DR. JUNIPER L. SIMONIS

they/them/theirs

Quantitative Ecological Scientist

DAPPER Stats
Portland, OR, USA

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EDUCATION

PhD	Ecology and Evolutionary Biology, Cornell University	2013
BS	Integrative Biology, University of Illinois: Urbana-Champaign	2006

PROFESSIONAL POSITIONS

Chemical Weapons Research Consortium
- Founder, Member — 2020 – Present

Rowan Institute
- Fiduciary Board Member — 2019 – Present

DAPPER Stats
- Founder, Owner, Lead Scientist — 2015 – Present

500 Women Scientists
- Leadership Board Member — 2015 – Present

University of Florida
Weecology Laboratory
- Collaborating Researcher — 2019 – Present
- Data Analyst — 2017 – 2019

Portland Public Schools
- Candidate for Zone 6 Board Member — 2017

Cornell University Gay and Lesbian Alumni Association
- Board Member — 2016 – 2018

Lincoln Park Zoo
Alexander Center for Applied Population Biology
- Adjunct Scientist — 2015 – Present
- Research Scientist — 2015
- Postdoctoral Fellow — 2013 – 2015

Urban Wildlife Institute
- Adjunct Scientist — 2014 – Present

Diversity and Inclusion Employee Task Force
- Founding Member — 2014 – 2015

Edanz Editing
- Expert Language Editor — 2016 – 2017

Cramer Fish Sciences
- Biometrician — 2015 – 2016

United States Fish and Wildlife Service
- Micronesian Kingfisher Recovery Committee Member — 2014 – 2016

Cornell University
Cornell University Library
- Student Library Advisory Council Member — 2011 – 2012

Department of Ecology and Evolutionary Biology
- National Science Foundation Graduate Research Fellow — 2007 – 2013

Graduate Student Association Member 2007 – 2013

Biogeochemistry and Environmental Biogeocomplexity Program

Seminar Committee Chair 2009 – 2012

Graduate Student Association Member 2007 – 2012

Florida State University

Underwood Laboratory

Research Technician 2006 – 2007

University of Illinois: Urbana-Champaign

Shearer Laboratory

Independent Undergraduate Researcher 2005 – 2006

Suarez Laboratory

Research Assistant 2005 – 2006

Cáceres Laboratory & The Kellogg Biological Station

Research Experiences for Undergraduates Scientist 2005

AWARDS AND RECOGNITIONS

Women's Flat Track Derby Association

Champion, Rose City Rollers' Wheels of Justice 2015, 2016, 2018, 2019

Runner Up, Rose City Rollers' Wheels of Justice 2017

Mundelein High School

Distinguished Alumna 2018

The Trans 100

Excellence in Service to Community 2015

Cornell University

Lamont C. Cole Award for Outstanding Publication, Ecology & Evolutionary Biology 2014

Robert H. Whittaker Award for Outstanding Presentation, Ecology & Evolutionary Biology 2011

1st Place, Harry W. Greene Grilled Cheese Competition 2011

University of Illinois: Urbana-Champaign

Bronze Tablet & *Summa Cum Laude* 2006

Harriett Long Award for Outstanding Undergraduate Research, Integrative Biology 2006

Thesis Honors with High Distinction, Integrative Biology 2006

AFFILIATIONS

@iamscicomm; 500 Women Scientists Portland Pod; American Society for Limnology and Oceanography; Association of Zoos and Aquariums; Chemical Weapons Research Consortium; Ecological Forecasting Initiative; Ecological Society of America; Ithaca League of Women Rollers; R-Ladies; oSTEM; Out in Tech; Police Brutality 2020 Tracker; Rose City Rollers; Sigma Xi; Society for Conservation Biology; Skype-A-Scientist; Small Population Management Advisory Group (Association of Zoos and Aquariums); The Wildlife Society; Trans, Gender-Non-Conforming, and Intersex Athlete Network; Willamette Riverkeeper; Windy City Rollers

SCIENTIFIC PEER REVIEW

Associate Editor

Ecological Solutions and Evidence 2020 – Present

Manuscript Referee

Auk, American Naturalist, *Citizen Science: Theory and Practice*, *Ecological Applications*, *Ecology Letters*, *Ecology and Evolution*, *Ecosphere*, *Freshwater Science*, *Frontiers in Marine Science*, *Hydrobiologia*, *Journal of Ecology, Proceedings of the Royal Society B: Biological Sciences*, *Royal Society Open Science*, United States Geological Survey, *Zoo Biology*

Review Boards

Oregon Metro Nature-in-Neighborhoods Restoration Grant Review Committee 2016

Lincoln Park Zoo Research Committee 2013 – 2015

Cornell University Biogeochemistry and Biocomplexity Grant Review Panel 2008 – 2012

TEACHING, ADVISING, AND SUPERVISING

Workshops

Statistics and Coding for Resource Managers	2018
Science Coding in the Middle School Classroom	2016
Quantitative Biology with R Lunch Bunch	2010 – 2012
Introduction to Programming in R for Ecologists	2010

Course Instructor

Ecological Design and Analysis Using R	2010, 2011
Writing in the Majors for Evolutionary Biology	2009

Teaching Assistant

Evolutionary Biology and Diversity	2012
Limnology [Lecture and Laboratory]	2012

Advisor

Lincoln Park Zoo Population Biology Internship	2014
Kara Pellowe, Cornell University Undergraduate, BS with High Honors	2012
Shoals Marine Laboratory Research Internships in Field Sciences	2010, 2011

Manager

DAPPER Stats	2020
Lincoln Park Zoo, Alexander Center	2014 – 2015
Shoals Marine Laboratory Research Internships in Field Sciences	2010, 2011

Mentor

oSTEM (out in STEM)	2019
ESA SEEDS (Strategies for Education, Diversity, and Sustainability)	2016, 2017
Planned Parenthood Transgender Youth Support Group, Ithaca NY	2012
Cornell University Peer Educators of Gender and Sexuality	2012
Cornell University EnviroMentors Mentoring Program	2011 – 2012
Floating Classroom, Ithaca NY	2010 – 2012
Expanding Your Horizons Conference Volunteer	2010, 2011, 2012
Shoals Marine Laboratory Research Internships in Field Sciences	2010, 2011
Cornell University Campus-to-Coast	2007

Coach

Rose City Rollers Trainer & Training Committee Member	2015 – Present
Rose City Rollers Junior Travel Team Head Coach	2016 – 2017
Windy City Rollers Trainer & Training Committee Co-Chair	2013 – 2015

PUBLICATIONS†

Books

Simonis, J. L. 2020. *Freelance Science Guide*. DAPPER Publishing. e-Book.

Scientific Articles and Technical Reports

Murray, M. M. Fidino, E. Lehrer, J. L. Simonis, and S. B. Magle. 2021. An integrated occupancy model to non-invasively monitor visible signs of wildlife health with camera traps. Under Review at *Journal of Animal Ecology*.

New, L., J. L. Simonis, M. C. Otto, E. R. Bjerre, M. C. Runge, and B. A. Millsap. 2021. Adaptive management to improve eagle conservation at terrestrial wind facilities. Under Review at *Conservation Science and Practice*.

Simonis, J. L., E. P. White, and S. K. M. Ernest. 2021. Evaluating probabilistic ecological forecasts. Accepted at *Ecology*.

Simonis, J. L. 2021. Federal agents use $ZnCl_2$ gas against Black Lives Matter protesters. *Zenodo*. DOI: 10.5281/zenodo.4059329

Feds used toxic smoke grenades during summer protests in Portland, researcher finds. K. Williams. *The Oregonian* and *The Columbian*. January 19, 2021. Oregon Live and The Columbian.
Scientists Identified a Green, Poisonous Gas Used By Federal Agents on Portland Protesters. L. Peskoe-Yang. *Future Human*. December 6, 2020. Medium.
Sinister Smoke. C. Vaughn. *Portland Tribune*. October 20, 2020. Pamplin Media.
Federal Agents Used Toxic Chemical Smoke Grenades in Portland. S. Lerner. *The Intercept*. October 10, 2020. The Intercept.
What Tear Gas Does To Fish. B. Owens. *Hakai Magazine*. September 23, 2020. Hakai Magazine.

Gornish, E. S., H. Ganjurjav, M. Liang, J. L. Simonis, and M. P. McClaran. 2021. Identifying restoration opportunities beneath native mesquite canopies. *Restoration Ecology* **29**: e13334. DOI: 10.1111/rec.13334.

Flaherty, R. J., L. K. Caldwell, D. Bingham, L. Belcher, J. L. Simonis, C. R. Contor, J. Bonifer, and M. Sheoships. 2020. Juvenile steelhead and chinook production and smolt survival. 2019 Annual Progress Report for the Umatilla Basin Natural Production Monitoring and Evaluation Project. Prepared for the Confederated Tribes of the Umatilla Indian Reservation. Cramer Fish Sciences, Gresham, OR. 39 pp. DOI: 10.5281/zenodo.3902416.

Meiners, J. M., M. C. Orr, K. Riemer, T. L. Griswold, and J. L. Simonis. 2020. The influence of data type and functional traits on native bee phenology metrics: Opportunistic versus inventory records. *bioRxiv*. DOI: 10.1101/2020.04.16.044750.

Simonis, J. L. 2020. Measuring the strength of vegetational seasonality. Prepared for Dr. Catherine Hulshof, Virginia Commonwealth University. DAPPER Stats, Portland, OR. 25 pp. DOI: 10.5281/zenodo.3902400.

Simonis, J. L. 2020. Crescent Dunes Solar Project avian mortality analyses with multi-year rates. Prepared for Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 12 pp. DOI: 10.5281/zenodo.3902406.

Simonis, J. L. and M. L. Larsen. 2020. American Wind Wildlife Information Center Analysis Software. Prepared for American Wind Wildlife Institute. DAPPER Stats, Portland, OR. 6 pp. DOI: 10.5281/zenodo.3902412.

Simonis, J. L., E. White, and S. K. M. Ernest. 2020. Evaluating probabilistic ecological forecasts. Under Review at *Ecology*.

Caldwell, L. K., J. L. Simonis, C. R. Contor, and M. Sheoships. 2019. Juvenile steelhead and chinook production and smolt survival. 2018 Annual Progress Report for the Umatilla Basin Natural Production Monitoring and Evaluation Project. Prepared for the Confederated Tribes of the Umatilla Indian Reservation. Cramer Fish Sciences, Gresham, OR. 46 pp. DOI: 10.5281/zenodo.3922869.

Christensen, E., G. M. Yenni, H. Ye, J. L. Simonis, E. K. Bledsoe, R. M. Diaz, S. D. Taylor, E. P. White, and S. K. M. Ernest. 2019. portalr: an R package for summarizing and using the Portal Project Data. *Journal of Open Source Software* **4**(33):1098. DOI: 10.21105/joss.01098

Faust, L. J., S. T. Long, K. Perišin, and J. L. Simonis. 2019. Uncovering challenges to sustainability of AZA Animal Programs by evaluating the outcomes of breeding and transfer recommendations with PMCTrack. *Zoo Biology* **38**:24-35. DOI: 10.1002/zoo.21470

Fidino, M. A., J. L. Simonis, and S. B. Magle. 2019. A multistate dynamic occupancy model to estimate local colonization–extinction rates and patterns of co-occurrence between two or more interacting species. *Methods in Ecology and Evolution* **10**:233-244. DOI: 10.1111/2041-210X.13117

Simonis, J. L. 2019. American Wind Wildlife Information Center Analysis Framework. Prepared for American Wind Wildlife Institute. DAPPER Stats, Portland, OR. 13 pp. DOI: 10.5281/zenodo.3902420.

Simonis, J. L. 2019. Mesquite effects on understory plants. Prepared for Dr. Elise Gornish, University of Arizona. DAPPER Stats, Portland, OR. 12 pp. DOI: 10.5281/zenodo.3902426.

Simonis, J. L. 2019. Pinyon Jay site selection analyses. Prepared for US Forest Service and Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 12 pp. DOI: 10.5281/zenodo.3902896.

Simonis, J. L. 2019. Crescent Dunes Solar Project avian mortality analyses. Prepared for Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 10 pp. DOI: 10.5281/zenodo.3902908.

Simonis, J. L. 2019. Bendire's and Le Conte's thrasher territory site selection analysis. Prepared for Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 8 pp. DOI: 10.5281/zenodo.3922815.

Simonis, J. L. 2019. Population viability analysis modeling to support releases of sihek (*Todiramphus cinnamominus*). Prepared for Division of Aquatic & Wildlife Resources, Department of Agriculture, Government of Guam. DAPPER Stats, Portland, OR. 12 pp. DOI: 10.5281/zenodo.3922863.

Simonis, J. L. and J. E. Merz. 2019. Prey availability, environmental constraints, and aggregation dictate distribution of an imperiled fish. *Ecosphere* **10**:e02634. DOI: 10.1002/ecs2.2634

White, E. P., G. M. Yenni, S. Taylor, E. Christensen, E. Bledsoe, J. L. Simonis, and S. K. M. Ernest. 2019. Developing an automated iterative near-term forecasting system for an ecological study. *Methods in Ecology and Evolution* **10**:332-344. DOI: 10.1111/2041-210X.13104

Caldwell, L. K., J. L. Simonis, C. R. Contor, and M. Sheoships. 2018. Juvenile steelhead and chinook production and smolt survival. 2017 Annual Progress Report for the Umatilla Basin Natural Production Monitoring and Evaluation Project. Prepared for the Confederated Tribes of the Umatilla Indian Reservation. Cramer Fish Sciences, Gresham, OR. 55 pp. DOI: 10.5281/zenodo.3923005.

Dalthorp, D., L Madsen, M. Huso, R. Wolpert, P. Rabie, J. Studyvin, J. L. Simonis, and J. Mintz. 2018. GenEst Statistical Models—A Generalized Estimator of Mortality. United States Geological Survey: Techniques and Methods:7-A2. 22 pp. DOI: 10.3133/tm7A2.

Simonis, J. L. 2018. Crescent Dunes Solar Project Avian Mortality Analyses. Prepared for Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 11 pp. DOI: 10.5281/zenodo.3902910.

Simonis, J. L. 2018. Kawailoa Wind Farm fatality estimation evaluation. Prepared for Tetra Tech, Inc. DAPPER Stats, Portland, OR. 3 pp. DOI: 10.5281/zenodo.3922886.

Simonis, J. L. 2018. Pinyon Jay Nest Site Selection Analyses. Prepared for Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 13 pp. DOI: 10.5281/zenodo.3923011.

Simonis, J. L. and Duren, O. 2018. Statistical Review of Quantitative Vegetation Monitoring. Prepared for The Freshwater Trust. DAPPER Stats, Portland, OR. 16 pp. DOI: 10.5281/zenodo.3922878.

Simonis, J. L., R. B. Harrison, S. T. Long, D. R. Rabon, Jr., W. T. Waddell, and L. J. Faust. 2018. Movement and mixing in a managed metapopulation of the critically endangered red wolf. *The Journal of Wildlife Management* **82**:573-582. DOI: 10.1002/jwmg.21397.

JWM: Red wolf reintroduction on path toward extinction. *The Wildlife Society*. December 19, 2017. The Wildlife Society.

Simonis, J. L., M. Huso, D. Dalthorp, J. Mintz, L. Madsen, P. Rabie, and J. Studyvin. 2018. GenEst User Guide—Software for a Generalized Estimator of Moraltiy. United States Geological Survey: Techniques and Methods:7-C19. 84 pp. DOI: 10.3133/tm7C19.

Zaringhalam, M., R. Vijayaraghavan, J. L. Simonis, K. Ramirez, and J. Zelikova, on behalf of 500 Women Scientists. Journal editors should not divide scientists. 2018. *Science* **360**: 163-164. DOI: 10.1126/science.aat6288

Merz, J. E., L. K. Caldwell, and J. L. Simonis. 2017. Dry Creek Temperature Modeling and Bioenergetics Report. Prepared for Environmental Science Associates. Cramer Fish Sciences, Gresham, OR. 47 pp. DOI: 10.5281/zenodo.3922986.

Ramirez, K. S., A. A. Berhe, J. Burt, G. Gil-Romera, R. F. Johnson, A. Koltz, I. Lacher, T. McGlynn, K. J. Nielsen, R. Schmidt, J. L. Simonis, C. P. terHorst, and K. Tuff. 2017. The future of ecology is collaborative, inclusive, and deconstructs biases. *Nature Ecology and Evolution* **2**:200. DOI: 10.1038/s41559-017-0445-7.

Simonis, J. L. 2017. Crescent Dunes Solar Project Avian Use and Mortality Analyses. Prepared for Great Basin Bird Observatory. DAPPER Stats, Portland, OR. 18 pp. DOI: 10.5281/zenodo.3902915.

Simonis, J. L. 2017. Gunsight Fatality Estimation Analysis. Prepared for Tetra Tech, Inc. DAPPER Stats, Portland, OR. 3 pp. DOI: 10.5281/zenodo.3922997.

Simonis, J. L. 2017. Clifton Court Forebay Predator Removal Consumption Analysis Methods. Prepared for Environmental Science Associates. DAPPER Stats, Portland, OR. 4 pp. DOI: 10.5281/zenodo.3922995.

Simonis, J. L. 2017. Estimation of Fatalities at Renewable Wind Facilities. Prepared for United States Fish and Wildlife Service. DAPPER Stats, Portland, OR. 159 pp. DOI: 10.5281/zenodo.3922989.

Caldwell, L. K., S. Cramer, J. L. Simonis, L. Belcher, and F. Carpenter. 2016. Drift Creek cutthroat trout rearing capacity analysis. Prepared for Integrated Water Solutions, LLC. Cramer Fish Sciences, Gresham, OR. 28 pp. DOI: 10.5281/zenodo.3922929.

Caldwell, L. K., J. L. Simonis, C. R. Contor, and M. Sheoships. 2016. Juvenile steelhead and chinook production and smolt survival. 2016 Annual Progress Report for the Umatilla Basin Natural Production Monitoring and Evaluation Project. Prepared for the Confederated Tribes of the Umatilla Indian Reservation. Cramer Fish Sciences, Gresham, OR. 40 pp. DOI: 10.5281/zenodo.3922980.

Caldwell, L. K., J. L. Simonis, F. Carpenter, and L. Belcher. 2016. North Pacific Fisheries Management Council High Seas Coded Wire Tag Database Overhaul. Prepared for North Pacific Fisheries Management Council. Cramer Fish Sciences, Gresham, OR. 25 pp. DOI: 10.5281/zenodo.3922942.

Faust, L., J. L. Simonis, R. Harrison, W. Waddell, and S. Long. 2016. Red Wolf (*Canis rufus*) Population Viability Analysis. Prepared for US Fish and Wildlife Service. Lincoln Park Zoo, Chicago, IL. 62 pp. DOI: 10.5281/zenodo.3922951.

Merz, J., P. S. Bergman, J. L. Simonis, D. Delaney, J. Pierson, P. Anders. 2016. Long-term seasonal trends in the prey community of Delta smelt (*Hypomesus transpacificus*) within the Sacramento-San Joaquin Delta, California. *Estuaries and Coasts* **39**:1526-1536. DOI: 10.1007/s12237-016-0097-x.

Simonis, J. L., S. Zeug, and K. Ross. 2016. Estimating Loss of Chinook Salmon and Natural-Origin steelhead at the Central Valley Project and State Water Project. Prepared for California Department of Water Resources. Cramer Fish Sciences, Gresham, OR. 62 pp. DOI: 10.5281/zenodo.3922960.

Stroud, D. and J. L. Simonis. 2016. Clifton Court Forebay Predator Study: Bioenergetics Feasibility and Sensitivity Analysis. Cramer Fish Sciences, Gresham, OR. 38 pp. DOI: 10.5281/zenodo.3922970.

Cramer, S. P., K. Sellheim, P. J. Haverkamp, K. Ceder, and J. L. Simonis. 2015. Lassen Lodge hydroelectric project: fish habitat survey and capacity modeling final report, South Fork Battle Creek. Prepared for Rugraw, LLC. Cramer Fish Sciences, Gresham, OR. 88 pp. DOI: 10.5281/zenodo.3922923.

Johnson, B. J., J. L. Simonis, B. Bahner, A. Baltz, P. Schultz, and R. Sweeney. 2015. Guam Kingfisher AZA Animal Program Population Viability Analysis Report. Association of Zoos and Aquariums. Lincoln Park Zoo, Chicago, IL. 29 pp. DOI: 10.5281/zenodo.3922913.

Simonis, J. L., L. J. Faust, R. B. Harrison, S. T. Long, D. R. Rabon Jr., and W. T. Waddell. 2015. Red Wolf AZA Animal Program

Population Viability Analysis Report. Association of Zoos and Aquariums. Lincoln Park Zoo, Chicago, IL. 30 pp. DOI: 10.5281/zenodo.3922893.

Simonis, J. L., E. Reynolds, P. M. Stevens, C. R. Contor, and M. Sheoships. 2015. Juvenile steelhead and chinook production and smolt survival. 2015 Annual Progress Report for the Umatilla Basin Natural Production Monitoring and Evaluation Project. Prepared for the Confederated Tribes of the Umatilla Indian Reservation. Cramer Fish Sciences, Gresham, OR. 45 pp. DOI: 10.5281/zenodo.3922888.

Pellowe-Wagstaff, K. E. and J. L. Simonis. 2014. The ecology and mechanisms of overflow-mediated dispersal in a rock-pool metacommunity. *Freshwater Biology* **59**:1161-1172. DOI: 10.1111/fwb.12337.

Simonis, J. L. and J. C. Ellis. 2014. Bathing birds bias β-diversity: frequent dispersal by gulls homogenizes fauna in a rock-pool metacommunity. *Ecology* **95**:1545-1555. DOI: 10.1890/13-1185.1.

Darwin was right. *The Economist*. April 12, 2014. The Economist.

Bell, R. C., A. Belmaker, J. M. Brown, C. Couch, K. Francisco, M. E. Manuel, K. M. Marchetto, J. L. Simonis, R. Q. Thomas, and J. P. Sparks. 2013. Effectiveness of bio-control in mediating Erythrina gall wasp (*Quadrastichus erythrinae*) infestations of Wiliwili trees (*Erythrina sandwicensis*). *Journal of the Torrey Botanical Society* **140**:215-224. DOI: 10.3159/TORREY-D-12-00069.1

Simonis, J. L. 2013. Predator ontogeny determines trophic cascade strength in freshwater rock pools. *Ecosphere* **4**:art62. DOI: 10.1890/ES13-00019.1.

Simonis, J. L. 2013. Prey (*Moina macrocopa*) population density drives emigration rate of its predator (*Trichocorixa verticalis*) in a rock-pool metacommunity. *Hydrobiologia* **715**:19-27. DOI: 10.1007/s10750-012-1268-9.

Simonis, J. L. 2013. *Food Webs In Space!* Ph.D. Thesis. Department of Ecology & Evolutionary Biology, Cornell University. Cornell eCommons: 1813-33778.

Simonis, J. L. 2012. Demographic stochasticity reduces the synchronizing effect of dispersal in predator-prey metapopulations. *Ecology* **93**:1517-1524. DOI: 10.1890/11-0460.1.

Simonis, J. L., D. Neuharth-Keusch, and I. Hewson. 2012. Aquatic bacterial assemblage variability in the supra littoral zone of Appledore Island, Gulf of Maine. *FEMS Microbiology Ecology* **80**:501-508. DOI: 10.1111/j.1574-6941.2012.01318.x.

Capps, K. A., M. T. Booth, S. M. Collins, M. A. Davison, J. M. Moslemi, R. W. El-Sabaawi, J. L. Simonis, and A. S. Flecker. 2011. Nutrient diffusing substrata: a field comparison of commonly used methods to assess nutrient limitation. *Journal of the North American Benthological Society* **30**:522-532. DOI: 10.1899/10-146.1.

Featured article. *NABS Spotlight*. Issue 10. Spring 2011.

Hall, S. R., J. L. Simonis, R. M. Nisbet, A. J. Tessier, and C. E. Cáceres. 2009. Resource ecology of virulence in a planktonic host-parasite system: an explanation using dynamic energy budgets. *American Naturalist* **174**:149-162. DOI: 10.1086/600086.

Hall, S. R., C. Becker, J. L. Simonis, M. A. Duffy, A. J. Tessier, and C. E. Cáceres. 2009. Friendly competition: evidence for a dilution effect among competitors in a planktonic host-parasite system. *Ecology* **90**:791-801. DOI: 10.1890/08-0838.1.

Simonis, J. L., H. A. Raja, and C. A. Shearer. 2008. Extracellular enzymes and soft-rot decay: are ascomycetes important degraders in freshwater? *Fungal Diversity* **31**:135-146. EID: 2-s2.0-53549129355.

Simonis, J. L. and C. A. Shearer. 2006. Substrate degradation patterns of freshwater euascomycetes: extracellular enzymes and soft-rot decay. Distinction Paper. School of Integrative Biology. University of Illinois at Urbana-Champaign.

Legal Declarations

Simonis, J. L. 2021. Supplemental Standing Declaration of Juniper Simonis, Willamette Riverkeeper Member. Northwest Center for Alternatives to Pesticides et al. v. U.S. Department of Homeland Security et al.. Docket 3:20-cv-01816-IM, District Court D. Oregon, Document #36. Court Listener RECAP Archive.

Simonis, J. L. 2020. Standing Declaration of Juniper Simonis, Willamette Riverkeeper Member. Northwest Center for Alternatives to Pesticides et al. v. U.S. Department of Homeland Security et al.. Docket 3:20-cv-01816-IM, District Court D. Oregon, Document #11. Court Listener RECAP Archive.

Wolfe, P., K. Durden, M. Lewis, J. L. Simonis, and Disability Rights Oregon. 2020. Complaint for Declaratory, Injunctive Relief, and Damages. Wolfe et al. v. City of Portland, et. al. Docket 3:20-cv-01822-SI, District Court D. Oregon, Document #1. Court Listener RECAP Archive.

Journalism Articles

Simonis, J. L. 2021. Pay no mind attention to the gross negligence behind the smoke. *We Out Here* 2021-03-23. We Out Here.

Simonis, J. L. 2013. The 2013 Trans 100 Chicago Launch Event: I Went, I Saw, They Inspired. *Autostraddle* 2013-04-16. Autostraddle.

Op-Eds and Essays

Simonis, J. L. et al. 2020. Open Letter to Halt Use of Chemical Weapons. v.0.0.2. Chemical Weapons Research Consortium. DOI:

10.5281/zenodo.3978769.

Simonis, J. L. and E. J. Kaiser. 2014. So you want to write a gender policy. *Derby Life*. Issue no. 4.

Simonis, J. L. 2013. I was finally going to be a queer athlete. *Lead Jammer*. Issue no. 5.

SOFTWARE

Applications

Dalthorp, D., J. L. Simonis, M. Huso, L. Madsen, P. Rabie, J. Mintz, R. Wolpert, J. Studyvin, and. F. Korner-Nievergelt. 2018. GenEst: Generalized Mortality Estimator. Web Application v.1.3.1. URL.

Simonis, J. L., S. Zeug, and K. Ross. 2017. Loss Calculator: Estimating Loss of Chinook Salmon and Natural-Origin Steelhead at the Central Valley Project and State Water Project. Web Application v.0.1.0. URL.

Packages

Simonis, J. L., G. M. Yenni, E. K. Bledsoe, E. M. Christensen, H. Senyondo. S. D. Taylor, H. Ye., E. P. White, and S. K. M. Ernest. 2021. portalcasting. R Software Package. v.0.21.1. DOI: 10.5281/zenodo.3332973

Yenni, G. M., H. Ye, E. Christensen, J. L. Simonis, E. K. Bledsoe, R. M. Diaz, S. D. Taylor, E. P. White, and S. K. M. Ernest. 2021. portalr. R Software Package. v.0.3.7. DOI: 10.5281/zenodo.1429290. CRAN

Dalthorp, D., J. L. Simonis, L. Madsen, M. Huso, P. Rabie, J. Mintz, R. Wolpert, J. Studyvin, and. F. Korner-Nievergelt. 2020. GenEst: Generalized Mortality Estimator. R Software Package. v1.4.5.1. DOI: 10.5066/P9O9BATL. CRAN.

Larsen, M. L., J. L. Simonis, and J. S. Waters. 2020. mavenR. R Software Package. v.1.0.0. waterslab/mavenR.

Simonis, J. L. 2020. accessor. Access Access Databases without Access to Access. bash and R Software Package. v.0.4.1. DOI: 10.5281/zenodo.3611911.

Simonis, J. L. 2020. salvage: tools for the California Delta Fish Salvage Database. bash and R Software Package. v.0.11.0. DOI: 10.5281/zenodo.3628045.

Simonis, J. L., E. M. Christensen, D. J. Harris, R. M. Diaz, H. Ye, E. P. White, and S. K. M. Ernest. 2020. LDATS. R Software Package. v.0.2.7. DOI: 10.5281/zenodo.3286117. CRAN

Simonis, J. L. and M. L. Larsen. 2020. awwic. American Wind Wildlife Information Center Analyses. R Software Package. v.1.0.0.

Simonis, J. L., M. L. Larsen, E. Hohn, E. Cheng, and O. Duren. 2020. vmstool. Vegetation Monitoring Site Selection Tool. R Software Package v.0.1.0.

Ye, H., E. K. Bledsoe, E. M. Christensen, R. Diaz, S. K. M. Ernest, J. L. Simonis, E. P. White, and G. M. Yenni. 2020. Macroecological Analyses of Time Series Structure. R Software Package. v.0.3.2. DOI: 10.5281/zenodo.3333008

Simonis, J. L. 2019. gendrendr. For enders of gender. R Software Package. v.0.1.4. DOI: 10.5281/zenodo.3525595

Simonis, J. L. 2018. revegest. Quantitative Vegetation Estimation for Water Quality Testing. R Software Package. v.0.0.1.

PRESENTATIONS

Research & Science

Simonis, J. L.. 2021. A Multi-Observation Model for Quantifying Deployment of Lethal Hexachloroethane by Federal Agents in Downtown Portland, OR, USA. Poster Presentation. Urban Ecosystem Research Consortium (Portland, OR/Vancouver, WA). Annual Meeting.

Simonis, J. L.. 2021. Police Ineptitude and the Environmental Impacts of Chemical Weapons. Oral Presentation and Discussion. SunrisePDX & 350PDX: Poisoned People Poisoned Planet. Portland, OR.

Simonis, J. L.. 2021. Use of Chemical Weapons by Portland Police Bureau and its Human and Environmental Impacts. Oral Presentation and Discussion. Portland, OR Citizen Review Committee.

Simonis, J. L.. 2021. Cover-ups of health risks caused by law enforcement munitions smokes. Press Conference. Chemical Weapons Research Consortium (Portland, OR).

Simonis, J. L.. 2020. Tools for working with the CDFW salvage database. Oral Presentation and Discussion. Interagency Ecological Program Data Science Project Working Team.

Simonis, J. L. and M. L. Larsen. 2020. LDATS: Latent Dirichlet Allocation coupled with Time Series Analyses. Oral Presentation. useR! 2020 Meeting.

Simonis, J. L. and M. L. Larsen. 2020. Combining high-frequency sampling, continuous analysis, and a user-friendly interface to inform operations and mitigate impacts to salmon at major pumping plants in the California Delta. Invited Oral Presentation. Ecological Society of America Annual Meeting. Abstract.

Simonis, J. L. 2019. Computational Conservation Biology: Forecasting wildlife using long-term data and continuous analyses. Department Seminar. Washington State University-Vancouver, Science Seminar Series.

Simonis, J. L. and J. Merz. 2019. Prey availability, environmental constraints, and aggregation dictate population distribution of an imperiled fish. Oral Presentation. American Fisheries Society Oregon Chapter Annual Meeting.

Simonis, J. L., G. Yenni, S. Taylor, E. Christensen, E. Bledsoe, H. Ye, E. White, and S. K. M. Ernest. 2019. Sandboxing the pipeline: building automated forecasting systems to facilitate model development. Oral Presentation. Ecological Forecasting Initiative Semiregular Meeting.

Simonis, J. L. 2019. Adventures in freelancing ecology: implementing lessons from Nelson outside of academia. Oral Presentation. Hairston Hoopla, Cornell University.

Simonis, J. L., G. Yenni, S. Taylor, E. Christensen, E. Bledsoe, H. Ye, E. White, and S. K. M. Ernest. 2018. Prediction & forecasting of Portal fauna via particle filtration. Oral Presentation. Ecological Society of America Annual Meeting.

Simonis, J. L., S. Zeug., and K. Ross. 2017. Particle filtration for the conservation biologist. Oral Presentation. Ecological Society of America Annual Meeting.

Simonis, J. L., M. Fidino, E. W. Lehrer, and S. B. Magle. 2016. Developing a dynamic multi-species patch occupancy model to study urban mesocarnivore distributions. Poster Presentation. Urban Ecosystem Research Consortium (Portland, OR/Vancouver, WA). Annual Meeting.

Simonis, J. L., M. Fidino, and S. B. Magle. 2016. To Chicagoland and beyond! Oral Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L. 2016. Apps for applied ecology. Ignite Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L., L. J. Faust, R. B. Harrison, S. T. Long, D. R. Rabon Jr., and W. T. Waddell. 2015. The case for space: the impact of holding capacity (and breeding) on the ability of the Red Wolf SSP to meet federal recovery goals. Poster Presentation. Associations of Zoos and Aquariums. Annual Meeting.

Simonis, J. L., L. J. Faust, R. B. Harrison, S. T. Long, D. R. Rabon Jr., and W. T. Waddell. 2015. Movement and mixing in a managed metapopulation. Oral Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L. 2015. Movement and mixing in a managed metapopulation. Seminar. Department of Forestry and Natural Resources, Purdue University.

Simonis, J. L., M. Fidino, E. W. Lehrer, and S. B. Magle. 2015. Developing a dynamic multi-species patch occupancy model to study Chicagoland mesocarnivores. Poster Presentation. International Urban Wildlife Conference. Semi-Annual Meeting.

Simonis, J. L. 2015. Computation for conservation. Oral Presentation and Discussion. Lincoln Park Zoo Heritage Society Science Luncheon.

Simonis, J. L., L. J. Faust, S. T. Long, W. T. Waddell, D. R. Rabon Jr., and R. B. Harrison. 2015. *Ex situ* population viability analysis (PVA) model for red wolves. Oral Presentation. Red Wolf Species Survival Plan Working Group. Annual Meeting.

Simonis, J. L., S. T. Long, K. Perišin, and L. J. Faust. 2014. Uncovering challenges to sustainability of AZA animal programs with PMCTrack. Poster Presentation. Associations of Zoos and Aquariums. Annual Meeting.

Simonis, J. L., L. J. Faust, S. T. Long, W. T. Waddell, D. R. Rabon Jr., and R. B. Harrison. 2014. Population viability analysis (PVA) model for red wolves. Oral Presentation. Canid Tag Meeting. Association of Zoos and Aquariums.

Faust, L. J. and J. L. Simonis. 2014. Are we doing a good job with our animal programs? Seminar. Conservation and Science Department, Lincoln Park Zoo.

Simonis, J. L., L. J. Faust, R. B. Harrison, S. T. Long, D. R. Rabon Jr., and W. T. Waddell. 2014. One plan to save them all: using population viability analyses to manage *in situ* and *ex situ* red wolf populations. Poster Presentation. The Wildlife Society. Annual Meeting.

Simonis, J. L., L. J. Faust, S. T. Long, W. T. Waddell, D. R. Rabon Jr., and R. B. Harrison. 2014. *Ex situ* population viability analysis (PVA) model for red wolves. Oral Presentation. Red Wolf Species Survival Plan Working Group. Annual Meeting.

Faut, L. J., S. T. Long, K. Perišin, and J. L. Simonis. 2013. Are we following breeding and transfer recommendations in our Animal Programs? A systematic analysis of 100,000 recommendations from PMCTrack. Poster Presentation. Associations of Zoos and Aquariums. Annual Meeting.

Simonis, J. L. 2013. Resource-dependent dispersal promotes spatial food-web persistence in a rock-pool metacommunity. Invited Oral Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L. 2013. Food webs in space! Seminar. Department of Biology, University of South Dakota.

Simonis, J. L. 2012. Demographic stochasticity reduces the synchronizing effect of dispersal in predator-prey metapopulations, Oral Presentation. North American Congress for Conservation Biology. Semi-Annual Meeting.

Simonis, J. L. 2012. Food webs in space! Seminar. Department of Ecology and Evolutionary Biology, Cornell University.

Simonis, J. L. and J. Ellis. 2012. Boisterous bathing birds bias beta-diversity. Oral Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L. and J. Ellis. 2012. Boisterous bathing birds bias beta-diversity. Oral Presentation. Heiserfest. Shoals Marine Laboratory, Cornell University.

Simonis, J. L. and J. Ellis. 2012. Boisterous bathing birds bias beta-diversity. Poster Presentation. Frontiers in the Life Sciences Symposium, Cornell University.

Simonis, J. L. 2011. Ontogenetic shift by top predator dictates trophic cascades in freshwater rock pools. Oral Presentation. Graduate Student Symposium. Biogeochemistry and Environmental Biogeochemistry Program, Cornell University.

Simonis, J. L. 2011. The impact of top-predator ontogeny on trophic interactions in freshwater rock pools. Oral Presentation. Ninth International Symposium on Cladocera.

Simonis, J. L. 2011. Demographic stochasticity reduces the synchronizing effect of dispersal in predator-prey metapopulations, Oral Presentation. Department of Ecology and Evolutionary Biology, Cornell University. Annual Symposium.

Simonis, J. L. 2011. Is dispersal a strong synchronizing force in predator-prey metapopulations? Oral Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L. 2010. Ontogenetic shift by in predation by *Trichocorixa verticalis* dictates trophic cascade in freshwater rock pools. Oral Presentation. American Society for Limnology and Oceanography. Annual Meeting.

Simonis, J. L. and I. Hewson. 2010. The effects of dissolved organic carbon inputs on freshwater rock pools. Oral Presentation. Graduate Student Symposium. Biogeochemistry and Environmental Biogeochemistry Program, Cornell University.

Simonis, J. L. 2010. Aerial defense of offspring by gulls (*Larus* sp.) against intruding researchers. Oral Presentation. Department of Ecology and Evolutionary Biology, Cornell University. Annual Symposium.

Simonis, J. L. 2010. Food webs in space: interactions between dispersal and food-web dynamics. Oral Presentation. Cary Institute of Ecosystem Sciences. Graduate Student Symposium.

Simonis, J. L. 2010. Gulls as dispersal vectors in a rock-pool metacommunity. Oral Presentation. Department of Ecology and Evolutionary Biology, Cornell University. Annual Symposium.

Simonis, J. L. 2009. Long- and short-term dynamics of pond zooplankton communities. Oral Presentation. Graduate Student Symposium. Biogeochemistry and Environmental Biogeochemistry Program, Cornell University.

Simonis, J. L. 2009. Rock pools, guano and DOC: the effects of nutrient loading on aquatic micro-ecosystems. Oral Presentation. Cary Institute of Ecosystem Sciences. Graduate Student Symposium.

Simonis, J. L. 2009. Ocean-front limnology: freshwater rock pools as model ecosystems. Poster Presentation. Celebration of a Centennial of Limnology. Cornell University.

Simonis, J. L. , S. R. Hall, C. E. Cáceres, and A. J. Tessier. 2008. Feed a fever, starve a haemolymph fungus. Poster Presentation. Ecology Society of America. Annual Meeting.

Simonis, J. L. 2008. The use and abuse of multivariate analytical methods in community (field) ecology. Seminar and Discussion. Department of Ecology and Evolutionary Biology, Cornell University. Lunch Bunch.

Simonis, J. L. 2008. Rot-n-enzymes: substrate degradation by freshwater ascomycete fungi. Oral Presentation. Department of Ecology and Evolutionary Biology, Cornell University. Annual Symposium.

Simonis, J. L., H. A. Raja, and C. A. Shearer. 2006. Substrate degradation patterns of freshwater euascomycetes. Poster Presentation. Mycological Society of America. Annual Meeting.

Simonis, J. L. 2006. Oral Presentation. Substrate degradation patterns of freshwater euascomycete fungi: extracellular enzymes and soft-rot decay. School of Integrative Biology, University of Illinois. Annual Undergraduate Research Symposium.

Career Pathways

Simonis, J. L. 2020. ~Transitioning~ to outside academia. Panelist. Challenges to an Inclusive Freshwater Community. Society for Freshwater Sciences Summer of Science.

Simonis, J. L. 2019. Freelancing ecological data science. Presentation and Discussion. R Ladies Gainesville.

Simonis, J. L. 2018. Applied data science inside, out of, and around academia. Oral Presentation. University of Florida Carpentries Research Bazaar.

Simonis, J. L. 2017. Visible and invisible identities in the workplace. Presentation and Discussion. Women in Science, Women in Policy & Women in Marine Sciences. Oregon State University.

Simonis, J. L. 2014. Conservation and Science Careers. Presentation and Discussion. Career Explorers. Lincoln Park Zoo.

LGBTQIA

Simonis, J. L. 2020. When equality is the prize; a panel of trans athletes. Panelist. Co-EXIST. Dragon Productions Theater Company.

Simonis, J. L. 2015. Transgender Day of Remembrance. Keynote Address. Purdue University.

Simonis, J. L. 2014. Queer in academia. Seminar. Gender Studies Department and Graduate Student Union. University of Notre Dame.

RESEARCH FUNDING

Competitive Research Grants and Fellowships

National Science Foundation, Long-Term Research in Environmental Biology. 2019. Using forecasting and long-term experiments to understand ecological dynamics under novel conditions. Grant 1929730. Senior Personnel and Co-Author. $637,157.

National Science Foundation, Doctoral Dissertation Improvement Grant. 2011. Food webs in space: the interplay between dispersal and trophic interactions. Grant 1110545. Co-PI. $14,773.

A. W. Mellon Foundation, Research Small Grant. 2010. $1,500.

Sigma Xi, Research Small Grant. 2009. $800.

Cornell University Program in Biogeochemistry and Environmental Biocomplexity, Research Small Grants. 2008 – 2011. $15,000.

Shoals Marine Laboratory, Summer Research Awards. 2008 – 2011. $10,000.

Cornell University Department of Ecology and Evolutionary Biology, Research Awards. 2008 – 2009. $1,250.

National Science Foundation, Graduate Research Fellowship. 2007. $178,500.

Research Contracts

Buckley Laboratory, University of Washington. trenchR. 2020. $8,750.

Tetra Tech. Effective of turbine size on mortality rates. 2020. $20,125.

Waters Lab. Providence College. MAVEn R package. 2020. $5,000.

Weecology Laboratory, University of Florida. Forecasting rodent and plant dynamics. 2020. $76,694.

Weecology Laboratory, University of Florida. Data-intensive ecological forecasting. 2020. $76,694.

Great Basin Bird Observatory. Avian mortality at Crescent Dunes Solar Project. 2020. $8,450.

American Wind and Wildlife Institute. American Wind and Wildlife Information Center. 2019. $16,288.

Cramer Fish Sciences. Long-term smelt and silverside interactions. 2019. $13,500.

Cramer Fish Sciences. Multihabitat aquatic sampling platform analysis. 2019. $11,500.

The Sustainability Innovation Lab, University of Colorado: Boulder. ATTA project public database. 2019. $10,000.

Hulshof Lab, Virginia Commonwealth University. Phenological impacts of Hurricane Maria. 2019. $10,000.

Cramer Fish Sciences. Umatilla smolt outmigration analyses. 2019. $14,500.

Gornish Laboratory, University of Arizona. Impacts of Lehmann lovegrass on agave. 2019. $7,000.

Gornish Laboratory, University of Arizona. Analysis of mesquite impacts on understory plants. 2019. $7,000.

Great Basin Bird Observatory. Avian mortality at Crescent Dunes Solar Project. 2019. $2,000.

The Freshwater Trust. Vegetation monitoring site selection model. 2018. $21,500.

Reef Environmental Education Foundation. Embedded assessment of public participation in reef fish surveys. 2018. $27,000.

Great Basin Bird Observatory. Thrasher territory analysis. 2018. $5,000.

US Forest Service & Great Basin Bird Observatory. Pinyon jay site selection analyses. 2018. $6,000.

Great Basin Bird Observatory. Waterbird trend analysis. 2018. $1,525.

Cramer Fish Sciences. Umatilla smolt outmigration analyses. 2018. $14,500.

Great Basin Bird Observatory. Avian mortality at Crescent Dunes Solar Project. 2018. $2,850.

Tetra Tech. Kawailoa Wind Farm fatality estimation evaluation. 2018. $250.

Bat Conservation International. Generalized estimator of bird and bat fatality at renewable energy facilities. 2017. $53,397.

The Freshwater Trust. Snake River vegetation monitoring plan evaluation. 2017. $7,718.

Great Basin Bird Observatory. Pinyon jay habitat use and nesting analysis. 2017. $6,000.

Tetra Tech. Gunsight Wind Energy Project analysis. 2017. $1,375.

Cramer Fish Sciences. Umatilla smolt outmigration analyses. 2017. $9,600.

Environmental Science Associates. Clifton Court Forebay predator removal bioenergetics. 2017. $8,926.

Great Basin Bird Observatory. Evaluation of Bureau of Land Management vegetation survey data. 2017. $750.

Great Basin Bird Observatory. Avian use and mortality at Crescent Dunes Solar Project. 2017. $2,500.

Great Basin Bird Observatory. Road-based survey population estimator evaluation. 2017. $375.

Cramer Fish Sciences. Delta smelt population distribution modeling. 2016. $51,560.

US Fish and Wildlife Service. Estimating project-specific mortality estimates from post-construction survey data and refinement of eagle Bayesian risk model. 2016. $24,000.

Cramer Fish Sciences. Clifton Court Forebay predator bioenergetics. 2016. $17,525.

Cramer Fish Sciences. Umatilla smolt outmigration analyses. 2016. $9,600.

Cramer Fish Sciences. Dry Creek temperature modeling. 2016. $6,400.

Guam Department of Agriculture. Population Viability Analysis to support releases of Sihek (*Todiramphus cinnamominus*). 2015. $19,720.

Lincoln Park Zoo. Red wolf Population Viability Analysis. 2015. $38,492.

Travel Grants

Society for Conservation Biology, Graduate Student Travel Grant. 2012. $500.

Cornell University Graduate School, Conference Grants. 2008 – 2012. $1,600.

Cornell University Department of Ecology and Evolutionary Biology, Orenstein Award. 2011. $750.

Ninth International Symposium on Cladocera, Graduate Student Travel Grant. 2011. $700.

Cornell University Graduate School, Research Travel Grant. 2010. $2,000.

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† *Work prior to 2017-10-01 authored as "Joseph L. Simonis"*