**Education**

Colorado State University, Department of Biology, Graduate Degree Program in Ecology, July 2016-Present. Expected Graduation: Spring 2024

University of Alaska Fairbanks - Fairbanks, Alaska, B.S. (Biology), B.A. (History). Graduated: December 2015

**Research Positions**

Research Scientist I, Molecular Genetics Laboratory, Washington Dept. of Fish and Wildlife, 1111 Washington St SE, Olympia, WA 98501, January 2024 -Present.

Ph.D. Candidate & Graduate Teaching Assistant, Colorado State University, Department of Biology, Graduate Degree Program in Ecology, July 2016-Present. Advisors: Drs. Cameron K. Ghalambor & W. Chris Funk

Curatorial Assistant, University of Alaska Fairbanks Museum, Department of Ornithology, December 2014 – June 2016.

Field Technician, University of Alaska Fairbanks & University of Miami, Department of Biology, June-August 2013, May-September 2014, August 2015

Museum Research Apprentice, University of Alaska Fairbanks Museum, Department of Ornithology, September 2012-December 2014

**Publications**

15) McCracken, KG, Alza, L, Astie, A, Bakkeren, C, Bautista, E, Bulgarella, M, **Cheek RG**, … & Milsom WK. (*In Press, Special Publications of the Louisiana State University*) Diving at high altitude: O2 transport in the Ruddy Duck and Torrent Duck in the Andes

14) **Cheek RG**, McLaughlin JF, Gamboa MP, Marshall CA, Johnson BM, Silver DB, Mauro AA, & Ghalambor CK. (2024) A lack of genetic diversity and minimal adaptive evolutionary divergence in introduced Mysis shrimp after 50 years. *Evolutionary Applications*, 17, e13637, https://doi.org/10.1111/eva.13637

13) Clancey E, MacPherson A, **Cheek RG**, Mouton JC, Sillett TS, Ghalambor CK, Funk WC, & Hohenlohe PA. (2023) Unraveling Adaptive Divergence at Microgeographic Scales. *The American Naturalist*, 203(2), https://doi.org/10.1086/727723.

12) Trumbo DR, Hardy BM, Crockett HJ, Muths E, Forester BR, **Cheek RG**, Zimmerman SJ, Corey-Rivas S, Bailey LL, & Funk WC. (2023). Conservation genomics of an endangered montane amphibian reveals low population structure, low genomic diversity and selection pressure from disease. *Molecular Ecology*, 00, 1–19. https://doi.org/10.1111/mec.17175

11) Spaulding F, McLaughlin JF, **Cheek RG**, McCracken KG, Glenn TC, & Winker K (2023). Population genomics indicate three different modes of divergence and speciation with gene flow in the green-winged teal duck complex. *Molecular Phylogenetics and Evolution*, 182 https://doi.org/10.1016/j.ympev.2023.107733

10) Hays SC, **Cheek RG** (joint first author), Mouton JC, Sillett TS, & Ghalambor CK (2022). Lack of avian predators is associated with behavioral plasticity in nest construction and height in an island songbird. *Animal Behaviour.* 194, 35–42. *h*ttps://doi.org/10.1016/j.anbehav.2022.08.017

9) Delaney KS, & **Cheek RG** (2022). Island Scrub-Jay (*Aphelocoma insularis*), version 2.0. In Birds of the World (S. M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA.

8) **Cheek RG**, Forester BR, Salerno PE, Trumbo DR, Langin KM, Chen N, Sillett TS, Morrison SA, Ghalambor CK, & Funk WC (2022). Habitat-linked genetic variation supports microgeographic adaptive divergence in an island-endemic bird species. *Molecular Ecology,* 31, 2830– 2846. https://doi.org/10.1111/mec.16438

7) Lagüe SL, Ivy CM, York JM, Chua BA, Alza L, **Cheek R**, Dawson NJ, Frappell PB, Farrell T, McCracken KG, Scott GR, & Milsom WK (2020). Cardiovascular responses to progressive hypoxia in ducks native to high altitude in the Andes. *Journal of Experimental Biology* 223: jeb211250 doi: 10.1242/jeb.211250

6) Ivy CM, Lagüe SL, York JM, Chua BA, Alza L, **Cheek R**, Dawson NJ, Frappell PB, McCracken KG, Milsom WK, & Scott GR (2019). Control of breathing and respiratory gas exchange in ducks native to high altitude in the Andes. *Journal of Experimental Biology* 222: jeb198622; doi:10.1242/jeb.198622

5) **Cheek RG**, ML Harris, & Kennedy A (2019). First documented observation of Island Scrub-Jay (*Aphelocoma insularis*) precopulatory display. *Western North American Naturalist* 79: 275–279.

4) **Cheek RG**, Alza L, & McCracken KG (2018). Down feather structure varies between low- and high-altitude Torrent Ducks (*Merganetta armata*) in the Andes. *Ornitología Neotropical* 29: 27–35.

3) **Cheek RG**, CampbellKK, Dickerman RW, Wijdeven B, & Winker K (2018). Mitochondrial DNA suggests recent origins of subspecies of the Sharp-shinned Hawk and Great Blue Heron endemic to coastal British Columbia and southeast Alaska. *Western Birds* 49: 47–61; doi: 10.21199/WB49.1.3

2) York JM, Chua BA, Ivy CM, Alza L, **Cheek R**, Scott GR, McCracken KG, Frappell PB, Dawson NJ, Lagüe SL, & Milsom WK (2017). Respiratory mechanics of eleven avian species resident at high and low altitude. *Journal of Experimental Biology* 220: jeb10791089; doi: 10.1242/jeb.151191

1) Dawson NJ, Ivy CM, Alza L, **Cheek R**, York JM, Chua B, Milsom WK, McCracken KG, Scott GR (2016). Mitochondrial physiology in the skeletal and cardiac muscles is altered in Torrent Ducks, *Merganetta armata*, from high altitudes in the Andes. *Journal of Experimental Biology* 219: 3719–3728; doi: 10.1242/jeb.142711

Hong A, **Cheek RG**, Mukherjee K, Yooseph I, Oliva M, Heim M, Funk C, Tallmon D, Boucher C. (*In Review, G3: Genes, Genomes, Genetics*). ONeSAMP 3.0: Predicting Effective Population Size via SNP Data for a Single PopulationSample

Yeatts B, **Cheek RG**, Pesendorfer MB, Mouton JC, Sillett TC, Morrison SA, Ghalambor CK. *(In Prep*). Stable isotopes and foraging observations suggest habitat-linked diet variation within an insular bird species.

**Grants**

American Ornithological Society Student Research Award, *Non-random gene flow as a mechanism of microgeographic adaptation in an island-endemic bird species*. PI: Cheek, April 2023 ($2,037)

Graduate Degree Program in Ecology Small Research Grant, *Sex-specific effects of non-random gene flow as a mechanism of microgeographic adaptation in an island-endemic bird species*. PI: Cheek, March 2023 ($1,900)

Graduate Degree Program in Ecology Small Travel Grant, *The Repeatability of Evolution: Conserving diversity through a microgeographic lens*. PI: Cheek, March 2022 ($1,300)

American Ornithologist Union Travel Award, *Mechanisms reinforcing microgeographic adaptation in an island endemic*. PI: Cheek, January 2019 ($410)

Graduate Degree Program in Ecology Small Research Grant, Research Mentoring to Advance Inclusivity in STEM, *Does nesting behavior vary in response to predation in an insular species?* PI: Cheek, March 2018 ($2,400)

American Ornithologist Union Travel Award, *Mitochondrial DNA suggests recent origins in two coastal avian subspecies in northwestern North America*. PI: Cheek, June 2016 ($425)

UAF Summer Undergraduate Research & Scholarly Activity Award*, Quality of DNA repair mechanisms in hibernating Arctic ground squirrels (Spermophilus parryii)*. PI: Podlutsky, CoPIs: Yancey, Cheek; February 2016 ($5,000) [Withdrew]

Undergraduate Research Scholarly Activity Travel Grant*, Effects of temperature on plumage insulation in Andean Torrent Ducks (Merganetta armata)*. PI: Cheek; October 2015, ($1,900)

Biomedical Learning and Student Training - Undergraduate Research Experience Award, *Genomic analysis of a known avian influenza carrying waterfowl species to determine the number of Asian-origin individuals coming to North America*. PI: Cheek; September 2015 ($3,000)

**Honors and Fellowships**

Smithsonian Institute Fellowship Program, *Does non-random gene flow facilitate microgeographic adaptation in an island-endemic bird species?* Cheek, June-August 2023

Graduate Degree Program in Ecology Excellence in Mentoring and Teaching Award: Colorado State University, 3 April 2023

Graduate Degree Program in Ecology Teaching Fellows Program: Colorado State University, September-December 2022

Smithsonian Institute Fellowship Program, *Development of RAPTURE (RAD capture) panel to facilitate analyses characterizing dispersal within an insular bird species*, June-August 2022

Smithsonian Institute Fellowship Program, *Patterns of convergent evolution within a population utilizing a heterogenous landscape*, PI: Cheek, June-August 2021

School of Global Environmental Sustainability, Sustainability Leadership Fellows Program. May 2020- April 2021

Smithsonian Institute Fellowship Program, *A genomic test for habitat-linked microgeographic adaptation in an island endemic*, PI: Cheek, June-August 2020

Smithsonian Institute Fellowship Program, *Mechanisms underlying microgeographic divergence in an island endemic: the Island Scrub-jay (Aphelocoma insularis)*, PI: Cheek, February-May 2018

National Science Foundation Graduate Research Fellowship Program, *Mechanisms underlying microgeographic divergence in an island endemic*. April 2018 [Honorable Mention]

Research Experiences for Undergraduates (REU) Fellowship, *High Altitude Expedition*. PI: Kevin McCracken; June 2013

**Presentations**

*Talks*

**Cheek RG**, Forester BR, Salerno PE, Trumbo DR, Langin KM, Chen N, Sillett TS, Morrison SA, Ghalambor CK, & Funk WC. “Habitat-linked genetic variation supports microgeographic adaptive divergence in an island-endemic bird species”. Evolution, Cleveland, Ohio, USA, June 28, 2022

**Cheek RG**, Ghalambor CK, Sillett TS, Funk WC. “The repeatability of evolution: conserving diversity through a microgeographic lens”. Front Range Student Ecology Symposium, Fort Collins, Colorado, USA, February 24, 2022

**Cheek RG**, Funk WC, Sillett TS, Ghalambor CK. “Detection of Microgeographic Adaptive Divergence in Spite of Low Genetic Structure in An Island Endemic”. Front Range Student Ecology Symposium, Fort Collins, Colorado, USA, February 21, 2020.

**Cheek RG**, Funk WC, Sillett TS, Ghalambor CK. “The genomic landscape of microgeographic adaptive divergence in an island endemic”. American Ornithological Society, Anchorage, Alaska, USA, June 28, 2019

*Posters*

Yeatts B, **Cheek RG**, Pesendorfer MB, Mouton JC, Sillett TC, Morrison SA, Ghalambor CK. “Stable isotopes and foraging observations suggest habitat-linked diet variation within an insular bird species.” 10th California Islands Symposium, Ventura, California, USA, November 7, 2023.

**Cheek RG**, Ghalambor CK, Sillett TS, Funk WC. “The repeatability of evolution: conserving diversity through a microgeographic lens”. Graduate Student Showcase, Fort Collins, Colorado, USA, November 9, 2021. **1st place, University-wide Graduate Programs**

**Cheek RG**. “Mechanisms reinforcing microgeographic divergence in an island endemic”. Graduate Student Showcase, Colorado State University, Fort Collins, Colorado, USA, November 13, 2019

**Cheek RG,** CampbellKK, Dickerman RW, Wijdeven B, and Winker K. “Mitochondrial DNA suggests recent origins in two coastal avian subspecies in northwestern North America”. North American Ornithological Conference, Washington D.C., USA, August 16-20, 2016

**Cheek RG**, Alza L. “Diferencia estructural en el plumaje de aislamiento entre dos poblaciones del pato de los torrentes (Merganetta armata) habitando elevación opuestas”. X Congreso Nacional de Ornitología, Chachapoyas, Perú, May 16-21, 2016

**Cheek RG**, Alza L. “Variation in the plumage insulation between lowland and highland populations of male Andean Torrent Ducks (*Merganetta armata*, Gould 1842)”. Research Day, Undergraduate Research and Scholarly Activity Program, University of Alaska Fairbanks, Fairbanks, Alaska, USA, April 26, 2016

**Professional Certifications and Workshops**

Graduate Certificate in Data Analysis, Colorado State University. Awarded May 2023

Graduate Teaching Certificate: The Institute for Teaching and Learning, Colorado State University. Awarded March 2021

Biology Graduate Teaching Professional Development: Level 1, The Institute for Teaching and Learning, Colorado State University. Awarded January 2019

ConGen, “Applications of New Sequencing Technologies to Understand Population Structure, Adaptation, and Environmental Influences on Genomic Variation”, Flathead Lake Biological Station, University of Montana, USA. 9-15th September 2018.

**Professional Service**

Day of Volunteer, “Front Range Student Ecology Symposium: Changing Landscapes: Understanding Ecosystems of the Future”, Colorado State University, Graduate Degree Program in Ecology. Spring 2022

Abstracts Committee Chair, “Front Range Student Ecology Symposium: A Niche for Everyone: Diversifying Ecology in 2021”, Colorado State University, Graduate Degree Program in Ecology. Spring 2021

Secretary & Abstracts Committee, “Front Range Student Ecology Symposium: Seeing 2020: Ecology Through a Human Lens”, Colorado State University, Graduate Degree Program in Ecology. Spring 2020

Graduate Student Representative and Mentor, Department of Biology, Colorado State University. Fall 2018- Fall 2019

Fundraising Committee, “Front Range Student Ecology Symposium: From Past to Future: Navigating Global Change”, Colorado State University, Graduate Degree Program in Ecology. Spring 2019

Fundraising Committee Co-Chair, “Front Range Student Ecology Symposium: Piecing Together a Fragmented World”, Colorado State University, Graduate Degree Program in Ecology. Spring 2018

Fundraising Committee, “Front Range Student Ecology Symposium: Ecology Gone Viral”, Colorado State University, Graduate Degree Program in Ecology. Spring 2017

**Societies**

American Ornithological Society: Member since January 2016

Society for the Study of Evolution: Member since January 2018

The American Naturalist: Member since October 2021

**Journal Peer Reviews**

Reviewer for the following journals: *The Auk*, *Molecular Ecology, Ecology & Evolution*, *Journal of Fish and Wildlife Management, Frontiers in Genetics*

**Teaching Experience**

2023; Co-Instructor- Introduction to Evolution (lecture of 250 undergraduate students)

2022; Teaching Assistant – Foundations of Ecology (seminar of 45 graduate students)

2021, 2022; Guest Lecturer – Fundamentals of Ecology (lecture of 80 undergraduate students in person and hybrid)

2019, 2020, 2021; Teaching Assistant (Lab and Lecture) – Introduction to Ornithology (Lecture of 100 students, 2 lab sections of 25 undergraduates)

2016, 2017, 2018; Lab Teaching Assistant – Attributes of Living Systems (2 lab sections of 25 undergraduate students; Instructor score average, 133 student surveys: 4.2/5)

2018; Guest Lecturer – Molecular Ecology (lecture of 25 graduate, and undergraduate students)

**Students Mentored in Independent Research**

B Yeatts (Colorado State University) “Stable isotopes reveal habitat-linked diet variation within an insular bird species” [in prep]

Georgia James (Colorado State University) “Characterization of Orange Crowned Warbler nest insect communities”

Sarah Hays (Colorado State University) “Behavioral plasticity in nest structure and placement is linked to nesting success in an insular songbird” [published]

**Students Mentored in Lab and Field Research**

Torrey Stephenson, Sonja Barber, Erin Carlson, Abbie Jefferson, Michelle Harris, Anna Kennedy, Molly Fitzsimmons, Joey Negreann, Kendall Zeller, Majesty Bordner, Maria Zhi Mei Lee

**Outreach**

Bird Adaptations Table Manager, Collaborative Education Event, Educational Outreach Center: TriUnfo, Colorado State University, 14 April 2022

Interviewed by Allie Ruckman, Communications Specialist with Colorado State University’s College of Natural Sciences, Scaling Up: Addressing the Climate Crisis, July 23, 2021. Published in Elements Magazine, February 2022.

Bird Banding Station, Bird Migration and Conservation Research, Bird Genoscape Project, Environmental Learning Center, Colorado State University, 22 September 2021 & 27 October 2021

Bird Watching Field Trip Leader, The Wildlife Society: Colorado State University Student Chapter, 24 April 2021

Skill Swap Representative: “R Coding”, School of Biomedical Engineering and the Graduate Degree Program for Ecology, Colorado State University. 7 October 2019

Bird Adaptations Table Manager, Family Science Field Day, Northern Colorado Graduate Women in Science, Fort Collins, Colorado. 28 April 2019

Bird Study Skin Workshop, Colorado State University, Fort Collins, Colorado. 25 April 2019

Bird Watching Station, Environmental Field Day (Bioblitz), Strategies for Ecology Education, Diversity, and Sustainability (SEEDs), Ecological Society of America, Fort Collins, Colorado, 26 April 2019

Workshop Organizer, “The Pursuit of a Healthy Work-Life Balance in Academia”, Colorado State University, Research Mentoring to Advance Inclusivity in STEM: Student Ecology Research Program (SERP). 26 July 2018

Problem-based Learning Panelist, “Waste Busters”, Shepherdson STEM Elementary School, Fort Collins, Colorado. 12 December 2017

Bird Study Skin Workshop, Centro do Ornitología y Biodiversidad (CORBIDI), Lima, Perú. 23 January 2016