

EVELYN LISE JENSEN

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CURRENT APPOINTMENT

2019- Postdoctoral Fellow
Department of Ecology and Evolutionary Biology, Yale University
Mentor: Dr. Adalgisa Caccone

PAST APPOINTMENT

2017-2019 NSERC and Genome Canada Postdoctoral Fellow
Department of Biology, Queen's University
Mentor: Dr. Stephen Loughheed

EDUCATION

2017 Ph.D. in Biology
Department of Biology, University of British Columbia Okanagan
Advisor: Dr. Michael Russello
Thesis: Learning from the past, examining the present and planning for the future:
Genetic approaches to the conservation of giant Galapagos tortoises

2013 M.Sc. in Biology
Department of Biology, University of British Columbia Okanagan
Advisor: Dr. Michael Russello
Thesis: Genetic assessment of taxonomic uncertainty and conservation units in
painted turtles, with a focus on the at-risk *Chrysemys picta bellii* in British
Columbia

2011 B.Sc. with Honors in Evolutionary Biology
Department of Biological Sciences, University of Alberta
Advisors: Drs. Sally Leys and David Coltman
Thesis: Studying the genetic structure of sponge populations

PUBLICATIONS

Peer Reviewed Articles

15. Reid, B., J. Kass, S. Wollney, **E. L. Jensen**, M. A. Russello, E. Viola, J. Pantophlet, J. Iverson, Peery, C. Raxworthy, and E. Naro-Maciel. 2019. Disentangling the genetic effects of refugial isolation and range expansion in a trans-continentially distributed species. *Heredity*, 122: 441-457.

14. **Jensen, E. L.**, D. L. Edwards, Ryan. C. Garrick, J. M. Miller, J. P. Gibbs, L. J. Cayot, W. Tapia, A. Caccone, and M. A. Russello. 2018. Population genomics through time provides insights into the consequences of decline and rapid demographic recovery through head-starting in a Galapagos giant tortoise. *Evolutionary Applications*, 11: 1881-1821.
13. **Jensen, E. L.**, J. M. Miller, D. L. Edwards, R. C. Garrick, W. Tapia, A. Caccone, and M. A. Russello. 2018. Temporal mitogenomics of the Galapagos giant tortoise from Pinzón reveals potential biases in population genetic inference. *Journal of Heredity*, 109: 631-640. **(Cover, invited blog feature for Oxford University Press)**
12. Miller, J. M., M. C. Quinzin, D. L. Edwards, D. A. R. Eaton, **E. L. Jensen**, M. A. Russello, J. P. Gibbs, W. Tapia, D. Rueda, and A. Caccone. 2018. Genome-wide assessment of diversity and divergence among extant Galápagos giant tortoise species. *Journal of Heredity* 109: 611-619.
11. **Jensen, E. L.**, A. Mooers, G. Caccone, and M. A. Russello. 2016. I-HEDGE: Determining the optimum complementary sets of taxa for conservation using evolutionary isolation. *Peer J*. 4:e2350.
10. Milián-García, Y., **E. L. Jensen**, S. Ribalta Mena, E. Perez Felitas, G. Sosa Rodriguez, L. Guerra Manchena, G. Espinosa Lopez, and M. A. Russello. 2016. Genetic evidence for multiple paternity in the Critically Endangered Cuban crocodile (*Crocodylus rhombifer*). *Amphibia-Reptilia* 37: 273-281.
9. Shafer, A. B., J. B. W. Wolf, P. C. Alves, L. Bergström, G. Colling, L. Dalén, L. De Meester, R. Ekblom, S. Fior, M. Hajibabaei, A. R. Hoebel, J. Höglund, **E. L. Jensen**, M. Krützen, A. J. Norman, E. M. Österling, N. J. Ouborg, J. Piccolo, C. R. Primmer, F. A. Reed, M. Roumet, J. Salmons, M. K. Schwartz, J. Thaulow, M. Valtonen, M. Weissensteiner, C. W. Wheat, and P. Zieliński. 2016. Reply to Garner et al. *Trends in Ecology and Evolution* 31:83-84.
8. **Jensen, E. L.**, W. Tapia, A. Caccone, and M. A. Russello. 2015. Genetics of a head-start program to guide conservation of an endangered Galápagos tortoise (*Chelonoidis ephippium*). *Conservation Genetics* 16: 823-832.
7. Milián-García, Y., **E. L. Jensen**, J. Madsen, S. Alvarez Alonso, A. Serrano Rodriguez, G. Espinosa Lopez, and M. A. Russello. 2015. Founded: genetics reconstruct lineage diversity and kinship within on-island captive populations of Cuban Amazon parrots to inform *ex situ* conservation. *Journal of Heredity* 106: 575-579. **(Cover)**
6. Shafer, A. B., J. B. W. Wolf, P. C. Alves, L. Bergström, M. W. Bruford, I. Brännström, G. Colling, L. Dalén, L. De Meester, R. Ekblom, K. D. Fawcett, S. Fior, M. Hajibabaei, J. A. Hill, A. R. Hoebel, J. Höglund, **E. L. Jensen**, J. Krause, T. N. Kristensen, M. Krützen, J. K. McKay, A. J. Norman, R. Ogden, E. M. Österling, N. J. Ouborg, J. Piccolo, D. Popović, C. R. Primmer, F. A. Reed, M. Roumet, J. Salmons, T. Schenkar, M. K. Schwartz, G. Segelbacher, H. Senn, J. Thaulow, M. Valtonen, A. Veale, P. Vergeer, N. Vijay, C. Vilà, M. Weissensteiner, L. Wennerström, C. W. Wheat, and P. Zieliński. 2015. Genomics and the challenging translation into conservation practice. *Trends in Ecology & Evolution* 30:78-87.
5. **Jensen, E. L.**, P. Govindarajulu, and M. A. Russello. 2015. Genetic assessment of taxonomic uncertainty in Painted Turtles. *Journal of Herpetology* 49: 314-324.

4. Morbey, Y., **E. L. Jensen**, and M. A. Russello. 2014. Time scale matters: genetic analysis does not support adaptation-by-time as the mechanism for adaptive seasonal declines in kokanee reproductive lifespan. *Ecology and Evolution* 4:3714-3722.
3. **Jensen, E. L.**, P. Govindarajulu, and M. A. Russello. 2014. When the shoe doesn't fit: applying conservation unit concepts to western painted turtles at their northern periphery. *Conservation Genetics* 15:261-274.
2. **Jensen, E. L.**, P. Govindarajulu, J. Madsen, and M. A. Russello. 2014. Extirpation by introgression?: Genetic evidence reveals hybridization between introduced *Chrysemys picta* and endangered Western Painted Turtles (*C. p. bellii*) in British Columbia. *Herpetological Conservation and Biology* 9:342-353.
1. **Jensen, E. L.**, L. M. Dill, and J. F. Cahill. 2011. Applying behavioral-ecological theory to plant defense: light-dependent movement in *Mimosa pudica* suggests a trade-off between predation risk and energetic reward. *American Naturalist* 177:377-381.

Articles Submitted for Peer Review

- Jensen, E. L.**, B. McClenaghan, B. Ford, A. Lentini, K. C. R. Kerr and M. A. Russello. Genotyping on the Ark: A synthesis of genetic resources available for species in zoos. Revisions submitted November 21, 2019 to *Zoo Biology* (MS# ZOO-19-029).
- Jensen, E. L.**, C. Tschirter, P. V. C. de Groot, K. M. Hayward, M. Branigan, M. Dyck and S. C. Loughheed. Canadian polar bear population structure using genome-wide markers. Revisions submitted January 23, 2020 to *Ecology and Evolution* (MS# ECE-2019-10-01377).
- Hayward, K., M. P. Harwood, S. C. Loughheed, Z. Sun, P. V. C. de Groot and **E. L. Jensen**. A real-time PCR assay to accurately quantify polar bear DNA in fecal extracts. Revisions submitted January 23, 2020 to *PeerJ* (MS# 2019:10:42109).
- Poulakakis, N., J. M. Miller, **E. L. Jensen**, L. Beheregaray, M. A. Russello, S. Glaberman, J. Boore and A. Caccone. Colonization history of Galapagos giant tortoises: insights from mitogenomes support the progression rule. Revisions submitted February 7, 2020 to *Journal of Zoological Systematics and Evolutionary Research* (MS# JZS.201900152).
- Hekkala, E., J. Gatesy, A. Narachania, R. Meredith, M. Russello, M. Aardema, **E. L. Jensen**, S. Montanari, C. Brochu, M. Norell and G. Amato. Ancient DNA illuminates the evolutionary history of the extinct Holocene crocodile of Madagascar, *Voay robustus*. Submitted January 30, 2020 to *Communications Biology* (MS# COMMSBIO-20-0287-T).

Book Chapter

- Russello, M. A. and **E. L. Jensen**. 2018. *Ex situ* conservation genetics in the age of genomics. In: *Population Genomics: Wildlife* (ed. Hohenlohe, P.). Springer Publishing, New York

Other Publications

- Jensen, E. L.** 2014. Additional analysis on the genetic aspects of Coastal Western Painted Turtle populations and draft guidance for conservation. Document commissioned by the British Columbia Ministry of Environment

RESEARCH GRANTS

Compute Canada, Resources for Research Groups

2019

Applicant: Stephen C. Lougheed, co-authored by Evelyn L. Jensen

Project title: Evolutionary and conservation genomics of wildlife

Amount: High performance computing allocation, 56 Core Years, 60 TB storage, value of \$10,000 CAD

American Genetic Association, Ecological, Evolutionary and Conservation Genomics Award

2015

Applicant: Evelyn L. Jensen

Project title: Looking through the bottleneck: genomic analysis of historic and contemporary patterns of genetic variation in an endangered Galápagos tortoise (*Chelonoidis ephippium*)

Amount: \$10,000 USD

AWARDS AND HONORS

- 2018 Postdoctoral Travel Award, Queen's University (\$750)
- 2018 Governor General's Academic Gold Medal, award for the highest academic standing for a graduate student, University of British Columbia Okanagan
- 2017 Ph.D. Excellence and Diversity Award, Canadian Society for Ecology and Evolution (\$500)
- 2016 Graduate Student Researcher of the Year, University of British Columbia Okanagan (\$1,500)
- 2012, 2016 Graduate Student Travel Award, University of British Columbia Okanagan (\$2,000 total)
- 2015 Biodiversity Research: Integrative Training and Education Travel Award, University of British Columbia (\$500)

FELLOWSHIPS AND SCHOLARSHIPS

- 2018-2020 Postdoctoral Fellowship, Natural Sciences and Engineering Research Council of Canada (\$90,000 over 2 years)
- 2012-2017 University Graduate Fellowship, University of British Columbia Okanagan (\$22,500 total)
- 2016 Graduate Dean's Thesis Fellowship, University of British Columbia Okanagan (\$6,000)
- 2013-2016 Postgraduate Scholarship, Natural Sciences and Engineering Research Council of Canada (\$63,000 over 3 years)
- 2011, 2013 Graduate Entrance Scholarship, University of British Columbia Okanagan (\$9,500 total)

- 2012-2013 Alexander Graham Bell Canada Graduate Scholarship, Natural Sciences and Engineering Research Council of Canada (\$17,500)
2012 University of British Columbia Okanagan Graduate Scholarship (\$700)
2011 Undergraduate Research Award, University of Alberta (\$100)
2009, 2010 Jason Lang Scholarship, Alberta Scholarship Programs (\$2,000 total)

TEACHING EXPERIENCE

Course Co-Instructor

Queen's University

Origins, patterns, and conservation of biodiversity in Western Mexico, international field course Feb 16 - March 2, 2019. Co-instructed with Dr. Stephen Lougheed and Dr. Javier Salgado-Ortiz

Teaching Assistantships

University of British Columbia Okanagan

Evolutionary Principles and Methods (2014, 2015, 2016)

Population Genetics (2016)

Classical Genetics (2013)

Physiology of Multicellular Organisms (2012)

Biology for Science Majors (2011)

Guest Lectures

Queen's University

Speciation and Macroevolution (1 lecture, 2017)

University of British Columbia Okanagan

Evolutionary Principles and Methods (3 lectures, 2014, 2015, 2016)

Behavioural Ecology (1 lecture, 2012)

Molecular Approaches in Ecology and Evolution (1 lecture, 2015)

Workshops

Yale University, Yale Institute for Biospheric Studies

“Variant detection and SNP filtering for population genomics”, November 15, 2019

Planned and led 3 hour workshop on best practices for variant detection, genotype calling and variant filtering to an audience of graduate students and post docs.

MENTORING

Co-supervised undergraduate Honors students

2019-2020: Joseph Kamm (Yale University)

2018-2019: Zoe Clark, Kristen Hayward, Sean Vanderluit (Queen's University)

2017-2018: Michelle Harwood (Queen's University)

2011-2012: Jeanette Madsen (University of British Columbia Okanagan)

Supervised NSERC Undergraduate Summer Research Award students

2018: Zoe Clark, Tristan Frappier-Brinton, Kristin Hayward (Queen's University)

Supervised directed studies students

2017: Danya Cook, Ashlyn Ketterer, Nicholas Phillipow (University of British Columbia Okanagan)

Work-study students

2018: Hoi Yee So (Queen's University)

2012: Anna Hall (University of British Columbia Okanagan)

PRESENTATIONS

Contributed Oral Presentations at Scientific Meetings [*Presenter]

Evelyn L. Jensen*, Joshua Miller, Nikos Poulakakis, Maud Quinzen, and Adalgisa Caccone. Population genomics of Galapagos tortoises: New insights into the evolution of the lineages on Santa Cruz Island. *Evolution* 2019; June 22-25, 2019; Providence, RI.

Evelyn L. Jensen*, Peter V.C. de Groot, Marsha Branigan, Markus Dyck, Lisette Waits, and Stephen C. Loughheed. Genomic tools to enable non-invasive monitoring of polar bears. ArcticNet 2018; December 10-14, 2018; Ottawa, ON.

Evelyn L. Jensen*, Michelle P. Harwood, Peter V. C. de Groot, Markus Dyck, Marsha Branigan, and Stephen C. Loughheed. Temporal analysis of polar bear population genetic structure in the Canadian Arctic. North American Congress for Conservation Biology; July 23-25, 2018; Toronto, ON.

Evelyn L. Jensen*, Adalgisa Caccone, and Michael A. Russello. Genome-wide historical DNA analysis reveals insights into population genetic theory and conservation practice. *Evolution* 2017; June 23-27, 2017; Portland, OR.

Evelyn L. Jensen*. Learning from the past, examining the present and planning for the future: Genetic approaches to the conservation of giant Galápagos tortoises. PhD Diversity and Excellence Research Award Symposium at the Canadian Society for Ecology and Evolution Meeting; May 8-10, 2017; Victoria, BC.

Evelyn L. Jensen*, Adalgisa Caccone, and Michael A. Russello. Genomic consequences of population decline and recovery in the Pinzón Island Galápagos Tortoise. *Evolution* 2016; June 17-21, 2016; Austin, TX.

Evelyn L. Jensen*, Purnima Govindarajulu and Michael A. Russello. When the shoe doesn't fit: applying conservation unit concepts to the Western Painted Turtle in British Columbia. Canadian Society for Ecology and Evolution Meeting; May 12-15, 2013; Kelowna, BC.

Poster Presentations at Scientific Meetings [*Presenter]

Evelyn L. Jensen*, Peter V. C. de Groot, Markus Dyck, Marsha Branigan, and Stephen C. Loughheed. BEARWATCH: Genomic tools to enable non-invasive, community-based monitoring of polar bears in Canada. The Canadian Society of Ecology and Evolution meeting; 2018 July 18-20; Guelph, ON.

Evelyn L. Jensen*, Washington Tapia, Adalgisa Caccone, and Michael A. Russello. Genetics of a head-start program to guide conservation of an endangered Galápagos tortoise

(*Chelonoidis ephippium*). The American Genetic Association meeting; 2014 June, 27-29; Seattle, WA.

Evelyn L. Jensen*, Jeanette Madsen, Purnima Govindarajulu and Michael A. Russello. Extirpation by Introgression?: Investigating the genetic consequences of released *Chrysemys picta* on endangered *C. p. bellii* in British Columbia. The First Joint Congress on Evolution; 2012 July 6-12; Ottawa, ON.

Invited Talks [*Presenter]

Evelyn L. Jensen*. From Darwin to DNA: evolution, genomics and conservation of the Galapagos giant tortoises. EEB Seminar presented at the Biology Department, Trent University; February 1, 2019, Peterborough, ON.

Evelyn L. Jensen*. Understanding and conserving wildlife using population genetics. Seminar presented at the Biology Department, Thompson Rivers University; January 4, 2019, Kamloops, BC.

Evelyn L. Jensen*. Queen's University Biological Station Seminar Series; The past, present and future of the Giant Galápagos Tortoises on Pinzón Island; May 30, 2018; Lake Opinicon, ON.

Evelyn L. Jensen*, Adalgisa Caccone, and Michael A. Russello. Symposium on Genomics of Agriculture & the Environment; Genomic consequences of population decline and recovery in the Pinzón Island Galápagos Tortoise; November 16, 2016; Kelowna, BC.

Evelyn L. Jensen*. Central Okanagan Naturalists Club; Learning from the past, examining the present and planning for the future: Genetic approaches to the conservation of giant Galápagos tortoises; January 12, 2016; Kelowna, BC.

Michael A. Russello*, **Evelyn L. Jensen***, and Matthew Lemay*. Okanagan Water and Biodiversity Forum; How DNA Can Inform Biodiversity Conservation: Case Studies from the Okanagan; September 16-17, 2014; Kelowna, BC.

Institutional Presentations [*Presenter]

Evelyn L. Jensen*. From Darwin to DNA: evolution, genomics and conservation of the Galapagos giant tortoises. EEB Seminar presented at the Biology Department, Queen's University; November 22, 2018, Kingston, ON.

Evelyn L. Jensen*. BEARWATCH: Genomic tools to enable non-invasive, community-based monitoring of polar bears in Canada. Pecha Kucha talk given at the Postdoctoral Research Showcase, Queen's University; September 20, 2018, Kingston, ON.

Evelyn L. Jensen*. Using genetics to understand the past, present and future of the Giant Galápagos Tortoises on Pinzón Island. Talk given at the FAB* Lab, Simon Fraser University; April 1, 2016, Burnaby, BC.

Evelyn L. Jensen*, Adalgisa Caccone, and Michael A. Russello. Genomic consequences of population decline and recovery in the Pinzón Island Galápagos Tortoise. Poster presented at the British Columbia EcoEvo retreat; 2016, November 4-6; Brackendale, BC and at the UBC Okanagan Biology Graduate Symposium; 2016, September 6; Kelowna, BC.

Evelyn L. Jensen*. Using genetics to understand the past, present and future of the Giant Galápagos Tortoises on Pinzón Island. Talk given at the Biology Graduate Student Society Seminar Series; February 4, 2016, Kelowna, BC.

Evelyn L. Jensen*, Arne Mooers, Adalgisa Caccone, and Michael A. Russello. Incorporating

evolutionary isolation and complementarity in ranking giant Galápagos tortoises for conservation using genetic networks. Poster presented at the British Columbia EcoEvo retreat; 2015, November 13-15; Brackendale, BC and at the UBC Okanagan Biology Graduate Symposium; 2015, September 11; Kelowna, BC.

Evelyn L. Jensen*, Washington Tapia, Adalgisa Caccone, and Michael A. Russello. Genetics of a head-start program to guide conservation of an endangered Galápagos tortoise (*Chelonoidis ephippium*). Poster presented at the British Columbia EcoEvo Retreat; 2014 November, 7-9; Brackendale, BC.

Evelyn L. Jensen*. Genetics of a head-start program: Conserving the Giant Galápagos tortoises. Talk given at the Biology Graduate Student Society Seminar Series; February 12, 2014, Kelowna, BC.

Evelyn L. Jensen*. Conservation genetics of the western painted turtle in British Columbia. Talk given at the Biology Graduate Student Society Seminar Series; October 10, 2012, Kelowna, BC.

RESEARCH EXPERIENCE

- 2013 Contract, British Columbia Ministry of Environment
Commissioned to write a guidance document outlining recommendations for conserving western painted turtles based on genetic evidence.
- 2012 Research Assistant, Ecological and Conservation Genomics Lab, University of British Columbia Okanagan
Performed genotyping of trawl samples of Kokanee salmon to assign ecotype.
- 2010 Research Technician, Carcass and Meat Science Lab, University of Alberta
Conducted fat analysis of pork tissue and tested prototype equipment for the spectral analysis of beef tissue in collaboration with the Faculty of Engineering.

SERVICE TO PROFESSION

- 2020- Lead co-organizer for a symposium “*Putting whole genome sequences to work for conservation*” at the Canadian Society for Ecology and Evolution Meeting, Edmonton AB, May 28-30 2020.
- 2018- Member of GEOBON (Group on Earth Observations Biodiversity Observation Network) Genetics working group, developing essential biodiversity variables for measuring and monitoring intraspecific genetic diversity
- 2016 Member of a working group on Conservation and Phylogenies, funded by the Canadian Institute for Ecology and Evolution
- 2011-2014 Advisor to the Western Painted Turtle Recovery Team, British Columbia Ministry of Environment
- 2013 Volunteer Coordinator and Public Outreach Committee Member for the Canadian Society for Ecology and Evolution Meeting 2013

Invited Reviewer

Amphibia-Reptilia (3), *Animal Conservation* (1), *Conservation Genetics* (4), *Conservation Genetics Resources* (1), *Ecology and Evolution* (2), *Global Ecology and Conservation* (1), *Molecular Ecology* (1), *Molecular Ecology Resources* (1), *PeerJ* (1), *PLoS One* (2), *Proceedings of the Royal Society B: Biological Sciences* (1), *The European Zoological Journal* (1).

UNIVERSITY SERVICE

- 2012-2016 Mentee Liaison on the Women in Science and Engineering Mentoring Program planning committee, University of British Columbia Okanagan
- 2014-2015 Member of the hiring committee for the position of Assistant Professor, Department of Biology, University of British Columbia Okanagan
- 2011-2014 Executive Member of the Biology Graduate Students Society, University of British Columbia Okanagan
- 2012-2013 Member of the Dean of Graduate Studies Student Advisory Committee, University of British Columbia Okanagan

WORKSHOPS AND COURSES

- 2018 “The Fundamentals of OCAP®”, online course through the First Nations Information Governance Centre on applying the principles of Ownership, Control, Access and Possession of First Nations information and data to research.
- 2018 “Science Outside the Lab North”, a week-long science policy workshop, Ottawa, ON and Montreal, QC, Canada
- 2017, 2018 “Research Collaboration with Indigenous Communities” workshop, Queen’s University, Kingston ON, Canada
- 2015 “ConGen”, a bioinformatics analysis workshop, Flathead Lake Biological Station, Montana, USA
- 2014 “Collections-based research in the genomic era”, a meeting at the Linnean Society, London, England
- 2014 “ConGenOmics”, a European Science Foundation workshop in Uppsala, Sweden

PROFESSIONAL SOCIETY MEMBERSHIPS

American Genetic Association
American Naturalists Society
Canadian Society for Ecology and Evolution
Society for the Study of Evolution