

Ryan A. Dunbeck

Master of Science Candidate

University of South Dakota

Department of Biology

Vermillion, SD 57069

EDUCATION

University of South Dakota

August 2019 – Present

Master of Science Candidate in Biology

University of Idaho

August 2015 – May 2019

Bachelor of Science in Ecology and Conservation Biology

Minor in Fisheries Resources

RESEARCH

Wesner Lab

August 2019 – Present

Mentor: Dr. Jeff Wesner

University of South Dakota

- Evaluated current differences in phytoplankton abundance and community structure of the middle Missouri River basin compared to historical data
- Conducted independent planning and field work, including basin-wide water sampling using industry standard instrumentation
- Enumerated and identified phytoplankton to genera in a laboratory setting using dichotomous keys

Fish Ecology Research Lab

July 2018 and June 2019

Mentor: Dr. Christopher Caudill

University of Idaho/Cascade Locks, OR

- Handled and translocated adult Pacific lamprey
- Assisted with PIT and radio telemetry tag record keeping
- Supported graduate student research consisting of experimental lamprey flume trials and post-exercise dam passage study

Fish Ecology Research Lab

January 2017 – May 2019

Mentor: Dr. Christopher Caudill

University of Idaho

- Ecology and Conservation Biology senior thesis project funded by Columbia River Intertribal Fish Commission
- Engineered and fabricated in-situ mesocosm experiment
- Studied juvenile salmon movement responses to Pacific lamprey and rainbow trout carcasses
- Collected periphyton from mesocosms and quantified ash-free dry mass and chlorophyll *a*

- Identified and quantified macroinvertebrate community within mesocosms
- Reviewed and scored video footage of juvenile salmon behavior
- Coauthored official report for Columbia River Intertribal Fish Commission

Fish Ecology Research Lab

May 2016 – May 2017

Mentor: Dr. Christopher Caudill

University of Idaho

- Pursued and obtained undergraduate research experience funding for independent research project
- Engineered solar-powered underwater camera system
- Studied Pacific lamprey carcass decomposition in natural stream setting
- Sorted and identified benthic invertebrate taxa from stream samples in a lab setting
- Collaborated with Yakama Nation Fisheries biologists
- Guided field work with the assistance of Teaching Rising American Indian Leaders (TRAILS) Intern funded through Columbia River Intertribal Fish Commission

PUBLICATIONS

Dunkle, M.R., **Dunbeck, R.A.**, Caudill, C.C. 2021. Fish carcasses alter subyearling Chinook salmon dispersal behavior and density but not growth in experimental mesocosms. *In review*.

Dunbeck, R.A., Dunkle, M.R., Caudill, C.C. 2017. Movement response of juvenile Chinook salmon to carcasses of rainbow trout and Pacific lamprey. 2018 Final Report to Columbia River Intertribal Fish Commission. Portland, OR.

PRESENTATIONS

Dunbeck, R.A., Wesner, J.S. 2021. Distribution and abundance of phytoplankton in the middle Missouri River basin. Dakota Chapter of the American Fisheries Society Annual Meeting. Virtual meeting.

Dunbeck, R.A., Wesner, J.S. 2020. Changes in phytoplankton abundance and community structure of the Missouri River basin over 70 years (poster). 2020 University of South Dakota IdeaFest. Vermillion, SD.

Dunbeck, R.A., Dunkle, M.R., Caudill, C.C. 2017. Movement response of juvenile Chinook salmon to carcasses of rainbow trout and Pacific lamprey (poster). 2018 Lamprey Information Exchange Workshop. Portland, OR.

Dunbeck, R.A., Dunkle, M.R., Caudill, C.C. 2017. Movement response of juvenile Chinook salmon to carcasses of rainbow trout and Pacific lamprey. 2018 Annual Meeting of the Western Division of the American Fisheries Society. Anchorage, AK.

Dunbeck, R.A., Dunkle, M.R., Caudill, C.C. 2017. Movement response of juvenile Chinook salmon to carcasses of rainbow trout and Pacific lamprey. 2018 World Fish Migration Day event hosted by Yakama Nation Fisheries Pacific Lamprey Project. Prosser, WA.

Dunbeck, R.A., M.R. Dunkle, C.C. Caudill. 2017. Movement response of juvenile Chinook salmon to carcasses of rainbow trout and Pacific lamprey (poster). 2018 University of Idaho Undergraduate Research Symposium. Moscow, ID.

Dunbeck, R.A., M.R. Dunkle, C.C. Caudill, R.T. Lampman. 2016. Quantifying the response of benthic invertebrates to post-spawn Pacific lamprey carcasses in an interior Columbia Basin stream. 2017 World Fish Migration Day event hosted by Yakama Nation Fisheries Pacific Lamprey Project. Prosser, WA.

Dunbeck, R.A., M.R. Dunkle, C.C. Caudill, R.T. Lampman. 2016. Quantifying the response of benthic invertebrates to post-spawn Pacific lamprey carcasses in an interior Columbia Basin stream (poster). 2017 University of Idaho Undergraduate Research Symposium. Moscow, ID.

Dunbeck, R.A., M.R. Dunkle, C.C. Caudill, R.T. Lampman. 2016. Quantifying the response of benthic invertebrates to post-spawn Pacific lamprey carcasses in an interior Columbia Basin stream (poster). 2017 Annual Meeting of the Idaho Chapter of the American Fisheries Society. Boise, ID.

SCHOLARSHIPS AND GRANTS

University of South Dakota – Graduate Research and Creative Scholarship Grant	February 2020
University of Idaho – Office of Undergraduate Research Travel Grant	May 2018
University of Idaho – Wallace and Dorothy Monnett Scholarship	Fall 2017 – Spring 2018
University of Idaho – Office of Undergraduate Research Grant	August 2016
National Science Foundation – Idaho EPSCoR MURI Research Grant	June 2016

VOLUNTEER WORK

Western Division of the American Fisheries Society Annual Meeting May 2018
Anchorage, AK

- Performed duties required for front desk attendee check-in
- Assisted in banquet hall setup
- Sold raffle tickets

Idaho Chapter of the American Fisheries Society Annual Meeting March 2017
Boise, ID

- Assisted with auction operations
- Performed duties required for front desk attendee check-in

Olympia Stream Team

February 2011 -March 2014

Olympia, WA

- Conducted amphibian egg mass surveys in lentic systems for Washington Department of Fish and Wildlife
- Sampled and sorted benthic invertebrates from salmon spawning streams
- Conducted nighttime surveys of amphibian roadkill in migration corridors to assist management decisions

Center for Natural Lands Management

December 2010 –August 2014

Tumwater, WA

- Monitored ESA threatened Mazama pocket gopher colonization on protected prairie
- Planted native prairie flora
- Assisted with dispersal of Taylor checkerspot butterfly larvae
- Removed invasive Scotch broom and Himalayan blackberry

Rocky Mountain Elk Foundation

June 2005 – June 2012

Washington State

- Coordinated volunteers for several projects throughout Washington State
- Removed abandoned barbed wire fencing
- Administered spot-treatment herbicide and manually removed noxious weeds
- Maintained and repaired summer-range watering basins

WORK EXPERIENCE

Lead Carpenter/ Contractor

October 1999 – July 2015

*Olympia, WA***Marching Band Instructor**

August 1999 – December 2004

*Tumwater, WA***RELEVANT COURSEWORK**

Teleost Fish Ecology | Riparian Ecology | Ecology and Conservation of Aquatic Macroinvertebrates | Limnology | Fisheries Management | Statistical Survey Sampling | Forest, Soil, and Canopy Processes | Landscape Ecology | Introduction to Geographical Information Systems (GIS) | River Studies | Bayesian Statistics