

MERRILL A. PETERSON

Curriculum Vitae

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EDUCATION

- 1994 Ph.D. in Ecology and Evolutionary Biology, Cornell University.
1987 B.S. in Zoology, University of Washington.

PROFESSIONAL APPOINTMENTS

- 2004- Adjunct Professor, Entomology Dept., Washington State Univ.
2016- Chair, Biology Department, Western Washington University
2007- Professor, Biology Department, Western Washington University
2004- Adjunct Associate Professor, Entomology Dept., Washington State Univ.
2003-4 Humboldt Fellow, Zool. Institut und Museum, Universität Hamburg, Germany
2001-2007 Associate Professor, Biology Department, Western Washington University
1997- Curator, Western Washington University Insect Collection (WWUC)
1997-2001 Assistant Professor, Biology Department, Western Washington University
1994-1997 Postdoctoral Research Associate, Department of Entomology, Univ. of
Maryland, College Park
1990-1993 Graduate Teaching Assistant, Section of Ecology & Systematics, Cornell Univ.
1987-1990 National Science Foundation Graduate Fellow, Cornell University
1984 Contract Biologist, The Nature Conservancy, Seattle
1983-1987 Undergraduate Research Assistant, Zoology Dept., University of Washington

AWARDS & HONORS

- 2009 Paul J. Olscamp Research Award, WWU
2009 Nominated for Excellence in Teaching Award, WWU
2009 Special Merit Increase, WWU
2006 Undergraduate-coauthored paper in *Evolution* listed by Faculty of 1000
Biology
2004 Nominated for Diversity Achievement Award, WWU
2003 Research Fellowship, Alexander von Humboldt Foundation, Germany
2003 Named as Beckman Scholars Mentor in Beckman Foundation Award to WWU
1993 Outstanding Teaching Assistant, College of Agric. & Life Sci., Cornell Univ.
1987 National Science Foundation Graduate Fellowship
1987 Cornell University Sage Supplemental Fellowship

COURSES TAUGHT AT WWU

Biol 101	Introduction to Biology
Biol 202	General Biology II, with lab
Biol 204	Ecology, Evolution, and Biodiversity, with lab (2x during review period)
Biol 325	Ecology (4x during review period, including W'17)
Biol 326	Ecology lab (2x during review period)
Biol 432	Evolutionary Biology (5x during review period, with additional WP3 sections x4)
Biol 434	Population Biology
Biol 445/545	Aquatic Insect Ecology
Biol 445/545	Metapopulation Biology
Biol 445/545	Plant-insect Interactions
Biol 445/545	Population Genetics
Biol 445/545	Species & Speciation
Biol 462	Entomology, w/ lab (3x during review period)
Biol 497/597	Biological Invasions (2x during review period)
Biol 503	Evolutionary Ecology
Biol 525	Research Mentorship (6x during review period)
Biol 598	Essentials of Biology Graduate Studies

MENTORING

Research advisor to 83 undergraduates (24 during review period), including 4 Outstanding Graduating Seniors (Jeff Holland, Erica Larson, Andrew Schweitzer, Ian Grettenberger)

Faculty advisor for 6 Honors theses (Kati Buckingham, Jessica Mendoza, Hallie Kerins, Megan Skinner, Ian Grettenberger, Hali Willis).

Thesis committee chair for 6 M.S. students (Amy Savage, Steven Schwartz, Rachel Zack, Matt Fisher, Natasha Johnson, and Melanie Fabian (the latter won the department's graduate research accomplishment award)), and 1 postdoctoral research associate (Kirsten Monsen).

Minor thesis committee member for 29 M.S. students (11 during review period).

Established an NSF-funded summer research internship for underrepresented students, "Minority Opportunities for Research on Evolution" (MORE), held 2003-2005.

GRANTS

2017 Subaward from USDA Forest Service grant to Cornell University. Project title: "The Cornell University hemlock woolly adelgid project at Western Washington University." \$3,055/1 year.

2016 NSF Grant, DBI-1600824. Collaborative research: Digitization TCN: Lepidoptera of North America network: Documenting diversity in the largest clade of herbivores. \$12,132/3 years.

2014 WSDA Interagency Contract K1487: Online Tortricidae Imagery Library. \$13,613.60/1 yr.

2012 WWU RSP Grant-in-Aid: "Enhancement of Web-based Biodiversity Informatics", \$2,376.

2009 NSF Grant, DBI-0846925: RUI-Collaborative Research: Collections enhancement and

- biodiversity informatics for Pacific Northwest macromoths. \$146,905/2 years, with 3rd year as no-cost extension, ending July 2012.
- 2007 US Fish & Wildlife Service, Experimental analysis of methods for restoring Island Marble butterfly habitat, \$20,000.
Office of Research and Sponsored Programs, WWU, PDA-64: Building a gateway to taxonomic knowledge: the development of a comprehensive, easy-to-use online tool for identifying the insects of the Pacific Northwest, \$21,013.
Grant-in-aid, Research and Sponsored Programs, WWU, A field guide to Pacific Northwest Insects, \$2,000.
- 2006 Summer Research Grant, Bureau for Faculty Research, WWU, A field guide to Pacific Northwest Insects. \$5,000
- 2005 NSF-REU Supplement to DEB-0212652: \$12,000 for two students (Donna Mangloña (Cal. State Univ., Northridge) and Joseph Deas, Jr. (San Diego State Univ.))
- 2004 NSF-REU Supplement to DEB-0212652: \$11,988 for two students (Jabin Green and Jessica Mendoza)
NSF-INT Supplement to DEB-0212652 for sabbatical research in Germany: \$15,900.
- 2003 NSF-REU Supplement to DEB-0212652: \$11,988 for two students (Erica Davis and Danielle Juárez)
- 2002 NSF Grant, DEB-0212652, RUI: Gene flow, selection, and the evolution of premating barriers. \$400,000/3 years.
NSF Grant, DBI-0216618, MRI/RUI: Instrumentation for sequencing and genomic analysis. \$170,330.
US Fish & Wildlife Service, via subcontract from Coastal Resource Alliance, Genetic variation in released populations of *Prokelisia marginata*. \$3,000.
- 2001 Bureau of Faculty Research, WWU, PDA-31: The evolution of reproductive barriers between hybridizing beetles: development of an NSF proposal to test speciation theory. \$15,898.
- 2000 Bureau of Faculty Research, WWU, PDA-27: Understanding the evolutionary significance of hybridization. \$14,895.
- 1994 Maryland Agric. Exp. Sta. Competitive Grants Program, ENTO-95-10: The influence of habitat fragmentation on the genetic diversity of Chesapeake Bay marsh insects: implications for the design of habitat preserves (M.A. Peterson & R.F. Denno). \$22,000.
- 1991 NSF Doctoral Dissertation Improvement Grant, BSR-9100860: Dispersal in metapopulations of butterflies: implications for the dynamics and genetic structure of local populations (R.B. Root & M.A. Peterson). \$10,126.

PEER-REVIEWED PUBLICATIONS (*undergraduate coauthors; **grad student coauthors)

- *Maurer, J.A., Shepard, J.H. Crabo, L.G., Hammond, P.C., Zack, R.S., and **M.A. Peterson**. 2018. Phenological responses of 215 moth species to interannual climate variation in the Pacific Northwest. *PLoS ONE* 13(9): e0202850. <https://doi.org/10.1371/journal.pone.0202850>.
- Whaley, D.K., **Marshall, A., Yoon, C.K., and **M.A. Peterson**. 2017. *Parabacillus hesperus* Hebard, 1934 (Phasmida: Heteronemiidae): new state records for Washington and

- Idaho, and an assessment of its distribution in the Pacific Northwest region (U.S.A.). *Pan-Pacific Entomologist* 93(1): 22-28.
- Seltmann, K.C., Cobb, N.S., Gall, L.F., Bartlett, C.R., Basham, M.A., Betancourt, I., Bills, C., Brandt, B., Brown, R.L., Bundy, C., Caterino, M.S., Chapman, C., Cognato, A., Colby, J., Cook, S.P., Daly, K.M., Dyer, L., Franz, N.M., Gelhaus, J.K., Grinter, C.C., Harp, C.E., Hawkins, R.L., Heydon, S.L., Hill, G.M., Huber, S., Johnson, N., Kawahara, A.Y., Kimsey, L.S., Kondratieff, B.C., Krell, F.-T., Leblanc, L., Lee, S., Marshall, C.J., McCabe, L.M., McHugh, J.V., Menard, K.L., Opler, P.A., Palffy-Muhoray, N., Pardikes, N., **Peterson, M.A.**, Pierce, N.E., Poremski, A., Sikes, D.S., Weintraub, J.D., Wikle, D., Zaspel, J.M., and G. Zolnerowich. 2017. LepNet: The Lepidoptera of North America Network. *Zootaxa* 4247 (1): 073-077.
- Looney, C., Smith, D.R., Collman, S.J., Langor, D.W., and **M.A. Peterson**. 2016. Sawflies (Hymenoptera, Symphyta) newly recorded from Washington State. *Journal of Hymenoptera Research* 49: 129-159.
- **Shelby, T., and **M.A. Peterson**. 2015. Despite extensive pollinator sharing, invasive blackberry has negligible impacts on reproductive success of a rare native wildflower. *Northwest Science* 89: 47-57.
- Peterson, M.A.**, *Larson, E.L., *Brassil, M., *Buckingham, K.J., *Juárez, D., *Deas, J., *Mangloña, D., *White, M.A., *Maslan, J., *Schweitzer, A., and K.J. Monsen. 2011. Cryptic gametic interactions confer both conspecific and heterospecific advantages in the *Chrysochus* (Coleoptera: Chrysomelidae) hybrid zone. *Genetica* 139: 663-676.
- Denno, R.F., **Peterson, M.A.**, *M.R. Weaver, and D.J. Hawthorne. 2008. Life history evolution in native and introduced populations. Pp. 296-310 in (K.J. Tilmon, ed.) *The Evolutionary Biology of Herbivorous Insects: Specialization, Speciation, and Radiation*. University of California Press, Berkeley, CA.
- Peterson, M.A.**, LaGasa, E.H, Passoa, S., Robinson, G.S., and D. Holden. 2007. First record of *Oecophora bractella* (Lepidoptera: Oecophoridae) in North America. *Journal of the Lepidopterists' Society* 61: 165-171.
- Monsen, K.J., *Honchak, B.M., *Locke, S.E., and **M.A. Peterson**. 2007. Cytonuclear disequilibria in *Chrysochus* hybrids. *Journal of Heredity* 98: 325-330.
- Peterson, M.A.**, Dobler, S., *Larson, E.L., *Juárez, D., **Schlarbaum, T., Monsen, K.J., and W. Francke. 2007. The role of cuticular hydrocarbons in assortative mating between hybridising *Chrysochus* (Coleoptera: Chrysomelidae). *Chemoecology* 17: 87-96.
- **Savage, A. and **M.A. Peterson**. 2007. Mutualism in a community context: the positive feedback between an ant-aphid mutualism and a gall-making midge. *Oecologia* 151: 280-291.
- **Schwartz, S. and **M.A. Peterson**. 2006. Strong material benefits and no longevity cost of multiple mating in an extremely polyandrous beetle. *Behavioral Ecology* 17: 1004-1010.
- Peterson, M.A.**, *Honchak, B., *Locke, S., *Beeman, T., *Mendoza, J., *Green, J., *Buckingham, K., *White, M.A., and K. Monsen. 2005. Relative abundance and the species-specific reinforcement of male mating preference in the *Chrysochus* (Coleoptera: Chrysomelidae) hybrid zone. *Evolution* 59: 2639-2655.

- Peterson, M.A.**, Monsen, K., *Pedersen, H., *Bearden, J., and *T. McFarland. 2005. Direct and indirect evidence of low hybrid fitness in the *Chrysochus* hybrid zone. *Biological Journal of the Linnean Society* 84: 273-286.
- Denno, R.F. and **M.A. Peterson**. 2004. From ecosystems to molecules: cascading effects of habitat persistence on dispersal strategies and the genetic structure of populations. Pp. 147-156 in (A. Moya & E. Font, eds.), *Evolution: From Molecules to Ecosystems*. Oxford Univ. Press.
- Denno, R.F., Gratton, C., **Peterson, M.A.**, Langellotto, G.A., Finke, D.L., and A.F. Huberty. 2002. Bottom-up forces mediate natural-enemy impact in a phytophagous insect community. *Ecology* 83: 1443-1458.
- Peterson, M.A.**, Dobler, S., *Holland, J., *Tantalo, L., and *S. Locke. 2001. Behavioral, molecular, and morphological evidence for a hybrid zone between *Chrysochus auratus* and *C. cobaltinus* (Coleoptera: Chrysomelidae). *Annals of the Entomological Society of America* 94: 1-9.
- Peterson, M.A.**, Denno, R.F., and *L. Robinson. 2001. Apparent widespread gene flow in the predominantly flightless planthopper, *Tumidagena minuta*. *Ecological Entomology* 26: 629-637.
- Denno, R.F., **Peterson, M.A.**, Gratton, C., Cheng, J., Langellotto, G.A., Huberty, A.F., and D.L. Finke. 2000. Feeding-induced changes in plant quality mediate interspecific competition between sap-feeding herbivores. *Ecology* 81: 1814-1827.
- Denno, R.F. and **M.A. Peterson**. 2000. Caught between the devil and the deep blue sea, mobile planthoppers elude natural enemies and deteriorating host plants. *American Entomologist* 46: 95-109.
- Peterson, M.A.** and R.F. Denno. 1998. The influence of dispersal and diet breadth on patterns of genetic isolation by distance in phytophagous insects. *American Naturalist* 152: 428-446.
- Peterson, M.A.** and R.F. Denno. 1998. Life history strategies and the genetic structure of phytophagous insect populations. Pp. 263-322 in: *Genetic structure and local adaptation in natural insect populations: Effects of ecology, life history, and behavior* (S. Mopper & S. Strauss, eds.). Chapman & Hall, New York, NY.
- Peterson, M.A.** 1997. Host plant phenology and dispersal by a montane butterfly: Causes and consequences of uphill movement. *Ecology* 78: 167-180.
- Peterson, M.A.** and R.F. Denno. 1997. The influence of intraspecific variation in dispersal strategies on the genetic structure of planthopper populations. *Evolution* 51: 1189-1206.
- Peterson, M.A.** 1996. Long-distance gene flow in the sedentary butterfly, *Euphilotes enoptes* (Lepidoptera: Lycaenidae). *Evolution* 50:1990-1999.
- Denno, R.F., Roderick, G.K., **Peterson, M.A.**, Huberty, A.F., Döbel, H.G., Eubanks, M.D., Losey, J.E., and G.A. Langellotto. 1996. Habitat persistence underlies intraspecific variation in the dispersal strategies of planthoppers. *Ecological Monographs* 66: 389-408.
- Peterson, M.A.** 1995. Phenological isolation, gene flow and developmental differences among low- and high-elevation populations of *Euphilotes enoptes* (Lepidoptera: Lycaenidae). *Evolution* 49: 446-455.
- Peterson, M.A.** 1995. Unpredictability in the facultative association between larvae of

Euphilotes enoptes (Lepidoptera: Lycaenidae) and ants. *Biological Journal of the Linnean Society* 55: 209-223.

Denno, R.F., and **M.A. Peterson**. 1995. Density-dependent dispersal and its consequences for population dynamics. Pp. 113-130 in *Population dynamics: New approaches and synthesis* (N. Cappuccino and P.W. Price, eds.). Academic Press, San Diego, CA.

Peterson, M.A. 1993. The nature of ant attendance and the survival of larval *Icaricia acmon* (Lycaenidae). *Journal of the Lepidopterists' Society* 47: 8-16.

Edwards, J., Crawford, R.L., Sugg, P.M., and **M.A. Peterson**. 1986. Arthropod colonization in the blast zone of Mount St. Helens. Pp. 329-333 in *Mount St. Helens: Five Years Later* (S.A.C. Keller, ed.). Eastern Washington University Press, Cheney, WA.

MANUSCRIPTS IN PREPARATION

*Larson, E.L., *Brassil, M.M., *Maslan, J., *Juarez, D., *Lilagan, F., *Tipton, H., *Schweitzer, A., *Skillman, J., Monsen-Collar, K.J., and **M.A. Peterson**. *In review*. Asymmetric fitness consequences of hybridization in *Chrysochus* leaf beetles via the combined effects of hybridization frequency, polyandry benefits, and conspecific sperm precedence.

Fabian, M. and **M.A. Peterson. Impacts of conventional vs. organic methods on native bee community structure in highbush blueberries. (for *Environmental Entomology*).

Fisher, M.R. and **M.A. Peterson. Response of macromoth communities to deforestation and regrowth in temperate conifer forests of Washington State, U.S.A. (for *Environmental Entomology*).

Peterson, M.A. and C.K. Yoon. First records of *Hystrichopsylla schefferi*, the world's largest flea species, on dogs and humans. (for *Pan-Pacific Entomologist*).

BOOKS

Peterson, M.A. 2018. *Pacific Northwest Insects*. Seattle Audubon Society, Seattle, WA, 528 pp.

Crabo, L, **Peterson, M.**, Zack, R, Hammond, P, Shepard, J, and **M. Davis. 2012. Moths of the Pacific Northwest: Drepanidae, Uraniidae, Lasiocampidae, Saturniidae, Sphingidae, Notodontidae, Erebidae, Euteliidae, Nolidae, and Noctuidae. Printed by Washington State University College of Agriculture, Human, and Natural Resource Sciences & M.T. James Entomological Collection, Pullman, WA. 100 pp.

WEBSITES

Project Coordinator, **Pacific Northwest Moths** (<http://pnwmoths.biol.wvu.edu/>): a website featuring photos, interactive distribution maps, descriptive species accounts, and an interactive key to ~1,200 species of moths in the Pacific Northwest, in collaboration with colleagues at WSU and OSU and students at WWU, launched 7/20/2012. (113,399 visits and 490,534 pageviews by 67,098 unique visitors as of 5/20/2016).

WEBSITES IN PREPARATION

Project Coordinator, **Pacific Northwest Butterflies** a website that will feature photos, interactive distribution maps, descriptive species accounts, and an interactive key to the ~250 butterfly species found in the Pacific Northwest, in collaboration with colleagues at UW, OSU and students at WWU.

Project Coordinator, **Pacific Northwest Sawflies**: a website that will feature photos, interactive distribution maps, descriptive species accounts, and an interactive key to the ~350 species of sawflies in the Pacific Northwest, in collaboration with colleagues at Washington State Department of Agriculture and students at WWU.

Collaborator, **Pacific Northwest Leafroller Moths**: a website that will feature photos and information about moths in the family Tortricidae, in collaboration with colleagues at Washington State Department of Agriculture and WWU students.

INVITED BOOK REVIEWS

Peterson, M.A. 2005. Is less more? (review of D.J. Futuyma (2005) *Evolution*. Sinauer Associates, Inc., Sunderland, MA). **Evolution** 59: 2721-2723.

PROJECT REPORTS (Not peer-reviewed)

Peterson, M.A. 2010. Monitoring plan for the Island Marble butterfly (*Euchloe ausonides insulanus*) at American Camp, San Juan Island National Historical Park. 21pp.

Peterson, M.A. 2009. Population ecology of the Island Marble butterfly (*Euchloe ausonides insulanus*): quantifying abundance and dispersal. Final Report to San Juan Island National Historical Park, for Study # SAJH-00039.

Peterson, M.A. 2002. Genetic variation in released populations of *Prokelisia marginata*. Final Project Report, prepared for Miranda Wecker and Fritz Grevstad, Olympic Natural Resources Center, University of Washington.

PROFESSIONAL PRESENTATIONS & #POSTERS (First author was presenter)

Crabo, L., Hammond, P., Peterson, M., Shepard, J., & R. Zack. 2016. Pacific Northwest Moths: A regional database-driven website. Lepidopterist Society Annual Meeting, Florissant, CO.

#*Maurer, J.A., and M.A. Peterson. 2016. Calculating the predictability of climate change: the effect of climate change on moth species in the Pacific Northwest varies among functional groups. WWU Scholars Week.

#*Maurer, J., and M.A. Peterson. 2015. Can collection specimen data reveal temporal shifts due to climate change? WWU Scholars Week.

#Looney, C., Smith, D.R., Olsson, R., Peterson, M.A., & S.J. Collman. 2014. Pacific Northwest sawflies: new discoveries, historical sampling patterns, and the development of web-based biodiversity informatics. Entomol. Soc. America Ann. Mtg., Portland, OR.

- Peterson, M.A. 2011. Sperm competition, promiscuity, and the cost of hybridization in the *Chrysochus* (Coleoptera: Chrysomelidae) hybrid zone. **Invited Seminar**. Department of Entomology, Washington State University, Pullman, WA.
- Peterson, M.A. 2011. Sperm competition, promiscuity, and necrophilia, or, How I spent my summer. **Invited Seminar**. Thompson Hall Science & Mathematics Seminar, University of Puget Sound, Tacoma, WA.
- Peterson, M.A. 2010. Unraveling the cost of hybridization in a beetle hybrid zone. **Invited Symposium Presentation**. Genetics and the Origin of Species: The Continuing Synthesis. Cornell University, Ithaca, NY.
- Peterson, M.A. 2010. Hybridization, promiscuity, and the evolution of reproductive barriers: insights from a beetle hybrid zone. **Graduate Student Invited Speaker**, Department of Entomology, Michigan State University, East Lansing, MI.
- Peterson, M.A., Davis, C., Thomas, T., & Yoon, C.K. 2008. Finding the best way to count butterflies: a case study with *Euchloe ausonides insulanus* (Lepidoptera: Pieridae). **Invited Symposium Presentation**. Entomol. Soc. America, Ann. Mtg., Reno, NV.
- Peterson, M.A. 2006. It pays to be choosy...or does it? Lessons from a beetle hybrid zone. **Invited Seminar**. Science Program, Washington State University, Vancouver.
- Schwartz, S.K.** and M.A. Peterson. 2006. Strong material benefits and no longevity costs of multiple mating in an extremely polyandrous leaf beetle, *Chrysochus cobaltinus* (Coleoptera: Chrysomelidae). Animal Behavior Society, Annual Meeting, Snowbird, UT. (poster – received honorable mention for the Founder's Award for best student poster)
- Peterson, M.A., *Honchak, B., *Locke, S., *Beeman, T., *Mendoza, J., *Green, J., *Buckingham, K., *White, M.A., & K. Monsen. 2005. Relative abundance and the reinforcement of male mating preference in a beetle hybrid zone. Society for the Study of Evolution, Annual Meeting, Fairbanks, AK. (contributed paper)
- Peterson, M.A. 2005. Hybridization, natural selection, and the evolution of reproductive barriers. Biology Department, Western Washington University.
- Peterson, M.A. 2005. Sexual isolation and reinforcement in a beetle hybrid zone. Invited Seminar. Department of Biological Sciences. Simon Fraser University.
- Peterson, M.A. 2005. Natural selection and the evolution of reproductive barriers in a beetle hybrid zone. Invited Seminar. Department of Entomology, University of Maryland, College Park.
- Peterson, M.A., Dobler, S., *Davis, E., *Juarez, D., Monsen, K., & W. Francke. 2004. Sexual isolation between hybridizing *Chrysochus* (Coleoptera: Chrysomelidae) is mediated by cuticular hydrocarbons. Entomol. Soc. America, Ann. Mtg., Salt Lake City, UT. (contributed paper)
- Peterson, M.A. 2003. The evolution of reproductive barriers in a beetle hybrid zone. Invited Seminar. Zoologisches Institut und Museum, Universität Hamburg, Hamburg, Germany.
- Monsen, K.J., *Honchak, B., *Locke, S., & M.A. Peterson. 2003. Cytonuclear disequilibrium in the *Chrysochus* hybrid zone. Society for the Study of Evolution, Annual Meeting, Chico, CA. (contributed paper)

- Peterson, M.A. 2003. The evolution of premating barriers in a beetle hybrid zone. Invited Seminar. Department of Entomology, Washington State University.
- Peterson, M.A. 2002. The role of behavior and conspecific sperm precedence in the directional bias of *Chrysochus* hybrids. Entomological Society of America, Annual Meeting, Ft. Lauderdale, FL. (contributed paper)
- Peterson, M.A. 2002. The evolution of premating barriers in a beetle hybrid zone. Invited Seminar. Department of Ecology and Evolution, Institute of Ecology, Universidad Nacional Autónoma de México.
- Peterson, M.A. 2000. Hybridizing beetles and the evolution of reproductive barriers: a test of speciation theory. Biology Department, Western Washington University.
- Peterson, M.A., Dobler, S., *Tantalo, L., *Holland, J., & S. *Locke. 2000. Behavioral, molecular, and morphological evidence for a hybrid zone between *Chrysochus auratus* and *C. cobaltinus* (Coleoptera: Chrysomelidae). Society for the Study of Evolution, Annual Meeting, Bloomington, IN.
- Peterson, M.A. 2000. The evolutionary significance of hybridization between *Chrysochus auratus* and *C. cobaltinus* (Coleoptera: Chrysomelidae). Invited Seminar. Department of Entomology, Oregon State University.
- Peterson, M.A. 1999. The geography of genetics: understanding the role of ecology in the differentiation of insect populations. BFR/Sigma-Xi Research Presentation, Western Washington University.
- Peterson, M. A. and R. F. Denno. 1998. The influence of dispersal and diet breadth on patterns of genetic isolation by distance in phytophagous insects. Society for the Study of Evolution, Annual Meeting, Vancouver, B.C.
- Denno, R.F., Peterson, M.A., Gratton, C., Langellotto, G.A., Huberty, A.F., & D.L. Finke. 1998. Interactive effects of top-down and bottom-up forces on the population dynamics of a salt marsh-inhabiting planthopper. Entomol. Soc. America, Ann. Mtg., Las Vegas, NV.
- Denno, R.F., Peterson, M.A., Langellotto, G.A., Gratton, C., Huberty, A.F., & D.L. Finke. 1998. Delayed interspecific competition between two species of salt marsh planthoppers. Ecological Society of America, Annual Meeting, Baltimore, MD.
- Peterson, M.A. 1997. The effects of habitat persistence on the life history and ecological genetics of saltmarsh insects. Invited Seminar. Biology Department, Western Washington University.
- Peterson, M.A. 1997. In a patchwork of populations, are the pieces important?: Insights from studies of the genetic structure of insect populations. Invited Seminar. Department of Biology, Bryn Mawr University.
- Denno, R.F. and M.A. Peterson. 1997. Relative impact of bottom-up, lateral, and top-down forces on sap-feeding herbivorous insect populations. Ecological Society of America, Annual Meeting, Albuquerque, NM.
- Peterson, M.A. and R.F. Denno. 1996. Life history strategies and the genetic structure of phytophagous insect populations. The Society for the Study of Evolution, Annual Meeting, St. Louis, MO.

- Peterson, M.A. 1996. Understanding the genetic differentiation of populations through studies of gene flow in phytophagous insects. Invited Seminar. Department of Biology, University of South Dakota.
- Peterson, M.A. 1996. Understanding the genetic differentiation of insect populations through studies of gene flow. Invited Seminar. Department of Entomology, University of Massachusetts.
- Peterson, M.A. and R.F. Denno. 1996. Geographic variation in dispersal strategies and the genetic structure of planthopper populations. Entomol. Soc. America, Ann. Mtg., Louisville, KY.
- Denno, R., Roderick, G., Peterson, M., Huberty, A., Doebel, H., Eubanks, M., Losey, J., & G. Langellotto. 1996. Habitat persistence underlies intraspecific variation in the dispersal strategies of planthoppers. Entomol. Soc. America, Ann. Mtg., Louisville, KY.
- Peterson, M.A. 1995. Plant-insect interactions, gene flow, and the evolution of phytophagous insect populations. Invited Seminar. Department of Biology, California State University, Northridge.
- Peterson, M.A. and R.F. Denno. 1995. The link between life history and gene flow among phytophagous insect populations. Entomol. Soc. America, Ann. Mtg., Las Vegas, NV.
- Denno, R.F. and M.A. Peterson. 1995. Density-dependent dispersal and its consequences for the population dynamics of sap-feeding insects. Entomol. Soc. America, Ann. Mtg., Las Vegas, NV.
- Peterson, M.A. and R.F. Denno. 1994. Differentiation in migratory and sedentary populations of *Prokelisia* planthoppers. Ecological Society of America, Annual Meeting, Invited Symposium Paper, Knoxville, TN.
- Peterson, M.A. 1994. The roles of topography and distance in isolating populations of the lycaenid butterfly, *Euphilotes enoptes* (Lepidoptera: Lycaenidae). Invited Seminar. Department of Entomology, University of Maryland.
- Peterson, M.A. and R.F. Denno. 1994. Influence of habitat-mediated dispersal strategies on gene flow among salt marsh planthopper populations. Entomol. Soc. America, Ann. Mtg., Dallas, TX.
- Peterson, M.A. 1993. The role of topography in the population structure of *Euphilotes enoptes* (Lepidoptera: Lycaenidae). The Society for the Study of Evolution, Annual Meeting, Snowbird, UT.
- Peterson, M.A. 1993. Gene flow along elevational gradients: Spatial vs. temporal isolation in *Euphilotes enoptes* (Lepidoptera: Lycaenidae). Ecological Society of America, Annual Meeting, Madison, WI.

COMMUNITY OUTREACH PRESENTATIONS

- Peterson, M.A. 2016. Flying flowers of the fourth corner: The butterflies of Whatcom County. Washington Native Plant Society, Koma Kulshan Chapter, Bellingham, WA.
- Peterson, M.A. 2015. Garden Insects: Friend or Foe? Whatcom County Master Gardeners, Bellingham, WA.

- Peterson, M.A. 2012. Amazing Moths! Burke Museum of Natural History, Seattle, WA.
- Peterson, M.A. and L. Crabo. 2012. Pacific Northwest Moths. Washington Butterfly Association, Seattle, WA.
- Peterson, M.A. 2009. Evolutionary lessons from the perverse lives of insects. Science in the UniverCity Lecture Series, Bellingham, WA.
- Peterson, M.A. 2008. Why are caterpillars such choosy eaters? Washington Native Plant Society, Koma Kulshan Chapter, Bellingham, WA.
- Peterson, M.A. 2007. Why are caterpillars such choosy eaters? Washington Butterfly Association, Keynote Presentation. Leavenworth, WA.
- Peterson, M.A. 2005. What can leaf beetles tells us about speciation? A tale of two serendipities. Scarabs: The Bug Society. Seattle, WA.
- Peterson, M.A. 2003. Strange bedfellows: the symbiosis between lycaenid butterflies and ants. Washington Butterfly Association, Seattle, WA.
- Peterson, M.A. 2001. Bugs, beetles and more...the evolving role of biological collections. Western Gallery, WWU, in conjunction with *Pictures, Patents, Monkeys and More...on Collecting*.

PROFESSIONAL DEVELOPMENT

- 2016-17 CSE Equity and Inclusion Forum participant (completed the 4-part series)
- 2016-17 Change at the Core (C-Core) participant, focusing on methods for creating more inclusive and student-centered courses.
- 2016 Participant in the following workshops run by WWU HR:
- 168 Hours: Productivity, Time, Energy, and Getting (the right) Stuff Done
 - STAR: Employee Engagement & Strengths-Based Management
 - STAR: Communication & Successful Conflict Resolution
 - STAR: FMLA Management – Leading is Caring
 - Emotional Intelligence: Aligning Intention with Impact and Being Effective with People

SERVICE

Biology Department

- 2016- Department Chair
- 2016-17 Interim Chair, Mentor Team for Dan Pollard
- 2016 Strategic Planning Committee (**Chair**)
- 2015- Biol 204 Curricular Revision Committee (**Chair** 2015-16)
- 2014-16 Space and Major Departmental Equipment Committee
- 2014-16 Research Associate Review Committee
- 2013-14 Quantitative Geneticist Search Committee
- 2011-16 Executive Committee
- 2011-14 Limited Term Faculty Evaluation Committee (**Chair**)
- 2008-10 Limited Term Faculty Evaluation Committee

2007 Ecological Geneticist Search Committee (**Chair**)
 2006-10 Chair, Mentor Team for Eric DeChaine
 2006 Quantitative Geneticist Search Committee
 2005 Plant Biologist Search Committee
 2005 Scientific Instructional Technician Search Committee
 2005 Administrative Services Manager Search Committee
 2004-10 Information Technology Committee (**Chair 2004-6**)
 2004-10 Graduate Committee (**Chair & Graduate Program Advisor**, 2005-10)
 2004-5 Marine Animal Ecologist Search Committee (**Chair**)
 2003 Interim Department Chair Search Committee
 2002-6 Faculty Mentor, Alejandro Acevedo-Gutiérrez
 2002-3 Graduate Curriculum and Advising Committee (**Chair**)
 2002 Scientific Instructional Technician II Search Committee
 2001 Scientific Instructional Technician II Search Committee
 1999-2003 Executive Committee
 1999-2003 Interdisciplinary Masters Programs Committee
 1999-2002 Graduate Committee (**Chair & Graduate Program Advisor**, 2001-2)
 1998-9 Plant Geneticist Search Committee
 1998-9 Outcomes Assessment Committee
 1997-9 Computer Committee
 1997-9 Undergraduate Admissions Committee
 1997-9 Scholarship Committee
 1997- Curator of Western Washington University Insect Collection (WWUC)
 (the 2nd largest publicly-held insect collection in the state)
 1997- Annually advise approximately 20-25 Biology majors

College and University

2016- Dean's Advisory Committee, CSE
 2014-16 Personnel Committee, CSE
 2014 Olscamp Research Award Committee
 2013-14 Scholarly Communications Librarian Search Committee
 2012-15 Natural History Museum Task Force, WWU (**Chair**)
 2012- Compass2Campus (annually host insect collection tour)
 2011-14 Professional Leave Advisory Committee, WWU (**Co-Chair, 2012, 2013**)
 2011-13 Animal Care and Use Committee, WWU
 2009 Committee on the Role of Graduate Education at WWU, CST
 representative
 2007-8 Developed Decision Package to present to HEC Board, with a goal of
 starting a Washington Biodiversity Institute at WWU
 2006-8 Patents and Copyrights Committee
 2006-8 Research Advisory Council
 2006 Member of *ad hoc* Graduate Council subcommittee to develop policy
 recommendations for reducing times to completion of MS
 degrees at WWU.

2003 Beckman Scholars Review Committee, Biology & Chemistry Depts. (**Chair**)
 2002-3 Scholars Academy participant
 2001-6 Human Subjects Review Committee
 1998-2006 Sehome Arboretum Board of Governors (**Chair 2000-2**)

Profession

2015 Advisor, Visipedia-VIBE, for computer identification of moths, using image recognition software
 2013 Consultant (pro bono) with WA state biologists and UW researchers working to determine best practices for conservation management of southern Puget Sound prairie remnants.
 2012- Pacific Northwest Moths (website maintenance)
 2012- National Moth Week, Science Advisory Board
 2006 NSF Dissertation Improvement Grants Panel (Population Biology)
 2005 NSF Graduate Research Fellowship Panel
 2004-6 **Associate Editor**, *Evolution*
 2003 Guest Associate Editor, *Northwest Science*
 2001- *Ad Hoc* reviewer for manuscripts/proposals for journals and granting agencies/foundations

Community

- Frequent host of community/school tours of Biology Department Insect Collection
- Whatcom Cooperative Extension **Master Gardener classes**, entomology unit instructor (2013, 2014, 2016)
- Washington State **Natural Heritage Advisory Council** member, 2005-2009.
- Coach, Math Olympiad team, Bayside Montessori (a team of four 6th graders who entered the competition for the first time in the school's history and took 2nd place).
- Provide insect identification and consultation to the public (20-30 contacts/year).
- Developed and ran a stream insect exercise at Bayside Montessori School, 2001-2003.
- Along with David Leaf, helped Ron Thompson **overhaul a high school evolution curriculum** he developed that was widely used in Washington State.
- Wrote a **guest editorial** and, with David Leaf, a **guest column** clarifying the need to keep 'creation science' out of the public school biology curriculum, and clarifying the strength of support for evolution.