




ROBERT L. NIESE

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PERSONAL

Date of Birth:	21 December 1988	Web Pages:	NorthwestNaturalist.org
Place of Birth:	Mission Viejo, California		RobertNiese.com
Languages Spoken:	English (1 st language), Spanish	Contact:	(925) 212-6750 (cell)
Favorite Bird:	Rock Pigeon (<i>Columba livia</i>)		robniese@gmail.com

EDUCATION

2013-2019	Ph.D., Organismal Biology and Ecology, Flight Laboratory, University of Montana, (Bret Tobalske, advisor)	Missoula, MT
2007-2011	B.S. Biology, Minor Spanish, University of Puget Sound	Tacoma, WA

PROFESSIONAL EXPERIENCE

2020 (Spring)	Senior Instructor, Introductory Biology 1: Foundation of Life, CIEE	Monteverde, Costa Rica
2019 (Fall)	Senior Instructor, Introductory Biology 1: Foundation of Life, CIEE	Monteverde, Costa Rica
2019 (Fall)	Senior Instructor, Introductory Biology 2: Diversity of Life, CIEE	Monteverde, Costa Rica
2019 (Summer)	Lab Instructor, Rocky Mountain Flora, University of Montana	Missoula, MT
2019 (Spring)	Head Teaching Assistant, Rocky Mountain Flora, University of Montana	Missoula, MT
2018-2019	Independent Research Consultant, The W Group, Inc.	Walnut Creek, CA
2018 (Spring)	Head Teaching Assistant, Rocky Mountain Flora, University of Montana	Missoula, MT
2017 (Fall)	Teaching Assistant, Mammalogy, University of Montana	Missoula, MT
2017 (Spring)	Lab Instructor, Comparative Vertebrate Anatomy, University of Montana	Missoula, MT
2016 (Fall)	Course Instructor, Mammalogy, University of Montana	Missoula, MT
2016	Interim Director, Philip L. Wright Zoological Museum	Missoula, MT
2016	Research and Forensics Consultant, Montana Fish, Wildlife, and Parks	Missoula, MT
2016 (Spring)	Lab Instructor, Comparative Vertebrate Anatomy, University of Montana	Missoula, MT
2015 (Fall)	Teaching Assistant, Mammalogy, University of Montana	Missoula, MT
2015 (Summer)	Teaching Assistant, Diversity of Life, University of Montana	Missoula, MT
2015 (Spring)	Head Teaching Assistant, Rocky Mountain Flora, University of Montana	Missoula, MT
2014 (Fall)	Teaching Assistant, Mammalogy, University of Montana	Missoula, MT
2014 (Summer)	Teaching Assistant, Diversity of Life, University of Montana	Missoula, MT
2014 (Summer)	Teaching Assistant, Rocky Mountain Flora, University of Montana	Missoula, MT
2014 (Spring)	Teaching Assistant, Diversity of Life, University of Montana	Missoula, MT
2011-2014	Media and Design Consultant, Slater Museum, U. of Puget Sound	Tacoma, WA
2013 (Fall)	Teaching Assistant, Mammalogy, University of Montana	Missoula, MT
2012- 2013	Education and Outreach Specialist, Slater Museum, U. Puget Sound	Tacoma WA
2012	Guest Naturalist and Educator, Annie Wright Summer Camps	Tacoma, WA
2012 (Spring)	Teaching Assistant, Ornithology, University of Puget Sound	Tacoma, WA
2011-2012	Education and Outreach Coordinator, Slater Museum, U. of Puget Sound	Tacoma WA
2011	Backcountry Point Count Technician, Institute for Bird Populations	Port Angeles, WA
2011 (Spring)	Teaching Assistant, General Ecology, University of Puget Sound	Tacoma, WA
2010 (Fall)	Teaching Assistant, Diversity of Life, University of Puget Sound	Tacoma, WA
2009	Laboratory Technician, EnviroSurvey Inc.	San Francisco, CA

PUBLICATIONS

Niese, R.L. 2021 (*in press*). *Backyard Nature and Science Workbook: Pacific Northwest*. Adventure Publications.

Niese, R.L., C.J. Clark, and B.W. Tobalske. 2020. Specialized feathers produce sonations during flight in *Columbina* ground doves. *Integrative and Comparative Biology*. 60, 5:1160–1172.

Niese, R.L. 2019. Why the Weird Wings? Investigating the morphology, function, and evolution of unusual feathers in pigeons and doves (Columbidae). Ph.D. Dissertation, University of Montana.

Niese, R. L. and B. W. Tobalske. 2016. Specialized primary feathers produce tonal sounds during flight in rock pigeons (*Columba livia*). *Journal of Experimental Biology*. 219:2173–81.

GRANTS AND AWARDS

2017 University of Montana, Toelle-Bekken Exploratory Research Grant (\$2,500)
2017 University of Montana, Drollinger-Dial Research Grant (\$2,500)
2016 University of Montana, Drollinger-Dial Research Grant (\$900)
2014 Tahoma Audubon Society, Distinguished Service Award—Slater Museum of Natural History
2011 University of Puget Sound, Phi Sigma Award for Best Research Symposium Presentation
2011 University of Puget Sound, Leadership Award
2010 University of Puget Sound, Summer Science Research Award (\$3,000)
2010 University of Puget Sound, Havana Bradner Memorial Scholarship for the Sciences (\$2,000)
2010 University of Puget Sound, Gordon Dell Alcorn Scholarship for the Sciences (\$475)
2009 University of Puget Sound, William McCullough Scholarship for Biology and Chemistry (\$2,000)

PRESENTATIONS AND SYMPOSIA

2018 Unique feather sounds in New World ground doves are sonations. Organismal Biology and Ecology Seminar Series, University of Montana, Missoula, MT
2018 *Columbina* ground doves produce sonations via unique feathers and a percussive aeroelastic flutter phenomenon. International Ornithological Congress, Vancouver, Canada
2018 Testing the aerodynamic and aeroacoustic function of unique dove feathers. Organismal Biology and Ecology Seminar Series, University of Montana, Missoula, MT
2017 Novel feather songs in New World ground doves: Exploring odd feather shapes and wing sounds in the Neotropical pigeon genus, *Columbina*. Organismal Biology and Ecology Seminar Series, University of Montana, Missoula, MT.
2016 Wing Sounds as Sonations of Alarm: Exploring the evolution of signals that are intrinsically linked to movement. Organismal Biology and Ecology Seminar Series, University of Montana, Missoula, MT.
2016 Specialized primary feathers in rock pigeons (*Columba livia*) produce tonal sounds during take-off. *Society for Integrative and Comparative Biology* 56(1). P1.37
2015 “Instrumental Music” – Whistling wings and chirping tails: An introduction to non-vocal feather-songs. Five Valleys Audubon Society (Invited Speaker), Missoula, MT.
2014 Communicating with Wings: The evolution and mechanics of feather sounds in pigeons and doves. Organismal Biology and Ecology Seminar Series, University of Montana, Missoula, MT.
2013 Darwin’s Instrumental Music: Whistling wings and chirping tails, an introduction to non-vocal feather songs. *Behavior and Evolution* (Invited Lecturer), University of Montana, Missoula, MT.
2013 Darwin’s Instrumental Music: Whistling wings and chirping tails, an introduction to non-vocal feather songs. Pilchuck Audubon Society Annual Membership Meeting (Invited Speaker), Everett, WA.
2011 Communicating with Wings: Wing sounds in Rock Pigeons (*Columba livia*). Phi Sigma Research Symposium, University of Puget Sound, Tacoma, WA.
2010 Communicating with Wings: Non-vocal wing-sounds in male and female rock pigeons (*Columba livia*). Student Research Symposium, U. of Puget Sound, Tacoma, WA.
2010 Non-vocal alarm sounds produced by the wings of Inca 2010 Non-vocal alarm sounds produced by the wings of Inca doves (*Columbina inca*). Symposium on Tropical Ecology and Conservation, Escuela de los Amigos, Monteverde, Costa Rica.

PROFESSIONAL ACTIVITIES, SOCIETIES, AND AFFILIATIONS

2013-2019	Research and Outreach Affiliate, Philip L. Wright Zoological Museum
2015-2017	Volunteer Master Naturalist, Missoula Butterfly House and Insectarium
2016	Grand Judge, Biology Chair (Division II), Montana State Science Fair
2014	Grand Judge, Environmental Chair (Division II), Montana State Science Fair
2012-2013	Volunteer Judge, Middle School Science Fairs, Tacoma Public Schools
2011-2013	Volunteer Master Naturalist, Puget Sound Outdoors
2011-2013	Volunteer Master Birder, Tahoma Audubon Society
2010-2011	Phi Sigma Biological Sciences Honors Society
2010-2011	Volunteer Docent, Slater Museum of Natural History
2010-2011	Co-Editor-in-Chief, Elements Science Magazine, University of Puget Sound
2009-2011	Publicity Manager, Elements Science Magazine, University of Puget Sound
2009-2010	Co-President, BGLAD, a club promoting LGBTQ diversity, University of Puget Sound

COMMUNITY OUTREACH

2019	Volunteer Scientist, WildFest in the Classroom, International Wildlife Film Festival
2017-2019	Volunteer Educator, Wings over Water Program, Montana Natural History Center
2017-2019	Volunteer Educator, We are Montana in the Classroom, University of Montana
2017-2018	Volunteer Educator, Summer Youth Programs, Montana Natural History Center
2015-2019	Volunteer Educator, TRIO-Upward Bound, USDE, University of Montana
2013-2016	Volunteer Educator, SpectrUM Children's Science Museum, University of Montana
2013	Coordinator, "A Celebration of Art and Science" exhibit and open house, Slater Museum of Natural History, University of Puget Sound (300 guests)
2013	Educational booth, Seattle Science Festival EXPO, Pacific Science Center
2013	Instructor/Coordinator, "Nature in the Classroom: Utilizing natural history specimens to teach 4 th and 5 th grade science," teacher training session (14 teachers), Tacoma
2012	Coordinator, "It's Wild Outside" exhibit and open house, Slater Museum of Natural History, University of Puget Sound (300 guests)
2012-2013	Science Liason, ArtSci, Tacoma Art Museum and University of Puget Sound
2012-2013	Guest Science Educator, Tacoma, South Kitsap, Bremerton, Franklin Pierce, Sumner, and Issaquah School Districts and various private schools (1500 students, 4200 contacts, 724 Title I students)
2012	Instructor/Coordinator, "Nature in the Classroom: Utilizing natural history specimens to teach 4 th and 5 th grade science," teacher training session (17 teachers), Tacoma
2012	Coordinator, "Exotic Species Night" exhibit and open house, Slater Museum of Natural History, University of Puget Sound (300 guests)
2012	Instructor/Coordinator, "Nature in the Classroom: Utilizing natural history specimens to teach 4 th and 5 th grade science," teacher training session (16 teachers), Tacoma
2011-2012	Guest Science Educator, Tacoma, Kitsap, Issaquah, and Bremerton School Districts and various private schools (1700 students, 4100 contacts)
2011	Educational booth, Nisqually Watershed Festival (100 guests)
2011	Instructor/Coordinator, "Nature in the Classroom: Utilizing natural history specimens to teach 4 th and 5 th grade," teacher training session (23 teachers), Tacoma Public Schools

GENERAL INTERESTS

Natural history, pigeons and doves, birding, botanizing, graphic design, science writing, macro photography, museum curation and research, STEM education, vertebrate forensics, active learning

REFERENCES

Dr. Bret Tobalske
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Dr. Greg Peters
Adjunct Professor
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