

# SILU WANG

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## RESEARCH INTEREST

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In order to substantially understand biodiversity, I investigate the genomic mechanisms underlying hybridization and the evolution of reproductive isolation. To address this interest, I am focusing on the *Setophaga* warbler system in the Pacific Northwest, while open to work with organismal diversity with the ultimate goal of integrating speciation-introgression insights for effective species rescue in the anthropogenic 6<sup>th</sup> extinction.

## CURRENT POSITION

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**Postdoc** Jan. 2020 - *present* University of California, Berkeley (UC Berkeley)

## EDUCATION

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**PhD Zoology**

University of British Columbia (UBC), 2020.

**MA Ecology, Evolution & Behavior; Computer Science (minor)**

University of Texas at Austin (UT Austin), 2014.

**BS Behavior, Genetics & Neurobiology; Applied Statistics (minor)**

University of Toronto (U of T), *high distinction*, 2011.

## PUBLICATIONS (\*corresponding author; +equal contribution)

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- (1) **Wang S.\*** Ore M. Mikkelsen E. Lee-Yaw, J. Rohwer S. Irwin DE. *Accepted*. Signatures of mitochondrial climate adaptation in a warbler species complex. *Nature Communications*. [BioRxiv](#).
- (2) de Zwaan D. R. Mackenzie J. Mikkelsen E. **Wang S.\*** Opposing dominance within a color gene block is associated with maladaptive hybrid signal discordance. [BioRxiv](#).
- (3) **Wang S.\*** Coevolution of song and egg coloration: multimodal mating signals? [BioRxiv](#).
- (4) +MacPherson A.\*, +**Wang S.** Rieseberg L. Yamaguchi R. Otto S. Parental population isolation and range expansion before secondary contact leads to greater hybrid relative fitness. [BioRxiv](#).
- (5) **Wang S.\*** Rohwer S., de Zwaan D. R. Toews D.P.L. Lovette I.J. Mackenzie J. Irwin DE. 2020. Selection on a small genomic region underpins differentiation in multiple color traits between two warbler species. *Evolution Letters*. 4-6: 502-515.
- (6) **Wang S.\*** Rohwer S. Delmore K. Irwin DE. 2019. Cross-decades stability of an avian hybrid zone. *Journal of Evolutionary Biology*. 32: 1242-1251.
- (7) **Wang S.** & Sokolowski M. B. 2017. Aggressive behaviors, food-deprivation and the *foraging* gene. *Royal Society Open Science*. 4:170042.
- (8) **Wang S.\*** Cummings M. E. & Kirkpatrick M. A. 2015. Coevolution of male courtship and sexual conflict characters in mosquitofish. *Behavioral Ecology*. 26:1013-1020.
- (9) **Wang S.M.T.** Ramsey M. & Cummings M. E. 2014. Plasticity of the mate choice mind: courtship

evokes choice-like brain responses in females from a coercive mating system. *Genes, Brain and Behavior*. 13:365-375.

## ORAL PRESENTATIONS (\*best talk)

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- 2021 Population Genomics Journal Club, UC Berkeley
- 2021 Annual Drosophila Research Conference, The Genetics Society of America
- 2019 The Society for the Study of Evolution meeting, Providence, Rhode Island, USA.
- 2019\* Eco-Evo Retreat, Brackendale, BC, Canada.
- 2018 International Ornithological Congress meeting, Vancouver, BC, Canada.
- 2017 The Society for the Study of Evolution meeting, Portland, OR, USA.
- 2017 Canadian Society for Ecology and Evolution meeting, Victoria, BC, Canada.
- 2016 North American Ornithological Congress, Washington, DC, USA.
- 2015 American Ornithologists' Union & Cooper's Ornithological Society meeting, OK, USA.
- 2014 International Ornithological Congress, Tokyo, Japan.
- 2014 American Society of Naturalists meeting, Pacific Grove, CA, USA.
- 2014 Society for Integrative and Comparative Biology Meeting, Austin, TX, USA.
- 2012 The Society for the Study of Evolution, Ottawa, ON, Canada.
- 2012 Animal Behavior Society meeting, Albuquerque, NM, USA.
- 2011 American Ornithologists' Union, Jacksonville, FL, USA.

## POSTERS (\*best poster)

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- 2019\* The Society for the Study of Evolution, Providence, RI, USA.
- 2018 Evo-Wibo Conference, Port Townsend, WA, USA.
- 2018 Evo-Eco Department Retreat, Brackendale, BC, Canada.
- 2018\* UBC Zoology Graduate Spring Symposium, Vancouver, BC, Canada.
- 2017 The Society for the Study of Evolution Meeting, Portland, OR, USA.
- 2017\* UBC Zoology Graduate Symposium, Vancouver, BC, Canada.
- 2010 Ontario Biology Day, Toronto, ON, Canada.
- 2010 Crime Prevention Conference, Mississauga, ON, Canada.

## INVITED PRESENTATION

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- 2021 Barton Group, Institute of Science and Technology Austria
- 2021 Evolution, Genomics, Behavioral Ecology, French National Centre for Scientific Research
- 2021 Evolution, Ecology, Genetics, and Genomics, University of Rochester.
- 2021 Center of Population Biology, University of California, Davis.
- 2020 Population Genetics seminar, Duke University.
- 2020 Ornithology Discussion, University of New Mexico.
- 2019 Center of Theoretical Evolutionary Genomics seminar, UC Berkeley.
- 2019 Les Ecologistes seminar, Simon Fraser University.
- 2018 BLISS seminar, University of British Columbia.
- 2013 Lunch seminar, School of Geological Science, UT Austin.
- 2013 Brain, Behavior & Evolution (BBE) Seminar, UT Austin.
- 2013 Biology Department Seminar, University of Oklahoma.
- 2012 BBE Seminar, UT Austin.

**2012** Integrative Biology Graduate Symposium, UT Austin.

## AWARDS GRANTS & HONORS

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<b>2019</b>	Ruth Patrick Student Poster Award, American Society of Naturalists	\$1,000
<b>2019</b>	Zoology Travel Award, Department of Zoology, UBC	\$500
<b>2019</b>	Best Talk Award, Eco-Evo Retreat, Brackendale, BC	
<b>2018-2019</b>	Zoology Graduate Fellowship, UBC	\$16,000
<b>2018</b>	Gibson's citation, Green College, UBC	
<b>2018</b>	Best Poster Award, Zoology Graduate Spring Symposium	
<b>2018</b>	Graduate Student Travel Fund, UBC	\$500
<b>2017</b>	Best Poster Award, Zoology Graduate Spring Symposium	
<b>2016</b>	Werner and Hildegard Hesse Research Award in Ornithology	\$2,500
<b>2015-2018</b>	Postgraduate Scholar ship D (PGS D)	
	Natural Sciences and Engineering Research Council of Canada (NSERC)	\$63,000
<b>2015</b>	Werner and Hildegard Hesse Research Award in Ornithology	\$3,500
<b>2014</b>	Biodiversity Research: Integrative Training & Education Grant, UBC	\$4,000
<b>2014</b>	R Howard Webster Foundation Fellowship, UBC	\$2,500
<b>2014-2018</b>	Four Year Doctoral Fellowship, UBC	\$18,000
<b>2014</b>	Student Travel grant, International Ornithological Congress	\$500
<b>2014</b>	Travel grant, Ecology, Evolution and Behavior, UT Austin	\$1,000
<b>2012-2013</b>	Texas Ecolab Research Grant	\$3,000
<b>2011</b>	Student Travel Award, American Ornithologists' Union	\$600
<b>2011</b>	Ontario Graduate Scholarship, Ministry of Training, Colleges and Universities of Ontario	\$6,000
<b>2011</b>	Excellence Award in the Natural Sciences and Engineering, U of T	\$5,600
<b>2010-2011</b>	Honor Roll in Department of Mathematical and Computational Sciences, U of T	
<b>2010</b>	Student Membership Award, American Ornithologists' Union	

## PROGRAMMING EXPERIENCE

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<b>•R:</b>	Population Genomics - admixture mapping, spatial genetics Phylogenetics – phylogeny construction, ancestral state reconstruction, trait coevolution Network Modeling – network construction, graph theory statistics Frequentist & Bayesian statistics
<b>•UNIX:</b>	Regular expressions related to parsing sequences SAS - Structural Equation Modeling
<b>•Python:</b>	Sequence processing & alignment Maximum likelihood estimates search

## TEACH-ASSISTANCE EXPERIENCE

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<b>• BIOL336:</b>	Fundamentals of Evolution Biology, UBC	2018 Spring and Fall
<b>• BIO321:</b>	Introduction to Computational Biology, UT Austin	2014 Spring
<b>• BIO370:</b>	Evolution, UT Austin	2012 Spring, 2013 Fall
<b>• BIO311:</b>	Introductory Biology, UT Austin	2012 Fall
<b>• BIO206:</b>	Structure & Function of Organisms, UT Austin	2012 Summer
<b>• BIO318:</b>	Biostatistics, UT Austin	2011 Fall
<b>• STA257:</b>	Probability and Statistics I, U of T	2010 Fall
<b>• BIO329:</b>	Mammalian Biology field section, U of T	2009 Fall

## MENTORING EXPERIENCE

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Anton Pederson: 2012; Arvind Pillai: 2013; Korey Conley: 2013-14;  
Ruth Midgley: 2015; Else Mikkelsen: 2016-17; Jacqueline Mackenzie: 2017.

## OTHER ACADEMIC CONTRIBUTION

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### *Leadership &/or coordination*

2020-present [Speciation & Introgression Genomics Discussion Group](#), coordinator, IB, UCB  
2017-19 Biodiversity Seminar Committee, A/V coordinator, Biodiversity Research Center, UBC  
2018 Dining Society Treasurer, Green College, UBC  
2017-18 Sustainability Committee, Co-Chair, Green College, UBC  
2015-16 Art Committee, Co-Chair, Green College, UBC

### **Reviewer service**

Auk (1), Molecular Ecology (2), Genome Biology and Evolution (1), Integrative and Comparative Biology (1), Poland National Science Center Grant Proposal (1).

## OUTREACH

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2021 Breaking Language Barriers in Biodiversity Science, guest mentor, UC Berkeley  
2019 Girls in Science Technology Engineering and Math (STEM), mentor, Templeton Secondary School, Vancouver  
2019 Nature Illustration Club Coordinator, UBC  
2015-19 Biodiversity Birding Group Coordinator, UBC

### *Public lectures*

- Sassy Tastes or Sexy Traits: Stories about Coevolution of Female Preference and Male Traits. Darwin's 203rd Birthday, **May 11<sup>th</sup> 2012**, Texas Memorial Museum.
- The Scales of Existence: A Journey from Population to Molecules (Collaborated with Isobel Mouat, Microbiology and Immunology; Kelsey Huus, Microbiology and Immunology; J. Andrew Alexander, Biochemistry and Molecular Biology), **Nov. 16<sup>th</sup> 2015**, UBC.
- The Hermits' Expeditions: Stories about the Habitat, Flora, Fauna and People in Northwest America, **Sep. 26<sup>th</sup> 2016**, Green College, UBC.
- On the Speciation of Species: the Fantastic Process Underlying Biodiversity, **Mar. 26<sup>th</sup> 2018**, Green College, UBC.