AUSTIN H. PATTON

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School of Biological Sciences
Washington State University
Pullman, WA 99163
austin.patton@wsu.edu

EDUCATION

Washington State University, Pullman, Washington
Ph.D., Biology – Defended 4/9/2020
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

PROFESSIONAL EXPERIENCE

Undergraduate: **†**

TEACHING

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**
2014-2015 **Teaching assistant, Biology for Non-majors – 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: **†**

2020 ***Doctoral Student Achievement Award: Sciences – Washington State University College of Arts and Sciences***

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)

2015-2019 ***Elling Foundation Award for Off-Campus Training and Research Washington State University*** ($3221, $4677, $1190, $2000, $218, Co-PI A. 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

Undergraduate: †

PUBLISHED

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. *Genetics. https://doi.org/10.1534/genetics.120.303428*

Patton, A.H., Margres, M.J., Epstein, B., Eastman, J., Harmon, L.J., Storfer, A., 2020. Hybridizing salamanders experience accelerated diversification. *Scientific Reports, 10(6566)*.

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, 111(1)*, pp.1-20.

Bakkegard, K.A., **Patton, A.H.†**, Ray, C.H., 2019. Chigger Mites (*Hannemania CF. dunni*) infect Northern Slimy Salamanders (*Plethodon glutinosus*) in Alabama. *Herpetological Conservation and Biology, 14*(3), pp.578-586.

Patton, A.H.*†, Apodaca, J.J.*, Corser, J., Wilson, C., Williams, L.A., Wake, D.B., 2019. 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, 107*(4), pp.748-763.
*Authors contributed equally

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. 2019. 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.

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

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 Ecology. https://doi.org/10.1111/mec.15558*
*Authors contributed equally

Smith, L., Jones M.E., Hamede, R., Risques, R., **Patton, A.H.**, Carter P.A., Storfer, A. Telomere length is a susceptibility marker for Tasmanian devil facial tumor disease. *EcoHealth.*

IN REVIEW

Patton, A.H., Lawrance, M., Margres, M.J., Kozakiewicz, C.P., Hamede, R., Ruiz-Aravena, M., Hamilton, D.G., Comte, S., Ricci, L., Taylor, R., Stadler, T., Leaché, A., McCallum, H., Jones, M., Hohenlohe, P.A., Storfer, A. A transmissible cancer shifts from emergence to endemism in Tasmanian devils. *Science.*

Rogers, J., **Patton, A.H.**, Harmon, L.J., Lex, A., Meyer, M. Insights From Experiments with Rigor in an EvoBio Design Study. *IEEE Transactions on Visualization and Computer Graphics.*

SUBMITTED

Stahlke, A., Epstein, B., Barbosa, S., **Patton, A.H.**, Hendricks, S., Veillet, A., Fraik, A., Schönfeld, B., McCallum, H., Hamede, R., Jones, M., Storfer, A., Hohenlohe, P. Historical

and contemporary signatures of selection in response to transmissible cancer in Tasmanian devils (*Sarcophilus harrisii*). *Proceedings of the Royal Society B.*

PRESENTATIONS

Undergraduate: †

2020 **Washington State University: Talk.** *Applications of phylogenetic methods to the study of micro- and macroevolutionary diversification.*

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 carpets for the enhancement of Tern nesting habitat.*