Jared L. Strasburg
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CURRENT POSITION

Assistant Professor, University of Minnesota-Duluth, Department of Biology, 2012-
Graduate Faculty, Integrated Biological Sciences Program, University of Minnesota-Duluth, 2012-

PREVIOUS POSITION

NIH Ruth L. Kirschstein Postdoctoral Fellow, Indiana University, 2004-2012
Advisor: Prof. Loren H. Rieseberg

EDUCATION

Ph.D. Evolution, Ecology, and Population Biology, 2004
Washington University, Division of Biology and Biomedical Sciences
Dissertation: "Comparative phylogeography and conservation genetics in two lizard species"
Advisor: Prof. Alan R. Templeton

B. S. Life Sciences, chemistry minor, philosophy minor, 1997
University of Missouri – Rolla

RESEARCH GRANTS

Funded

2015-2017 – Moen RA and Strasburg JL. Genetic and camera techniques to estimate carnivore populations. Legislative-Citizen Commission on Minnesota Resources, Environmental and Natural Resources Trust Fund. $200,000.

2015-2016 – Strasburg JL. Non-Invasive Genetic Estimation of Population Size in Yellowstone Moose. University of Minnesota Grant-in-Aid of Research, Artistry, and Scholarship. $55,556.

2014-2015 – Strasburg JL. Estimating population demographics of moose in northern Yellowstone National Park using non-invasive methods. University of Wyoming-National Park Service Research Grants Program. $4,000.

2013 – Strasburg JL. Preliminary data collection for Minnesota moose population genetic analysis. UMD Chancellor's Faculty Small Grant. $2,000.

2001-2003 – Missouri Department of Conservation Natural History Division Small Grants Program Award. $2,000

2000-2002 – Nature Conservancy of Missouri Small Research Grants Program Award. $2,000

PROFESSIONAL RECOGNITION, FELLOWSHIPS, AND AWARDS

National Institutes of Health Ruth L. Kirschstein Postdoctoral Fellowship, 2005-2008 – $118,000
Howard Hughes Medical Institute Predoctoral Fellowship, 1998-2003 – $160,000
National Science Foundation Predoctoral Fellowship, 1998 (declined)
Graduated *Summa Cum Laude* from University of Missouri-Rolla, May, 1997
Biological Sciences Departmental Scholarship (University of Missouri-Rolla), 1996
Phi Sigma biological honor society, 1995-1997
Alumni Scholarship (University of Missouri-Rolla), 1993-1997
National Merit Scholarship, 1993-1997

PUBLICATIONS

Dobosenski, JA, **Strasburg JL**, Larson, WA, Hrabik TR (2020). Investigating population genetics of invasive rainbow smelt in the Great Lakes Region. ***Journal of Great Lakes Research*** **46**, 382-390.

Rick JA, Moen RA, Erb JD, **Strasburg JL** (2017). Population structure and gene flow in a newly harvested gray wolf (*Canis lupus*) population. ***Conservation Genetics*** **18**, 1091-1104.

Unger TL, Moen RA, **Strasburg JL** (2017). A methodological comparison among DNA source types for moose genotyping. ***Alces*** **53**, 181-197.

Ron J, Lammers Y, **Strasburg JL**, *et al*. (2014). New insights into domestication of carrot using high-throughput transcriptome sequencing of cultivars and wild populations. ***BMC Genomics*** **15**:895.

Ellstrand NC *et al*. (**Strasburg JL** 11th of 14 authors) (2013) Introgression of crop alleles into wild or weedy populations. ***Annual Review of Ecology, Evolution, and Systematics*** **44**, 325-345.

Strasburg JL, Rieseberg LH (2013) Methodological challenges to realizing the potential of hybridization research. ***Journal of Evolutionary Biology*** **26**, 259-260.

Sambatti JBM, **Strasburg JL**, Ortiz-Barrientos D, *et al*. (2012) Reconciling extremely strong barriers with high levels of gene exchange in annual sunflowers. ***Evolution*** **66**, 1459-1473.

Strasburg JL, Sherman NA, Wright KM, *et al*. (2012) What can patterns of differentiation across plant genomes tell us about adaptation and speciation? ***Philosophical Transactions of the Royal Society B-Biological Sciences*** **367**, 364-373.

Strasburg JL, Rieseberg LH (2011) Interpreting the estimated timing of migration events between hybridizing species. ***Molecular Ecology*** **20**, 2353-2366.
This work was featured in a ***Molecular Ecology* perspective (**20**, 2229-2232, 2011)

Strasburg JL, Kane NC, Raduski AR, *et al*. (2011) Effective population size is positively correlated with levels of adaptive divergence among annual sunflowers. ***Molecular Biology and Evolution*** **28**, 1569-1580.
**This work was featured in Faculty of 1000 (F1000.com/10407956)

Blackman BK, Rasmussen DA, **Strasburg JL**, *et al*. (2011) Contributions of flowering time genes to sunflower domestication and improvement. ***Genetics*** **187**, 271-287.

Gross BL, **Strasburg JL** (2010) Cotton domestication: Dramatic changes in a single cell. ***BMC Biology*** **8**:137.

Strasburg JL (2010) Adaptive divergence in sunflowers. **Encyclopedia of Life Sciences**.

Blackman BK, **Strasburg JL**, Raduski AR, *et al*. (2010) The role of recently derived FT paralogs in sunflower domestication. ***Current Biology*** **20**, 629-635.
This work was featured in ***Current Biology* (**20**, R320-R322, 2010)

Raduski AR, Rieseberg LH, and **Strasburg JL** (2010) Effective population size, gene flow, and species status in a narrow endemic sunflower, *Helianthus neglectus,* compared to its widespread sister species, *H. petiolaris*. ***International Journal of Molecular Sciences*** **11**, 492-506.
**This work is based on Andy Raduski's senior honors thesis, for which I served as mentor

Strasburg JL, Rieseberg LH (2010) How robust are "Isolation with Migration" analyses to violations of the IM model? A simulation study. ***Molecular Biology and Evolution*** **27**, 297-310.

Strasburg JL, Scotti-Saintagne C, Scotti I, Lai Z, Rieseberg LH (2009) Genomic patterns of adaptive divergence between chromosomally differentiated sunflower species. ***Molecular Biology and Evolution*** **26**, 1341-1355.
**This work was featured in Faculty of 1000 (F1000.com/1165704)

Strasburg JL, Rieseberg LH (2008) Molecular demographic history of the annual sunflowers *Helianthus annuus* and *H. petiolaris* – large effective population sizes and rates of long-term gene flow. ***Evolution*** **62**, 1936-1950.

Strasburg JL, Gross BL (2008) Adapting to winter in wheat. ***Molecular Ecology*** **17**, 716-718.

Strasburg JL, Kearney M, Moritz C, *et al*. (2007) Combining phylogeography with distribution modeling: Multiple Pleistocene range expansions in a parthenogenetic gecko from the Australian arid zone. ***PLoS ONE*** **2**, e760.

Ostman O, Griffin N, **Strasburg JL**, *et al*. (2007) Habitat area affects arthropod communities directly and indirectly through top predators. ***Ecography*** **30**, 359-366.

Macey JR, Schulte JA, **Strasburg JL**, *et al*. (2006) Assembly of the eastern North American herpetofauna: New evidence from lizards and frogs. ***Biology Letters*** **2**, 388-392.

Strasburg JL (2006) Conservation biology – roads and genetic connectivity. ***Nature*** **440**, 875-876.

Kearney M, Blacket M, **Strasburg JL**, Moritz C (2006) Waves of parthenogenesis in the desert: evidence for the parallel loss of sex in a grasshopper and a gecko from Australia. ***Molecular Ecology*** **15**, 1743-1748.
This work was featured in ***Current Biology* (**16**, R641-R643, 2006)

Strasburg JL, Kearney M (2005) Phylogeography of sexual *Heteronotia binoei* (Gekkonidae) in the Australian arid zone: Climatic cycling and repetitive hybridization. ***Molecular Ecology*** **14**, 2755-2772.

Hutchison DW, **Strasburg JL**, Shaffer C (2005) Cleaning microsatellite PCR products with Sephadex™ in 96-well filtration plates enhances genotyping quality. ***Biotechniques*** **38**, 56-58.

Hutchison DW, **Strasburg JL**, Brisson JA, Cummings S (2004) Isolation and characterization of eleven polymorphic microsatellite loci in collared lizards (*Crotaphytus collaris*). ***Molecular Ecology Notes*** **4**, 554-556.

Strasburg JL (2004) Eight highly polymorphic microsatellite loci for the Australian gecko *Heteronotia binoei*. ***Molecular Ecology Notes*** **4**, 456-458.

Kearney M, Moussalli A, **Strasburg J**, Lindenmayer D, Moritz C (2003) Geographic

parthenogenesis in the Australian arid zone: I. A climatic analysis of the *Heteronotia binoei* complex (Gekkonidae). ***Evolutionary Ecology Research* 5**, 953-976.

Brisson JA, **Strasburg JL**, Templeton AR (2003) Impact of fire management on the ecology of collared lizard (*Crotaphytus collaris*) populations living on the Ozark Plateau. ***Animal Conservation* 6**, 247-254.

Strasburg JL, Brisson JA, Templeton AR (2002) Fire restoration of a fragmented population of collared lizards (*Crotaphytus collaris collaris*) on the Ozark Plateau - evidence from genetic and life-history data. ***Proceedings of the SRM Savanna/Woodland Symposium***, Kansas City, MO.

Templeton AR, Robertson RJ, Brisson J, **Strasburg J** (2001) Disrupting evolutionary processes: The effect of habitat fragmentation on collared lizards in the Missouri Ozarks. ***Proceedings of the National Academy of Sciences of the United States of America* 98**, 5426-5432.

Macey JR, **Strasburg JL**, Brisson JA, *et al*. (2001) Molecular phylogenetics of western North American frogs of the *Rana boylii* species group. ***Molecular Phylogenetics and Evolution* 19**, 131-143.

INVITED SEMINARS

"Genomics of hybridization, speciation, and adaption in annual sunflowers." 2013. Keynote speaker of "Evolution and Biodiversity" section at IV Brazilian Symposium on Plant Molecular Genetics. Bento Goncalves, Brazil.

"Estimating short-term and long-term levels of gene flow." 2011. "Transgenes Going Wild? Risk Assessment of Transgene Introgression from Crops into Wild Relatives." Lorentz Center, Leiden, Netherlands.

"Genomics of hybridization and adaptation in annual sunflowers." 2011. Saint Louis University, St. Louis, MO

"Hybridization and species boundaries in annual sunflowers." 2009. Donald Danforth Plant Science Center, St. Louis, MO.

"Hybridization and species boundaries in annual sunflowers." 2009. Department of Biological Sciences, University of Massachusetts – Boston, Boston, MA.

"Hybridization and species boundaries in annual sunflowers." 2009. Department of Biological Sciences, Florida International University, Miami, FL.

"Hybridization and molecular demography in annual sunflowers." 2008. Department of Biology, Saint Louis University, St. Louis, MO.

"Hybridization and historical demography in annual sunflowers." 2007. Department of Plant Pathology, Kansas State University, Manhattan, KS.

"Hybridization and historical demography in annual sunflowers." 2007. Evolution, Ecology, and Population Biology Program, Washington University, St. Louis, MO.

"Population genetics of speciation and hybridization - geckos, sunflowers, and frogs." 2007. Department of Biology, Willamette University, Salem, OR.

"The effect of prescribed burning on the structure and viability of Ozark collared lizard populations." 2002. Herpetology Group (monthly meeting of herpetologists in the St. Louis region), Washington University, St. Louis, MO.

"Fire restoration of a collared lizard population on the Ozark plateau: evidence from genetic and life history data." 2002. Savanna/Woodland Symposium, Society for Range Management 2002 Annual Meeting, Kansas City, MO.

OTHER PRESENTATIONS AND POSTERS

"Population genetic assessment of regionally threatened wolf and moose populations in the northern USA." 2015. Poster, 10th International Conference on Behaviour, Physiology, and Genetics of Wildlife, Berlin.

"Genomic patterns of adaptive divergence between chromosomally differentiated sunflower species." 2009. Oral presentation, Society for the Study of Evolution 2009 Annual Meeting, Moscow, ID.

"Candidate gene association analyses in *Helianthus annuus*." 2007. Oral presentation, Compositae Genome Project 2007 Annual Meeting, Davis, CA.

"Historical demography, speciation, and gene flow in North American sunflowers." 2007. Poster, Society for Molecular Biology and Evolution 2007 Annual Meeting, Halifax, NS.

"Phylogeography of sexual and hybrid parthenogenetic Bynoe's geckos (*Heteronotia binoei*)." 2006. Oral presentation, Indiana University Departmental "Brown Bag" Seminar Series, Bloomington, IN.

"Phylogeography and repetitive hybridization in sexual Bynoe's geckos (*Heteronotia binoei*)." 2005. Oral presentation, Society for the Study of Evolution 2005 Annual Meeting, Fairbanks, AK.

"Population genetic structure of sexual and asexual Bynoe's geckos (*Heteronotia binoei*)." 2003. Oral presentation, Howard Hughes Medical Institute 2003 Meeting of Predoctoral Fellows, Chevy Chase, MD.

"The effect of prescribed burning on the structure and viability of Ozark collared lizard populations." 2002. Oral presentation, Society for the Study of Evolution 2002 Annual Meeting, Champaign-Urbana, IL.

COURSES TAUGHT

General Biology I (BIOL 1101), University of Minnesota-Duluth – 2019-2020
Research Club (IBS 8030), UMD Integrated Biosciences graduate program – 2017-2018
Genetics (BIOL 2201), University of Minnesota-Duluth – 2017-2020
Biology Seminar (BIOL 3987), University of Minnesota-Duluth – 2013-2019
Evolution (BIOL 3401), University of Minnesota-Duluth – 2012-2018
Biology and Society (BIOL 1001), University of Minnesota-Duluth – 2017-2018
Genomics (BIOL 4233), University of Minnesota-Duluth – 2014, 2015
Modern Genetics (upper-level undergraduate/Masters level course), University College, Washington University – 2008

OTHER TEACHING POSITIONS

Guest lecturer, Washington University – 1998, 1999, 2008, 2009

Biological Conservation (lecture titled "The impact of fire on habitat connectivity in collared lizards;" 9/21/09)

Biological Conservation (lecture titled "The impact of fire on habitat connectivity in collared lizards;" 9/22/08)

Population Genetics (lecture titled "Quantitative genetics – unmeasured genotypes;" fall semester, 1999)

Introductory Biology for Non-Majors (lecture titled "The history of life on earth;" fall semester, 1998)

Teaching assistant, Washington University – 1998, 1999, 2002
Molecular Evolution (2002)
Population Genetics (1999)
Introductory Biology for Non-Majors (1998)

ADVISING/MENTORING ACTIVITIES

Graduate student advisor:
Jessica Rick, UMD Integrated Biosciences MS student, 2013-2015
Tessa Tjepkes, UMD Integrated Biosciences MS student, 2013-2015
Jamie Dobosenski, UMD Integrated Biosciences MS student, 2016-2018 (co-advisor)
Graduate thesis committee member:
Jolene Prochazka, UMD Integrated Biosciences MS student, 2017-2018
Yvette Ibrahim, UMD Integrated Biosciences MS student, 2014-2015
Senior honors thesis mentor:
Andy Raduski, Indiana University, 2006: "Examining the mode of speciation of the sunflower species *Helianthus neglectus* with multilocus sequence data from *H. petiolaris* and *H. neglectus*"
Laboratory undergraduate research mentor:
Nathanial Rismon – 2016-2017
Ashleigh Brykaliuk – 2016-2017
John Statz, UMD, 2014-2016
Stephanie Grewenow, UMD, 2014-2015
Amanda Norbie, UMD, 2014-2015
Kara Werner, UMD, 2014-2015
Joe Burger, UMD, 2013-2014
Whitney Scherkenbach, UMD, 2013-2014
Michael Onami, UMD, 2013
Ben Atkinson, Indiana University, 2006-2007
Neel Patel, Indiana University, 2007

PROFESSIONAL SERVICES

NSF Evolutionary Genetics full proposal panelist, 2013
Subject editor, technical advances, *Molecular Ecology Notes/Molecular Ecology Resources*, 2006-2010
Ad-hoc editor, *Molecular Ecology*, 2009
Manuscript reviewer for *Alces*, *American Journal of Botany*, *Biological Journal of the Linnean Society*, *Biology Letters*, *BMC Evolutionary Biology*, *Cell*, *Copeia*, *Ecography*, *Ecology Letters*, *Evolution*, *Evolutionary Applications*, *Genes*, *Genetica*, *Heredity*, *International Journal of Evolutionary Biology*, *Journal of Biogeography*, *Journal of Experimental Marine Biology and Ecology, Molecular Biology and Evolution*, *Molecular Ecology*, *Molecular Ecology Resources, Molecular Phylogenetics and Evolution, Nature Genetics, New Phytologist, Perspectives in Plant Ecology, Evolution and Systematics, Philosophical Transactions of the Royal Society of London B, Plant Cell, Plant Ecology & Diversity, The Plant Journal, PLoS ONE, Proceedings of the National Academy of Sciences USA*
Grant reviewer for NSF (Population and Evolutionary Processes Cluster – 2006, 2007, 2009;

Systematics and Biodiversity Science Cluster – 2012)
Textbook chapter reviewer, *Introduction to Genetic Analysis* 9th ed.
Graduate student representative to Washington University Evolution, Ecology, and Population Biology Program steering committee, 2003-2004
Organizer, Washington University Evolution, Ecology, and Population Biology Program graduate student-invited seminar series, 2002-2003

PROFESSIONAL SOCIETIES

Member, Society for Molecular Biology and Evolution
Member, Society for the Study of Evolution
Member, Botanical Society of America