

FINDLEY RANSLER FINSETH

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EDUCATION AND POSITIONS

	Keck Science Department , Claremont, CA Claremont McKenna, Pitzer, and Scripps Colleges Assistant Professor of Biology* *On parental leave fall 2019	2016-present
	University of Montana , Missoula, MT Post-doctoral Research Associate Department of Organismal Biology and Ecology	2013-2016
Ph. D.	Cornell University , Ithaca, NY Ph.D. in Ecology and Evolution	2006-2013
	University of Denver , Denver, CO Research Associate Rocky Mountain Center for Conservation Genetics and Systematics	2004-2006
B. Sc.	University of Virginia , Charlottesville, VA B. Sc. in Biology with Distinction	1999-2003

PUBLICATIONS

*Undergraduate co-author
 Note: surname changed from “Ransler” to “Finseth”

Peer-reviewed publications:

FR Finseth, K Brown, A Demaree*, L Fishman. (2022) Supergene potential of a selfish centromere. *Philosophical Transactions of the Royal Society B*. 377: 202110208

F Finseth, S Halvorsen*, S Budischak. (2022) Genomic heterozygosity is associated with parasite abundance, but the effects are not mediated by condition. *Evolutionary Ecology*.
<https://doi-org.ccl.idm.oclc.org/10.1007/s10682-022-10175-8>

FR Finseth, T Nelson, L Fishman. (2021) Selfish chromosomal drive shapes recent centromeric histone evolution in monkeyflowers. *PLOS Genetics* 17(4): e2009418.*
<https://doi.org/10.1371/journal.pgen.1009418>

*Chosen by the editors as a *Perspectives* article, which highlights work considered to be of particular importance.

- T Nelson, A Stathos, D Vanderpool, FR Finseth, Y Yuan, L Fishman. (2021) Ancient and recent introgression shape the evolutionary history of pollinator adaptation and speciation in a model monkeyflower radiation. *PLOS Genetics* 17(2):e1009095.
<https://doi.org/10.1371/journal.pgen.1009095>
- K Muenzen*, J Monroy, FR Finseth. Evolution of the PEVK region of titin across mammals. (2019) *G3: Genes, Genomes, and Genetics*, 9: 1103-1115.
- T Nelson, P Monnahan, M McIntosh*, K Anderson*, E MacArthur-Waltz*, FR Finseth, J Kelly, L Fishman. (2019) Extreme copy number variation at a tRNA ligase affecting phenology and fitness in yellow monkeyflowers. *Molecular Ecology*, 28: 1460-1475.
- FR Finseth, RG Harrison. (2018) Genes integral to the sexual function of male reproductive tissues drive evolutionary rate heterogeneity. *G3: Genes, Genomes, Genetics*, 8: 39-51.
- AC Case**, FR Finseth**, CM Barr, L Fishman. (2016) Selfish evolution of cytonuclear incompatibility in *Mimulus*. *Proceedings of the Royal Society B*, 283: 20161493
 **Equal contribution
- M Hendrick**, FR Finseth**, M Matthiassen*, K Palmer*, E Broder*, L Fishman. (2016) Top-down and bottom-up approaches combine to identify a major gene underlying monkeyflower adaptation to an extreme habitat. *Molecular Ecology*, 25: 5647-5662
 **Equal contribution
 – Highlighted in *Molecular Ecology: News and Views*, 25:5605-5607, Nov 2016
- FR Finseth, Y Dong, AS Saunders, L Fishman. (2015) Duplication and adaptive evolution of a key kinetochore protein in *Mimulus*, a genus with female meiotic drive. *Molecular Biology and Evolution*, 32: 2694-706
- FR Finseth, ER Bondra*, RG Harrison (2014) Selective constraint dominates the evolution of a novel reproductive gland. *Molecular Biology and Evolution*, 12: 3266-3281
- FR Finseth, RG Harrison (2014) A comparison of next-generation sequencing technologies for transcriptome assembly and utility for RNA-Seq in a non-model bird. *PLoS ONE*, 9: e108550
- FR Finseth, SR Iacovelli*, RG Harrison, EK Adkins-Regan (2013) A non-semen copulatory fluid influences the outcome of sperm competition in Japanese quail. *Journal of Evolutionary Biology*, 26: 1875 -1889
 – Highlighted in *New Scientist*, 12:06, 05 Aug 2013
- FA Ransler, SJ Oyler-McCance, TW Quinn (2011) Genetic consequences of trumpeter swan (*Cygnus buccinator*) reintroductions. *Conservation Genetics*, 12: 257-268
- Oyler-McCance, SJ, FA Ransler, LK Berkman, TW Quinn. (2007) A rangewide population genetic study of trumpeter swans. *Conservation Genetics*, 8: 1339-1353
- Oyler-McCance SJ, FA Ransler, LK Berkman, Quinn TW (2006) A comparison of trumpeter swan populations using nuclear and mitochondrial genetic markers. Final Report, US Fish and Wildlife Service, Denver, CO

St John, J, FA Ransler, TW Quinn, SJ Oyler-McCance. (2006) Characterization of microsatellite loci isolated in trumpeter swan (*Cygnus buccinator*). *Molecular Ecology Notes*, 6: 1083-1085.

Blumstein, DT, A Runyan, M Seymour*, A Nicodemus*, A Ozgul, FA Ransler*, S Im, T Stark, C Zugmeyer, JC Daniel. (2004) Locomotor ability and wariness in yellow-bellied marmots. *Ethology*, 110, 615-634.

In preparation:

E Bekele*, T Finley*, F Jammes, and FR Finseth. *In prep* Self-pollination promotes quantitatively flatter epidermal petal cells in monkeyflowers. Draft available upon request.

F Callahan*, E Anderson*, N Day, M Coleman, FR Finseth. *In prep* The neurogenetic basis of pair-bonding behavior in zebrafish.

E Mahdavi*, F Finseth. *In prep*. Evolutionary rate of male and female reproductive proteins expressed across developmental and fertilization stages in a outcrossing plant.

TEACHING AND PROFESSIONAL EXPERIENCE

Instructor

2022 Introductory Biology 43, Keck Science Department, lab and lecture
 2022 Genomics and Society, Keck Science Department, lab and lecture
 2021 Introductory Biology 43, Keck Science Department, lab and lecture
 2021 Genomics and Bioinformatics, Keck Science Department, lab and lecture (Virtual)
 2020 Introductory Biology 43, Keck Science Department, lab and lecture (Virtual)
 2019 Genomics and Bioinformatics, Keck Science Department, lab and lecture
 2018 Introductory Biology 43, Keck Science Department, lab and lecture
 2018 Genomics and Bioinformatics, Keck Science Department, lab and lecture
 2017 Genetics, Keck Science Department, lab
 2017 Genomics and Bioinformatics, Keck Science Department, lab and lecture
 2016 Genetics, Keck Science Department, lab
 2010 Instructor, *Writing in the Majors: Evolution*, John S. Knight Writing Institute, Cornell University
 **Student essay won 2nd place for the John S. Knight writing award, a university-wide writing competition
 2007-2010 Lab Instructor, *Introductory Biology I/II*, Cornell University (six semesters)

Teaching Assistant

2013 Head Teaching Assistant, *Evolution and Biodiversity*, Cornell University
 2011 Head Teaching Assistant, *Evolution and Biodiversity*, Cornell University
 2011 Teaching Assistant, *Ecological Genetics*, Cornell University
 2007 Teaching Assistant, *Tropical Field Ornithology*, Cornell University
 2001 Teaching Assistant, *Vertebrate Zoology Laboratory*, University of Virginia

Guest Lectures

2011 "Conservation Genomics", *Ecological Genetics*, Cornell University
 2011 "Population Structure", *Ecological Genetics*, Cornell University

Technician Positions

2003 Field Technician, Kilauea Field Station, Hawaii Volcanoes National Park
2002-2003 Lab Technician, Antonovics Lab, University of Virginia
2002 Field Technician, Rocky Mountain Biological Laboratory

SELECTED PRESENTATIONS

May 2022 Causes and consequences of gene drive in a natural system. *Invited oral presentation at Oregon State University: Cascades, Bend, OR*

Mar 2022 Causes and consequences of gene drive in a natural system. *Invited oral presentation at The University of Tennessee, Chattanooga, Chattanooga, TN*

Dec 2018 Decoding the dark matter of the genome. *Contributed oral presentation at Keck Science Department, Claremont Colleges*

Feb 2018 Reproductive conflict in yellow monkeyflowers. *Invited oral presentation at The University of Tennessee, Chattanooga, Chattanooga, TN*

Jan 2018 Reproductive conflict in yellow monkeyflowers. *Invited oral presentation at Miami University of Ohio, Oxford, OH*

Oct 2017 Reproductive conflict in yellow monkeyflowers. *Invited oral presentation at Cal Poly San Luis Obispo, San Luis Obispo, CA*

Feb 2017 Genomic consequences of genetic conflict in yellow monkeyflowers. *Invited oral presentation at Pomona College, Claremont, CA.*

Dec 2016 Genomic consequences of genetic conflict in yellow monkeyflowers. *Invited oral presentation at Rancho Santa Ana Botanic Garden, Claremont, CA*

Nov 2016 Genomic consequences of genetic conflict in yellow monkeyflowers. *Invited oral presentation at Biology Department, Harvey Mudd College.*

Nov 2016 Genomic consequences of genetic conflict in yellow monkeyflowers. *Contributed oral presentation at Keck Science Department, Claremont Colleges.*

Apr 2016 Causes and consequences of reproductive conflict. *Invited oral presentation at Department of Integrative Biology, CU Denver.*

Jun 2016 A selfish centromere drives centromeric-histone coevolution in *Mimulus*. *Oral presentation at Evolution Society Meetings, Austin, TX*

Dec 2015 Causes and consequences of reproductive conflict. *Invited oral presentation at Keck Science Department, Claremont Colleges.*

- Dec 2014 Reproductive conflict and genomic variation. *Invited oral presentation* at Pacific University
- Jun 2014 Exploring centromeric diversity in *Mimulus*. *Invited oral presentation* at Mimulus meetings, Duke University
- Jun 2014 Duplication and adaptive evolution of a key kinetochore protein in *Mimulus*, a genus with centromere-associated meiotic drive. *Contributed oral presentation* at Evolution Society Meetings, Raleigh, NC
- Sep 2013 Sperm selection and selective constraint: the evolution of a novel reproductive gland. *Invited oral presentation* at Department of Organismal Biology & Ecology, University of Montana
- Sep 2013 Selective constraint and sperm competition during the evolution of a novel reproductive gland. *Invited oral presentation* at Biology of Sperm Meeting, University of Sheffield
- Jun 2012 Rapid evolution of genes encoding a unique reproductive proteome in Japanese quail. *Contributed oral presentation* at Evolution Society Meetings, Ottawa, CA
- Jan 2012 Rapid evolution of genes encoding a unique reproductive proteome in Japanese quail. *Invited oral presentation* at Center for Vertebrate Genomics, Cornell
- Dec 2011 Rapid evolution of genes encoding a unique reproductive proteome. *Oral presentation* at December Symposium, Department of Ecology and Evolutionary Biology, Cornell University
- Jun 2011 The role of foam in sperm competition. *Oral presentation* at Evolution Society Meetings, University of Oklahoma
- Dec 2011 Rapid evolution of genes encoding a unique reproductive proteome. *Invited oral presentation* at Evolution Group, Cornell University

FELLOWSHIPS, GRANTS, AND AWARDS

Fellowships

- 2011 P.E.O. Scholar Award (\$15,000)
- 2007 Cornell Lab of Ornithology Summer Fellowship (\$1,500)
- 2006-2007 Presidential Life Sciences Fellow, Cornell University (\$22,000)

Grants and Contracts

- 2022 OCAC Faculty Collaboration Grant, (\$2,000)
- 2021 OCAC, Data Science Course Development Grant, (\$1,500)
- 2021 OCAC, Faculty Development Grant, (\$1,500)
- 2019 Westland Natural, "Conservation genomics of an endangered cactus", (\$1,000)
- 2018 Professional Development Grant, Claremont Colleges, "DNA Barcoding Workshop with Next Generation Sequencing" (\$2,500)

2018	Center for Teaching and Learning Grant, Claremont Colleges, “Nanopore DNA sequencing for the 21 st century classroom.” (\$8,100)
2017	HHMI, collaborative grant, “Linking cell shape, a microscopic trait, to organismal-level selective pressures” (\$13,333)
2010-2012	NSF Doctoral Dissertation Improvement Grant, “Genetic Basis of a Unique Avian Reproductive Proteome” (\$14,994, DEB #1010757)
2011	Paul F. Feeny Award (\$1000)
2011, 2009	Cornell Sigma Xi Award (\$600; \$1000)
2011	Orenstein Fund Award (\$750)
2010	Frank M. Chapman Memorial Fund, American Museum of Natural History (\$3,000)
2010, 2008	Andrew W. Mellon Grant (\$1,000; \$1,500)
2009, 2008	Department of Ecology and Evolutionary Biology Research Award (\$500; \$750)
2009-2012	Cornell Conference Travel Grant (\$675; \$440; \$515; \$515)
2008	Society of Systematic Biologists, Student Research Award (\$1,650)

Awards

2010	Outstanding Graduate Teaching Assistant, College of Life and Agricultural Sciences, Cornell University
2007, 2008	Honorable Mention, NSF Graduate Research Fellowship
2003	Phi Beta Kappa, University of Virginia
1999-2003	Echols Scholar, University of Virginia

SERVICE

Keck

- Academic Standards Committee, member; Claremont McKenna (2022)
- Search Committee, Organismal Biology Visiting Faculty (2022)
- Diversity, Equity and Inclusion Committee, elected member (2021-2022)
- Grievance Hearing Committee, member (SCR, 2021)
- Anti-racism task force, member; Accountability and Transparency sub-committee (2020-2021)
- Keck Executive Committee, elected member (2018-2020)
- Claremont McKenna Science Vision Team, elected member (2019)
- Computer Science Implementation Team, Scripps College (2018-2020)
- Biology Education Specialist search committee (2019)
- 5C Data Science Vision Team, member (2018)
- 5C Biology Distinguished Speaker, committee member (2018-2019)
- Watson Committee, member, Scripps College (2018-2019)
- Post-Baccalaureate Faculty Panel Member, Scripps College (2017-2018; 2016-2017)
- Scripps College Capstone Day, moderator (2017, 2018)
- Co-organizer, Keck Summer Research Symposium (2017,2018)
- Biophysics search committee, Keck Science Department (2017)
- 5C New faculty orientation, panelist (2017)
- Panelist, Fulbright interview committee, Scripps College (2017, 2021)

Reviewer

Proceedings of the National Academy of Sciences, Molecular Ecology, Evolution, Molecular Biology and Evolution, BMC Genomics, Journal of Molecular Evolution, Heredity, PLoS ONE, Auk, Conservation Genetics, United States Geological Survey, Scientific Reports, Chromosome Research, French National Research Agency, Cornell Sigma Xi grant review board

Membership

- *Society for the Study of Evolution, Sigma Xi, Society for Systematic Biologists, Genetics Society of America*

TEACHER TRAINING ACTIVITIES

Workshop, *“Using Canvas in the Classroom”*, Scripps 2021

Course, *“Online Course Design”*, Center for Teaching and Learning at the Claremont Colleges (2020)

Participant in *“How to Facilitate Engaged Learning in Online Classes”*, Minerva Schools Workshop (2020)

Panel member, *“Data Science in the Liberal Arts Classroom”*, Claremont McKenna Teaching Summit (2019)

Panel member, *“Technology in the classroom”*, Claremont Colleges 5C Orientation (2017)

Participant in *“Active learning”*, *“Transparency in Teaching”* and *“Difficult classroom discussions”*, workshops held by the Center for Teaching and Learning at the Claremont Colleges (2016, 2019)

Participant in *“Teaching at CMC: Excellence, Innovation, and Technology”*, workshop (2017, 2019)

Participant in *“Mimulus in the Classroom”*, a workshop for the development, implementation, and dissemination of *Mimulus* lab exercises in the classroom (2014)

Teaching Writing: Writing in the Majors, a graduate training course for teaching undergraduate writing in the disciplines (2010)