

Brittany L. Wagler

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EDUCATION

Master's of Science, University of Wyoming, expected May 2022

Zoology and Physiology

Thesis: Herbal remedies: The interface of forage quality and disease in bighorn sheep

Advisor: Dr. Kevin L. Monteith

Bachelor's of Science, University of Wyoming, December 2017

Wildlife and Fisheries Biology and Management; minor Statistics

GPA: 3.9/4.0; graduated *magna cum laude*, dean's list 8 semesters

PROFESSIONAL EXPERIENCE

Graduate Research Assistant, June 2018 – present

Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming

Assessing the role of disease and nutrition in bighorn sheep population dynamics; run daily logistics of the Northwest Wyoming Bighorn Sheep Nutrition and Disease Project; capture neonate bighorn sheep in the Fitzpatrick and Gros Ventre Wilderness; conduct habitat transects on summer range; manage a crew of 6 technicians; capture adult bighorn sheep in December and March via net gunning and ground darting; manage access database; provide project updates and preliminary analyses to collaborators; prepare grants; participate in public education and outreach; present research at professional and public meetings

Bighorn Sheep Field Technician, March 2018 – May 2018

University of Nevada, Reno

Captured bighorn sheep neonates by hand; PIT tagged lambs; identified Great Basin / Sierra Nevada plants; collected fecal samples of collared adult; navigated extremely rugged terrain

Research Aide, September 2017 – December 2018

Haub School of Environment and Natural Resources, University of Wyoming

Assisted with a variety of ongoing research in the lab; delineated migrations using Program R; classified habitat using ArcGIS, NAIP imagery, and ground-truthed data; retrieved mule deer mortalities from winter ranges; cleaned and manipulated data

Undergraduate Research Fellow, 2015 – 2017

University of Wyoming EPSCoR Fellow

Composed research proposal and study design; wrote grants; nocturnally trapped small mammals with baited Sherman traps on 10 plots for 4 weeks; lead a crew of 2 technicians; analyzed data using Program R and RMARK, sampled vegetation using SamplePoint; identified small mammals of the sagebrush steppe; prepared results for publication

Mule Deer Technician, May 2017 – August 2017

Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming
Captured neonate mule deer by hand; drew blood of fawns from jugular; determined cause-specific mortality of fawns; monitored recruitment with observational data

Songbird and Small Mammal Technician, June 2016 – August 2016

Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming
Searched for sagebrush obligate songbird nests; monitored and set up video cameras on nest; nocturnally and diurnally trapped small mammals using Sherman and Tomahawk traps; raptor point counts; trail cameras to detect apex predators

ADDITIONAL WORK EXPERIENCE

Fawn Capture Volunteer, Starkey Experimental Forest, June 2018

Lab Intern, University of Wyoming, September 2015 – May 2016

Devils Tower Winter Porcupine Survey, Winter 2016

Baggs Mule Deer Study Winter, 2016, 2017

TEACHING EXPERIENCE

Statistics Tutor, University of Wyoming Athletic Department, 2015 - 2017

PEER-REVIEWED PUBLICATIONS

Smiley, R. A., T. N. LaSharr, H. N. Abernathy, Y. N. Shakeri, R. L. Levine, S. Rankins, R. P. Jakopak, R. Rafferty, J. Kolek, **B. L. Wagler**, S. P. H. Dwinnell, T. J. Robinson, J. E. Randall, R. C. Kaiser, M. Tonhoff, B. Scurlock, T. Fieseler, G. L. Fralick, and K. L. Monteith. Biomarkers of animal nutrition: from seasonal to lifetime indicators of environmental conditions. *In review*.

Blum, M. E., T. N. LaSharr, K. M. Stewart, J. T. Hogg, **B. L. Wagler**, R. A. Smiley, K. S. Huggler, R. P. Jakopak, M. J. Brunet, R. Levine, S. P. H. Dwinnell, B. M. Regan, M. Cox, B. F. Wakeling, D. Birmeyer, G. L. Fralick, B. Scurlock, R. Kaiser, M. Tonoff, P. W. Burke, A. B. Courtemanch, D. Lutz, and K. L. Monteith. Capture-induced mortality in neonate ungulates: Role of handling protocols? *Journal of Wildlife Management*. *In revision*.

Smiley, R. A., **B. L. Wagler**, T. N. LaSharr, K. A. Denryter, T. R. Stephenson, A. B. Courtemanch, T. W. Mong, D. Lutz, D. McWhirter, D. Birmeyer, P. Hnilicka, B. Lowrey, and K. L. Monteith. Heterogeneity in risk-sensitive allocation of somatic reserves in a long-lived mammal. *Ecosphere*. *In revision*.

Wagler, B. L., R. A. Smiley, A. B. Courtemanch, G. Anderson, D. Lutz, D. McWhirter, D. Brimeyer, P. Hnilicka, T.R. Stephenson, and K. L. Monteith. 2022. Effects of helicopter net-gunning on the survival of bighorn sheep. *Journal of Wildlife Management* 1–18.

OTHER ARTICLES

Wagler, B. L., and K. L. Monteith. An assessment of bighorn sheep in the Sweetwater Rocks: Habitat suitability and risk of contact with domestic sheep. 2021 Research Brief. Haub School of Environment and Natural Resources, University of Wyoming.

Wagler, B., R. Smiley, and K. Monteith. 2020. Bighorn sheep nutrition and disease summer 2020 Update. Fall 2020 Rampage, Wyoming Wild Sheep Foundation Newsletter.

Wagler, B. and R. Smiley. 2020. Communicating science as stories. Winter/Spring Newsletter – Wyoming Chapter of The Wildlife Society.

Smiley, R., **B. Wagler**, and K. Monteith. 2020. Sheep nutrition, predation, and disease: exciting new work to get underway this spring. Spring 2020 Rampage, Wyoming Wild Sheep Foundation Newsletter.

Wagler, B., R. Smiley, and K. Monteith. 2019. Sheep nutrition, predation, and disease: a successful first season monitoring lambs. Fall 2019 Rampage, Wyoming Wild Sheep Foundation Newsletter.

Smiley, R., **B. Wagler**, and K. Monteith. 2018. Sheep nutrition, predation, and disease: exciting new work to get underway this spring. Fall 2018 Rampage, Wyoming Wild Sheep Foundation Newsletter.

PRESENTATIONS

* indicates presented

Wagler, B. L.*, R. A. Smiley, H. Edwards, J. Malmberg, G. Anderson, D. Lutz, A. Courtemanch, G. Fralick, D. McWhirter, T. Mong, C. Class, L. Yandow, C. Downs, P. Hnilicka, and K. L. Monteith. 2019. Fad diets: Does forage quality affect the ability of bighorn sheep to tolerate pathogens? Wyoming Chapter of the Wildlife Society Annual Conference: Sheridan, Wyoming. Poster.

Wagler, B. L.*, R. A. Smiley, H. Edwards, J. Malmberg, G. Anderson, D. Lutz, A. Courtemanch, G. Fralick, D. McWhirter, T. Mong, C. Class, P. Hnilicka, and K. L. Monteith. 2019. Is it in your horoscope? How neonate birth date influences survival in the light of disease. The Wildlife Society Annual Conference: Reno, Nevada. Poster.

Smiley, R. A., **B. L. Wagler**, H. Edwards, J. Malmberg, G. Anderson, D. Lutz, A. Courtemanch, G. Fralick, D. McWhirter, T. Mong, C. Class, P. Hnilicka, and K. L. Monteith. 2019. Fat and germly mamas: the role of maternal condition in survival of neonate bighorn sheep. The Wildlife Society Annual Conference: Reno, Nevada. Poster.

Wagler, B. L.*, R. A. Smiley, H. Edwards, J. Malmberg, G. Anderson, D. Lutz, A. Courtemanch, G. Fralick, D. McWhirter, T. Mong, C. Class, P. Hnilicka, and K. L. Monteith. 2018. Baaacterial

pathogens, not the wool story: Interactions of disease and nutrient in bighorn sheep. Wyoming Chapter of the Wildlife Society Annual Conference: Laramie, Wyoming. Poster.

Wagler, B. L.*, L. E. Sanders, and A. D. Chalfoun. 2017. A nest predator's response to reclaimed areas on natural gas fields at the home-range scale. Wyoming Chapter of The Wildlife Society Annual Conference: Jackson, Wyoming. Oral.

Wagler, B. L.*, L. E. Sanders, and A. D. Chalfoun. 2017. Do reclaimed areas within natural gas fields augment deer mouse fitness and abundance? University of Wyoming Undergraduate Research Day: Laramie, Wyoming. Oral.

Wagler, B. L.*, L. E. Sanders, and A.D. Chalfoun. 2016. Do reclaimed areas within natural gas fields augment deer mouse fitness and abundance? Wyoming Chapter of The Wildlife Society Annual Conference: Cody, Wyoming. Poster.

GRANTS

Wagler, B. L., R. A. Smiley, K. L. Monteith. 2020. Western Wyoming bighorn sheep nutrition and disease. Teton Conservation District. \$10,000.

SCHOLARSHIPS AND AWARDS

2020 – Wyoming Wildlife Society Graduate Student Scholarship - \$750

2017 – *Magna cum laude* graduate honors

Wyoming Chapter of The Wildlife Society Travel Grant - \$250

Jack and Eileen Rouston Wildlife Biology Scholarship - \$5,000

2016 – Wyoming EPSCoR Fellowship - \$8,600

Gore Family Independent Study Award - \$3,000

OUTREACH AND PROFESSIONAL SERVICE

2020 – Outreach booth at The Sheep Show, Reno, NV (The Wild Sheep Foundation's annual fundraising exposition)

Shared my research with multiple elementary classrooms via the program Skype a Scientist

2019 – Lead radio telemetry activity for 30 kids attending Camp Bighorn, Dubois, WY

2017 – Organized multiple fundraising events for the Wyoming Student Chapter of The Wildlife Society

SKILLS

Technical Field Skills: Radio telemetry; animal capture including helicopter net gun, ground darting, drop net, stationary traps (Havahart, Tomahawk, Sherman); animal handling and collection of biological data (tooth extraction for aging, disease sampling, blood drawing from cephalic and jugular, GPS/VHF collar fitting, VIT insertion); chemical immobilization; camera trapping; Rocky Mountain plant identification (alpine, forest, sage-steppe); animal track and sign identification; various vegetation survey methods; field necropsy; GPS, map, and compass navigation; route finding; winter backcountry travel and camping; vehicle operation (snowmobile, ATV, manual transmission, trailers)

Computer Software: Program R and R Studio (analysis, figure preparation, data cleaning and manipulation); QGIS (spatial data manipulation); Microsoft Office (Word, Excel, PowerPoint, Access); SamplePoint

Analytical: Movement modeling (home range delineation, resource selection); multivariate regression analysis; familiar with Bayesian analysis

PROFESSIONAL MEMBERSHIPS AND INVOLVEMENT

The Wildlife Society 2015 – present
Wyoming Chapter 2015 – present
UW Student Chapter 2015 – 2018
2017 President
2016 Vice President

REFERENCES

Kevin L. Monteith, graduate advisor
Assistant Professor
Haub School of Environment and Natural Resources
University of Wyoming
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Anna D. Chalfoun, undergraduate research advisor
Assistant Professor
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