Erika I Hersch-Green

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Appointments

2012 – present Assistant Professor, Michigan Technological University, Department of Biological Sciences, Houghton, MI.

Professional Preparation and Education

2009 – 2011 Postdoctoral researcher, North Carolina State University, Department of Plant Biology, Raleigh, NC.

2007 – 2009 Postdoctoral researcher, Northern Arizona University, Department of Biological Sciences, Flagstaff, AZ.

2007 Ph.D., Ecology and Evolutionary Biology, University of Oregon, Eugene, OR. (GPA 4.00/4.00)

2001 M.S., Population Biology, University of California, Davis, CA. (GPA 4.00/4.00)

1996 B.S., Biological Conservation & Psychology, Certificate in Environmental Studies, University of Wisconsin, Madison, WI. (GPA 3.92/4.00)

Current Research Interests

- Evaluating the effects/influence of climate and environmental variables on the structuring of plant genomes and transcriptomes, plant developmental and metabolic properties, and on species interactions and multi-trophic level community biodiversity patterns.

- Documenting invasive species presence, distribution, and population genetic structure, understanding the ecological, social/cultural, and economic consequences of invasive species in a globally changing climate, and determining the efficacy of invasive species management efforts to meet ecological and/or social objectives.

- Examining the ecological and evolutionary consequences of whole genome duplication (polyploidy), genome size variation, and/or hybridization in plants.

- Understanding the ecological and evolutionary dynamics of plant-pollinator and plant-herbivore interactions.

- Deciphering the ecological, evolutionary, and genetic dynamics of fungi that cause pseudoflowers to form on their hosts.

- Integrating education and public outreach into scientific research and vice versa.

Research Grants (3 external awards totaling $336.5K since 2012; 3 Michigan Tech internal awards totaling $23.5K)

Awarded Grants

2019 – 2020 Huron Mountain Wildlife Fund
Title: An exploratory analysis of the invasive spotted-winged drosophila and *Exobasidium* fungal pests of wild berry and soft-fruit species in the Huron Mountains
Lead PI: E.Hersch-Green
$2,600

2017-2020 Michigan Technological University, Research Excellence Fund Seed Grant
Title: Understanding feedbacks between ecosystems and the genetics of a dominant plant (*Solidago gigantea*, Asteraceae)
Lead PI: E. Hersch-Green, Co-PI: A. Burton
$15,000

2010 – 2011 Huron Mountain Wildlife Fund
Title: Genetic, phenotypic and community diversity associated with a hemiparasitic annual plant, *M. lineare* - an initial survey
Lead PI: E. Hersch-Green
$1,900

2015-2017 Michigan Department of Natural Resources, Invasive Species Program
Title: Innovative and multifaceted control of invasive Eurasian and hybrid watermilfoil using integrative pest management practices.
Lead PI: C. Huckins, Co-PIs: A. Marcarelli, E. Hersch-Green and C. Brooks,
$332,000

2015 Michigan Technological University Jackson Center for Teaching and Learning
Title: Integrative Statistics in Social and Biological Sciences through Blended Learning
Lead PI: S. Amato-Henderson, Co-PI: E. Hersch-Green
$3000

2012 Ecosystem Science Center award for the International Exchange Initiative at Michigan Technological University
Lead PI: E. Hersch-Green
$5500

2004 – 2007 National Science Foundation, DEB, Doctoral Dissertation Improvement Grant
Co-PIs: E. Hersch, B. Roy,
$13,800

2000-2001 Univ. of California, Davis, Center for Population Biology Research Grant, $1000.

2000 Univ. of California, Bodega Bay Marine Laboratory, Research Grant, $750.

Submitted and Pending Grants

2020-2024 National Science Foundation Division of Environmental Biology
Title: CAREER: Can material costs contribute to the structuring of biodiversity patterns from genomes and transcriptomes to multispecies communities?
Lead PI: E.Hersch-Green (This is a resubmission of a proposal submitted in 2018 in which I received 3 excellent, 5 good, and 2 fair reviews).
$1,127,287

Teaching Experience

At Michigan Technological University (graduate student advising not included)

2019
- Instructor, *General Biology I* (70 students, BL1010), Fall
- Instructor, *Research in Biology* (2 students, BL4000), Fall
- Instructor, *Botany* (72 students, BL 2160), Spring
- Instructor, *Evolution* (50 students, BL 3190), Spring
- Instructor, *Biological Sciences Teaching Experience* (1 student, BL3990), Spring

2018
- Instructor, *Botany* (69 students, BL 2160), Spring
- Instructor, *Evolution* (25 students, BL 3190), Spring
- Instructor, *Biological Sciences Teaching Experience* (1 student, BL3990), Spring

2017
- Instructor, *General Biology I* (68 students, BL1010), Fall
- Instructor, *Botany* (67 students, BL 2160), Spring
- Instructor, *Evolution* (38 students, BL 3190), Spring
- Instructor, *Biological Sciences Teaching Experience* (1 student, BL3990), Spring

2016
- Instructor, *General Biology I* (68 students, BL1010), Fall
- Instructor, *Evolution* (42 students, BL 3190), Spring
- Instructor, *Research in Biology* (2 students, BL4000), Spring

2015
- Instructor, *General Biology I* (27 students, BL1010), Fall
- Instructor, *Research in Biology* (1 student, BL4000), Fall
- Instructor, *Evolution* (33 students, BL 3190), Spring
- Instructor, *Research in Biology* (1 student, BL4000), Spring

2014
- Instructor, *General Biology I* (25 students, BL1010), Fall
- Instructor, *Research in Biology* (1 student, BL4000), Fall
- Guest Lecturer, *Intro to Biosciences and Intro to Pre-Health* (BL 1580/1590), Fall
- Instructor, *Evolution* (38 students, BL 3190), Spring
- Co-Instructor, *Analysis of Biological Data* (25 students, BL4470), Spring

2013
- Instructor, *Research in Biology* (1 student, BL4000), Fall
- Guest Lecturer, *Intro to Biosciences and Intro to Pre-Health* (BL 1580/1590), Fall
- Instructor, *Evolution* (45 students, BL 3190), Spring

2012
- Instructor, *Special Topics: Plant-Insect Interactions* (6 students, BL 5380), Spring

Prior to Michigan Technological University

2011 Guest lecturer for *Evolution* (1 time), Rhodes College.
2011 Guest lecturer for *Evolution* (3 times), North Carolina State University.
2006 Teaching assistant, *Pollination Biology*, University of Oregon
2003 Teaching assistant, *Ecology for Non-Majors*, University of Oregon
2001 Guest lecturer for *Pollination Biology* (4 times), University of Oregon.
2001 Guest lecturer for *Plant Ecology* (2 times), University of Oregon.
2001 Guest lecturer for *Evolution of Infectious Diseases* (1 time), University of Oregon.
2000 Teaching assistant, *Zoology Laboratory*, University of California, Davis
1999 Teaching assistant, *Zoology Laboratory*, University of California, Davis

Mentoring

I have mentored over 40 undergraduate and graduate students on research projects in the field and laboratory as part of my own research or as independent study.

Undergraduate mentoring at Michigan Technological University – independent research projects (IR) and students working on my research

2019 – present	Abi Milne
2019 – present	Jennifer Finall (IR)
2018 – 2018	Hannah McKinnon-Reish
2018 – 2018	Skye Adams
2017 – 2018	Luke Moore
2017 – 2018	Sophie Fentress
2017 – 2017	Kayla McQuin (Albion College Student volunteer)
2015 – 2017	Will Christian (IR – 2017 - received a Summer Undergraduate Research Fellowship to work in my lab but declined it)
2014 – 2016	Randee Wlodek (IR)
2014 – 2015	Emily Bouckeart
2014 – 2015	Tashi Zandstra
2014 – 2015	Harmony Osborn
2014 – 2017	Jeannie van Vienan (IR – 2015 - received a Summer Undergraduate Research Fellowship to work in my lab)
2013 – 2014	Parrisha Loius (IR)

Current graduate students at Michigan Technological University – primary advisor

2018 – present	Angela Walczyk	PhD – Biological Sciences

Completed graduate students at Michigan Technological University – primary advisor

2016 – 2018	Angela Walczyk	MS – Biological Sciences
2016 – 2018	Taylor Zellak	MS – Biological Sciences (started Spring)
2014 – 2017	Lucy Hatfield	MS – Biological Sciences, Peace Corp Master's International
2013 – 2015	Alex Bales	MS – Biological Sciences

Graduate students at Michigan Technological University – committee member

2012 – 2013	Alex Sullivan	MS – Forest Molecular Genetics & Biotechnology
2012 – 2013	Katheryn Hietala	MS – Applied Ecology
2012 – 2013	Cassandra Ott	MS – Forest Science

Undergraduate mentoring prior to Michigan Technological University

2008-2010	Undergraduate IGERT Research Project Co-Advisor, Northern Arizona University.
2006	NSF Research Experiences for Undergraduates (REU) advisor at the Rocky Mountain Biological Laboratory, Colorado.
2005	Research advisor for a student from The Evergreen State College, Olympia, WA – project at Rocky Mountain Biological Laboratory, Colorado.
2002-2003	Undergraduate Honors College Thesis Co-Advisor, University of Oregon, for Claire Mecredy's research entitled "Costs and benefits of support for the common morning glory vine".
2001-2012	Direct supervision of over 20 undergraduate researchers.

Publications (15 total, 10 since 2012. 438 citations, h-index = 10 from Google Scholar - https://scholar.google.com/citations?hl=en&user=--8v1eUAAAAJ)
* indicates graduate student co-author, first author is corresponding author unless otherwise noted with §

Peer-reviewed Journals

Walczyk A*, and **Hersch-Green, E**. 2019. Impacts of soil nitrogen and phosphorus levels on cytotype performance of the circumboreal herb, *Chamerion angustifolium* (Onagraceae): implications for polyploid establishment. *American Journal of Botany* 106(7): 906-921.

Bales A*, and **Hersch-Green, E**§. 2019. Diploid disadvantage disappears under increased soil nitrogen availability in fireweed, *Chamerion angustifolium* (Onagraceae). *Ecology and Evolution* 9(3):1095-1109.

Bothwell H, Cushman S, Woolbright S, **Hersch-Green E**, Evans L, Allan G, Whitham T. 2017. Conserving threatened riparian ecosystems in the American West: Precipitation gradients and river networks drive genetic connectivity and diversity in a foundation riparian tree (*Populus angustifolia*). *Molecular Ecology* 26(19): 5114-5132.

Grady K, Wood T, Kolb T, **Hersch-Green E**, Shuster S, Gehring C, Hart S, Allan G, Whitham T. 2017. Local biotic adaptation of trees and shrubs to plant neighbors. *Oikos* 126(4): 583-593.

Fischer D, Wimp G, **Hersch-Green E**, Bangert R, LeRoy C, Schweitzer J, Bailey J, Dirks C, Hart S, and Whitham T. 2017. Tree genetics strongly affect forest productivity, but intraspecific diversity-productivity relationships do not. *Functional Ecology* 31(2): 520-529.

Hersch-Green E, Allan G, and Whitham T. 2014. Genetic analysis of admixture and patterns of introgression in foundation cottonwood tree (Salicaceae) in southwestern Colorado, USA. *Tree Genetics and Genomes* 10(3): 527-539.

Bangert R, Ferrier S, Evans L, Kennedy K, Grady K, **Hersch-Green E**, Allan G, and Whitham T. 2012. The proportion of three foundation plant species and their genotypes influence an arthropod community: restoration implications for the endangered southwestern willow flycatcher. *Restoration Ecology* 21(4): 447-456.

Hersch-Green E. 2012. Polyploidy in Indian paintbrush (*Castilleja*; Orobanchaceae) species shapes but does not prevent gene flow across species boundaries. *American Journal of Botany* 99(10): 1680-1690.

Hersch-Green E, Myburg H, and Johnson M. 2012. Adaptive molecular evolution of a defence gene in sexual but not functionally asexual evening primroses. *Journal of Evolutionary Biology* 25(8): 1576-1586.

Ferrier S, Bangert R, **Hersch-Green E**, Bailey J, Whitham T, and Allan G. 2012. Unique arthropod communities on different host-plant genotypes results in greater arthropod diversity. *Arthropod Plant Interactions* 6(2): 187-195

Hersch-Green E, Turley N, and Johnson M. 2011. Community genetics: what have we accomplished and where should we be headed? *Phil. Trans. R. Soc. B.* 366(1569): 1453-1460.

Hersch-Green E and Cronn R. 2009. Tangled trios, or something entirely different? Characterizing a hybrid zone in *Castilleja* (Orobanchaceae). *American Journal of Botany* 96(8): 1519-1531.

Hersch E and Roy B. 2007. Context-dependant pollinator behavior: an explanation for patterns of hybridization among three species of Indian paintbrush. *Evolution* 61(1): 111-124. Cover Photo.

Hersch E. 2006. Foliar damage to parental plants interacts to influence mating success of *Ipomoea purpurea*. *Ecology* 87(8): 2026-2036.

Hersch E and Phillips P. 2004. Power and potential bias in field studies of natural selection. *Evolution* 58(3): 479-485.

In review or close to being submitted

Bothwell HB, Evans LM, **Hersch-Green EI**, Woolbright SA, Allan GJ and Whitham TG. In review. Incorporating intraspecific genetic variation in ecological niche models changes the direction and magnitude of climate change predictions for a widespread North American tree species. *Global Change Biology*; submitted Aug 2019.

Bales A* and **Hersch-Green E**[§]. Polyploidy and soil nitrogen supply influence resistance and tolerance responses to insect herbivory in Fireweed, *Chamerion angustifolium* (Onagraceae). To be submitted October 2019 to *Journal of Plant Ecology*.

Zallek T*, Huckins C, and **Hersch-Green E**. Variation in genetic diversity, structure, and patterns of hybridization among and within populations of invasive Eurasian watermilfoil (*Myriophyllum spicatum*). To be submitted to *Aquatic Plant Management*.

Hersch-Green E, Bowers D, and Roy B. Defense compounds and yearly patterns of damage by natural enemies for four Indian Paintbrush species. To be submitted to *Journal of Chemical Ecology*.

Dissertations and Theses (* denotes student advisee)

*Walczyk, A. 2018. Evaluating the interactive roles of soil nutrients and polyploidy on competitive outcomes of *Chamerion angustifolium*. MS Thesis, Department of Biological Sciences, Michigan Technological University, Houghton, MI.

*Zallek, T. 2018. Intraspecific variation in genetic diversity, population structure, and competitive ability in the invasive aquatic macrophyte Eurasian watermilfoil (*Myriophyllum spicatum*). MS Thesis, Department of Biological Sciences, Michigan Technological University, Houghton, MI.

*Hatfield, L. 2018. Waste not, want not: Using source-separated urine to cultivate maize in the southern highlands, Tanzania. MS Thesis, Department of Biological Sciences, Michigan Technological University, Houghton, MI.

*Bales, A. 2016. Investigating the role of polyploidy in response of *Chamerion angustifolium* to increased soil nitrogen availability and insect herbivory. MS Thesis, Department of Biological Sciences, Michigan Technological University, Houghton, MI.

Hersch-Green EI. 2007. Evidence for hybridization between three species of Indian paintbrush: Ecological implications and evolutionary scenarios. PhD Dissertation, Center for Ecology and Evolutionary Biology, Department of Biology, University of Oregon, Eugene, OR.

Presentations (* indicates graduate student co-author, † indicates undergraduate student co-author; note that first author listed was presenting author)

Invited presentations

2017 Zallek T*, **Hersch-Green E**, Huckins C, Marcarelli A, and Brooks C*. Herbicide susceptibility, hybrid zones, genetic diversity, and selection in invasive Eurasian watermilfoil (*Myriophyllum spicatum*). President's Alumni Reunion Poster Session. Michigan Technological University, Houghton, MI.

2016 **Hersch-Green EI**. The roles of hybridization, polyploidy, and global environmental changes in the evolution and diversity of flowering plants. Organismal Biology Seminar Series Colorado College, Colorado Springs, CO.

2016 Bothwell HM, Cushman SA, Woolbright SA, **Hersch-Green EI**, Evans LM, Allan GJ, and Whitham T. Landscape resistance models identify genetic connectivity corridors

for a foundation riparian tree (*Populus angustifolia*). World Conference on Natural Resource Modeling, Flagstaff AZ.

2013 **Hersch-Green EI.** Genetic diversity and the evolution and ecology of flowering plants. Department Seminar, Netherlands Institute of Ecology (NIOO-KNAW). Wageningen, Netherlands.

2012 **Hersch-Green EI.** Sexual reproduction and the evolution of plant defenses against natural enemies. Department of Biological Sciences Seminar, University of Minnesota, Duluth, MN.

2012 **Hersch-Green EI.** Sexual reproduction and the evolution of plant defenses against natural enemies. Department of Biological Sciences Seminar, Michigan Technological University, Houghton, MI.

2011 **Hersch-Green EI.** The role of hybridization, polyploidy, and sexual reproduction in the evolution of flowering plant diversity. Department of Biological Sciences Seminar, Michigan Technological University, Houghton, MI.

2011 **Hersch-Green EI.** The role of hybridization, polyploidy, and sexual reproduction in the evolution of flowering plant diversity. Department of Biological Sciences Seminar, Rhoades College, Memphis, TN.

2010 **Hersch-Green E**, Whitham T, and Allan G. Different community consequences in different *Populu*s hybrid zones? Cottonwood Symposium, Flagstaff, AZ.

2010 Ferrier S, Bangert R, **Hersch-Green E**, Grady K, Busby P, Gitlin A, Kennedy K, Hagenauer L, Allan G, and Whitham T. Restoration at Palo Verde Ecological Reserve, Blythe, CA. Colorado River Riparian and Terrestrial Research Bureau of Reclamation Meeting, Laughlin, NV.

2010 Johnson M, Smith S, Myburg H, Robert F J, **Hersch-Green, E**, Sally O, and Rausher M. The effects of plant sex on the evolution of plant defenses and diversification. Gordon Research Conference on Plant Herbivore Interactions, Galveston, TX, USA.

2009 **Hersch-Green EI.** Evidence for hybridization between three species of Indian paintbrush: ecological implications and evolutionary scenarios. North Carolina State University, Department of Plant Biology, Raleigh, NC.

2008 **Hersch-Green EI.** Evidence for hybridization between three species of Indian paintbrush: ecological implications and evolutionary scenarios. Northern Arizona University, Department of Biological Sciences, Flagstaff, AZ

2007 **Hersch-Green EI.** The influence of hybridization, polyploidy, and species interactions on diversity within and among populations of Indian paintbrush species. York University, Toronto CAN

2007 **Hersch-Green EI.** The influence of hybridization, polyploidy, and species interactions on diversity within and among populations of Indian paintbrush species. Northern Arizona University, Flagstaff, AZ.

2007 **Hersch-Green EI.** The influence of hybridization, polyploidy, and species interactions on diversity within and among populations of Indian paintbrush species. University of Virginia, Charlottesville, VA.

2005 **Hersch-Green EI.** Hybridization and polyploidy variation within and among populations of Indian paintbrush species of the Rocky Mountains of Colorado, USA. University of Guelph, CAN

2004 **Hersch-Green EI.** Hybridization and its effect on plant-insect interactions within and among populations of three species of Indian paintbrush. University of Colorado, Boulder CO.

2004 **Hersch-Green EI.** Hybridization and its effect on plant-insect interactions within and among populations of three species of Indian paintbrush. Harvard University, Cambridge, MA.

2003 **Hersch-Green EI.** The role of pollinators in patterns of hybridization among populations of three species of Indian paintbrush. IGERT symposium, Eugene, OR.

2002 **Hersch-Green EI.** The role of pollinators in patterns of hybridization among populations of three species of Indian paintbrush. University of Indiana, Bloomington, IN.

Contributed presentations

2019 Walczyk A* and **Hersch-Green EI**. The effects of soil nutrient levels and competition on cytotype performance of *Chamerion angustifolium*: Implications for polyploid establishment. Ecosystem Science Center Research Forum, Michigan Technological University, Houghton, MI. Poster Presentation.

2018 Walczyk A* and **Hersch-Green EI**. Evaluating the effects of ploidy, competition, and nitrogen availability on *Chamerion angustifolium* (Onagraceae). Ecosystem Science Center Research Forum, Michigan Technological University, Houghton, MI. Poster Presentation. Merit Award (Runner-up).

2018 Zallek T*, **Hersch-Green E**, and Huckins C. Variation in genetic diversity, structure, and patterns of hybridization among and within populations of invasive Eurasian watermilfoil (*Myriophyllum spicatum*) in waterbodies with and without histories of herbicide treatment across Michigan. Science 2018. Pittsburgh, PA. Poster presentation.

2017 Zallek T*, **Hersch-Green E**, Casey Huckins, Amy Marcarelli, and Colin Brooks. Herbicide susceptibility, hybrid zones, genetic diversity, and selection in invasive Eurasian watermilfoil (*Myriophyllum spicatum*). Ecological Society of America's Annual Meeting. Portland, OR. Poster presentation.

2017 Huckins, CJ, **Hersch-Green EI**., Marcarelli AM, Grimm A, Brook, CN*, Zallek T*, Leguizamon CM, Van Goethem RR, Heilman M, and Willis B. Eurasian Watermilfoil response to herbicide control and predictions of its dispersal. IAGLR's Annual Conference on Great Lakes Research. Detroit, MI.

2017 Walczyk A* and **Hersch-Green EI**. Evaluating the fitness of *Chamerion angustifolium* (Fireweed) cytotypes under varying soil nutrient and competition conditions. Annual Meeting of the Michigan Consortium of Botanists. Albion, MI.

2017 Zallek T***, Hersch-Green E**, Huckins C, Marcarelli A, and Brooks C. Herbicide susceptibility, hybrid zones, genetic diversity, and selection in invasive Eurasian watermilfoil (*Myriophyllum spicatum*). Ecosystem Science Center Student Research Forum. Houghton, MI. Poster presentation. Merit Award (Runner-up).

2016 Huckins CJ, Marcarelli A, Juneau KJ, Chimner R, Brooks C*, Wue P, Meadows G, and **Hersch-Green E**. Collaboration and challenges with prevention, control, and management of invasive Eurasian Watermilfoil. 76th Midwest Fish and Wildlife Conference. Grand Rapids, MI.

2016 Marcarelli A, Huckins C, Juneau KJ, Brooks CN, Chimner R, **Hersch-Green E**, and Meadows G. Integrated management of nonnative and hybrid Eurasian Watermilfoil in the Portage waterway of the Upper Peninsula of Michigan. Midwest Aquatic Plant Management Society 36th Annual Meeting, Grand Rapids, MI.

2016 Bothwell HM, Cushman SA, Woolbright SA, **Hersch-Green EI**, Evans LM, Allan GJ, and Whitham TG. Landscape resistance models identify genetic connectivity corridors for a foundation riparian tree (*Populus angustifolia*). World Conference on Natural Resource Modeling, Flagstaff, AZ.

2016 Van Vianen J† and **Hersch-Green EI**. The effects of increased anthropogenic nitrogen on plant characteristics and herbivory. Ecosystem Science Center Student Research Forum, Michigan Technological University, Houghton, MI. Poster Presentation.

2016 Van Vianen J† and **Hersch-Green EI**. The effects of increased anthropogenic nitrogen on plant characteristics and herbivory. Summer Undergraduate Research Fellowship Forum, Michigan Technological University, Houghton, MI. Poster Presentation.

2016 Zallek T*, **Hersch-Green EI**, Marcarelli A, and Huckins C. Genetic variation genome size, and herbicide susceptibility of Invasive Eurasian watermilfoil (*Myriophyllum spicatum*). Ecosystem Science Center Research Forum, Michigan Technological University, Houghton, MI. Poster Presentation.

2016 Zallek T*, **Hersch-Green EI**, Marcarelli A, and Huckins C. Genetic variation genome size, and herbicide susceptibility of Invasive Eurasian watermilfoil (Myriophyllum spicatum). Center for Water and Society World Water Day, Michigan Technological University, Houghton, MI. Poster Presentation.

2015 Bales AL* and **Hersch-Green EI**. Polyploidy influences plant carbon/nitrogen balance and resistance to insect herbivory in *Chamerion angustifolium*. Ecological Society of America, Baltimore, MD.

2015 Bales AL* and **Hersch-Green EI**. Polyploidy influences plant carbon/nitrogen balance and resistance to insect herbivory in *Chamerion angustifolium*. Ecosystem Science Center Research Forum, Michigan Technological University, Houghton, MI. Poster Presentation – won first prize.

2015 Bothwell HM, Woolbright SA, **Hersch-Green EI**, Evans LM, Allan GJ, and Whitham TG. Genetic based species distribution models: Building better predictions of global change. Ecological Society of America, Baltimore, MD.

2014 Bales AL* and **Hersch-Green EI**. The role of genome duplication (polyploidy) in plants' response to predicted changes in soil nitrogen availability and insect herbivory. Ecosystem Science Center Research Forum, Michigan Technological University, Houghton, MI. Poster Presentation.

2012 Fisher D, LeRoy CJ, Ferrier SM, **Hersch-Green E**, Allan G, Kennedy K, Bangert R, and Whitham T. Riparian restoration and genetic diversity of a foundation tree along the principal river of the Southwest. Ecological Society of America, Portland, OR.

2012 **Hersch-Green EI**, Myburg H, and Johnson MTJ. Sexual reproduction, position in a network, and molecular evolution of flavonoid genes. Society for the Study of Evolution, Ottowa, Canada.

2010 **Hersch-Green EI**, Myburg H, and Johnson MTJ. The consequences of losing sex for the molecular evolution of plant defenses against natural enemies. Society for the Study of Evolution, Portland, OR.

2010 **Hersch-Green E**, Whitham T, and Allan G. Population genetics of a *Populus* hybrid zones along the San Miguel River in Colorado. Cottonwood Symposium. Flagstaff, AZ.

2010 Busby PE, Newcombe G, Zinkgraf MS, **Hersch-Green E**, Allan G, and Whitham T. Different community consequences in different *Populus* hybrid zones? Cottonwood Symposium. Flagstaff, AZ.

2010 Ferrier S, Bangert, R, **Hersch-Green E**, Grady, K, Gitlin A, Kennedy K, Hagenauer L, Allan G, and Whitham T. Cutting-edge research at Palo Verde Ecological Reserve, Blythe, Ca. Presentation. Cottonwood Symposium. Flagstaff, AZ.

2010 Johnson M, Smith S, FitzJohn R, **Hersch-Green E**, Myburg H, Otto S, and Rausher, M. The effects of plant sex on the evolution of plant defenses and diversification. Gordon Research Conference on Plant Herbivore Interactions, Galveston, TX.

2010 Ferrier S, Bangert R, **Hersch-Green E**, Grady K, Gitlin A, Kennedy K, Hagenauer L, Allan G, and Whitham T. Community genetics and neighborhood relationships define arthropod communities on Fremont cottonwood. Western Forest Insect Work Conference 61st Annual Meeting. Flagstaff, AZ.

2010 Ferrier S, Bangert R, **Hersch-Green E**, Grady K, Busby P, Gitlin A, Kennedy K, Hagenauer L, Allan G, and Whitham T. Restoration at Palo Verde Ecological Reserve, Blythe, CA. Colorado River Riparian and Terrestrial Research Bureau of Reclamation Meeting. Laughlin, NV. January 2010.

2008 **Hersch-Green, E.,** T. Whitham and G. Allan. Using microsatellites to infer genetic structure in a *Populus* hybrid zone. Cottonwood Symposium. Flagstaff, AZ.

2008 **Hersch-Green E**, Whitham TG, and Allan G. A hidden geographic mosaic: Cottonwoods, aphids and endosymbionts. Cottonwood Symposium. Flagstaff, AZ.

2006 **Hersch EI.** Patterns of parasite attack in 3 species of Indian paintbrushes (*Castilleja*) and their hybrids. Ecological Society of America, Memphis, TN.

2004 **Hersch EI.** Context-dependant pollination could influence interspecific hybridization among 3 species of Indian paintbrushes in the Rocky Mountain region, USA. Society for the Study of Evolution, Ft. Collins, CO.

2002 **Hersch EI** and Phillips PC. The power (or lack thereof) of regression approaches to detecting selection in natural populations. Society for the Study of Evolution, Champaign/Urbana, IN.

Professional Service and Outreach

Michigan Technological University

Biological Sciences Departmental Standing Committees

2015 (Spring)	Biology Seminar Series
2012 (Spring)	Biology Seminar Series
2019 – Present	Charter committee
2012 – 2016	Charter committee
2014 - 2016	Curriculum committee (Chair 2015-2016)
2017 - 2019	Graduate committee
2012 - 2016	Graduate committee
2013 - Present	Greenhouse committee (Chair 2015-2016)
2017 – 2018	Grievance committee
2012 – 2015	Grievance committee
2012 – 2014	Scholarship committee

College and University Committees

2017 - Present	Diversity Liaison – Representative for Department of Biological Sciences
2015 - 2018	University Academic and Instruction Policy Committee
2015 - 2016	University-Wide Faculty Senate – Alternate Representative for Department of Biological Sciences
2012 - 2015	University-Wide Graduate Faculty Council – Representative for Department of Biological Sciences

Temporary or Ad-Hoc Committees

2014 – 2019	Ecology interdisciplinary BS proposal committee
2013 – 2018	Ecology and Evolution interdisciplinary PhD proposal committee
2014 – 2015	Microbiologist Hiring Committee, Department of Biological Sciences

One-time service activities

2012-3, 2015, 2019	Judge for Ecosystem Science Center Graduate Research Forum
2016	Judge for Life Science and Technology Institute Graduate Research Forum (Posters and Abstracts)
2016, 2018	Freshman Orientation Summer Reading Discussion Facilitator
2014-2019	Day Zero Presentation (Student Orientation) for BL10100
2013, 2014, 2016	Reviewer for Summer Undergraduate Research Fellowships (SURF)
2013, 2018	Host/reviewer for Leading Scholars Scholarship program
2013, 2016	Reviewer Panelist for Graduate Student Research Grants, Ecosystem Science Center

Editorial and Review Activities

2013, 2016	Ad-hoc proposal reviewer for NSF DEB (3 in total)
2013	NSF DDIG panel member, DEB Population and Community Ecology.
2012 – 2019	Manuscript reviewer: 1 in 2019, 4 in 2018, 9 in 2017, 8 in 2016, 2 in 2015, 6 in 2014, 4 in 2013, 6 in 2012. *American Journal of Botany, Conservation Biology, Ecological Entomology, Ecology, Ecological Applications, Ecology Letters, Evolution, Evolutionary Ecology, Forests, Forest Ecology and Management, Functional Ecology, Integrative and Comparative Biology, Journal of Evolutionary Biology, Journal of Plant Research, Molecular Ecology, New Phytologist, Oecologia, Oikos, Restoration Ecology, Tree Genetics and Genomes, PLOS Genetics, PLoS One*

Outreach and Community Service

2019	Mentored a high school student on research at the Huron Mountains Wildlife Foundation
2014, 2018	Judge for Western U.P. Science Fair – grades 4-8

Service Previous to Michigan Technological University

2006-2012	Manuscript reviewer for various journals including: *American Journal of Botany, Ecology, Ecological Entomology, Evolution, Functional Ecology, Journal of Evolutionary Biology, Journal of Ecology, New Phytologist, Oecologia, Oikos, Restoration Ecology.*
2010	Co-organized Cottonwood Community Ecology Symposium at Northern Arizona University, Flagstaff AZ.
2010	Ad-hoc proposal reviewer for NSF (DEB: Population and Community Ecology)
2010	Ad-hoc proposal reviewer for Sigma Delta Epsilon/Graduate Women in Science fellowship
2010	Presented at BUGFEST, North Carolina Museum of Natural Sciences, Raleigh, NC.
2009	Led a seminar and worked with graduate students on grant writing and obtaining NSF graduate fellowships, Plant Biology, North Carolina State University
2003, 2004, 2006	Served as the Graduate Student Representative for faculty hiring committees, Institute of Ecology and Evolutionary Biology, University of Oregon
2002 – 2004	Led seminars and worked with graduate students on grant writing and obtaining NSF graduate fellowships, Institute of Ecology and Evolutionary Biology, University of Oregon

2000	Mentored a high school student on research at New Mexico State University when I was a visiting graduate student

Professional Development

2012 – Present	Attendee at Center for Teaching and Learning luncheon workshops at Michigan Technological University, Houghton MI– at least 31 attended.
2012 – Present	Attendee at Women in Science and Technology workshops/seminars at Michigan Technological University, Houghton MI – at least 10 attended.
2013-Present	Completed Diversity-Literacy Trainings at Michigan Technological University, Houghton MI.
2017	Participant in the Upper Peninsula Teaching and Learning Conference at Michigan Technological University, Houghton MI
2014	Participant in the National Academies Midwest Summer Institute Conference for Undergraduate Education - a weeklong workshop on "Scientific Teaching". University of Minnesota, Twin Cities MN.
2012 - 2014	Attendee at Educational Technology seminars at Michigan Technological University, Houghton MI – at least 6 attended
2012 – 2013	Completed workshops by Sponsored Programs at Michigan Technological University, Houghton MI – 2 attended
2009 – 2010	Certificate in Teaching Techniques for Postdoctoral Scholars, North Carolina State University, Raleigh NC.

Awards and Honors

2015	Darwin's Day Roadshow Recipient, National Evolutionary Synthesis Center
2006-2007	National Institute of Health Genetics Training Grant Fellow, Univ. of Oregon, $32,000 + tuition.
2006	Ecological Society of America Student Travel Award, $600
2005-2006	IGERT Research Training Grant Fellow, Univ. of Oregon, $30,000 + tuition.
2003-2004	IGERT Research Training Grant Fellow, Univ. of Oregon, $30,000 + tuition.
2002	University of Oregon, Biology Travel Award, $1000
2001	National Science Foundation Pre-Doctoral Fellowship Award, 3-year award, including $89,000 + tuition.
2000	National Science Foundation Pre-Doctoral Fellowship Award, Honorable Mention, 2000.
1999-2001	Univ. of California, Davis, Block Grant, 4 semesters of $17,000 + tuition.
1996	Phi Beta Kappa, national academic honor society
1996	Phi Kappa Phi, national academic honor society
1995	Golden Key, national academic honor society

Advisors

Dr. Marc Johnson– North Carolina State University (Postdoctoral, Marc is currently at the University of Toronto)
Dr. Gery Allan – Northern Arizona University (Postdoctoral)
Dr. Barbara ("Bitty") Roy – University of Oregon (PhD)
Dr. Patrick Phillips – University of Oregon (PhD)

Professional Affiliations

Botanical Society of America
Ecological Society of America
Society for the Study of Evolution
Ecosystem Science Center at Michigan Technological University
Golden Key National Honors Society
Phi Beta Kappa National Honors Society
Phi Kappa Phi National Honors Society