

AUSTIN H. PATTON

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School of Biological Sciences
Washington State University
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EDUCATION

Washington State University, Pullman, Washington

Ph.D. Student, Biology

GPA 4.00/4.00

Warren Wilson College, Asheville, North Carolina

B.S., Biology & Environmental Studies, concentration in Conservation Biology

GPA 3.59/4.00

EXPERIENCE

TEACHING

Undergraduate: †

2017-2018 Teaching assistant (Biology for Non-majors) – Washington State University
2016-2017 Teaching assistant (Biology for Non-majors) – Washington State University
2015-2016 Teaching assistant (Ecology) – Washington State University
2014 † Teaching assistant (Conservation Genetics) – Highlands Biological Station
2013-2014 † Teaching assistant (Conservation Genetics) – Warren Wilson College
2012 † Teaching assistant (Field ornithology) – Warren Wilson College

GENERAL

2013-2014 † Genetics lab manager, Warren Wilson College
2013 † National Science Foundation Research Experience for Undergraduates
 Samford University
2012 † Rotating field intern, Project Puffin, Audubon Society

AWARDS & GRANTS

Undergraduate: †

2019 *Brislawn Graduate Fellowship in Biological Sciences – Washington State University Graduate Program committee (\$3000)*
2018 *King Graduate Scholarship – Washington State University Graduate Program committee (\$2000)*
2015, 2016, *Elling Foundation Award for Off-Campus Training and Research*
2017, 2018, *Washington State University (\$3221, \$4677, \$1190, \$2000, \$218, Co-PI A.*
2019 *Storfer)*

- 2013** *Research Experience for Undergraduates*[†] – *National Science Foundation* (\$4200)
- 2013** *Yarborough Grant*[†] – *North Carolina Academy of Sciences* (\$567)
- 2012, 2013** *Pugh Endowed Fund for Undergraduate Research in the Division of Natural Science & Math*[†] – *Warren Wilson College* (\$854, \$2000, Co-PI J.J. Apodaca)

PUBLICATIONS

PUBLISHED

Undergraduate: [†]

- Patton, A.H.**, Margres, M.J., Hendricks, S., Stahlke, A.R., Lewallen, K., Hamede, R.K., Ruiz-Aravena, M., Ryder, O., McCallum, H.I., Jones, M.E., Hohenlohe, P.A., and Storfer, A. Contemporary demographic reconstruction methods are robust to genome assembly quality: A case study in Tasmanian Devils. *Molecular Biology and Evolution*, 36(12), pp.2906-2921.
- Patton, A.H.*†**, Apodaca, J.J.*, Corser, J., Wilson, C., Williams, L.A., Wake, D.B. A new green salamander in the southern Appalachians: evolutionary history of *Aneides aeneus* and implications for management and conservation with the description of a cryptic microendemic species. *Copeia* (2019)
- *Authors contributed equally
- Margres, M.J., **Patton, A.H.**, Wray, K.P., Hassinger, A.T., Ward, M.J., Lemmon, E.M., Lemmon, A.R. and Rokyta, D.R., 2018. Tipping the Scales: The Migration–Selection Balance Leans toward Selection in Snake Venoms. *Molecular Biology and Evolution*, 36(2), pp.271-282.
- Margres, M.J., Ruiz-Aravena, M., Hamede, R., Jones, M.E., Lawrance, M.F., Hendricks, S.A., **Patton, A.H.**, Davis, B.W., Ostrander, E.A., McCallum, H. and Hohenlohe, P.A., 2018. The genomic basis of tumor regression in Tasmanian devils (*Sarcophilus harrisii*). *Genome Biology and Evolution*, 10(11), pp.3012-3025.
- Storfer, A., **Patton, A.H.**, & Fraik, A. K. (2018). Navigating the interface between landscape genetics and landscape genomics. *Frontiers in Genetics*, 9, 68.
- Storfer, A., Hohenlohe, P.A., Margres, M.J., **Patton, A.H.**, Fraik, A.K., Lawrance, M., Ricci, L.E., Stahlke, A.R., McCallum, H.I. and Jones, M.E., 2018. The devil is in the details: genomics of transmissible cancers in Tasmanian devils. *PLoS pathogens*, 14(8), p.e1007098
- Marsh, D.M., Cosentino, B.J., Jones, K.S., Apodaca, J.J., ... **Patton, A.H.†**, ... Vonesh, J.R. 2017. Effects of roads and land use on frog distributions across spatial scales and regions in the Eastern and Central United States. *Diversity and Distributions*, 23(2), pp.158-170

IN Press

- Bakkegard, K.A., **Patton, A.H.†**, Ray, C.H. Chigger Mites (*Hannemania CF. dunni*) infect Northern Slimy Salamanders (*Plethodon glutinosus*) in Alabama. *Herpetological Conservation and Biology*.
- Gillespie, R.G., Bennett, G.M., De Meester, L., Fleischer, R.C., Harmon, L.J., Hendry, A., Knope, M.L., Mallet, J., Martin, C., Parent, C.E., **Patton, A.H.**, Pfennig, K.S., Rubinoff, D., Schluter, D., Seehausen, O., Shaw, K., Stacy, E., Stervander, M., Stroud, J.T., Wagner, C., Wogan, G.O.U. Comparing Adaptive Radiations Across Space, Time, and Taxa. *Journal of Heredity*.

IN REVIEW

Patton, A.H., Margres, M.J., Epstein, B., Eastman, J., Harmon, L.J., Storfer, A. Hybridizing salamanders experience accelerated diversification. *Scientific Reports*.
<https://doi.org/10.1101/760264>

Margres M.J., Ruiz-Aravena, M., Hamede R.K., Kusum C., **Patton, A.H.**, Lawrance, M.F., Fraik, A.K., Stahlke, A.R., Davis, B.W., Ostrander, E.A., Jones, M.E., McCallum, H., Paddison, P.J., Hohenlohe, P.A., Hockenbery, D. Storfer, A. A mechanism for natural tumour regression in a transmissible cancer. *Cell Reports*.

Kozakiewicz, C.*, Ricci, L.*, **Patton, A.H.**, Hendricks, S., Brunner, J., Goldberg, C., Ruiz-Aravena, M., McCallum, H., Hamede, R.K., Jones, M.E., Hohenlohe, P.A., Storfer, A. Comparative Landscape Genetics of Tasmanian Devils and Devil Facial Tumor Disease. *Molecular Evolution*.

*Authors contributed equally

IN PREP

Patton, A.H., Harmon, L.J., Frank H., Herrel, A., Losos, J.B. Colonization drives explosive and predictable diversification of mainland *Anolis* lizards.

Patton, A.H., Lawrance, M.F., Margres, M.J., Kozakiewicz, C., Hamede, R.K., Ruiz-Aravena, M., McCallum, H.I., Jones, M.E., Hohenlohe, P.A., and Storfer, A. Phylodynamics of a transmissible cancer.

Patton, A.H., Margres, M.J., Kelley, J.L., Storfer, A. Comparative transcriptomics of introgressed loci in three plethodontid salamanders.

PRESENTATIONS

Undergraduate: †

- 2019** **Center for Theoretical Evolutionary Genetics at University of California, Berkeley: Invited Talk.** *Historical contingency in the evolution of a transmissible cancer.*
- 2019** **Evolution, Providence, Rhode Island: Poster.** *Contemporary demographic reconstruction methods are robust to genome assembly quality: A case study in Tasmanian Devils.*
- 2018** **American Genetics Association Symposium on the Origins of Adaptive Radiation, Waimea, Hawaii: Poster.** *Explosive early diversification of mainland anoles.*
- 2018** **Fred Hutch Cancer Research Center: Invited Talk.** *Phylodynamics of a transmissible cancer in Tasmanian devils.*
- 2017** **Evolution, Portland, Oregon: Talk.** *Hybridization accelerates speciation in salamanders.*
- 2016** **Special Highlands Conference on Plethodontid Salamander Biology, Highlands, North Carolina: Talk.** *Assessing the role of lineage hybridizability on diversification dynamics in salamander.*
- 2015** **6TH Conference on the Biology of Plethodontid Salamanders, Tulsa Oklahoma: Talk.** *Delimiting cryptic species in the Green salamander, *Aneides aeneus*, using ecological niche models, population genetics and phylogenetic reconstruction.*
- 2014** **Southeast Partners in Amphibian and Reptile Conservation (SEPARC), Jamestown, Kentucky: Poster.†** *Delimiting cryptic species in the Green*

salamander, Aneides aeneus, using ecological niche models, population genetics and phylogenetic reconstruction.

- 2014** **North Carolina Academy of Sciences (NCAS), Raleigh, North Carolina:**
Talk.† Conservation genetics of the Green salamander (*Aneides aeneus*) in
Western North Carolina
- 2013** **Samford University REU Final Symposium, Birmingham, Alabama: Talk.†**
*Using geometric morphometric analyses to distinguish between two Slimy
salamander species in Central Alabama.*
- 2012** **Gulf of Maine Seabird Working Group, Bremen, Maine: Talk.†** *Potential
of landscape.*