

Brett R. Jesmer

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Education

- Expected 2017* **Doctor of Philosophy, Ph.D. in Ecology**
University of Wyoming, Laramie, WY
Dissertation: Understanding resource limitations in large herbivores
- 2006* **Bachelor of Science, B.S. in Environmental and Forest Biology**
State University of New York College of Environmental Science & Forestry, Syracuse, NY
- 2003* **Associates of Applied Science, A.A.S in Environmental Science**
State University of New York, Delhi. Delhi, NY

Appointments

- 2012, 2015 T.A., Mammalogy, Dept. Zoology and Physiology, University of Wyoming
- 2015 T.A., General Ecology, Dept. Zoology and Physiology, University of Wyoming
- 2014 Wyoming NASA Space Grant Consortium Fellow
- 2007-2011 Research Associate, Dept. Wildlife Biology, University of California, Davis
- 2006-2007 Research Associate, Dept. Biology, SUNY, Environmental Science and Forestry

Publications

- JESMER, B. R., J. R. GOHEEN, K. L. MONTEITH, AND M. J. KAUFFMAN. *In Review*. State-dependent foraging alters endocrine-energy relationships in a large herbivore. *Functional Ecology*.
- WATTS, A. G., P. SCHLICHTING, S. BILLERMAN, B. R. JESMER, S. MICHELETTI, M.-J. FORTIN, C. FUNK, P. HAPEMAN, E. L. MUTHS, AND M. A. MURPHY. 2015. How spatio-temporal habitat connectivity affects amphibian genetic structure. *Frontiers in Genetics* 6:275.
- KELT, D. A., D. H. VAN VUREN, M. L. JOHNSON, J. A. WILSON, R. J. INNES, B. R. JESMER, K. P. INGRAM, J. R. SMITH, S. W. BIGELOW, AND R. D. BURNETT. 2013. Small mammals exhibit limited spatiotemporal structure in sierra nevada forests. *Journal of Mammalogy* 94:1197-1213.
- JESMER, B. R., D. H. VAN VUREN, J. A. WILSON, D. A. KELT, AND M. L. JOHNSON. 2011. Spatial organization in female golden-mantled ground squirrels. *The American Midland Naturalist* 165:162-168.

Select Reports

- JESMER B. R., J. R. GOHEEN, M. J. KAUFFMAN, K.L. MONTEITH. Linking Habitat and Climate with Nutrition and Recruitment in Shiras Moose. Wyoming Game and Fish Department, Governors Big Game License Coalition, Colorado Parks and Wildlife. 2012, 2013, 2014 Annual Reports.
- JESMER B. R., D. A. KELT, D. H. VAN VUREN, AND M. L. JOHNSON. Small Mammal Distribution, Abundance, and Habitat Relationships. p. 73-131 *In: Plumas-Lassen Study 2008 & 2009 & 2010 Annual Reports*.

Select Presentations

- JESMER B. R., J. R. GOHEEN, K.L. MONTEITH, M. J. KAUFFMAN. 2015. State-Dependent Foraging Alters Endocrine-Energy Relationships in a Large Herbivore. Oral presentation to The American Society of Mammalogists, Jacksonville, FL.
- JESMER B. R., J. R. GOHEEN, K.L. MONTEITH, M. J. KAUFFMAN. 2015. Can State-Dependent Foraging Alter Endocrine-Energy Relationships in Moose?. Oral presentation at the North American Moose Conference and Workshop, Middle Park, CO.
- JESMER B. R., J. R. GOHEEN, K.L. MONTEITH, M. J. KAUFFMAN. 2014. Linking Habitat and Climate with Nutrition and Recruitment in Shiras Moose. Oral presentation at the North American Moose Conference and Workshop, Girdwood, AK.
- JESMER B. R., J. R. GOHEEN, K.L. MONTEITH, M. J. KAUFFMAN. 2014. Linking Habitat and Climate with Nutrition and Recruitment in Shiras Moose. Oral presentation to the Wyoming Chapter of The Wildlife Society, Annual Meeting, Rock Springs, WY.
- JESMER B. R. 2010. Small Mammal Distribution, Abundance, and Habitat Relationships. Oral Presentation to the Plumas Lassen Administrative Study, Research Seminar, Annual Meeting, Quincy, CA.

Guest Lectures

- JESMER B. R. 2015. Are Large Mammals Simply Small Mammals Writ Large? Oral presentation to the University of Wyoming, Mammalogy class, Laramie, WY.
- JESMER B. R. 2013. Of Mice and Moose: Ecological Generalities and Their Conservation Implications. Oral presentation to the University of Wyoming, Conservation Biology class, Laramie, WY.
- JESMER B. R. 2011. Shiras Moose Declines in Wyoming. Oral presentation to the University of Wyoming, Conservation Biology class, Laramie, WY.

Manuscript Reviews (Journal, Date, Editor)

- Journal of Wildlife Management, 2014, Evelyn Merrill, Ph.D.
Canadian Journal of Zoology, 2103, M.B. Fenton, Ph.D.; Helga Guderley, Ph.D.
The Prairie Naturalist, 2011, Kevin L. Montieith, Ph.D.

Summary of Technical Skills

Project Management and Leadership

University, state and federal agency collaboration, hiring and training of personnel, supplies management, data management and analysis, protocol development, logistics, land owner contacts and site selection.

Computer Software

R, SQL, ArcGIS, Microsoft Office (Access, Excel, Word, Power Point), PROGRAM MARK, Gap Light Analyzer.

Field and Lab Skills

Molecular techniques (DNA extraction, PCR and genotyping), flight experience (Bell and Robinson helicopters), classification counts of moose, elk, deer, and bighorn sheep, VHF radio tracking (homing and triangulation), GPS/VHF collar affixation, fluids & drug administration (IV, IM, sub-cutaneous), blood draws, tooth extraction, tissue biopsy, vitals monitoring, vegetation plots, mark-recapture (birds, reptiles, large and small mammals), track and scat surveys, amphibian point-call counts, road mortality surveys, camera trapping, tissue sampling, mast counts, orienteering (map, compass, GPS (hand-held and Trimble)), scientific journal keeping, data entry, vehicle operation and maintenance: 4WD, ATV and snowmobile.

Experience

Spring 2011 – present

Shiras Moose Behavioral, Foraging and Nutritional Ecology University of Wyoming, Research Assistant

Developed and currently implementing a study to assess the roles of climate, habitat, behavior, and nutrition in Shiras moose declines across in the intermountain west. Movement analysis, remote-sensing, vegetation monitoring, nutrition monitoring, non-invasive genetic sampling techniques, hormone and diet assessment are being employed to help quantify climatic variability, migratory behavior, habitat condition, forage quantity and quality, diet composition, nutritional condition, and pregnancy rates among eight herds across a gradient of population performance.

Winter 2011

River Otter Occupancy Surveys SUNY Research Foundation, Field Technician

Conducted daily surveys for semi-aquatic freshwater mammals (i.e. mustelids and rodents) during winter in the St. Lawrence River valley of New York state. Track and scat detections were used in an occupancy modeling framework to determine the status and habitat selection of otter, mink, beaver, and muskrat in northern and central New York.

*Summer 2007
Spring 2008 –
Fall 2010*

Small Mammal Habitat Management University of California Davis, Project Leader/ Field Technician

Lead and assisted with a small mammal distribution, abundance, and habitat relationship study in California's Sierra Nevada. Responsible for all managerial, logistical, and field operations needed to successfully collect a variety of data necessary to determine small mammal community responses in demography, distribution, and habitat selection to habitat alterations occurring during experimental forest-fuel-reductions as part of the Plumas-Lassen Administrative Study. Additionally, lead a landscape scale sampling effort directed towards determining forest wide small mammal distributions and habitat selections.

Winter 2008

Shiras Moose Survival and Diet Study University of Wyoming, Field Technician

Assisted in Shiras moose survival and diet study in Grand Teton National Park and Bridger-Teton National Forest. Snowshoed, skied and used homing techniques to collect fecal samples for diet and progesterone analyses, and to determine over-winter calf survival. Also, quantified browse levels to help determine resource availability.

Winter 2006
Winter 2007

White-tailed Deer Movement, Behavior and Epidemiology
SUNY Research Foundation, Crew Leader / Field Technician

Assisted in a white-tailed deer movement and behavior study in an agricultural-woodland matrix. Used capture (clover trap, rocket net, capture gun), VHF/GPS collar affixation, chemical immobilization, and vitals monitoring techniques while working as a primary handler to help determine space-use, dispersal, and contact rates in order to develop a model for potential chronic wasting disease epidemics in central New York State.

Summer 2006

Herpetological Road Ecology
SUNY Research Foundation, Field Technician

Independently conducted a herpetological road ecology study for the New York State Department of Transportation. Assessed the diversity and abundance of turtles and frogs across a road density gradient from suburban developments to state wildlife preserves. Also conducted mortality surveys and crossing structure (barrier and choice arena) experiments to determine road mortality hot spots and which types of crossing structures are most effective for frogs and turtles.

Summer 2005
Summer 2004

Spruce-grouse Conservation
SUNY Research Foundation, Field Technician

Assisted in and independently performed spruce grouse population and habitat surveys in New York's Adirondack Park. Employed playback surveys, noose capture, banding, radio-collar affixation, homing and triangulation, blood collection, and vegetation quantification techniques in order to help determine metapopulation dynamics such as, habitat associations, habitat connectivity, space-use, dispersal rates, and survival.

Volunteer
2004-2009

New York State Department of Environmental Conservation
Various Locations, NY

- Canada goose banding and round up.
- Observed bald eagle banding techniques.
- Assisted in black bear capture.

National Park Service
Yosemite National Park, CA

Assisted with telemetry and negative conditioning practices of nuisance black bear.

U.S.D.A. Forest Service
Plumas National Forest, CA

Helped conduct California spotted owl status and broadcast surveys.

Ventana Wildlife Society
Big Sur, CA

Assisted with California condor telemetry and observational data collection.