Krissa A. Skogen, Ph.D.

Chicago Botanic Garden 1000 Lake Cook Road Glencoe, IL 60022 kskogen@chicagobotanic.org www.skogenlab.org

APPOINTMENTS

2013 - Present Chicago Botanic Garden - Associate Conservation Scientist

2008 - Present Chicago Botanic Garden - Manager, Conservation & Land Management Internship Program

2008 - Present Northwestern University, Evanston, IL -Adjunct Assistant Professor,

Plant Biology and Conservation

2008 – 2013 Chicago Botanic Garden - Assistant Conservation Scientist

EDUCATION

2008	Ph.D.	Ecology and Evolutionary Biology	University of Connecticut. Storrs, CT
		Declining Desmodium cuspidatum (Muhl.ex Willd.)	DC. Ex Loudon, Multiple approaches to a
		unique conservation problem. K. Holsinger (major advisor)	
2000	B.A.	Major: Biology, Minor: Women's Studies	Gustavus Adolphus College. St. Peter, MN

LEADERSHIP APPOINTMENTS & TRAINING

2018 – 2019 <u>Homeward Bound Project for Women in Science</u> Worldwide / Antarctica

HB4 Team Member

2007 Environmental Leadership Program New England Regional Network

Senior Fellow

PUBLICATIONS (*student authors)

Jogesh, J., R. A. Raguso, M. S. Balbuena, L. L. Bechen*, G. T. Broadhead*, J. B. Fant, A. M. Gruver*, E. T. Hilpman*, E. M. Lewis*, S. L. Todd*, and K. A. Skogen. Submitted. Floral antagonists generate floral fragrance diversity. Science.

Bruzzese*, D. J., D. L. Wagner, T. Harrison, T. Jogesh, R. P. Overson, N. J. Wickett, R. A. Raguso, and **K. A. Skogen**. In Review. Diversification in the microlepidopteran genus Mompha (Lepidoptera: Gelechioidea: Momphidae) is explained more by tissue specificity than host plant family. PLoS ONE.

- Bechen*, L., M. Johnson, G. Broadhead, R. Levin, R. Overson, T. Jogesh, J. Fant, R. Raguso, **K. Skogen**, N. Wickett. In Revision. Differential gene expression associated with a floral scent polymorphism in the evening primrose *Oenothera harringtonii* (Onagraceae). BMC Genomics.
- Jogesh, T., G. T. Broadhead*, R. A. Raguso, and K. A. Skogen. 2018. Intraspecific floral diversity in the California evening primrose, *Oenothera californica* subsp. avita. <u>Mojave National Preserve Science</u> <u>Newsletter.</u> 12-16.
- Rhodes, M. K.*, J. B. Fant, and **K. A. Skogen**. 2017. Pollinator identity and spatial isolation influence multiple paternity in an annual plant. Molecular Ecology. <u>doi:10.1111/mec.14115</u>
- Jogesh, T., R. P. Overson, R. Raguso, and **K. A. Skogen**. 2017. Herbivory as an important selective force in the evolution of floral traits and pollinator shifts in a clade of evening primroses, *Oenothera* sect. *Calylophus* (Onagraceae). AoB Plants. 9(1) doi:10.1093/aobpla/plw088 **Open Access.**
- **Skogen, K. A.**, T. Jogesh, E. T. Hilpman*, S. L. Todd*, M. K. Rhodes*, S. Still, and J. B. Fant. 2016. Landuse change has no detectable effect on reproduction in a disturbance-adapted plant pollinated by long-distance dispersing hawkmoths. American Journal of Botany. 103(11):1950-1963. doi:10.3732/ajb.1600302 **Open Access.**
- Lewis, E. M.*, J. B. Fant, M. J. Moore, A. P. Hastings, E. L. Larson, A. Agrawal, and **K. Skogen**. 2016. Microsatellites for *Oenothera gayleana* and *O. hartwegii* subsp. *filifolia* (Onagraceae) and their utility in section *Calylophus*. Applications in Plant Sciences. 4(2). doi: 10.3732/apps.1500107
- Barak, R.*, J. Fant, A. Kramer, and K. Skogen. 2015. Assessing the value of potential "native winners" for restoration of cheatgrass-invaded habitat. Western North American Naturalist. 75:58-69. doi: 10.3398/064.075.0107.

- Rhodes, M.*, J. Fant, and **K. Skogen**. 2014. Local topography shapes fine-scale spatial genetic structure in the Arkansas Valley evening primrose, *Oenothera harringtonii* (Onagraceae). Journal of Heredity.105:900-909. doi: 10.1093/jhered/esu051 **Open Access**.
- Ksiazek*, K., J. Fant, and **K. Skogen**. 2014. Native forbs produce high quality seeds on Chicago green roofs. Journal of Living Architecture. http://livingarchitecturemonitor.com/JOLA/JOLA2014_Volume1_Issue2_Ksiazek(etal).pdf
- Fant, J., H. Weinberg-Wolf*, D. Tank and **K. Skogen**. 2013. Characterization of 12 microsatellite markers in *Castilleja sessiliflora* and transferability to other *Castilleja* species. Applications in Plant Sciences. 1(6):1200564. doi: 10.3732/apps.1200564
- Ksiazek*, K., J. Fant and **K. Skogen**. 2012. An assessment of pollen limitation on Chicago green roofs. Landscape and Urban Planning. 107(4):401-408. doi: 10.1016/j.landurbplan.2012.07.008
- **Skogen, K.**, E. Hilpman*, S. Todd*, and J. Fant. 2012. Microsatellite primers in *Oenothera haringtonii* (Onagraceae), an annual endemic to the shortgrass prairie of Colorado. American Journal of Botany Primer Notes and Protocols in the Plant Sciences. 99(8):e313-6. doi:10.3732/ajb.1200003
- **Skogen, K.,** K. Holsinger, and Z. Cardon. 2011. Nitrogen deposition and the decline of a regionally threatened legume, *Desmodium cuspidatum*. Oecologia.165(1):261-269. doi: 10.1007/s00442-010-1818-7
- **Skogen, K.,** L. Senack*, and K. Holsinger. 2010. Dormancy, small seed size and low germination rates contribute to low recruitment in *Desmodium cuspidatum* (Fabaceae). Journal of the Torrey Botanical Society. 137(4):355-365. doi: 10.3159/10-RA-003.1
- Tienes, M.*, **K. Skogen**, P. Vitt and K. Havens. 2010. Optimal monitoring of rare plant populations Report for the USDA Forest Service.
- Johnson-Groh, C., C. Riedel, L. Schoessler and **K. Skogen**. 2002. Belowground distribution and abundance of *Botrychium* gametophytes and juvenile sporophytes. American Fern Journal 92(2):80-92. https://doi.org/10.1640/0002-8444(2002)092[0080:BDAAOB]2.0.CO;2

RESEARCH GRANTS

- 2018 National Science Foundation: Unlocking the evolutionary history of a rapid Hawaiian Islands radiation with extraordinary breeding system diversity. DEB 1752785. PIS: A. Sakai, S. Weller (UC Irvine); N. Wickett (CBG); M. Moore (Oberlin College); W. Wagner (Smithsonian Institution). Senior Personnel: **K. Skogen,** L. Weisenberger. \$1,065,581
- 2013 National Science Foundation: <u>Dimensions of Biodiversity</u>. <u>Landscapes of linalool: scent-mediated diversification of flowers and moths across western North America</u>. DEB 1342873 **Lead PI: K. Skogen.** Co-PIs: J. Fant, N. Wickett (CBG); R. Raguso (Cornell University); R. Levin (Amherst College). 2013. Total: CBG: \$1,459,382
- National Science Foundation MRI: Acquisition of a Seed X-ray Machine at Chicago Botanic Garden. DBI 1125997. Lead PI: K. Havens, Co-PIs: P. Vitt, S. Wagenius, **K. Skogen**, J. Fant. \$136,597
- 2009 National Science Foundation MRI: Acquisition of Conservation Geographic Information Systems (GIS) DBI 0922995. Instrumentation. Lead PI: K. Havens, Co-PIs: P. Vitt, D. Larkin, **K. Skogen**, and J. Fant. \$305,389
- 2009 National Fish and Wildlife Foundation, Native Plant Conservation Initiative. Co-PIs: J. Fant, D. Larkin, **K. Skogen,** E. Yates. \$40,000
- 2008 Colorado Native Plant Society, Steinkamp Research Grant. \$800.
- 2006 Environmental Protection Agency, Science to Achieve Results Graduate Fellowship. \$110,000 National Science Foundation, Doctoral Dissertation Improvement Grant. \$11,990
- Torrey Botanical Society, Research Fellowship. \$2,500
 Center for Conservation and Biodiversity, University of Connecticut. Research Grant. \$750
- 2004 Botanical Society of America, Karling Graduate Student Research Award. \$500
- 2004 New England Botanical Club, Graduate Research Grant. \$1,055 Center for Conservation and Biodiversity, University of Connecticut. Research Grant. \$750
- 2003-2007 Ronald Bamford Endowment, Graduate Research Grant. University of Connecticut. \$5,000
- 2003 Summer Institute in Statistical Genetics, North Carolina State University, NC. Scholarship. \$1,000
- 2003 National Science Foundation & New England Wild Flower Society. Conservation Biology Fellow. \$4,000
- 1999 Sigma Xi Scientific Research Society, Research Grant. \$500

FEDERAL & NON-PROFIT GRANT & PROGRAM MANAGEMENT

2008 – 2018 Conservation and Land Management Internship Program

\$28+ million total funding 1,120+ interns

Coordinated federal funding (Assistance and Cooperative Agreements) for the Conservation and Land Management Internship Program with federal and non-profit partners including Bureau of Land Management (BLM), Botanic Garden Conservation International (BGCI), Center for Plant Conservation (CPC), Greenbelt Native Plant Center (GNPC), National Park Service (NPS), USDA Forest Service (FS), US Fish and Wildlife Service (FWS), USDA Forest Service (FS), and US Geologic Survey (USGS).

Led recruitment, application procedures, interviewing, hiring and data management for all interns. Managed support staff (CLM Program Coordinator & Program Assistants).

Total funding: \$1.43 million; 65 interns 2018 BLM (52 interns), NPS (1 intern), FS (10 interns), FWS (2 interns) 2017 Total funding: \$4.05 million; 137 interns BLM (123 interns), NPS (1 intern), FS (10 interns), FWS (2 interns), USGS (1 intern) Total funding: \$3.6 million; 128 interns 2016 BLM (117 interns), NPS (3 interns), FS (5 interns), FWS (3 interns) 2015 Total funding: \$3.6 million; 119 interns BLM (100 interns), NPS (3 interns), FS (8 interns), FWS (3 interns), USGS (4 interns), GNPC (1 intern) Total funding: \$2.7 million; 123 interns 2014 BLM (109 interns), NPS (1 interns), FS (6 interns), FWS (2 interns), USGS (4 interns), GNPC (1 intern) Total funding: \$2.3 million; 88 interns 2013 BLM (76 interns), NPS (3 interns), FWS (4 interns), USGS (4 interns), GNPC (1 intern) 2012 Total funding: \$2.5 million; 95 interns BLM (88 interns), NPS (2 interns), FS (1 intern), FWS (3 interns), USGS (2 interns), GNPC (1 intern) Total funding: \$2.2 million; 99 interns 2011 BLM (81 interns), NPS (2 interns), FS (6 interns), FWS (2 interns), USGS (2 interns), CPC (4 interns) Total funding: \$2.8 million; 134 interns 2010 BLM (128 interns), NPS (5 interns), BGCI (1 intern) 2009 Total funding: \$1.6 million; 84 interns BLM (64 interns), NPS (14 interns), FS (4 interns), BGCI (2 interns) Total funding: \$990,000; 55 interns

INVITED LECTURES & SEMINARS

BLM (54 interns), NPS (1 intern)

2008

- The unsung heroes and villains of the night nocturnal pollination and herbivory in the evening 2018 primrose family, Onagraceae. 65th Annual Fall Symposium – Biota of North America: what we know, what we don't know and what we're losing. Missouri Botanical Garden. October Scent-mediated diversification – is floral scent at the center of interactions among plants, pollinators and antagonists? Departmental Seminar. Rancho Santa Ana Botanic Garden. March Scent-mediated diversification – is floral scent at the center of interactions among plants, pollinators and antagonists? Biology Departmental Seminar. University of Wisconsin-Milwaukee. February
- 2017 Is floral scent at the nexus of interactions among plants, pollinators and herbivores? Biology Departmental Seminar. Texas Tech University. April
- Flowers smell who cares? Pollinators, herbivores and evening primroses. When floral scent attracts 2016 your friends and enemies. Biology Departmental Seminar. Lake Forest College. October

- 2015 Moths and nocturnal pollination similarities and differences with diurnal pollinators and the threats they face. Green Matters 2015 Symposium Protecting our Pollinators. Brookside Gardens and Montgomery Parks, Maryland. 200 attendees. February
 - Scent-mediated diversification: Is floral scent at the center of interactions among evening primroses, pollinators, and parasites? Ecology and Evolution Departmental Seminar. University of Illinois Chicago. January
- 2014 Scent-mediated diversification: Is floral scent at the center of interactions among evening primroses, pollinators, and parasites? Entomology Departmental Seminar. University of Wisconsin Madison. October
 - Pollinators, parasites and floral diversity assessing the role of mutualism in plant diversity in Onagraceae. 2014 Plant Science Symposium. The Field Museum, Chicago, IL. April
 - Floral traits & plant diversification pollinators get the credit but are floral antagonists the unsung heroes? Biology Departmental Seminar. Oberlin College, Oberlin, OH. April
- 2013 Vagrant pollinators, fragrant plants geographic variation in floral scent despite hawkmoth-mediated gene flow linking isolated populations. Biology Departmental Seminar. University of Wisconsin, Whitewater. April
 - Vagrant pollinators, fragrant plants geographic variation in floral scent despite hawkmoth-mediated gene flow linking isolated populations. Biology Departmental Seminar. Bucknell University, Lewisburg, PA. March
- 2010 Does fragmentation negatively impact plant species pollinated by long-distance dispersers? Variation in floral advertisements, rewards and neutral genetic markers in *Oenothera harringtonii*. Botany Departmental Seminar. The Field Museum. Chicago, IL. April
- 2008 Same but different: using a similar synthetic approach to illuminate the causes and consequences of species decline in two unrelated plant species. Biology Departmental Seminar. Lawrence University, Appleton, WI. December
 - Declining *Desmodium:* Multiple approaches to solving a unique conservation problem. Plant Biology and Conservation Departmental Seminar. Northwestern University, Evanston, IL. October
 - Declining *Desmodium*: Multiple approaches to solving a unique conservation problem. Biology Departmental Seminar. Central Connecticut State University, New Britain, CT. February
 - Using scientific data to inform plant conservation decisions. Guest Lecturer, Biology 327, Vascular Plants. Central Connecticut State University, New Britain, CT. February

AWARDS

2016 2010	Public Policy Award Employee of Distinction	Botanical Societ Chicago Botanic	,
2008	Outstanding Academic Achievem	nent Award	University of Connecticut - Provost's Commission on the Status of Women & The Women's Center
2006	Alternate Fellow	Robert and Patr	icia Switzer Foundation
2004	Outstanding Teaching Assistant Award Nominee. University of Connecticut.		
		Ecology & Evol	utionary Biology Department
2000	Special Recognition Award	Gustavus Adolp	hus College, Biology Dept.
	Elected member	Sigma Xi Scienti	fic Research Society.

POSTDOCS MENTORED

Tania Jogesh. 2014 – 2018. Supported by the NSF-funded Dimensions of Biodiversity: Landscapes of Linalool Project (DEB 1342873).

Current Position: Data Scientist, City of San Francisco.

Rick Overson. 2014 – 2017. Supported by the NSF-funded Dimensions of Biodiversity: Landscapes of Linalool Project (DEB 1342873).

Current Position: Research Manager, Cease Lab, Julie Ann Wrigley Global Institute of Sustainability. Arizona State University.

GRADUATE STUDENTS ADVISED - MAJOR ADVISOR

12 Total: 9 M.S., 3 Ph.D.; 9 underrepresented in STEM; 8 women

Susan Deans (Northwestern University, Ph.D. expected 2023)

Katie Wenzel (Northwestern University, Ph.D. expected 2020), Co-advisor

Katherine Andrews (Northwestern University, M.S. expected 2019)

Kelly Mikenas (Northwestern University, Ph.D. 2017) The Potential of Green Roofs to Provide Habitat for Native Plant Conservation.

Current Position: Lecturer, Biology Department, Elmhurst College.

Dan Bruzesse (Northwestern University, M.S. 2016) Host use and diversification of the genus *Mompha* (Lepidoptera: Gelechioidea: Momphidae).

Current Position: Ph.D. student in Jeff Feder's lab at the University of Notre Dame.

Ben Cooper (Northwestern University, M.S. 2016) Revealing patterns of evolution in a recently radiated plant group, the Sundrops (*Oenothera* Section *Calylophus*: Onagraceae) using target enrichment. Current Position: Data analyst, National Park Service, Las Cruces, NM.

Emily Lewis (Northwestern University, M.S. 2015) Differences in population genetic structure of hawkmothand bee-pollinated species of *Oenothera* (Onagraceae) are more pronounced at a landscape scale. Current Position: Graduate coordinator. Math Department, Washington State University.

Matthew Rhodes (Northwestern University, M.S. 2013) Spatial genetic structure and nonrandom pollination success in *Oenothera harringtonii* (Onagraceae).

Current Position: Ecological consultant, Lander, WY.

Ricardo Rivera (Northwestern University, M.S. 2013) Quantitative genetics in a fragmented landscape, a study of heritable floral traits in *Oenothera harringtonii* (Onagraceae).

Current Position: Ph.D. candidate. Erika Marin Spiotta's lab at the University of Wisconsin, Madison.

Rebecca Barak (Northwestern University, M.S. 2012) Species interactions between native forbs and invasive cheatgrass (*Bromus tectorum* L.) in the Colorado Plateau.

Current Position: David H. Smith Conservation Postdoctoral Fellow, Chicago Botanic Garden, Purdue University and Michigan State University.

Emily Booth (Northwestern University, M.S. 2011) Potential effects of climate change on *Penstemon palmeri* at Zion National Park, Utah, U.S.A.

Current Position: Postdoctoral researcher, Brent Sewall's lab at Temple University.

Melissa Gray (Northwestern University, M.S. 2011) The effects of floral density manipulation on the pollination and reproductive success of *Penstemon pachyphyllus*.

Current Position: Assistant editor in Plant and Environmental Science at Encyclopedia Britannica.

GRADUATE STUDENTS ADVISED – COMMITTEE MEMBER

12 Total: 10 M.S., 2 Ph.D.; 10 underrepresented in STEM; 9 women

Marie Faust (Northwestern University, M.S. expected 2019)

Kristen Manion (Northwestern University, M.S. expected 2019)

Anita Cisternas-Fuentes (Northwestern University, Ph.D. expected 2019)

Elliot Gardner (Northwestern University, Ph.D. 2017) Evolutionary transitions: Phylogenomics and pollination of *Artocarpus* (Moraceae).

Christopher Warneke (Northwestern University, M.S. 2015) Host preferences of biocontrol weevils on a threatened thistle and an invasive weed: implications for management and conservation.

Laney Widener (Northwestern University, M.S. 2014) Reproductive isolation and genetic divergence in the *Castilleja affinis* subspecies complex.

Anna Braum (Northwestern University, M.S. 2014) Investigating the drivers of floral trait polymorphism in *Castilleja coccinea* (L.) Sprengel. (Orbancaceae)

Karen Taira (Northwestern University, M.S. 2013) Does style persistence measure pollen limitation in perennial *Helianthus* species?

Byron Tsang (Northwestern University, M.S. 2012) Environmental factors affecting woodland legume restoration. Committee Member.

Kelly Ksiazek (Northwestern University, M.S. 2011) Patterns of Pollen Limitation and Seed Set on Chicago Green Roofs. Committee Member.

Megan Kate Gallagher (Northwestern University, M.S., 2011) Plant Performance in prairie restorations: Does seed source matter? Committee Member

Megan Jensen (Northwestern University, M.S., 2010) Breeding system assessment in a prairie plant community. Committee Member.

RESEARCH ASSISTANTS & UNDERGRADUATE STUDENTS ADVISED

30 Total: 23 underrepresented in STEM; 22 women

Chris Woolridge. Research Assistant. Sept 2017 – present.

Haley Carter. Research Assistant. July 2017 – Sept 2018.

Laura Fehling (University of Wisconsin – Green Bay) REU Student: Summer 2018. Impact of drought on plant-herbivore interactions.

Lindsey Bechen. Research Assistant. July 2016 – July 2018.

Casey Beidelman (Northwestern University) Research intern. Summer 2017.

Andrea Gruver. Research Assistant. July 2015 – Aug 2017.

Sydney Weil (Amherst College) Research intern: Summer 2017.

Melissa Vergara (University of California – Santa Cruz) REU Student: Spring 2017. Botanical Society of America PLANTS award recipient, 2017. Do herbivores prefer flower buds over leaves? Evaluating caterpillar preferences in evening primroses (Onagraceae).

Victoria Luizzi (Amherst College) REU Student: Summer 2016.

Emily Lewis. Research Assistant. July 2015 – August 2016.

Katherine Andrews (Lake Forest College, 2015). Research intern 2014-2016.

Evan Hilpman. Research Assistant. May 2008 – May 2013, May 2014 – July 2015. Senior thesis co-advisor, Colorado College, 2010. Genetic analysis of a Colorado endemic threatened by anthropogenic landscape alteration: *Oenothera harringtonii* (Onagraceae).

Matt Rhodes. Research Assistant. May 2012 - July 2015.

Taylor Tate (Northwestern University, 2017). Research intern: Summer 2015. Northwestern University. Summer Undergraduate Research Award recipient.

Evan Levy (Colorado College, expected 2016). REU Student: Summer 2015. Floral preference of bees in a montane meadow in Flagstaff, AZ.

Adam Rork (Maryville University, expected 2017). REU Student: Summer 2015. A comparison of pollination and herbivory between two chemotypes of *Oenothera harringtonii*.

Lindsey Bechen (Amherst College, 2016). Research intern: Summer 2015. Heritability of linalool and geneexpression of floral scent in *Oenothera harringtonii*

Amanda Patsis (Amherst College, 2017). Research intern: Summer 2015. The evolutionary history of evening primroses (Onagraceae) using exon-capture and next-gen sequencing

Andrea Gruver (Gustavus Adolphus College, 2015). REU Student. Summer 2014. Population genetics of *Hyles lineata* using CO1

James Medina (Oberlin College, 2015). Research Assistant. Summer 2012, Jan 2013, Summer 2013.

Sadie Todd (University of Missouri, Columbia, 2010). Research Assistant. May 2009 - May 2013.

Kathleen (KC) West (Claremont McKenna College, 2012). Research Assistant. 2012-2013.

Heather-Rose Kates (Oberlin College, 2011). REU Student: Summer 2010. Variation in floral morphology in *Oenothera harringtonii*.

Carrie Klase (Warren Wilson College, 2012). REU Student: Summer 2009. *Oenothera harringtonii* fruit and seed morphology, weight, and seed viability analyses.

Quincy Roberts (Lake Forest College, 2009). Research Intern. 2008 – 2009.

Logan Senack (University of Connecticut, University Scholar and Honors Student, 2008). Senior thesis co-advisor: 2006 –2008. Seed size, germination, and the effects of herbivory in rare and common *Desmodium* species.

Susan Kim (University of Connecticut). Undergraduate research assistant. 2007.

Kathryn Sturgeon (University of Connecticut). Undergraduate research assistant. 2005 – 2006.

Claudette Casile (University of Connecticut, Honors student). Undergraduate research assistant. 2005.

Meagan Ridder (University of Connecticut) Garden Club of America Scholar. 2004.

TEACHING

Current Topics in Ecology and Conservation, Instructor

Winter 2009 - 2011, Fall 2011 - 2018

Northwestern University, Evanston, IL

Plant Science and Conservation

This course provides students with the conceptual and theoretical framework within the field of ecology (especially plant biology) and conservation. This seminar-style class is based on reading and discussion of historical literature paired with more recent research. It provides students with the opportunity to think critically and discuss their thoughts within a structured yet informal setting and provides them with a basic background in reading and writing scientific papers.

Field & Laboratory Methods in Plant Biology & Conservation, Co-Instructor Fall 2009 - 2018

Northwestern University, Evanston, IL

Plant Science and Conservation

The goals of this course are to (1) familiarize students with various tools and techniques used frequently in the plant biology and conservation research, (2) provide students hands-on experience with a variety of field and laboratory methods used in plant biology and conservation research, and (3) ensure that students complete the course feeling confident in their ability to select and implement the appropriate methods to address a variety of research questions.

Current Topics in Ecology & Evolutionary Biology, Co-instructor

Spring and Fall 2007

University of Connecticut, Storrs, CT

Department of Ecology and Evolutionary Biology

Weekly undergraduate seminar designed around the EEB weekly seminar series.

Developmental Plant Morphology, Teaching Assistant

Fall 2004

University of Connecticut, Storrs, CT

Department of Ecology and Evolutionary Biology

Introduction to Botany, Teaching Assistant

Fall 2003

University of Connecticut, Storrs, CT

Department of Ecology and Evolutionary Biology

Principles of Biology, Teaching Assistant

Fall 2002, Spring 2003

University of Connecticut, Storrs, CT

Department of Ecology and Evolutionary Biology

PUBLIC POLICY INVOLVEMENT

2017 - present	Botanical Society of America. Public Policy Committee. Co-chair.	
2016 – present	H.R. 1054 – Botanical Sciences and Native Plant Materials Research, Restoration, and	
	Promotion Act. Science advisor. Provided feedback on drafts of the Bill and helped advocate	
	for bi-partisan co-sponsorship.	
2017	Congressional visits on Capitol Hill. Offices of Sen. Duckworth (IL), Rep. Schneider (IL-10)	
	American Institute of Biological Sciences – Science Communication Boot Camp. February.	
2016	Congressional visits on Capitol Hill. Offices of Sen. Durbin (IL), Rep. Schneider (IL-10)	
	Ecological and Biological Sciences Coalition.	
2013 - 2017	Botanical Society of America. Public Policy Committee. Committee member.	

SERVICE

2018 – 2021 2017 – present	American Society of Plant Taxonomists. <i>Promotional Materials Committee member</i> . Pollinators in the Garden – year-long theme for Chicago Botanic Garden, 2019.
1	Steering committee member, science advisor.
2016 – present	Graduate Program in Plant Biology and Conservation. Master's selection committee member.
•	Northwestern University and Chicago Botanic Garden.
2015 – present	Botanical Society of America. Northwestern University Student Chapter. Faculty Rep.

2011 - present Graduate Program in Plant Biology and Conservation. Curriculum committee member. Northwestern University and Chicago Botanic Garden. 2013 Buell & Braun Student Presentation/Poster Awards. Judge. Ecological Society of America. Annual meeting, Portland, OR. 2011, 2012 Graduate Program in Plant Biology and Conservation. Master's selection committee member. Northwestern University and Chicago Botanic Garden. 2010-2011 Botanical Society of America. Certifying Botanists Committee. Steering committee member. 2007 Science, Engineering and Health Professions Collaborative Symposium to promote minorities in the sciences. Ecology and Evolutionary Biology Department representative. University of Connecticut. 2006 Board of Trustees Distinguished Professor Advisory Committee. Committee member and graduate student representative. University of Connecticut. 2006 - 2008Center for Conservation and Biodiversity. Committee member and graduate student representative. University of Connecticut. 2005 Board of Trustees Distinguished Professor Advisory Committee. Committee member and graduate student representative. University of Connecticut. Society for Conservation Biology. Student Advisory Committee member. 2004-2005 Graduate Student Senate Elected Senator, representing the Ecology and Evolutionary Biology. 2002-2003

PRESS

2018	Midwestern women join climate change contingent in Antarctica. Energy News Network. 9 Nov.	
2017	Hawkmoth pollination promotes promiscuity in plants. Chicago Botanic Garden Blog. Summary of	
	recent Molecular Ecology paper. 12 April	
2015	The North Shore Weekend Newspaper. "She blooms in role at Botanic Garden." 24 Jan p. 35.	
2014	Keep Growing - Chicago Botanic Garden quarterly member magazine.	
	"The evening primrose, the hawkmoth, and the Mompha moth: an evolutionary love triangle."	
	Fall p. 36-37.	
	USDA Blog - Evening primrose by any other name is a moth plant. 19 Aug	
	UConn Today - A growing knowledge: from plants to pollinators. 13 May	
	Nature Documentaries Features Plants Are Cool, Too! Episode. 25 March	
2013	UConn Today. "Taking 'adventure botany' on the road." University of Connecticut. 23 Oct	
	Behind the Scenes – Filming "Plants Are Cool, Too!" Chicago Botanic Garden Blog. 18 Oct	
	The Evolution of a Research Idea - Chicago Botanic Garden Blog. Describes the project evolution	
	over the 5 years and details the goals of the NSF Dimensions of Biodiversity grant. 7 Oct	

ORGANIZED SYMPOSIA AND MEETINGS

University of Connecticut.

2018	Botanical Society of America. Using Our Science to Inform Policy.
	Workshop co-organizer/moderator.
	BSA 2018 Annual meeting, Rochester, MN.
2009-2018	Conservation and Land Management Internship Program Training Workshop.
	Committee chair.
	2009, 2010: Albright Training Center - Grand Canyon National Park
	2011 – 2018: Chicago Botanic Garden
	~75 CLM interns and 10-15 instructors annually.
	Sessions on plant inventorying and monitoring, field botany and conservation genetics, etc.
2010	Botanical Society of America. Plant/Pollinator Interactions in Fragmented Landscapes.
	Symposium Co-organizer.
	BSA Annual Meeting, Providence, RI.
2006	15th Annual Graduate Student Symposium.
	Committee member.
	Ecology and Evolutionary Biology Department, University of Connecticut.
2004	Northeast Ecology and Evolution Conference

Co-chair member, Organizing and Fundraising Committees.

University of Connecticut, Storrs, CT.

Raised \$23,000; Oversaw 4 committees (Abstract/Program, Registration, Website and Internal Recruiting Committees); 210 participants; 135 presentations (oral and poster).

MANUSCRIPTS REVIEWED

American Journal of Botany International Journal of Plant Sciences

Annals Botanici Fennici Natural Areas Journal

Annals of Botany Oecologia

AoB Plants Plant Species Biology

Ecology PLoS ONE

Evolutionary Ecology

PROPOSAL REVIEWER

2018 National Science Foundation. Dimensions of Biodiversity. Ad hoc reviewer.

National Science Foundation. Dimensions of Biodiversity. Ad hoc reviewer.

2016 National Science Foundation. Dimensions of Biodiversity. Panelist.

2010 – 2013 Botanical Society of America. Karling and Graduate Student Research Awards.
2008, 2010, 2013. Graduate Program in Plant Biology and Conservation. Northwestern University and

Chicago Botanic Garden. Master's graduate research award reviewer.

OUTREACH

2018 **Conservation Corps Conference** – Forest Preserves of Cook County. *Career panelist*. Chicago Botanic Garden October 11th

<u>The Shape of the World – Episode 4: Secret in the Scented Night.</u> Podcast. *Featured scientist.* Host Jill Riddell discusses my research and career in science. 12 May.

Experimental Words – Poetry Slam Science-Poetry collaboration. As one of 5 scientists paired with Chicago-area poets, I created and performed poems inspired by my research on hawkmoth pollination and José Olivarez's poetry. U.S. premier performance project from Manchester, U.K.-based scientist Sam Illingworth, Ph.D., and poet Dan Simpson. Chicago Botanic Garden. April 20

Project Exploration - Sisters 4 Science. STEM Scientist Instructor

- Ariel Community Academy, Chicago, IL.

98% Black, 81% low income. 14% diverse learners.

2017 Soho House Pollinator Awareness Event Panelist.

Co-hosted by the Pollinator Partnership, SproutModern, and Soho House. Chicago.

Girl Scouts of Greater Chicago and Northwest Indiana. Panelist.

Imagine your future – Environmental Scientist Edition. Discussed my career in science and research with 4th-8th grade girls to increase exposure to careers in science.

Project Exploration - Sisters 4 Science. STEM Scientist Instructor

After school program for young girls from underrepresented communities in Chicago elementary and middle school. Each session is led by a female scientist who emphasize leadership development through scientific exploration. www.projectexploration.org Discussed my career background, a day in the life of a scientist, and lead a hands-on experiment focused on flowers and pollinators.

- Carter G. Woodson North Middle School, Chicago, IL. 96% Black, 3% Hispanic. 97% low income. 20% diverse learners.
- Frederick Funston Elementary School, Chicago, IL.

91% Hispanic, 9% Black. 96% low income. 18% diverse learners. 42% limited English.

Oak Terrace Elementary School

Dual language school. 75% Hispanic. 70% low income. 62% limited English.

- Ecology Club - Discussed my career background, a day in the life of a scientist, and assisted in the development of a pollinator-friendly native plant garden.

- Kindergarten - Developing hands-on activities for outdoor classroom

2015 **Work-life Balance in Academia**, *Panelist*. Northwestern University.

Co-hosted by Graduate Women Across Northwestern, Association for Women in

Chemistry, and Women in Philosophy.

2013 – 2015 Woman in Science, Pollinators and Pollination.

Presentation to 50+ elementary and middle school students.

- YWCA Lake County Tech GYRLS summer program

- Catherine Cook School, Chicago, IL.

2013 Plants Are Cool, Too! Episode 4 - Desert Blooms and Marathon Moths. Featured

Scientist. Dr. Chris Martine, hose of the YouTube series, joins Krissa Skogen in New Mexico's White Sands National Monument and finds plant romance happening by the light of the full moon. Hawkmoths fly for miles each night in search of flower nectar - and are

thus critically important as pollinators of desert wildflowers. 17 Oct

2011, 2013 Girl Scouts of America. Female Scientist Mentor

Worked with troops to earn their 'Meet a Female Scientist' and 'Plant Life' badges.

NorthShore Homeschool Group.

AP Biology. Taught plant reproduction, pollination, and genetics sessions.

Starbucks Corporation Executive NonProfit Volunteer Day. Volunteers learned about my research and collected fitness data.

2011 CBG Dixon National Tallgrass Prairie Seed Bank

Volunteers learned about my research and collected fitness data.

2009 - 2010 Planting Science

Science mentor to high school students on their botany research project.

2005 Middle School Biodiversity Curriculum Development

Developed a biodiversity curriculum for CT 6th grade teachers incorporating concepts in Ecology and Evolutionary Biology, coordinated with the Education Department, University

of Connecticut.

PROFESSIONAL ASSOCIATIONS

Botanical Society of America (2003)

Ecological Society of America (2008)

Graduate Women in Science (2006)

Association for Women in Science (2006)

Society for Conservation Biology (2003)

New England Botanical Society (2003)

Torrey Botanical Society (2003)

The Nature Conservancy (2002)

Union of Concerned Scientists (2003) Sigma Xi Scientific Research Society (2000

OTHER PROFESSIONAL EXPERIENCE

National Research Council Assessment of Research Doctorate Programs, National Academies of Sciences University of Connecticut, Storrs, CT 2006 – 2007

Graduate Assistant

Collected and compiled data on doctoral students, faculty and doctoral programs.

Teachers for a New Era Program, Department of Education 2005

University of Connecticut, Storrs, CT

Graduate Assistant

Developed biodiversity curriculum for Connecticut 6th grade teachers incorporating ecology and evolutionary biology. Emphasis on hands-on and interactive learning in the classroom and outdoors.

National Science Foundation/New England Wildflower Society 2003

Conservation Research Fellow

Investigated the causes of decline in New England populations of the large-bracted tick-trefoil, *Desmodium cuspidatum* (Fabaceae).

Argonne National Laboratory. Argonne, IL

2001 - 2002

Environmental Research Division, Research Aide (R. Mike Miller, Julie Jastrow)

Studied effects of ambient and elevated CO₂ on soybean root growth and associated mycorrhizae using freeair CO₂ enrichment (FACE) rings in association with the SoyFACE Project at the University of Illinois, Urbana-Champaign.

Chicago Botanic Garden, Glencoe, IL

2000 - 2001

Conservation Science Department Intern, Research Intern (Suzanne Masi, Kay Havens, Pati Vitt)

Assisted on numerous projects including: Endangered and Threatened Plants of Cook County Inventory, Flora of Cook County Project, Herbarium teaching collection, Baseline demographic data and genetic analysis of *Viola conspersa*, reproductive studies of *Platanthera leucophaea*, and outbreeding depression study of *Lobelia cardinalis* and *L. siphilitica*.

Gustavus Adolphus College, St. Peter, MN

1998 - 2000

Plant Ecology Research Lab, Sigma Xi funded research (Cindy Johnson-Groh)

Rare plant ecology research on *Botrychium* ferns: distribution and abundance of underground reproductive structures (gametophytes, gemmae, and juvenile sporphytes).

University of Arizona, Tucson, AZ

January 2000

Plant Pathology Department, Intern (Martha Hawes)

Aluminum toxicity tolerance/avoidance of pea and alfalfa root border cells.

Gustavus Adolphus College, St. Peter, MN

1999

Plant Ecology Research Lab, Research Assistant (Cindy Johnson-Groh)

Vegetation map of Gustavus Adolphus College and Linnaeus Arboretum, St. Peter, MN

North Dakota State University, Fargo, ND

1997

Department of Plant Sciences, Research Assistant

Maintenance of sugar beet and wheat plots investigating effects pesticide and herbicide treatments.

PUBLISHED ABSTRACTS (oral presentations unless otherwise noted; *presenting author, *students)

- Bechen⁺, L., N. Wickett*, M. Johnson, R. Levin, T. Jogesh, R. Overson, J. Fant, R. Raguso, and **K. Skogen**. Differential gene expression associated with a floral scent polymorphism in the evening primrose *Oenothera harringtonii* (Onagraceae). BOTANY annual conference. Rochester, MN.
 - Wenzell*+, K., J. Fant, and **K. Skogen**. Geographic variation in pollinators and floral traits in a widespread species *Castilleja sessiliflora* (Orbanchaceae). BOTANY annual conference. Rochester, MN.
 - Jordan-Thaden, I.*, **K. Skogen***, and K. Tuominen*. Using our science to inform public policy. BOTANY annual conference. Rochester, MN.
- 2017 Wenzell*+, K., J. Fant, and **K. Skogen**. Range-wide variation in floral traits and local pollinator assemblages in *Castilleja sessiliflora* (Orobanchaceae). Ecological Society of America. Portland, Oregon. Poster.

- Patsis*+, A., R. Overson, M. Johnson, **K. Skogen**, W. Wagner, R. Raguso, N. Wickett, and R. Levin. Elucidating the evolutionary history of *Oenothera* sect. *Pachylophus* using phylogenomics. BOTANY annual conference. Fort Worth, Texas.
- Vergara*+, M., **K. Skogen**, T. Jogesh, and K. Kay. Do herbivores prefer flower buds over leaves? Evaluating caterpillar preferences in evening primroses (Onagraceae). BOTANY annual conference. Fort Worth, Texas. Poster.
- Havens-Young, K., A. Kramer, **K. Skogen***, and E. Williams. Advocacy for native plants and restoration: 'Botany Bill', H. R. 1054 the Botanical Sciences and Native Plant Materials Research, Restoration and Promotion Act. BOTANY annual conference. Fort Worth, Texas. Poster.
- **Skogen*, K.**, T. Jogesh, E. Lewis*, A. Gruver*, G. Broadhead*, R. Overson, and R. Raguso. Is floral scent at the nexus of interactions among plants, pollinators and herbivores in the evening primroses (Onagraceae)? BOTANY annual conference. Fort Worth, Texas.
- 2016 **Skogen*, K.**, T. Jogesh, R. Overson, J. Fant, and R. Raguso. Evolution of floral traits in the evening primrose family, Onagraceae. BOTANY annual conference. Savannah, Georgia.
 - Gardner*+, E., M. Johnson, **K. Skogen**, N. Wickett, and N. Zerega. Phylogenomics of *Artocarpus* (Moraceae): insights into pollination transitions. BOTANY annual conference. Savannah, Georgia.
 - Overson*, R., M. Johnson, J. Fant, R. Levin, M. Moore, W. Wagner, R. Raguso, **K. Skogen**, and N. Wickett. A phylogeny of the evening primrose family (Onagraceae) using a target enrichment approach for 322 nuclear loci. BOTANY annual conference. Savannah, Georgia.
 - Bechen*+, L., R. Overson, M. Johnson, J. Fant, R. Levin, R. Raguso, **K. Skogen**, and N. Wickett. Organ-specific transcriptomes of *Oenothera harringtonii* (Onagraceae) and associated variation in floral scent. BOTANY annual conference. Savannah, Georgia.
 - Lewis*+, E., J. Fant, M. Moore, and **K. Skogen**. Differences in population genetic structure of hawkmoth- and bee-pollinated species of *Oenothera* (Onagraceae). BOTANY annual conference. Savannah, Georgia.
 - Jogesh*, T., R. Raguso, R. Overson, J. Fant, and **K. Skogen**. Geographic variation in herbivore selection and the diversification of floral scent in evening primroses (Onagraceae). BOTANY annual conference. Savannah, Georgia.
 - Cooper*+, B., M. Moore, N. Wickett, R. Overson, M. Johnson, and **K. Skogen**. Using target enrichment methods to resolve the phylogeny of *Oenothera* sect. *Calylophus* (Onagraceae) with 322 nuclear loci. BOTANY annual conference. Savannah, Georgia.
- Tank*, D., L. Widener +, M. Latvis, S. Jacobs. **K. Skogen**, J. Fant. Phylogyen and evolution of a historically challenging species group: mixed data types identify cryptic species and a history of gene flow in the *Castilleja latifolia* (Orbanchaceae) species alliance. BOTANY annual conference. Edmonton, Alberta.
- 2013 Rhodes*+, M.K., **K. Skogen** & J.B. Fant. Moths vs. bees: Linking temporal variation in pollinator community structure to reproductive dynamics and pollen movement in an annual plant. Ecological Society of America, Minneapolis, MN
 - Ksiazek⁺, K., R. K. Tonietto & **K. Skogen***. Green roofs provide resources for native forbs and bees in Chicago. Invited talk for special session: incorporating Ecology into Green Research. Ecological Society of America, Minneapolis, MN
- 2012 **Skogen*, K**., J. Fant and R. Raguso. Vagrant pollinators and fragrant plants geographic structure in floral scent despite hawkmoth-mediated gene flow linking isolated populations. Ecological Society of America, Portland, OR.
 - Rivera*+, R., **K. Skogen**, and J. Fant. Quantitative genetics in a fragmented landscape, a study of heritabletraits in *Oenothera harringtonii*. Ecological Society of America, Portland, OR.
 - Barak*+, B., **K. Skogen**, and J. Fant. Assessing competitive potential of native forbs from cheatgrass-dominated habitats. Ecological Society of America, Portland, OR.
- 2010 **Skogen*, K.**, R. Raguso, J. Fant and E. Hilpman+. Does fragmentation negatively impact species pollinated by long-distance dispersers? Variation in floral advertisements, rewards and neutral genetic markers in *Oenothera harringtonii*. BOTANY annual conference, Providence, RI.

- 2009 **Skogen*, K**, R. Raguso, J. Fant, E. Hilpman*+, S. Kelso, and Q. Roberts+. Fragmented fragrances: habitat modification, population structure and reproductive ecology in a rare prairie endemic, *Oenothera harringtonii*. BOTANY annual conference, Snowbird, UT. Poster.
- 2008 **Skogen*, K**. and K. Havens. Demand for botanists on federal lands: Partnerships between botanic gardens and land management agencies. BOTANY annual conference, Vancouver, Canada.
- 2007 **Skogen*, K**. Does atmospheric nitrogen deposition contribute to the decline of a native nitrogen-fixing species, *Desmodium cuspidatum*? BOTANY annual conference, Chicago, IL.
 - **Skogen*, K**. Does atmospheric nitrogen deposition contribute to the decline of a native nitrogen-fixing species, *Desmodium cuspidatum*? 17th Annual Graduate Student Symposium, Ecology and Evolutionary Biology Department, University of Connecticut.
- 2006 **Skogen*, K**. Atmospheric nitrogen deposition and the decline of a nitrogen-fixing plant species. Environmental Protection Agency Science to Achieve Results Conference, Washington, DC. Poster presentation.
 - **Skogen*, K.** and K. Holsinger. Does size matter? Genetic diversity in declining and secure populations of *Desmodium cuspidatum*. BOTANY annual conference, Chico, CA.
- 2005 Holsinger*, K., and **K. Skogen**. Plant genetic consequences of pollinator declines. National Research Council Workshop on the Status of Pollinators in North America. National Academy of Sciences, Washington, DC.
 - **Skogen*, K**. Demography and reproductive biology of threatened populations of *Desmodium cuspidatum* (Fabaceae). BOTANY annual conference, Austin, TX.
- 2004 **Skogen*, K**. Exploring causes of decline in the large-bracted tick-trefoil, *Desmodium cuspidatum*, (Fabaceae). 2nd Annual Northeast Ecology and Evolution Conference, University of Connecticut, Storrs, CT. Poster presentation.
- 2003 **Skogen*, K**. 2003. Exploring causes of decline in the large-bracted tick-trefoil, *Desmodium cuspidatum*, (Fabaceae). National Science Foundation/New England Wildflower Society Fellowship in Conservation Biology Symposium, New England Wildflower Society, Framingham, MA. Oral and poster presentations.
 - **Skogen*, K**. Exploring causes of decline in rare plant species. Northeast Ecology and Evolution Conference, Rutgers University, New Brunswick, NJ.
 - **Skogen*, K**. Exploring causes of decline in rare plant species. 13th Annual Graduate Student Symposium, Ecology and Evolutionary Biology Department, University of Connecticut.
- 2001 Bradford*, K, S. Liarakos, K. Skogen, A. Tietmeyer, P. Vitt and K. Havens. Comparing the ability of two PCR-based techniques, RAPD and ISSR, to detect low levels of genetic diversity. 2001 Midwestern Plant Conservation Conference, Chicago Botanic Garden, Glencoe, IL. Poster presentation.
- 2000 Tietmeyer*, A., **K. Skogen***, K. Bradford, J. Taylor* and P. Vitt. Using demographic and genetic indicators to investigate the effects of woodland restoration on the threatened *Viola conspersa*. Sixth Annual Janet Meakin Poor Research Symposium: 2001 Midwestern Plant Conservation Conference, Chicago Botanic Garden, Glencoe, IL. Poster presentation.
 - Johnson-Groh, C.L., L. Schoessler*, C. Riedel and **K. Skogen**. Underground distribution and abundance of *Botrychium* gametophytes and juvenile sporophytes. Symposium: Biology and Conservation of the Ophioglossaceae--A Tribute to Warren "Herb" Wagner. Botanical Society of America, Portland, OR.
 - Johnson-Groh, C.L., L. Schoessler*, C. Riedel and **K. Skogen***. The distribution and abundance of underground gametophytes in four species of *Botrychium* (moonwort ferns). National Conference of Undergraduate Research, Missoula, MT.
- Johnson-Groh, C.L., L. Schoessler*, C. Riedel and **K. Skogen***. 1999. Underground distribution and abundance of *Botrychium* gametophytes and juvenile sporophytes. National Sigma Xi Annual Meeting, Minneapolis, MN. Poster presentation.
 - Johnson-Groh, C.L., L. Schoessler*, C. Riedel and **K. Skogen***. Underground distribution and abundance of *Botrychium* gametophytes and juvenile sporophytes. International Botanical Congress, St. Louis, MO. Poster presentation.