

## **DARREN IRWIN**

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### **CURRENT POSITIONS**

2014– Professor, Department of Zoology, UBC  
2004– Member, Biodiversity Research Centre, UBC

### **EDUCATION**

1994–2000 Ph.D., Biological Sciences, University of California, San Diego (advisor: Dr. Trevor Price)  
1988–1992 B.S., Biological Sciences (with Honors & Distinction), Stanford University, Stanford, California (advisor: Dr. Ward Watt)

### **PREVIOUS APPOINTMENTS**

2005–2023 Director, Cowan Tetrapod Collection, Beaty Biodiversity Museum, UBC  
2014–2015 Interim Director, Beaty Biodiversity Museum, UBC  
2009–2014 Associate Professor, Department of Zoology, UBC  
2010–2011 Visiting Sabbatical Scholar, Department of Genetics, University of Wisconsin, Madison  
2004–2009 Assistant Professor, Department of Zoology, UBC  
2003–2004 Postdoctoral Research Fellow, Center for Tropical Research, Institute of the Environment, University of California, Los Angeles  
2001–2002 NSF International Research Fellow, Molecular Population Biology Group, Department of Animal Ecology, Lund University

### **SPECIAL PROFESSIONAL QUALIFICATIONS**

2018– Fellow, American Ornithological Society (Elective Member since 2014)  
2004– Certified as a Master Bird Bander by Environment Canada

### **GRANTS & HONOURS**

2023–2027 NSERC Discovery Grant: “Investigating the Dual Nature of Hybrid Zones: Integrating Adaptive Introgression and Low Hybrid Fitness into One Theory”  
2017–2022 NSERC Discovery Grant: “Evolution of the Causes of Speciation: Comparative Analysis of Genomic Variation and the Genetic Basis of Traits Responsible for Diversification”  
2017–2022 NSERC Discovery Accelerator Supplement  
2016–2018 Genome BC Grant: “Genomic Differentiation among Northern Goshawks of Coastal British Columbia”

- 2012–2017 NSERC Discovery Grant: “Comparative Genomic Analysis of Hybridization and Speciation: Uncovering Genes and Traits Responsible for Diversification”
- 2010–2012 NSERC Discovery Grant, “Testing Mechanisms of Speciation and Hybridization in Terrestrial Vertebrates” (awarded for 2010–2015; 2012–2015 declined)
- 2010 NSERC Research Tools and Infrastructure Grant: “Ultracold Freezers for Molecular Ecology and Evolution”
- 2005–2010 NSERC Discovery Grant: “Intraspecific Variation and Speciation in Passerine Birds”
- 2006–2007 Early Career Scholar, Peter Wall Institute for Advanced Studies
- 2006 Just Desserts Award, UBC Alma Mater Society and UBC Graduate Student Association (for going ‘above and beyond the call of duty’ in service to graduate students)
- 2005 New Opportunities Grant from Canadian Foundation for Innovation / British Columbia Knowledge Development Fund: “Facility for Molecular BioGeography”
- 2000–2002 NSF International Research Fellowship: “The Role of Migration in Speciation: a Study of two Ring Species”
- 1998–2000 NSF grant: “Analysis of a Ring Species” (co-written with PI Trevor Price)
- 1998 NSF Dissertation Enhancement grant: “U.S.–Russian/Kazakhstan Dissertation Research: Analysis of a Ring Species”
- 1996 Sigma Xi Grant-in-Aid of Research
- 1996 Blake Award from the American Ornithologists’ Union
- 1995 Jeanne Messier Memorial Fund grant
- 1995 Exploration Fund grant from The Explorers Club
- 1994 Markey Fellowship, University of California, San Diego
- 1988 DSJ Scholarship, Stanford University

## PUBLICATIONS

\*Undergraduate Student

+Graduate Student

‡Postdoc

79. Nikelski, E.<sup>+</sup>, A.S. Rubtsov, & **D. Irwin**. 2023. High heterogeneity in genomic differentiation between phenotypically divergent songbirds: a test of mitonuclear co-introgression. *Heredity* 130: 1–13.
78. Ore, M.J.<sup>+</sup>, S. Wang<sup>+</sup>, & **D. Irwin**. 2023. Gradual transitions in genetics and songs between coastal and inland populations of *Setophaga townsendi*. *Ornithology* 140: ukac060.
77. Natola, L.<sup>+</sup>, S.M. Billerman, M.D. Carling, S.S. Seneviratne<sup>‡</sup>, & **D. Irwin**. 2023. Geographic variability of hybridization between red-naped and red-breasted sapsuckers. *Evolution* 77: 580–592.
76. **Irwin, D.**, & D. Schluter. 2022. Hybridization and the coexistence of species. *American Naturalist* 200: E93–E109.
75. Natola, L.<sup>+</sup>, S.S. Seneviratne<sup>‡</sup>, & **D. Irwin**. 2022. Population genomics of an emergent tri-species hybrid zone. *Molecular Ecology* 31: 5356–5367.
74. Askelson, K.K.<sup>+</sup>, A. Gerald<sup>‡</sup>, & **D. Irwin**. 2022. Using genomics to reveal conservation units: the case of the Haida Gwaii goshawks. “Guest box” (pp. 485–486) in F.W. Allendorf, W.C. Funk, S.N. Aitken, M. Byrne, & G. Luikart, *Conservation and the Genomics of Populations*, 3rd Edition. Oxford University Press.
73. Mikkelsen, E.K.<sup>\*</sup>, & **D. Irwin**. 2021. Ongoing production of low-fitness hybrids limits range overlap between divergent cryptic species. *Molecular Ecology* 30: 4090–4102.

72. Wang, S.<sup>+</sup>, M.J. Ore<sup>+</sup>, E.K. Mikkelsen\*, J. Lee-Yaw, D.P.L. Toews, S. Rohwer & **D. Irwin**. 2021. Signatures of mitonuclear coevolution in a warbler species complex. *Nature Communications* 12: 4279.
71. **Irwin, D.E.** 2020. Assortative mating in hybrid zones is remarkably ineffective in promoting speciation. *American Naturalist* 195: E150–E167.
70. Wang, S.<sup>+</sup>, S. Rohwer, D.R. de Zwaan<sup>+</sup>, D.P.L. Toews, I.J. Lovette, J. Mackenzie\* & **D. Irwin**. 2020. Selection on a small genomic region underpins differentiation in multiple color traits between two warbler species. *Evolution Letters* 4: 502–515.
69. Geraldes, A.<sup>‡</sup>, K.K. Askelson<sup>+</sup>, E. Nikelski<sup>+</sup>, F.I. Doyle, W.L. Harrower, K. Winker & **D.E. Irwin**. 2019. Population genomic analyses reveal a highly differentiated and endangered genetic cluster of northern goshawks (*Accipiter gentilis laingi*) in Haida Gwaii. *Evolutionary Applications* 12: 757–772. *Shared first authorship of first two authors.*
68. Wang, S.<sup>+</sup>, S. Rohwer, K. Delmore & **D.E. Irwin**. 2019. Cross-decades stability of an avian hybrid zone. *Journal of Evolutionary Biology* 32: 1242–1251.
67. Delmore, K.E.<sup>‡</sup>, J. Lugo, B.M. Van Doren, M. Lundberg, S. Bensch, **D.E. Irwin** & M. Liedvogel. 2018. Comparative analysis examining patterns of genomic differentiation across multiple episodes of population divergence in birds. *Evolution Letters* 2: 76–87.
66. **Irwin, D.E.**, B. Milá, D.P.L. Toews<sup>‡</sup>, A. Brelsford, H.L. Kenyon<sup>+</sup>, A.N. Porter<sup>+</sup>, C. Grossen<sup>‡</sup>, K.E. Delmore<sup>‡</sup>, M. Alcaide<sup>‡</sup> & J.H. Irwin. 2018. A comparison of genomic islands of differentiation across three young avian species pairs. *Molecular Ecology* 27: 4839–4855.
65. **Irwin, D.E.** 2018. Sex chromosomes and speciation in birds and other ZW systems. *Molecular Ecology* 27: 3831–3851.
64. Toews, D.P.L.<sup>‡</sup>, I.J. Lovette, **D.E. Irwin** & A. Brelsford. 2018. Similar hybrid composition among different age and sex classes in the Myrtle–Audubon’s warbler hybrid zone. *The Auk: Ornithological Advances* 135: 1133–1145.
63. Uy, J.A.C., **D.E. Irwin** & M.S. Webster. 2018. Behavioral isolation and incipient speciation in birds. *Annual Review of Ecology, Evolution, and Systematics* 49: 1–24.
62. Brelsford, A., D.P.L. Toews<sup>‡</sup> & **D.E. Irwin**. 2017. Admixture mapping in a hybrid zone reveals loci associated with avian feather coloration. *Proceedings B* 284: 20171106. *Shared first authorship of the first two authors.*
61. Kenyon, H.L.<sup>+</sup>, M. Alcaide<sup>‡</sup>, D.P.L. Toews<sup>+</sup> & **D.E. Irwin**. 2017. Cultural isolation is greater than genetic isolation across an avian hybrid zone. *Journal of Evolutionary Biology* 30: 81–95.
60. Szabo, I., K. Walters, J. Rourke & **D.E. Irwin**. 2017. First record of House Swift (*Apus nipalensis*) in the Americas. *Wilson Journal of Ornithology* 129: 411–416.
59. Toews, D.P.L.<sup>+</sup>, K.E. Delmore<sup>+</sup>, M.M. Osmond<sup>+</sup>, P.D. Taylor & **D.E. Irwin**. 2017. Migratory orientation in a narrow avian hybrid zone. *PeerJ* 5: e3201.
58. Toews, D.P.L.<sup>+</sup>, J. Heavyside\* & **D.E. Irwin**. 2017. Linking the wintering and breeding grounds of warblers along the Pacific Flyway. *Ecology and Evolution* 7: 6649–6658.
57. Delmore, K.E.<sup>+</sup>, D.P.L. Toews<sup>+</sup>, R.R. Germain<sup>+</sup>, G.L. Owens<sup>+</sup> & **D.E. Irwin**. 2016. The genetics of seasonal migration and plumage color. *Current Biology* 26: 2167–2173.
56. Fernando, S.P.<sup>+</sup>, **D.E. Irwin** & S.S. Seneviratne<sup>‡</sup>. 2016. Phenotypic and genetic analysis support distinct species status of the Red-backed Woodpecker (Lesser Sri Lanka Flameback: *Dinopium psarodes*) of Sri Lanka. *The Auk: Ornithological Advances* 133: 497–511.
55. Grossen, C.<sup>‡</sup>, S.S. Seneviratne<sup>‡</sup>, D. Croll<sup>‡</sup> & **D.E. Irwin**. 2016. Strong reproductive isolation and narrow genomic tracts of differentiation among three woodpecker species in secondary contact. *Molecular Ecology* 25: 4247–4266.
54. **Irwin, D.E.** 2016. A tree of tree frogs around the Black Sea. *Molecular Ecology* 25: 4093–4096. (invited “Perspective”)

53. Irwin, D.E., M. Alcaide<sup>‡</sup>, K.E. Delmore<sup>+</sup>, J.H. Irwin & G.L. Owens<sup>+</sup>. 2016. Recurrent selection explains parallel evolution of genomic regions of high relative but low absolute differentiation in a ring species. *Molecular Ecology* 25: 4488–4507.
52. Irwin, D.E., & D.B. Wake. 2016. Ring species. Pages 467–475 in *Encyclopedia of Evolutionary Biology*, edited by R. M. Kliman. Oxford: Academic Press.
51. Seneviratne, S.S.<sup>‡</sup>, P. Davidson, K. Martin & D.E. Irwin. 2016. Low levels of hybridization across two contact zones among three species of woodpeckers (*Sphyrapicus* sapsuckers). *Journal of Avian Biology*, 47: 887–898.
50. Toews, D.P.L.<sup>+</sup>, A. Brelsford, B. Milá, C. Grossen<sup>‡</sup> & D.E. Irwin. 2016. Genomic variation across the yellow-rumped warbler species complex. *The Auk: Ornithological Advances* 133: 698–717.
49. Toews, D.P.L.<sup>+</sup>, L. Campagna, S.A. Taylor, C.N. Balakrishnan, D.T. Baldassarre, P.E. Deane-Coe, M.G. Harvey, D.M. Hooper, D.E. Irwin, C.D. Judy, N.A. Mason, J.E. McCormack, K.G. McCracken, C.H. Oliveros, R.J. Safran, E.S.C. Scordato, K.F. Stryjewski, A. Tigano, J.A.C. Uy & B.M. Winger. 2016. Genomic approaches to understanding population divergence and speciation in birds. *The Auk: Ornithological Advances* 133: 13–30.
48. Delmore, K.E.<sup>+</sup>, H.L. Kenyon<sup>+</sup>, R.R. Germain<sup>+</sup> & D.E. Irwin. 2015. Phenotypic divergence during speciation is inversely associated with differences in seasonal migration. *Proceedings of the Royal Society of London B* 282: 20151921.
47. Delmore, K.E.<sup>+</sup>, S. Hübner<sup>‡</sup>, N.C. Kane, R. Schuster, R.L. Andrew<sup>‡</sup>, F. Câmara, R. Guigo & D.E. Irwin. 2015. Genomic analysis of a migratory divide reveals candidate genes for migration and implicates selective sweeps in generating islands of differentiation. *Molecular Ecology* 24: 1873–1888.
46. Lee-Yaw, J.A.<sup>+</sup>, & D.E. Irwin. 2015. The importance (or lack thereof) of niche divergence to the maintenance of a northern species complex: the case of the long-toed salamander (*Ambystoma macrodactylum* Baird). *Journal of Evolutionary Biology* 28: 917–930.
45. Lee-Yaw, J.A.<sup>+</sup>, T. Sechley\* & D.E. Irwin. 2015. Conflicting effects of microhabitat on long-toed salamander (*Ambystoma macrodactylum*) movement: implications for landscape connectivity. *Canadian Journal of Zoology* 93: 1–7. Shared first authorship of the first two authors.
44. Alcaide, M.<sup>‡</sup>, E.S.C. Scordato<sup>+</sup>, T.D. Price & D.E. Irwin. 2014. Genomic divergence in a ring species complex. *Nature* 511: 83–85.
43. Delmore, K.E.<sup>+</sup>, & D.E. Irwin. 2014. Hybrid songbirds employ intermediate routes in a migratory divide. *Ecology Letters* 17: 1211–1218.
42. Lee-Yaw, J.A.<sup>+</sup>, C.G.C. Jacobs<sup>+</sup> & D.E. Irwin. 2014. Individual performance in relation to cytonuclear discordance in a northern contact zone between long-toed salamander (*Ambystoma macrodactylum*) lineages. *Molecular Ecology* 23: 4590–4602.
41. Szabo, I., S. Cavaghan\*, G. Hurley\* & D.E. Irwin. 2014. A call for the preservation of images, recordings, and other data in association with avian genetic samples, and the introduction of a solution: OMBIRDS. *The Auk: Ornithological Advances* 131: 321–326.
40. Toews, D.P.L.<sup>+</sup>, A. Brelsford<sup>+</sup> & D.E. Irwin. 2014. Isotopic variation across the Audubon's-myrtle warbler hybrid zone. *Journal of Evolutionary Biology* 27: 1179–1191.
39. Toews, D.P.L.<sup>+</sup>, M. Mandic<sup>+</sup>, J.G. Richards & D.E. Irwin. 2014. Migration, mitochondria and the yellow-rumped warbler. *Evolution* 68: 241–255.
38. Paxton, K.L.<sup>+</sup>, M. Yau\*, F.R. Moore & D.E. Irwin. 2013. Differential migratory timing of western populations of Wilson's Warbler (*Cardellina pusilla*) revealed by mitochondrial DNA and stable isotopes. *The Auk* 130: 689–698.
37. Delmore, K.E.<sup>+</sup>, J.W. Fox & D.E. Irwin. 2012. Dramatic intraspecific differences in migratory routes, stopover sites and wintering areas, revealed using light-level geolocators. *Proceedings of the Royal Society of London B* 279: 4582–4589.
36. Irwin, D.E. 2012. A novel approach for finding ring species: look for barriers rather than rings. *BMC Biology* 10: 21. (invited Commentary)

35. Irwin, D.E. 2012. Culture in songbirds and its contribution to the evolution of new species. Pages 163–178 in: *Creating Consilience: Integrating the Sciences and the Humanities*, edited by E. Slingerland & M. Collard. Oxford University Press, Oxford.
34. Irwin, D.E. 2012. Local adaptation along smooth ecological gradients causes phylogeographic breaks and phenotypic clustering. *American Naturalist* 180: 35–49.
33. Irwin, D.E. 2012. Look northward to the boreal, the home of many migrating birds. *Frontiers of Biogeography* 4: 99–101. (invited Book Review)
32. Lee-Yaw, J.A.<sup>+</sup>, & D.E. Irwin. 2012. Large geographic range size reflects a patchwork of divergent lineages in the long-toed salamander (*Ambystoma macrodactylum*). *Journal of Evolutionary Biology*, 25: 2276–2287.
31. Safran, R., S. Flaxman, M. Kopp, D.E. Irwin, D. Briggs, M.R. Evans, W.C. Funk, D.A. Gray, E.A. Hebets, N. Seddon, E. Scordato, L.B. Symes, J.A. Tobias, D.P.L. Toews<sup>+</sup> & J.A.C. Uy. 2012. A robust new metric of phenotypic distance to estimate and compare multiple trait differences among populations. *Current Zoology* 58: 426–439.
30. Seneviratne, S.S.<sup>‡</sup>, D.P.L. Toews<sup>+</sup>, A. Brelsford<sup>+</sup> & D.E. Irwin. 2012. Concordance of genetic and phenotypic characters across a sapsucker hybrid zone. *Journal of Avian Biology* 43: 119–130.
29. Toews, D.P.L.<sup>+</sup>, D.E. Irwin, S.J. Hejl, J.A. Holmes & D.E. Kroodsmas. 2012. Pacific Wren (*Troglodytes pacificus*). The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology.
28. Brelsford, A.<sup>+</sup>, B. Milá & D.E. Irwin. 2011. Hybrid origin of Audubon's warbler. *Molecular Ecology* 20: 2380–2389.
27. Irwin, D.E., J.H. Irwin & T.B. Smith. 2011. Genetic variation and seasonal migratory connectivity in Wilson's warblers (*Wilsonia pusilla*): species-level differences in nuclear DNA between western and eastern populations. *Molecular Ecology* 20: 3102–3115.
26. Kenyon, H.L.<sup>\*</sup>, D.P.L. Toews<sup>+</sup> & D.E. Irwin. 2011. Can song discriminate between MacGillivray's and Mourning warblers in a narrow hybrid zone? *Condor* 113: 655–663.
25. Rohwer, S., & D.E. Irwin. 2011. Molt, orientation, and avian speciation. *Auk* 128: 419–425.
24. Toews, D.P.L.<sup>+</sup>, A. Brelsford<sup>+</sup> & D.E. Irwin. 2011. Hybridization between Townsend's *Dendroica townsendi* and black-throated green warblers *D. virens* in an avian suture zone. *Journal of Avian Biology* 42: 434–446.
23. Brelsford, A.<sup>+</sup>, & D.E. Irwin. 2009. Incipient speciation despite little assortative mating: the yellow-rumped warbler hybrid zone. *Evolution* 63: 3050–3060.
22. Irwin, D.E., A. Brelsford<sup>+</sup>, D.P.L. Toews<sup>+</sup>, C. MacDonald<sup>\*</sup> & M. Phinney. 2009. Extensive hybridization in a contact zone between MacGillivray's and mourning warblers (*Oporornis tolmiei* and *O. philadelphia*) detected using molecular and morphometric analyses. *Journal of Avian Biology* 40: 539–552.
21. Irwin, D.E. 2009. Incipient ring speciation revealed by a migratory divide. *Molecular Ecology* 18: 2923–2925. (invited "Perspective")
20. Irwin, D.E. 2009. Speciation: New migratory direction provides route toward divergence. *Current Biology* 19: R1111–R1113. (invited "Dispatch")
19. Irwin, D.E., A.S. Rubtsov<sup>‡</sup> & E.N. Panov. 2009. Mitochondrial introgression and replacement between yellowhammers (*Emberiza citrinella*) and pine buntings (*Emberiza leucocephalos*) (Aves: Passeriformes). *Biological Journal of the Linnean Society* 98: 422–438.
18. Rush, A.<sup>+</sup>, R.C. Cannings & D.E. Irwin. 2009. Analysis of multilocus DNA reveals hybridization in a contact zone between *Empidonax* flycatchers. *Journal of Avian Biology* 40: 614–624.
17. Irwin, D.E., M.P. Thimgan<sup>\*</sup> & J.H. Irwin. 2008. Call divergence is correlated with geographic and genetic distance in greenish warblers (*Phylloscopus trochiloides*): a strong role for stochasticity in signal evolution? *Journal of Evolutionary Biology* 21: 435–448.
16. Toews, D.P.L.<sup>+</sup>, & D.E. Irwin. 2008. Cryptic speciation in a Holarctic passerine revealed by genetic and bioacoustic analyses. *Molecular Ecology* 17: 2691–2705. *The authors contributed equally to this work (order determined by musical ability).*

15. Irwin, D.E., & M. Hellström. 2007. Green Warbler *Phylloscopus (trochiloides) nitidus* recorded at Ottenby, Öland: a first record for Scandinavia. *Ornis Svecica* 17: 75–80.
14. Bensch, S., D.E. Irwin, J.H. Irwin, L. Kvist & S. Åkesson. 2006. Conflicting patterns of mitochondrial and nuclear DNA diversity in *Phylloscopus* warblers. *Molecular Ecology* 15: 161–171.
13. Irwin, D.E., S. Bensch, J.H. Irwin & T.D. Price. 2005. Speciation by distance in a ring species. *Science* 307: 414–416.
12. Irwin, D.E., & J.H. Irwin. 2005. Siberian migratory divides: the role of seasonal migration in speciation. Pages 27–40 in *Birds of Two Worlds: The Ecology and Evolution of Migration*, edited by R. Greenberg & P. P. Marra. Johns Hopkins University Press, Baltimore, Maryland.
11. Irwin, D.E., & J.H. Irwin. 2004. Speciation in a ring: the role of song. Page 204 in *Nature's Music: the Science of Birdsong*, edited by P. Marler and H. Slabbekoorn. Academic Press.
10. Price, T.D., A. Qvarnström & D.E. Irwin. 2003. The role of phenotypic plasticity in driving genetic evolution. *Proceedings of the Royal Society of London B* 270: 1433–1440.
9. Åkesson, S., S. Bensch, A. Hedenström & D.E. Irwin. 2002. Blowfly *Trypocalliphora braueri* (Diptera: Calliphoridae) larvae infestation in Willow Warblers *Phylloscopus trochilus* breeding in a hybrid zone. *Ornis Svecica* 12: 83–88.
8. Bensch, S., S. Åkesson & D.E. Irwin. 2002. The use of AFLP to find an informative SNP: genetic differences across a migratory divide in willow warblers. *Molecular Ecology* 11: 2359–2366.
7. Irwin, D.E. 2002. Phylogeographic breaks without geographic barriers to gene flow. *Evolution* 56: 2383–2394.
6. Irwin, D.E., & J.H. Irwin. 2002. Circular overlaps: rare demonstrations of speciation. *Auk* 119: 596–602. (invited “Overview”)
5. Irwin, D.E., P. Alström, U. Olsson & Z.M. Benowitz-Fredericks\*. 2001. Cryptic species in the genus *Phylloscopus* (Old World leaf warblers). *Ibis* 143: 233–247.
4. Irwin, D.E., S. Bensch & T.D. Price. 2001. Speciation in a ring. *Nature* 409: 333–337.
3. Irwin, D.E., J.H. Irwin & T.D. Price. 2001. Ring species as bridges between microevolution and speciation. *Genetica* 112–113: 223–243.
2. Irwin, D.E. 2000. Song variation in an avian ring species. *Evolution* 54: 998–1010.
1. Irwin, D.E., & T. Price. 1999. Sexual imprinting, learning and speciation. *Heredity* 82: 347–354.

#### TEACHING EXPERIENCE (all at UBC)

- 2010–2023 BIOL300, Fundamentals of Biostatistics (8 terms; 197–301 students each)
- 2005–2022 BIOL427, Ornithology and Herpetology (18 terms; 23–58 students each)
- 2021 BIOL140, Laboratory Investigations in Life Science (2 sections, 51 students total)
- 2016 BIOL501, Quantitative Methods in Ecology and Evolution (22 graduate students)
- 2009 BIOL525A, Speciation (with L. Rieseberg and D. Schluter; 8 graduate students)
- 2006–2007 ZOOL525, Evolution Discussion Group (1-credit course; 2 terms; about 20 graduate students each)
- 2006 BIOL409, Field Course in Ecology (intensive 2-week field course in the Yukon; 12 students)

#### INVITED PRESENTATIONS

- 2022 University of Basel, Department of Environmental Sciences.

- 2021 Symposium on “Advances in the study of reproductive isolation in birds,” annual conference of the American Ornithological Society / Society of Canadian Ornithologists (online).
- 2020 Speciation & Introgression Discussion Group, UC Berkeley (online).
- 2019 Gordon Research Conference on Speciation, Ventura, California. University of Wyoming, Department of Zoology and Physiology.
- 2018 Symposium on “Sexual signals and speciation in birds: combining field and genomic approaches,” International Ornithological Congress 2018, Vancouver, British Columbia.
- 2017 University of Illinois at Urbana–Champaign, Program in Ecology, Evolution & Conservation Biology.
- 2015 University of Oslo, Centre for Ecological and Evolutionary Synthesis.
- 2014 Symposium on “Genomic approaches to understanding avian speciation,” annual meeting of the American Ornithologists’ Union, Estes Park, Colorado.
- 2013 University of California, San Diego, Division of Biological Sciences. 5th Annual Peace Region Palaeontology Research Centre Symposium, Tumbler Ridge, British Columbia. FroSpects (Frontiers of Speciation Research) Behaviour and Speciation Workshop. Oslo, Norway.
- 2012 University of Toronto Scarborough, Department of Biological Sciences. Yukon Science Institute, Beringia Centre, Whitehorse, Yukon. November 18, 2012. (public lecture) Yukon Biodiversity Forum, Yukon College, Whitehorse, Yukon. (Keynote speaker)
- 2011 Queen’s University, Department of Biology. Centro de Investigação em Biodiversidade e Recursos Genéticos (CIBIO), Porto, Portugal. University of Chicago, Department of Ecology and Evolution. Field Museum, Chicago, Illinois. University of Wisconsin, Madison, Evolution Seminar Series.
- 2010 University of Wisconsin, Madison, Department of Zoology. 2010 Calpe Conference, Gibraltar Museum, Gibraltar.
- 2009 University of Northern British Columbia, Ecosystem Science and Management Program. Simon Fraser University, Department of Biological Sciences. Colorado State University, Fort Collins, Department of Biology. University of Colorado at Boulder, Department of Ecology and Evolutionary Biology. Symposium on “Evolutionary processes underlying avian biodiversity,” at *Evolution—the Experience*, Melbourne Convention Centre, Melbourne, Australia.
- 2008 Conference on *Integrating the Sciences and Humanities*, Peter Wall Institute for Advanced Studies, UBC.
- 2007 University of Western Ontario, Department of Biology. University of Toronto, Department of Ecology and Evolutionary Biology. University of Victoria, Department of Biology. Workshop on “Culture in evolutionary perspective,” Green College. UBC.

- 2006 Symposium on “Genetics of speciation,” American Genetics Association  
Annual Symposium, UBC.  
Zoology Graduate Student Symposium, UBC.
- 2005 University of Wyoming, Department of Zoology and Physiology.  
Simon Fraser University, Department of Biological Sciences.  
Canadian Wildlife Service, Ladner, British Columbia.  
Western Washington University, Department of Biology.
- 2003 University of British Columbia, Department of Zoology.  
University of California, Davis, Section of Evolution and Ecology.  
University of California, Berkeley, Museum of Vertebrate Zoology.  
University of California, Los Angeles, Department of Organismic Biology,  
Ecology, and Evolution.
- 2002 California State University, Northridge, Department of Biology.  
University of Nevada, Reno, Department of Biology.  
Duke University, Department of Biology.  
Symposium on “Birds of two worlds,” Smithsonian Institution.
- 2001 University of St. Andrews, Scotland, School of Biology.  
Uppsala University, Sweden, Departments of Animal Ecology and  
Population Biology, Evolutionary Biology Center.  
Lund University, Sweden, Department of Ecology.
- 2000 California State University, Fullerton, Department of Biological Science.
- 1999 University of Texas, Austin, Department of Zoology.

## **MENTORING**

### ***Current Lab Members***

- 2023– Finola Fogarty (MSc student)  
2022– Claudie Pageau (PhD student)  
2022– Caleigh Charlebois (MSc student)  
2018– Rashika Ranasinghe (PhD Candidate)  
2018– Kenneth Askelson (PhD Candidate)

### **Lab Alumni**

#### Postdoctoral researchers

- 2016–2018 Dr. Armando Gerales (now Research Scientist, UBC Botany)  
2013–2014 Dr. Christine Gossen (now Independent Group Leader, Department of  
Evolutionary Biology and Environmental Studies, University of Zurich,  
Switzerland)  
2011–2014 Dr. Miguel Alcaide (now Senior Molecular Diagnostics Scientist, SAGA  
Diagnostics, Lund, Sweden)  
2008–2012 Dr. Sampath Seneviratne (now Professor, Department of Zoology &  
Environment Sciences, University of Colombo, Sri Lanka)  
2005–2006 Dr. Alexander Roubtsov (now Head of Research Department, State Darwin  
Museum, Moscow, Russia)

#### Graduate students

- 2017–2022 Elizabeth Natola, PhD (now postdoctoral fellow, UBC)  
2018–2021 Ellen Nikelski, MSc (now PhD student, University of Toronto Scarborough)



- 2013–2020 Saminda Fernando, PhD (co–advised with Dr. Sampath Seneviratne; now Senior Lecturer, The Open University of Sri Lanka)
- 2016–2019 Madelyn Ore, MSc (now PhD student, Cornell University)
- 2014–2019 Silu Wang, PhD (now postdoctoral fellow, UC Berkeley / UC Davis)
- 2016–2018 Kenneth Askelson, MSc (now PhD student; see above)
- 2016–2017 Cheng Chen, MSc (co–advised with Dr. Jedediah Brodie)
- 2012–2015 Alison Porter, MSc (now completed a law degree—JD at University of Ottawa—and working with a law firm)
- 2010–2015 Kira Delmore, PhD (now Assistant Professor, Texas A&M University)
- 2009–2014 David Toews, PhD (now Assistant Professor, Pennsylvania State University)
- 2011–2013 Haley Kenyon, MSc (now PhD candidate, Queen’s University)
- 2008–2013 Julie Lee–Yaw, PhD (now Assistant Professor, University of Lethbridge)
- 2004–2010 Alan Brelsford, PhD (now Assistant Professor, UC Riverside)
- 2005–2008 Kathryn Kuker, MSc (co–advised with Dr. Lance Barrett–Lennard; now Senior Consultant/Senior Wildlife Biologist at ERM: Environmental Resources Management)
- 2005–2007 Andrew Rush, PhD (transferred to UC Berkeley after 2 years for personal reasons and completed PhD there; we published a paper together and are on good terms; now Continuing Lecturer, UC Berkeley)
- 2005–2007 David Toews, MSc (continued on to PhD—see above)

Honours Undergraduate Students

- 2019–2021 Quinn McCallum
- 2017–2018 Else Mikkelsen
- 2016–2018 Annagret Liederbach
- 2009–2010 Haley Kenyon

Advised and/or partly funded over 30 other undergraduate research projects.

Served on advisory committees of 34 additional PhD students and 27 additional MSc students.

Served as External Examiner for 7 PhD defenses at other universities.

**SERVICE**

- 2021– Co–developer and adjudicator, BRC Undergraduate Diversity Research Grants Program
- 2020–2023 Co–chair (until 2023, then member), Zoology Equity, Diversity, and Inclusion Committee
- 2018–2023 Executive Committee member, UBC Dept. of Zoology
- 2010–2023 Director, Cowan Tetrapod Collection, Beaty Biodiversity Museum, UBC
- 2005– More than a dozen public seminars or radio / newspaper interviews.
- 2004– Member of more than 20 short–term committees for UBC Zoology (e.g., hiring, promotion, safety, admissions committees)
- 2001– Reviewer of 216 manuscripts for 52 journals, and 62 grant proposals for 18 agencies
- 2000– Contributed, coauthored and/or advised student presenters of more than 60 scientific conference presentations.

- 2022 Member, Selection Committee, Raja Rosenbluth Award for Women in Biological Sciences
- 2019 Member, Rosemary Grant Award reviewing committee, Society for the Study of Evolution
- 2018 Study Guide on an alumniUBC / Worldwide Quest expedition to Peruvian Amazonia
- 2018 Co-organizer, symposium on “Sexual signals and speciation in birds: combining field and genomic approaches,” International Ornithological Congress, Vancouver, Canada.
- 2016–2018 Member of National Committee, International Ornithological Congress 2018, Vancouver, Canada
- 2014–2017 Subject Editor, *Journal of Avian Biology*
- 2014–2017 Member, Miller Award Committee, Cooper Ornithological Society
- 2014–2015 Interim Director, Beaty Biodiversity Museum
- 2009–2015 External examiner for 1 MSc and 5 PhD defenses, at 6 universities in 4 countries.
- 2008–2015 Member, Birds Specialist Subcommittee, Committee on the Status of Endangered Wildlife in Canada (COSEWIC); two four-year terms
- 2009–2012 Associate Editor, *The American Naturalist*
- 2009–2010 Member, NESCent (National Evolutionary Synthesis Center) working group, “An integrative evolutionary approach to examine sexual selection as a mechanism of speciation”
- 2005–2010 Director, Cowan Vertebrate Museum, UBC
- 2007 Organizer of symposium on “Mechanisms of speciation in birds,” 125th Stated Meeting of the American Ornithologists’ Union, University of Wyoming
- 2006–2007 Core Participant, MIGRATE (Migration Interest Group: Research Applied Toward Education), an NSF funded Research Coordination Network