

Evelien de Greef

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EDUCATION

MSc in Biological Sciences , <i>University of Manitoba, Winnipeg</i>	Sept 2018-2020
<ul style="list-style-type: none">• Studied population and migration timing genomics in the purple martin• <i>Supervisors</i>: Drs. K.C. Fraser and K.E. Delmore• <i>Thesis</i>: Genomic mechanisms underlying migration timing and population differentiation across North America in a long-distance migratory songbird	
BSc in Wildlife, Fish, and Conservation Biology , <i>University of California, Davis</i>	Sept 2011-2015
<ul style="list-style-type: none">• Specialization in Wildlife Biology	

WORK EXPERIENCE

Research Technician , <i>Garroway lab, University of Manitoba, Winnipeg</i>	Dec 2021-present
<ul style="list-style-type: none">• Processed and organized large sets of genomic data of Arctic and sub-Arctic cetaceans• Conducted various genetic analyses to study population structure, demographic history, signatures of selection, and genotype-environmental associations• Prepared reports for Fisheries and Oceans Canada and manuscripts for publication• Trained students in topics such as bioinformatics and analyzing genomic data with high performance computing, and creating maps and extracting environmental data in R• Presented current research at conferences	
Biological Technician , <i>Fraser lab, University of Manitoba, Winnipeg</i>	Sept 2021
<ul style="list-style-type: none">• Banded and deployed ICARUS tracking tags on American robins captured through mist-netting• Investigated movement data on Movebank and animal tracker applications	
Conservation Assistant , <i>Assiniboine Park Conservancy, Winnipeg, MB</i>	May-Aug 2021
<ul style="list-style-type: none">• Reared an endangered butterfly species, the Poweshiek Skipperling, at the Assiniboine Zoo• Conducted butterfly transect surveys in the Tall Grass Prairie Reserve• Led nest box monitoring and banding for tree swallows and purple martins• Conducted polar bear observations at the Assiniboine Zoo for an ongoing behavioural study	
Researcher , <i>Marine Gene Probe Lab, Dalhousie University, Halifax, NS</i>	Nov 2020-Mar 2021
<ul style="list-style-type: none">• Analyzed population genomics in the northern bottlenose whale• Prepared reports for Fisheries and Oceans Canada and a manuscript for publication	
Biological Technician , <i>Fraser lab, University of Manitoba, Winnipeg</i>	Sept-Nov 2020
<ul style="list-style-type: none">• Analyzed purple martin genomic data to examine demographic history• Organized data for over 300 geolocator tracks	
Junior Specialist , <i>Museum of Wildlife and Fish Biology, University of California Davis</i>	Mar 2016-Jul 2018
<ul style="list-style-type: none">• Project coordinator for the Putah Creek Nestbox Highway• Managed teams of field technicians and undergraduate interns to monitor 200 nest boxes• Banded hundreds of songbirds, including tree swallows and western bluebirds• Organized large data sets and wrote reports, brochures, handouts, and posters• Led tours and other outreach events and maintained an active blog• Conducted bird surveys, mist-netting, and live mammal trapping for museum projects	
Field Technician , <i>Janelle-Nolan & Associates Environmental Consulting, Sacramento, CA</i>	Jun-Aug 2017
<ul style="list-style-type: none">• Conducted surveys for spotted owls and northern goshawks in the Sierra Nevada mountains	
Field Technician , <i>The Fishery, Galt, CA</i>	Feb-Mar 2016
<ul style="list-style-type: none">• Tested the effectiveness of using a XADS TR3 laser to deter herons, egrets, and cormorants from fish farms to explore non-lethal deterrent techniques	

Field Technician, *Museum of Wildlife and Fish Biology, University of California Davis*

Apr-Sept 2015

- Led teams of undergraduate interns to monitor songbird nest boxes along Putah Creek
- Collected morphometric data and banded over 450 birds of 4 passerine species
- Created species lists of known birds, mammals, and herps of Putah Creek for landowner reports
- Performed pre-construction biomonitoring surveys at Winters Putah Creek Park

Student Assistant, *Department of Civil and Environmental Engineering, UC Davis*

Jun 2013-Feb 2015

- Analyzed several thousand hours of underwater video footage counting lamprey and salmon at dams along the Columbia and Snake Rivers
- Reviewed final reports and trained undergraduate student interns

PUBLICATIONS (first author: 5; co-author: 6)

Karachaliou, E., Schmidt, C., **de Greef, E.**, Docker, M.F., Garroway, C.J. (2025). Urbanization is associated with reduced genetic diversity in marine fish populations. *Molecular Ecology*, 34(7). <https://doi.org/10.1111/mec.17711>

de Greef, E., Müller, C., Thorstensen, M.J., Ferguson, S.H., Watt, C.A., Marcoux, M., Petersen, S.D., Garroway, C.J. (2024). Unraveling the genetic legacy of commercial whaling and population dynamics in Arctic bowhead whales and narwhals. *Global Change Biology*, 30(10). <https://doi.org/10.1111/gcb.17528>

Rivkin, L.R., Richardson, E.S., Miller, J.M., Atwood, T.C., Baryluk, S., Born, E.W., Davis, C., Dyck, M., **de Greef, E.**, Laidre, K.L., Lunn, N.J., McCarthy, S., Obbard, M.E., Owen, M.A., Pilfold, N.W., Roberto-Charron, A., Wiig, O., Wilder, A.P., Garroway, C.J. (2024). Assessing the risk of climate maladaptation for Canadian polar bears. *Ecology Letters*, 27(8), e14486. <https://doi.org/10.1111/ele.14486>

Feyrer, L.J., **de Greef, E.**, Wellcome Sanger Institute Tree of Life Management, Samples and Laboratory team, Wellcome Sanger Institute Scientific Operations: Sequencing Operations, Wellcome Sanger Institute Tree of Life Core Informatics team, Tree of Life Cord Informatics collective, Darwin Tree of Life Consortium. (2024). The genome sequence of the Northern Bottlenose whale, *Hyperoodon ampullatus* (Forster, 1770). *Wellcome Open Research* 9:410. <https://doi.org/10.12688/wellcomeopenres.22743.1>

Korpach, A.M. **de Greef, E.**, Newediuk, L., Schmidt, C., Garroway, C.J., Thorstensen M.J. (2024). Moving to mate? Migration strategy does not predict genetic structure or diversity in bats (Chiroptera). *Biological Journal of the Linnean Society*, blae068. <https://doi.org/10.1093/biolinnean/blae068>

Garroway, C.J.*, **de Greef, E.***, Lefort, K.J., Thorstensen, M.J., Foote, A.D., Matthews, C.J.D., Higdon, J.W., Kucheravy, C.E., Petersen, S.D., Rosing-Asvid, A., Ugarte, F., Dietz, R., Ferguson, S.H. (2024). Climate change introduces threatened killer whale populations and conservation challenges to the Arctic. *Global Change Biology*, 30(6), e17352. <https://doi.org/10.1111/gcb.17352>

**co-first authors*

de Greef, E., Suh, A., Thorstensen, M. J., Delmore, K., Fraser, K. (2023). Genomic architecture of migration timing in a long-distance migratory songbird. *Scientific Reports*, 13: 2437. <https://doi.org/10.1038/s41598-023-29470-7>

Riggio, J., Engilis Jr., A. Cook, H., **de Greef, E.**, Karp, D. S., Truan, M. L. (2023). Long-term monitoring reveals the impact of changing climate and habitat on the fitness of cavity-nesting songbirds. *Biological Conservation*, 278: 109885. <https://doi.org/10.1016/j.biocon.2022.109885>

de Greef, E., Einfeldt, A. L., Miller, P. J. O., Ferguson, S. H., Garroway, C. J., Lefort, K. J., Paterson, I. G., Bentzen, P., & Feyrer, L. J. (2022). Genomics reveal population structure, evolutionary history, and signatures of selection in the northern bottlenose whale, *Hyperoodon ampullatus*. *Molecular Ecology*, 31(19): 4919-4931. <https://doi.org/10.1111/mec.16643>

de Greef, E., Brashear, W., Delmore, K., & Fraser, K. (2022). Population structure, patterns of natal dispersal and demographic history in a declining aerial insectivore, the purple martin *Progne subis*. *Journal of Avian Biology*, 2022(6), e02929. <https://doi.org/10.1111/jav.02929>

Fraser, K.C., Shave, A., **de Greef, E.**, Siegrist, J., and Garroway, C.J. (2019). Individual variability in migration timing can explain long-term, population-level advances in a songbird. *Frontiers in Ecology and Evolution*, 7(324). <https://doi.org/10.3389/fevo.2019.00324>

REPORTS (available upon request)

de Greef, E. (2024). Report on pedigree analyses of the western Hudson Bay polar bear population. Submitted to Environment and Climate Change Canada.

Einfeldt, A., Feyrer, L.J., Paterson, I., Ferguson, S., Miller, P., **de Greef, E.**, Bentzen, P. (2022). Characterization of Population Structure in Northern Bottlenose Whales (*Hyperoodon ampullatus*) in the North Atlantic from an Analysis of Microsatellite Data. *Canadian Technical Report of Fisheries and Aquatic Sciences*, 3467: vii + 17p

de Greef, E., Einfeldt, T., Paterson, I.G., Bentzen, P., Feyrer, L. (2021). Demographic history and signatures of selection in the northern bottlenose whale *Hyperoodon ampullatus* through genomic resequencing data. Submitted to Fisheries and Oceans Canada.

de Greef, E., Einfeldt, T., Paterson, I.G., Bentzen, P., Feyrer, L. (2021). Evaluating population structure in the northern bottlenose whale *Hyperoodon ampullatus* using genomic resequencing data. Submitted to Fisheries and Oceans Canada.

de Greef, E., Truan, M., Engilis, A. (2018). Putah Creek Nestbox Highway 2017 Annual Report. Report from the UC Davis Museum of Wildlife and Fish Biology to private and public landowners along lower Putah Creek.

de Greef, E., Truan, M., Engilis, A. (2017). Putah Creek Nestbox Highway 2016 Annual Report. Report from the UC Davis Museum of Wildlife and Fish Biology to private and public landowners along lower Putah Creek.

TEACHING EXPERIENCE

Teaching Assistant, University of Manitoba, Winnipeg

Biology of Birds	Sept-Dec 2019
Biology II: Biological Diversity, Function & Interactions	Jan-Apr 2019
Biology 1: Principles and Themes	Sept-Dec 2018

Undergraduate Teaching Assistant, University of California, Davis

Laboratory of Habitat Conservation and Restoration	Jan-Mar 2015
Laboratory of Biology and Conservation of Wild Birds	Oct-Dec 2014
Natural History of California's Wild Vertebrates	Jan-Mar 2014

AWARDS

AOS Council Award - Best Student Presentation, NAOC conference 2020 (USD \$500)	Aug 2020
UMGSA Conference Grant, University of Manitoba (CAD \$410)	Oct 2019
Best Student Presentation Award, SCO-SOC Quebec conference 2019 (CAD \$300)	Aug 2019
Master's Studentship Award, Research Manitoba (CAD \$12,000)	June 2019
Student Travel Award, University of Manitoba Faculty of Science (CAD \$250)	June 2019
Student Travel Award, University of Manitoba Dept of Biological Sciences (CAD \$250)	May 2019
Grants-in-Aid of Research, Sigma Xi (USD \$500)	May 2019
Fred Cooke Student Award, Society of Canadian Ornithologists (CAD \$1,000)	Apr 2019

ORAL PRESENTATIONS (presenting author: 14, co-presenting author: 1)

"A multi-species assessment of future genetic adaptability in Arctic and sub-Arctic whales" de Greef, E. , Garroway, C.J., Ferguson, S.H., and Matthews, C.J.D., National DFO Genomics Workshop. Live video 5-minute presentation	April 2025
"The genetic legacy of commercial whaling" de Greef, E. and Garroway, C.J. Canadian Society for Ecology and Evolution, Vancouver, British Columbia	May 2024
"Two sympatric killer whale populations in Eastern Canadian Arctic waters: secondary contact and signatures of selection" de Greef, E. and Garroway, C.J. Canadian Society for Ecology and Evolution and Canadian Botanical Association, Winnipeg, Manitoba	Jun 2023
"Identification of two sympatric western North Atlantic killer whale populations: evidence for secondary contact in Arctic waters" de Greef, E. Darwin Day Symposium, Biological Sciences Graduate Students Association, University of Manitoba	Feb 2023

"Demographic history and selection in the narwhal (<i>Monodon monoceros</i>) and bowhead whale (<i>Balaena mysticetus</i>), with implications for changing climates in the Arctic" de Greef, E. and Garroway, C.J. Ecological Society of America & Canadian Society for Ecology and Evolution, Montreal, Quebec.	Aug 2022
"Population Genomics Reveal Latitudinal Division, Evolutionary History, and Signatures of Selection in the Northern Bottlenose Whale, <i>Hyperoodon ampullatus</i> " de Greef, E. , Einfeldt, A.L., Miller, P.J.O., Ferguson, S., Garroway, C.J., Lefort, K.J., Paterson, I.G., Bentzen, P., and Feyrer, L.J. Society of Marine Mammals, recorded video presentation.	Aug 2022
"Exploring the genomics of migration timing in a long-distance migratory songbird, the purple martin (<i>Progne subis</i>)" de Greef, E. , Suh, A., Brashear, W., Delmore, K.E., and Fraser, K.C. North American Ornithological Conference, live video presentation.	Aug 2020
"Purple martin genomics" de Greef, E. Invited talk for the International Purple Martin working group, live video presentation.	May 2020
"Combining avian field research and genetics to study migration timing" de Greef, E. Invited by U of Manitoba Faculty of Science for the Revera Portsmouth Retirement Residence, Winnipeg, Manitoba.	Mar 2020
"Individual variability in migration timing can explain long-term population level advances in a songbird" de Greef, E. , Shave, A.C., Siegrist, J., Garroway, C.J., and Fraser, K.C. BSGSA Crackerjack, Biological Sciences Department, University of Manitoba.	Sept 2019
"Individual variability in migration timing can explain long-term population level advances in a songbird" de Greef, E. , Shave, A.C., Siegrist, J., Garroway, C.J., and Fraser, K.C. Society of Canadian Ornithologists, Quebec City, Quebec.	Aug 2019
"Boxes for Birds: Studying Tree Swallows in California's Central Valley" de Greef, E. BSGSA Crackerjack, Biological Sciences Department, University of Manitoba.	Oct 2018
"The Putah Creek Nestbox Highway" de Greef, E. Wildlife, Fish, and Conservation Department, University of California, Davis.	Jan 2018
"Chasing Gobblers" Effects of eye contact on flight-initiation distances in Wild Turkeys. de Greef, E. and Wofford, M. Wildlife, Fish, and Conservation Department, University of California, Davis.	Dec 2014
"Roosts of the Black-crowned Knights in the Yolo Bypass Wildlife Area" de Greef, E.* and Lei, S.* Invited to present to Board of Directors of the Yolo Basin Foundation, Davis, California. *co-presenters	May 2014

PEER REVIEW EXPERIENCE (number of reviews)

Alberta Conservation Association (1), Central Valley Birds (1), Conservation Genetics (2), Marine Mammal Science (2), Molecular Ecology (1), Ornithology (2)

VOLUNTEER EXPERIENCE

Volunteer , <i>United States Geological Survey, Dixon, CA</i>	Oct 2015-Jan 2016
<ul style="list-style-type: none"> Collected morphometric data and wing samples of waterfowl at the Yolo Bypass Wildlife Area hunting check station 	
Intern , <i>Dept. of Wildlife, Fish, and Conservation Biology, University of California Davis</i>	Apr-Jun 2014,
<ul style="list-style-type: none"> Monitored wood duck nest boxes and collected morphometric data of hens and ducklings Maintained batteries for RFID readers on nest boxes 	Apr-Jun 2015
Intern , <i>Museum of Wildlife and Fish Biology, University of California Davis</i>	Apr-Jul 2014
<ul style="list-style-type: none"> Monitored songbird nest boxes along Putah Creek Collected morphometric data and banded over 150 birds of 4 passerine species 	