

## KRISTA B. OKE, Ph.D., B.Sc. (Hons)

### Centennial Postdoctoral Fellow

College of Fisheries and Ocean Sciences, University of Alaska Fairbanks  
kristaoke@gmail.com

### ACADEMIC BACKGROUND

**Postdoctoral Researcher** 2017-2018, Department of Ecology and Evolutionary Biology, University of California Santa Cruz, Santa Cruz, CA

**Ph.D.** 2011-2017, Department of Biology, McGill University, Montreal, QC

**B.Sc. (Honours)** 2007-2011, Department of Biology, Memorial University, St. John's, NL

### PUBLICATIONS

**Oke, K.B.**, Cunningham, C.J., Quinn, T.P., Hendry, A.P. (2019) Independent lineages in a common environment: the roles of determinism and contingency in shaping the migration timing of even- versus odd-year pink salmon over broad spatial and temporal scales. *Ecology Letters*. doi: 10.1111/ele.13337

**Oke, K.B.** & Hendry, A.P. (2019) Genetic insights into the past, present, and future of a keystone species. *Proceedings of the National Academy of Sciences U.S.A.* 116-2: 344-346

**Oke, K.B.**, Motivans, E., Quinn, T.P., Hendry, A.P. (2018) Sexual dimorphism modifies habitat-associated divergence: Evidence from beach and creek breeding sockeye salmon. *Journal of Evolutionary Biology*. 32-3: 227-242

Bolnick, D.I., Barrett, R., **Oke, K.B.**, Rennison, D., Stuart, Y.E. (2018) (Non)Parallel Evolution. *Annual Reviews of Ecology, Evolution, and Systematics*. 49: 303-330

**Oke, K.B.**, Rolshausen, G., LeBlond, C., Hendry, A.P. (2017) How parallel is parallel evolution? A comparative analysis in fishes. *The American Naturalist*. 190-1: 1-16

**Oke, K.B.\***, Bukhair, M., Kaeuffer, R., Rolshausen, G., Räsänen, K., Bolnick, D.I., Peichel, C.L., Hendry, A.P. (2016) Does plasticity enhance or dampen phenotypic parallelism? A test with three lake-stream stickleback pairs. *Journal of Evolutionary Biology*. 29-1: 126-143

**\*Web of Science Highly Cited Paper (top 1% of Plant and Animal Science field)**

Rolshausen, G., Muttalib, S., Day, T., Kaeuffer, R., **Oke, K.**, Hanson, D., Hendry, A.P. (2015) When maladaptive gene flow does not increase selection. *Evolution*. 69-9: 2289-2302

Chaulk, A. C., Driscoll, S., **Oke, K. B.**, Coates, P. J., Caravan, H. E., & Chapman, T. W. (2014). Flight muscle breakdown in the soldier caste of the gall-inducing thrips species, *Kladothrips intermedius* Bagnall. *Insectes Sociaux*, 61(1), 57-66.

**Oke, K. B.\***, Westley, P. A., Moreau, D. T., & Fleming, I. A. (2013). Hybridization between genetically modified Atlantic salmon and wild brown trout reveals novel ecological interactions. *Proceedings of the Royal Society B: Biological Sciences*, 280(1763). DOI: 10.1098/rspb.2013.1047. **\*F1000 Prime Recommended.**

Google Scholar account at: [scholar.google.com/citations?user=WuxV5YIAAAAJ&hl=en](https://scholar.google.com/citations?user=WuxV5YIAAAAJ&hl=en)

### HONOURS AND AWARDS

# Curriculum Vitae

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W.D. Hamilton Award Finalist (Society for the Study of Evolution): 2017  
Vineberg Fellowship in Freshwater Biology/Limnology (McGill University): 2017  
Excellence in Doctoral Research Award, Canadian Society for Ecology and Evolution: 2016  
Graduate Research Travel Award (McGill University): 2013, 2015, 2016  
Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship (NSERC PGS-D): 2012-2015  
Lorne Trottier Science Accelerator Fellowship (McGill University): 2012-2013  
Alexander Graham Bell Canada Graduate Scholarship (NSERC CGS-M): 2011-2012  
Graduate Excellence Fellowship (McGill University): 2011-2013  
University Medal for Academic Excellence, Biology (Memorial University): 2011  
NSERC Undergraduate Student Research Award (USRA): 2009, 2010, and 2011  
Lou Visentin Award (Memorial University): 2010-2011  
Faculty of Science Dean's List (Memorial University): 2007-2011  
Lee Wulff Scholarship (Memorial University): 2009-2010  
Dean of Science Book Award (Memorial University): 2009-2010  
Poster Prize, Third Annual Summer Student Symposium (Memorial University): 2009

## TEACHING

### *Teaching assistantships*

BIOL 111: Principles: Organismal Biology, Fall 2015  
BIOL 215: Introduction to Ecology and Evolution, Fall 2015  
BIOL 304: Evolution, Fall 2016

### *Guest lectures*

Fish and Fisheries in a Changing World (University of Alaska Fairbanks, 4 lectures)  
Pacific Salmon Life Histories (University of Alaska Fairbanks, 1 lecture)  
Data Analyses in Community Ecology (University of Alaska Fairbanks, 1 lecture)  
Advanced Design and Statistics (McGill, 1 lecture)  
Contemporary Topics in Aquatic Ecology (McGill, 1 lecture)

### *Workshops*

Quebec Centre for Biodiversity Science R workshop presenter 2015-2017  
Workshop 1: Introduction to R  
Workshop 2: Loading and manipulating data  
Workshop 3: Introduction to ggplot2, plyr, and reshape  
Workshop 4: Linear models  
Workshop 7: Generalized linear mixed models (GLMMs)

## MENTORING

Gautier Magne (Co-advisor): 2019, Master's Internship, University of California Berkley and  
Université de Pau et des Pays de L'Adour (France)  
Minxin Lu: 2017, Independent Studies project, McGill  
Tristan Kosciuch: 2016, Biodiversity Science Discovery Award, Quebec Centre for Biodiversity  
Science (QCBS)  
Elena Motivans: 2013-2014, Independent Studies project, McGill

# Curriculum Vitae

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Mehvish Bukhari: 2013, Independent Studies project, McGill

## PRESENTATIONS

### *Invited seminars*

**Ecology and Evolutionary Biology Seminar Series, University of California Santa Cruz:** April 2018, Santa Cruz, California

Oke, K.B. (Non)parallel evolution in salmon and other fishes

**College of Fisheries and Ocean Sciences Department of Fisheries Seminars, UAF:** February 2018, Juneau, Alaska

Oke, K.B. (Non)parallel evolution and salmon

**McGill Organismal Seminar Graduate Student Speaker:** March 2016, Montreal, Quebec

Oke, K.B. Parallel evolution in fishes.

**FishBase Symposium 2014 – Fishes and Genes:** October 2014, Stockholm, Sweden

Oke, K.B., Westley, P.A.H., Moreau, D.T.R., Fleming, I.A.F. Hybridization between genetically modified Atlantic salmon and wild brown trout.

### *Select contributed talks*

**Alaska Marine Science Symposium:** January 2018, Anchorage, Alaska

Oke, K.B., Cunningham, C.J., Westley, P., Lewis, B., Baskett, M., Carlson, S., Hendry, A.P., Kindsvater, H., Reynolds, J., Kendall, N., Munch, S., Kobayashi, K., Vick, G., Jovanovich, M., Karaytayev, V., Clark, J., Kibele, J., Cornejo-Donoso, J., Palkovacs, E. How consistent are declines in the size and age of Alaska salmon?

**Evolution:** July 2017, Portland, Oregon

Oke, K.B., Cunningham, C.J., Quinn, T.P., Rolshausen, G., LeBlond, C., Hendry, A.P. The extent of parallelism in independent lineages in shared environments: Migration phenology of even-year and odd-year pink salmon (**W.D. Hamilton Award Finalist**)

**Canadian Society for Ecology and Evolution (CSEE):** July 2016, St. John's, Newfoundland

Oke, K.B., Rolshausen, G., LeBlond, C., Bukhari, M., Kaeuffer, R., Bolnick, D., Peichel, K., Quinn, T.P. Hendry, A.P. (Non)Parallel evolution in fishes: investigating potential drivers of non-parallelism in stickleback and salmon. (**Graduate Student Symposium**)

**Evolution:** June 2015, Guarujá, Sao Paulo, Brazil

Oke, K.B., LeBlond, C., Rolshausen, G., Hendry, A.P. How parallel is parallel evolution? A comparative analysis in fishes.

**Quebec Centre for Biodiversity Science Symposium:** December 2014, Montreal, Quebec

Oke, K.B., Bukhari, M., Kaeuffer, R., Rolshausen, G., Räsänen, K., Bolnick, D., Peichel, K., Hendry, A.P. Does plasticity enhance or dampen phenotypic parallelism in lake-stream stickleback?

**Genomes to Biomes:** May 2014, Montreal, Quebec

Oke, K.B., Bukhari, M., Kaeuffer, R., Rolshausen, G., Bolnick, D., Peichel, K., Hendry, A.P. (Non)parallelism in lake-stream stickleback: Plastic, genetic, or both?

**First Joint Conference on Evolutionary Biology:** July 2012, Ottawa, Ontario

Oke, K.B., Westley, P.A.H., Moreau, D.T.R., Fleming, I.A.F. Hybridization between genetically-modified Atlantic salmon and wild brown trout results in novel ecological interactions and potential genetic introgression

# Curriculum Vitae

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## ***Invited public outreach talks***

**Kenai Classic Roundtable:** August 2018, Soldotna, Alaska

Oke, K.B, Cunningham, C.J., Westley, P., Lewis, B., Baskett, M., Carlson, S., Hendry, A.P., Kindsvater, H., Reynolds, J., Kendall, N., Munch, S., Kobayashi, K., Vick, G., Jovanovich, M., Karaytayev, V., Clark, J., Kibele, J., Cornejo-Donoso, J., Palkovacs, E. Changes in the size and age of Alaska Salmon

**University of Alaska Anchorage Bookstore Public Lecture Series:** January 2018, Anchorage, Alaska

Oke, K.B. (Non)parallel evolution and Alaska salmon

## **PROFESSIONAL AFFILIATIONS**

American Society of Naturalists, Canadian Society for Ecology and Evolution, Society for the Study of Evolution, American Fisheries Society

## **PEER REVIEWER**

Evolution, Evolutionary Applications, Journal of Evolutionary Biology, Ecology and Evolution, Environmental Biology of Fishes, Journal of Great Lakes Research

## **PROFESSIONAL SERVICE**

Organismal biology representative, Biology Graduate Student Association: 2015-2016

Green committee representative, Biology Graduate Student Association: 2014-2016

Counselor, Biology Graduate Student Association: 2013-2016

Vice president, Biology Graduate Student Association: 2012-2013

## **PROFESSIONAL BACKGROUND**

Quebec Centre for Biodiversity Science R Workshop Coordinator: July 2016-June 2017

NSERC USRA Summer Research Student: May-August 2011

Fish Laboratory Research Technician: September 2009-December 2010

NSERC USRA Summer Research Student: May-August 2009, May-August 2010

Federal Student Work Experience Program (FSWEP) Student Assistant, Department of Fisheries and Oceans Canada: May-August 2008