

JUSTINE B. WEBER

State University of New York || College of Environmental Science and Forestry
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EDUCATION

Ph.D., Ecology

State University of New York College of Environmental Science and Forestry (ESF), 2022
Dissertation: Using niche data to improve conservation decisions in rare plants, with a focus on Houghton's goldenrod (*Solidago houghtonii*); advisor: Donald J. Leopold, Ph.D.

B.S., Biology and Environmental Education

Messiah (College) University, *magna cum laude*, 2006
Pennsylvania Teaching Certifications: Biology 7-12, Environmental Education K-12

TEACHING

Visiting Instructor

ESF, Department of Environmental Biology

500-level Freshwater Wetland Ecosystems lecture course for undergrads and grads, 1 semester

Spring 2023

Syracuse, NY

Invited Instructor

ESF, Cranberry Lake Biological Station, 2020 season canceled due to COVID-19

200-level Ecological Monitoring and Biodiversity Assessment, required field course

Summer 2020-2023

Adirondack Park, NY

Lecturer

Hamilton College, Department of Biology

200-level Wetland Ecology lecture and field lab for Biology undergraduates, new course, 1 semester

Fall 2021

Clinton, NY

Visiting Assistant Professor

Utica (College) University, Department of Biology

100-level Ecology lecture for nonmajors, new course, 2 semesters

100-level Ecology lab for nonmajors, new course, 2 semesters

200-level Research Methods course for Biology program undergraduates, writing-intensive, 2 semesters

400-level Senior Seminar for Biology program undergraduates, writing-intensive, 1 semester

* All courses above taught online for seven weeks in Spring 2020 due to COVID-19

2019-2020

Utica, NY

Instructor and Coordinator

ESF, Department of Environmental Biology

200-level Diversity of Life lecture course, required, 11 semesters

200-level Diversity of Life lab course, required, 11 semesters as secondary coordinator

2014-2019

Syracuse, NY

Teaching Assistant

ESF, Department of Environmental Biology

200-level Diversity of Life I lecture and lab course, 2 semesters

300-level Ecology of Mosses lecture and lab course, 1 semester

300-level Indigenous Issues and the Environment lecture course, 1 semester

2012-2013

Syracuse, NY

High School Science Teacher

Lancaster Mennonite High School

9th grade Environmental Science, led curriculum redesign, 8 semesters

10th grade Biology, 6 semesters

11th and 12th grade Wildlife Science, elective, 2 semesters

11th and 12th grade Advanced Environmental Science, elective, 1 semester

2006-2010

Lancaster, PA

RESEARCH

ESF, Department of Environmental Biology

Research Collaborator

2018-present

Plant ecology and conservation of *Trollius laxus* with Dr. Sara Scanga (Utica University)

Graduate Research

2012-2022

Plant ecology and conservation of *Solidago houghtonii*, Dr. Donald Leopold

Syracuse, NY

The Pennsylvania State University

2010-2012

Research Technician

State College, PA

Forest songbird response to Marcellus shale-fracking infrastructure, Dr. Margaret Brittingham

Research Technician

Grassland songbird response to agricultural land management, Dr. Margaret Brittingham

Lab Assistant

Carabid beetle weed seed granivory in agricultural systems, Dr. Robert Gallagher and PhD candidate Jeffrey Law

Research Technician

Grassland bird response to agricultural conservation practices (CRP), Dr. Margaret Brittingham

FUNDED GRANTS and AWARDS

Research awards:

- \$10,000** **E.B. Sussman Fund Dissertation Fellowship**, competitive award for dissertation writing, **2021**
Edna Bailey Sussman Fund
- \$2600** **Wilford A. Dence Fellowship**, for achievements in natural history and wild life, **2019**
ESF Department of Environmental and Forest Biology, first botany student to receive award
- \$100** **Excellence in Applied Research Award**, nominated for rare plant conservation work, **2019**
ESF Graduate Student Association
- \$2900** **Maurice Alexander Graduate Award**, competitive award for wetland research, **2017**
ESF Department of Environmental and Forest Biology
- \$149,600** **Great Lakes Restoration Initiative, U.S. Fish and Wildlife Service, 2015**
J. Weber – lead author/researcher, D.J. Leopold – principal investigator of record
Range-wide status assessment of Houghton's goldenrod, with special emphasis on niche limits, demographic transitions, and population stability
- \$7370** **Edna Bailey Sussman Fund Fellowship**, competitive award for summer research, **2015**
Edna Bailey Sussman Fund

Travel awards:

- \$250** **Student Travel Grant** for attendance to Northeast Natural History Conference, **2019**
ESF Graduate Student Association
- \$250** **Student Travel Grant** for attendance to Botany2017 (BSA annual meeting), **2017**
ESF Graduate Student Association
- \$350** **Student Travel Grant** for attendance to National Native Seed Conference, **2017**
ESF Graduate School

OUTREACH and SERVICE

Participating Scientist, Skype a Scientist	2020-2021, 2023
Skype a Scientist program connects classrooms with scientists via video calls	online
Expert Interview, “New York’s Extinction”	published March 2021
Feature story on New York State’s endangered plants, appears in <i>The Earth Issue</i> and <i>Icarus Complex</i>	online
Striped Coralroot (<i>Corallorhiza striata</i>) Surveys	2020
New York Natural Heritage Program, rare orchid surveys, Nelson Swamp Unique Area	Nelson, NY
Teaching Fellow: Graduate Assistant Colloquium on Teaching and Learning	2017 and 2018
ESF, Open Academy, prepping new grad students for teaching tasks	Syracuse, NY
Ecolunch Departmental Seminar Coordinator	2014-2017
ESF, weekly ecology seminar with graduate student and faculty presentations	Syracuse, NY
Onondaga Lake Bioblitz	2014
ESF, plant data collection and collation for bioblitz to honor incoming ESF president	Syracuse, NY

ENVIRONMENTAL EDUCATION

Invited Instructor: Fall Migration and Monhegan, Coastal Maine Bird Studies for Teens	2017-2019, 2022
National Audubon Society, Hog Island Audubon Camp; <i>invited in 2019, declined due to conflict</i> ;	Bremen, ME
historic conservation camp providing bird-focused programming for adults, families, and teens	
Naturalist Program Leader	2010-2012
Millbrook Marsh Nature Center: tasks included school programs, summer camps, bird walks	State College, PA
Environmental Education Intern	Summer 2006
Edwin B. Forsythe National Wildlife Refuge: tasks included public outreach, school programs	Oceanville, NJ
Park Ranger Naturalist Intern	Summer 2005
Glacier National Park, with 4 weeks of National Association of Interpretation (NAI) training	St. Mary, MT

MENTORING

Student Research Mentor

Chelsea Radford, ESF undergraduate student (1 year, research credits, skills, and field training)

Morgan Couch, ESF undergraduate student (1 year, research credits, skills, and field training)

Luria Lee, ESF undergraduate student (1 year, research credits, skills, and greenhouse training)

Lindsay Windsor, ESF undergraduate student (1.5 years; research credits, skills, and field training)

Baylee Earl, ESF undergraduate student (4 months; research skills and field training)

Student Internship Mentor

Gabrielle Sisson, ESF undergraduate student (1 semester, faculty sponsor for environmental education internship)

Student Involvement

Head Coach, junior high field hockey, Lancaster Mennonite School

FFA Assistant Advisor, Lancaster Mennonite School

Envirothon Coach, Lancaster Mennonite School

Student Green Team faculty mentor, Lancaster Mennonite School

Student Support Team member (conflict resolution), Lancaster Mennonite School

PUBLICATIONS and TECHNICAL REPORTS

Peer-reviewed manuscripts:

Weber, J.B. and D.J. Leopold. *In press*. Substrate moisture and texture affect germination in Houghton's goldenrod, a federally protected Great Lakes endemic plant. *Native Plants Journal*.

Law, J.J., R.S. Gallagher, T.F. Leslie, and **J.B. Weber**. *In press*. Enhanced invertebrate activity-densities and weed seed predation in an integrated cropping system. *Basic and Applied Ecology*.

Technical reports:

Final Report to U.S. Fish and Wildlife Service, with Dr. Donald Leopold, *April 2019*

Range-wide status assessment of Houghton's goldenrod (*Oligoneuron* [=*Solidago*] *houghtonii*) with a special emphasis on niche limits, demographic transitions, and population stability

Interim Reports: 2017, 2018

Final Report to U.S. Fish and Wildlife Service, with Dr. Donald Leopold, *April 2016*

Restoring Critical Habitat, Mitigating Multiple Threats, and Evaluating Population Statuses for Bog Turtle, Eastern Massasauga Rattlesnake, and Houghton's Goldenrod Co-occurring in a Single, Exceptional Marl Fen Ecosystem, Bergen Swamp, Genesee County, New York

Interim Reports: 2014, 2015

Final Report to Edna Bailey Sussman Foundation, *December 2015*

Range-wide status assessment of Houghton's goldenrod (*Oligoneuron houghtonii*) with a special emphasis on niche limits, demographic transitions, and population stability

Final Report to The Pennsylvania State University, with Dr. Margaret Brittingham, *Fall 2012*

Recommendations for Rockview Property acquisitions as managed bird habitat

PRESENTATIONS and GUEST LECTURES

*undergraduate mentee

- April 2022 **Weber, J.B.** and D.J. Leopold. *Oral Presentation*. Ontogenetic niche shifts present conservation challenges for rare plants such as Houghton's goldenrod, a federally listed species and Great Lakes endemic. *Northeast Natural History Conference, Albany, NY*.
- July 2021 **Weber, J.** and D.J. Leopold. *Oral Presentation*. Conservation challenges due to ontogenetic niche shifts in Houghton's Goldenrod, a federally listed species and Great Lakes endemic. *BOTANY21, BSA Annual Meeting, Virtual*.
- April 2019 Crouch, M.*, **J. Weber**, S.E. Scanga, and D.J. Leopold. *Poster*. Effect of gap position on *Trollius laxus* vigor. *ESF Student Spotlight on Research Symposium, Syracuse, NY*.
- April 2019 Radford, C.*, **J. Weber**, S.E. Scanga, and D.J. Leopold. *Poster*. Canopy gap effects on fecundity to biomass ratios and herbivory of spreading globeflower (*Trollius laxus* ssp. *laxus*). *ESF Student Spotlight on Research Symposium, Syracuse, NY*.
- April 2019 **Weber, J.** and D.J. Leopold. *Poster*. Evaluating reproductive niche characteristics of federally listed Houghton's goldenrod to approximate range wide stability. *Northeast Natural History Conference, Springfield, MA, and ESF Student Spotlight on Research Symposium, Syracuse, NY*.
- April 2019 **Weber, J.** and D.J. Leopold. *Oral Presentation*. Rediscovering our species sense: developing natural history appreciation and skill sets in undergraduate students. *Northeast Natural History Conference, Springfield, MA*.
- March 2019 **Weber, J.** *Guest Lecture*. Nature apps as conservation tools: thoughts from an old millennial. *ESF*
and 2018 *Senior Synthesis in Conservation Biology (EFB 414)*.

- June 2017 **Weber, J.**, D.J. Leopold, and J.J. Wiley Jr., *Poster*. Greenhouse germination trials with federally protected Houghton's goldenrod: evaluating factors associated with population persistence. *BOTANY17, BSA Annual Meeting, Fort Worth, TX*.
- April 2017 Lee, L.*, **J. Weber**, and D.J. Leopold. Preliminary analysis of germination rate in Houghton's goldenrod (*Oligoneuron houghtonii*) in various substrate types. *ESF Student Spotlight on Research Symposium, Syracuse, NY*.
- April 2017 **Weber, J.**, D.J. Leopold, and J.J. Wiley Jr., *Poster*. Greenhouse germination trials with federally protected Houghton's goldenrod: evaluating factors associated with population persistence. *ESF Student Spotlight on Research Symposium, Syracuse, NY*.
- Feb 2017 **Weber, J.**, D.J. Leopold, and J.J. Wiley Jr., *Poster*. Greenhouse germination trials with federally protected Houghton's goldenrod: evaluating factors associated with population persistence. *National Native Seed Conference, Washington, D.C*.
- Sept 2016 **Weber, J.** *Guest lab instructor*. Botanical lab exploration of Rand Tract, Syracuse, NY: identification of local angiosperms. *ESF Flowering Plants: Diversity, Evolution, and Systematics (EFB 435/635)*.
- Sept 2016 **Weber, J.** *Invited talk*. Houghton's goldenrod range wide status update. *US Fish and Wildlife Service New York Field Office, Cortland, NY*.
- Oct 2013 **Weber, J.** *Keynote speaker*. Potential impacts of deer herbivory and non-native *Phragmites australis* on marl fen rarities. *Bergen Swamp Preservation Society Annual Meeting, Bergen, NY*.
- March 2013 **Weber, J.** *Guest lecture*. Moss life history strategies. *ESF Ecology of Mosses (EFB 446/646)*.

PROFESSIONAL SOCIETIES – CURRENT MEMBERSHIPS

Botanical Society of America
 Ecological Research as Education Network (EREN)
 New York Flora Association