweed (*Ambrosia spp.*)  
   and sagebrush (*Artemisia spp.*) can distinguish between vegetation types at broad spatial scales.  
   Target: Ecology.  
Cox, M., **H.M. Carroll**, T. Gallaher, H.T. Horner, P.C. Klahs, and L.G. Clark. In prep. Mature grass  
   (Poaceae) root anatomy: A phylogenetic survey and potential functional correlations.  
   Target: American Journal of Botany.

# Technical Reports

**Significant contributor**, Municipal separate storm sewer system 2017 annual report.  
   Department of Environmental Health and Safety and Facilities Planning and Management.  
   Iowa State University.  
**Significant contributor**, Municipal separate storm sewer system 2016 annual report.  
   Department of Environmental Health and Safety and Facilities Planning and Management.  
   Iowa State University.  
Downing, J.A., C.T. Filstrup, D.L. Kendall, L. Whitehouse, and **H. Carroll**. 2016. A diagnostic–feasibility  
   study for the restoration of Silver Lake, Palo Alto County. Iowa State University Limnology Laboratory  
   and Iowa Department of Natural Resources.  
Downing, J.A., C.T. Filstrup, D.L. Kendall, L. Whitehouse, and **H. Carroll**. 2015. A diagnostic–feasibility  
   study for the restoration of North and South Twin Lakes. Iowa State University Limnology Laboratory  
   and Iowa Department of Natural Resources.  
**Significant contributor**, Municipal separate storm sewer system 2015 annual report.  
   Department of Environmental Health and Safety and Facilities Planning and Management.  
   Iowa State University.  
**Significant contributor**, Municipal separate storm sewer system 2014 annual report.  
   Department of Environmental Health and Safety and Facilities Planning and Management.  
   Iowa State University.  
**Significant contributor**, Municipal separate storm sewer system 2013 annual report.  
   Department of Environmental Health and Safety and Facilities Planning and Management.  
   Iowa State University.  
Norris, J.G., I.E. Fraser, and **H. Julich**. 2012. Underwater Videographic Survey of Submerged Aquatic  
   Vegetation in Sequim Bay, WA, August 2011. Report to Hansi Halls, Environmental Planning Manager,  
   Jamestown S’Klallam Tribe, Sequim, WA.  
Norris, J.G., I.E. Fraser, and **H. Julich**. 2011. Defining fish use of subtidal vegetated habitats of the  
   Elwha and comparative shorelines. Report to Cathy Lear, Clallam County Planning Biologist,  
   Port Angeles, Washington.  
Schanz, A., **H. Julich**, L. Ferrier, and H. Berry. 2010. Eelgrass Stressor-Response Project:  
   Report 2007—2008. Nearshore Habitat Program. Washington Department of Natural Resources,  
   Olympia, WA.

# Service

Graduate Student Representative - ISU Stormwater Management Committee 2014—2018  
Curriculum Committee Representative , Department of Ecology, Evolution, 2017—2018  
   and Organismal Biology Graduate Student Organization  
Skype a Scientist, two high school classrooms 2018  
Certified Volunteer - IOWATER volunteer water quality monitoring program 2014—2017  
President - Environmental Science Graduate Student Organization 2014—2015  
Graduate Student Representative - Plant or Microbial Processes Faculty Search Committee 2014—2015  
Volunteer Judge - Eco Day, Nevada Middle School 2015  
Volunteer Judge - Des Moines Public Schools Science Fair 2014—2015  
Graduate Student Representative - EEOB external review panel 2014  
Volunteer Judge - Iowa State Science and Technology Fair 2014  
Volunteer Judge - Introduction to Environmental Issues Final Projects 2014  
Workshop Leader - “All About Mussels” workshop for fifth grade students 2014  
Social Outreach and Safety Chair - Environmental Science Graduate Student Organization 2013—2014  
Volunteer - Iowa Children’s Water Festival 2013

# Invited Talks and Guest Lectures

Carroll, H. “Spatial data wrangling in R.” Demonstration for LunchinatoRS: 2019  
   an R-focused lunch seminar. Iowa State University, Ames  
Carroll, H. “New Solutions for Old Problems: The Power of Big Data in Late 2018  
   Quaternary Paleoecology.” Departmental seminar. University of Washington, Tacoma  
Carroll, H. “Stream Health and Ecology.” Invited guest lecture with field component. 2018  
   Biology 211 - Introductory Biology for Nonmajors. Iowa State University, Ames  
Carroll, H. “Water Quality on the Iowa State University Campus.” 2016  
   National Pollutant Discharge Elimination System Stakeholders Meeting.  
   Iowa State University, Ames  
Carroll, H. “Lake Eutrophication and Land Use.” Departmental seminar. 2015  
   University of Wisconsin, Stout, Menomonie

# Presentations and Posters

**Carroll, H.**, L.G. Clark, B.E. Caissie, and A.D. Wanamaker. 2019. “Late Quaternary vegetation dynamics  
   at the southern limit of the temperate tallgrass prairie.” Environmental Science Graduate Student  
   Symposium, Ames, IA  
**Carroll, H.**, L.G. Clark, and A.D. Wanamaker. 2018. “Preparation of a phytolith reference collection  
   for the study of late Quaternary paleoecology in Missouri.” Environmental Science Graduate Student  
   Symposium, Ames, IA  
**Carroll, H.**, 2018. Department of Ecology, Evolution, and Organismal Biology Three Minute Thesis  
   Competition, Ames, IA  
**Carroll, H.**, L.G. Clark, and A.D. Wanamaker. 2017. “Tracking Holocene vegetation change in the tallgrass  
   prairie region: the power of big data in paleoecology.” Environmental Science Graduate  
   Student Symposium, Ames, IA  
**Carroll, H.**, C.T. Filstrup, and J.A. Downing. 2016. “Comparative palynology of two agriculturally  
   eutrophic lakes” Environmental Science Graduate Student Symposium, Ames, IA  
**Carroll, H.** and J.A. Downing. 2015. “Water quality declines and diversity loss in an agriculturally eutrophic  
   landscape” Environmental Science Graduate Student Symposium, Ames, IA  
**Carroll, H.** and J.A. Downing. 2015. “Paleolimnological analysis of Iowa’s changing landscapes”  
   Graduate Research in Evolutionary Biology and Ecology symposium, Ames, IA  
**Julich, H.** and J.A. Downing. 2014. “Two hundred years of landscape change: Consequences for East  
   Okoboji Lake, Iowa.” Association for the Sciences of Limnology and Oceanography Meeting, Portland, OR.  
**Julich, H.** and J.A. Downing. 2014. “Use of palynological techniques to reconstruct macrophyte loss and  
   multiple stable states in a eutrophic lake.” Graduate Research in Evolutionary Biology and  
   Ecology symposium, Ames, IA  
**Julich, H.** and J.A. Downing. 2013. “Use of palynological techniques to reconstruct macrophyte loss and  
   multiple stable states in a eutrophic lake.” Association for the Sciences of Limnology and  
   Oceanography Meeting, New Orleans, LA  
**Julich, H.** and B.J. Becker. 2008. “An evaluation of conditions in in situ mesocosms” Western Society of  
   Naturalists Meeting, Vancouver, BC, Canada  
**Julich, H.** and B.J. Becker. 2008. “In situ culturing of larval sand dollars, *Dendraster excentricus*, in  
   Friday Harbor, Washington” University of Washington Tacoma Environmental Research  
   Symposium, Tacoma, WA  
**Julich, H.** and B.J. Becker. 2008. “In situ culturing of larval sand dollars, *Dendraster excentricus*, in  
   Friday Harbor, Washington” UW Undergraduate Research Symposium, Seattle, WA  
**Julich, H.** and B.J. Becker. 2007. “In situ culturing of larval sand dollars, *Dendraster excentricus*, in  
   Friday Harbor, Washington” Western Society of Naturalists Meeting, Ventura, CA

# Mentorship

### Iowa State University, Ames

Jacqueline Arlene Galang, Environmental Science  
Juan-Carlos Mungaray, Environmental Science  
Juan Perez, Environmental Science  
Kathryn Holmes, Environmental Science, Community and Regional Planning  
Logan Crees, Environmental Science  
Lindsay Mack, Environmental Science  
Josiah Ihnen, Environmental Science  
Marlyssa Crow, Environmental Science  
Nicole Stout, Environmental Science  
Shelby Poole, Environmental Science  
Samuel Freestone, Environmental Science  
Emily Martin, Honors, Environmental Science  
Eric Tagatz, Environmental Science  
Megan Koppenhafer, Environmental Science  
Connor Nicholas, Environmental Science  
Molly Zelinskas, Environmental Science  
Molli Wienhold, Environmental Science  
Mariah Mahaney, Environmental Science  
Sarah Leichty, Honors, Environmental Science  
William Tony Manriquez, Environmental Science

### University of Washington, Tacoma

Linsdsay McCormick, Environmental Science

# Interviews in the Popular or University Press

Department of Ecology, Evolution, and Organismal Biology. Departmental Spotlight. “Introducing environmental science to a growing number of undergraduates.” September 2017

Visions Magazine (Iowa State University Alumni Association). “Three Billion Years: The Evolution of a State.” November 2016 (print only)

Environmental Monitor. “Future scientists get real-world skills in Iowa State water quality monitoring courses.” March 5, 2014  
<http://www.fondriest.com/news/future-scientists-get-real-world-skills-iowa-state-water-quality-monitoring-courses.htm>

Iowa State Daily. “ISU students to monitor campus impact on water.” February 28, 2014  
<http://www.iowastatedaily.com/news/article_01050a06-9fe2-11e3-9d48-001a4bcf887a.html>

Ames Tribune. “ISU students study campus impact on waterways.” February 25, 2014  
<http://www.amestrib.com/news/ames-and-story-county/isu-students-study-campus-impact-waterways>

Iowa State University News Service. “Iowa State students will check water quality on campus this semester.” February 19, 2014  
<http://www.news.iastate.edu/news/2014/02/19/watertesting2014>

Iowa State Daily. “Carolyn Hoskinson makes first appearance in Iowa, speaks out about underground leakage.” November 19, 2013  
<http://www.iowastatedaily.com/news/article_55d307f6-50a8-11e3-a53a-001a4bcf887a.html>

# Professional Memberships (Past Five Years)

Association for Experiential Education (AEE), Association for Women in Science (AWIS), The Palynological Society (AASP), The Geological Society of America (GSA), Botanical Society of America (BSA)