

STATEMENT OF INTEREST

I work on linking animal function to social and ecological systems, that is, I try to understand how animals work in a complex world. Most of my work has focused on nutrition of wildlife and the performance of populations. Although most of my recent projects concern large herbivorous mammals (bison, caribou, moose, muskoxen, reindeer), I also study carnivores (bear, seal), waterfowl (ducks and geese) and non-game species (e.g., porcupines, bats, tortoises, iguanas, and marsupials). My projects address issues of natural and anthropogenic change for the management of wildlife populations. I strive to connect wildlife science to public policy in undergraduate courses on fish and wildlife policy, graduate courses on wildlife issues (e.g., conservation capstone) and graduate research in wildlife nutrition and physiology.

EDUCATION

- 1991 Doctor of Philosophy (Department of Biochemistry, Microbiology, and Nutrition), University of New England, Armidale, NSW, Australia.
- 1984 Bachelor of Science (majors in Biochemistry and Zoology) with Honors (Zoology), University of New South Wales, Kensington, NSW, Australia.

EMPLOYMENT

- 2025 Professor, Department of Ecology and Conservation Biology, Texas A&M University, College Station
- 2020 Professor, jointly appointed in the College of Agriculture and Life Sciences to the Department of Rangeland, Wildlife and Fisheries Management (55%), and the Department of Ecology and Conservation Biology (45%), Texas A&M University, College Station. Affiliate Faculty of Department of Public Service and Administration, Bush School of Government and Public Administration. Boone and Crockett Chair in Wildlife Conservation and Policy, renewed term 1 November 2020 - 31 April 2025
- 2015 – 2019 Professor, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station. Tenured September 2, 2015. Boone and Crockett Chair in Wildlife Conservation and Policy, 15 October 2015 - 31 October 2020
- 2009 – 2015 Professor of Biology, Department of Biology and Wildlife and Institute of Arctic Biology, University of Alaska, Fairbanks.
- 2002 – 2008 Associate Professor of Biology (Wildlife Physiology and Nutrition), Department of Biology and Wildlife and Institute of Arctic Biology, University of Alaska, Fairbanks. Tenured 2002.
- 1997 – 2002 Assistant Professor of Biology (Nutritional Physiology), Institute of Arctic Biology & Department of Biology and Wildlife, University of Alaska, Fairbanks.
- 1994 – 1997 Visiting Assistant Professor, George Washington University, Department of Biological Sciences, Washington DC.
- 1993 Visiting Lecturer, Catholic University of America, Department of Biology, Washington DC.
- 1991 – 1993 Visiting Scientist / Comparative Nutritionist, Smithsonian Institution.
- 1990 Smithsonian Institution Postdoctoral Research Fellow.
- 1985 – 1989 Commonwealth Postgraduate Research Fellow, Department of Employment Education and Training, Australia.
- 1984 – 1989 Laboratory Instructor: University of New England; Armidale College of Technical and Further Education; University of Sydney.
- 1984 – 1985 Research Assistant, Department of Biochemistry, Microbiology, and Nutrition, University of New England, Australia.

PROFESSIONAL RECOGNITION

- 2020 – 2025 Certified Wildlife Biologist, The Wildlife Society
2018 – 2023 Certified Senior Ecologist, Ecological Society of America
2019 Graduate Teaching Award, Wildlife and Fisheries Sciences, Texas A&M University
2015 Undergraduate Teaching Award, Department of Biology & Wildlife, University of Alaska Fairbanks
2015 Wildlife Conservation Award, Alaska Chapter of the Wildlife Society

TEACHING

UNDERGRADUATE COURSES

- 2024 - now Nutrition of Range and Wild Animals (RWF349/649) 30 Students stacked undergrad and graduate
2016 – 2025 Fish and Wildlife Law and Administration. (WFSC303 / RWF308) Texas A&M University (30 students in face-to-face class with blended delivery using videos and discussion; online delivery of 15 students per section. Writing intensive class. 30-50 students per semester twice each year.
2018 – 2019 Fundamentals of Wildlife and Fisheries Sciences (WFSC101) Texas A&M University (30 - 42 students in blended lecture, activity, and online learning) once each year
2016 Ecology and management of wild ungulates. (WFSC 489) Texas A&M University (20 students).
1997 – 2014 Wildlife Nutrition (WLF460/660; BIOL459/659) – University of Alaska, Fairbanks. 15–30 students/course once each year.
2011, 2012, 2013 Principles and Techniques of Wildlife Management (WLF322) – University of Alaska, Fairbanks. 10–12 students/course once each year.
2008 – 2009, 2011, 2012, 2014 Introduction to Wildlife Science (WLF101) – University of Alaska, Fairbanks. 35–60 undergraduates once each year.
2000 – 2003, 2006 – 2008 Animal Physiology (BIOL310) – University of Alaska, Fairbanks. 45–50 students/course once each year.
1998 Principles of Metabolism and Biochemistry (BIOL303) – University of Alaska, Fairbanks. 40 students for 1 semester (Sabbatical Replacement)
1994 – 1997 Human Nutrition (BISC128) – George Washington University, Department of Biology. 30–40 students/course for 3 semesters plus 10 students/course for 2 summer semesters.
1996 Cell Biochemistry (BISC103 & BISC104) – George Washington University, Department of Biology. 60 students in lecture, 15 students in lab for 1 semester (Sabbatical Replacement).
1994 – 1996 Introductory Biology for Science Majors (BISC111) – George Washington University, Department of Biology. 180–200 students/course for 2 semesters plus 40 students for 2 semesters.
1996 Histology (BISC118) – George Washington University, Department of Biology. 50 students for 1 semester (Sabbatical Replacement).
1993 Biological Chemistry (BIO554) – Catholic University of America, Department of Biology. 20 students for 1 semester (Sabbatical Replacement).

GRADUATE COURSES

- 2018 – 2025 Capstone in Master of Public Service and Administration (PSAA675; PSAA676) – 8 to 12 students advised with Dr. Cole Blease Graham in Bush School of Government, TAMU. Two semester group projects on conservation issues for 6 years
- 2017 Directed studies. Thermal biology and stress in animals (WFSC 685) – TAMU. 3 PhD students.
- 1997 – 2014 Recitation and Laboratory – Wildlife Nutrition (WLF660/ BIOL659) – University of Alaska, Fairbanks. 3–10 MS and PhD students/course once each year.
- 1999 Techniques in Physiology and Nutrient Analysis (BIOL620) – Department of Biology and Wildlife, University of Alaska, Fairbanks. 5 students for 1 semester.
- 1991 – 1992 Comparative Animal Nutrition – Tufts University, School of Veterinary Medicine, Boston MA. 40–50 students/course for 2 semesters.

GRADUATE STUDENTS

Current Students as Principal Advisor

Doctor of Philosophy

- Amelia Christian. Constraints on carnivory in grizzly bears.
Daniel Winstead. Organizational networks for invasive species management.

Master of Science

- Andrea Huriega. Protein metabolism of brown bears in summer and winter.
Cecelia Giesen. Fitness of female caribou in the Arctic: Teshekpuk Caribou Herd
Ashley Belknap. Forage evaluation with Near Infrared Spectroscopy for Arctic Caribou

Theses Completed as Principal Advisor

Doctor of Philosophy

- 2011 Gustine, D. PhD Wildlife Biology, UAF. Topic: Body protein stores of barren ground caribou and muskoxen.
2011 Coltrane, J. PhD Wildlife Biology, UAF. Topic: Physiology of porcupines in winter.
2020 Thompson, D.P. Wildlife & Fisheries Sciences, Texas A&M. Topic: Thermal biology of moose.
2020 Martin, Jeffrey M. Wildlife & Fisheries Sciences, Texas A&M. Topic: Body size of bison.
2023 Downs, Bridgett. Ecology and Conservation Biology, Texas A&M. Topic: Costs of insect harassment to moose

Master of Science

- 2002 Rombach, E. P. MS Biology, UAF. Topic: Copper metabolism during pregnancy and neonatal development of muskoxen.
2003 Peltier, T. C. MS Wildlife Biology, UAF. Topic: Effects of season, sex and diet on muskoxen.
2004 Knott, K.K. MS Biology, UAF. Topic: Nutritional development of muskoxen and reindeer.
2005 Mason (Mather), D.M. MS. Wildlife Biology, UAF. Topic: Migration strategies of black brant.
2006 Crater, A.R. MS. Biology, UAF. Topic: Microbial ecology of the rumen in muskoxen.
2011 De Groot, K. MS Wildlife Biology, UAF. (Co-Chair with M. Lindberg). Topic: Relationships between physiological condition and reproduction of lesser scaup.
2012 Welch, J. MS Wildlife Biology, UAF. Topic: Movement of moose in a nutritional landscape.
2013 Thompson, D.P. MS Wildlife Biology, UAF. Topic: Food intake of caribou and reindeer.
2014 Van Someren, L. MS Wildlife Biology, UAF. Topic: Forage quality for arctic caribou.
2016 Shively, R.D. MS Wildlife Biology, UAF. Topic: Food and habitat for bats in the arctic.

- 2017 Oster, K.W. MS. Wildlife and Fisheries Sciences, TAMU. Topic: Forage minerals for arctic caribou.
- 2019 Hollingsworth, K. Wildlife & Fisheries Sciences, Texas A&M. Topic: Minerals for populations of rodents and deer in Texas

Master of Natural Resources Development (non-thesis).

- 2022 Echols, Shelby. Rangelands, Wildlife and Fisheries Management. Topic: Rewilding ungulates.
- 2023 Watter, Kyle. Rangelands, Wildlife and Fisheries Management. Topic: Historical and spatial evaluation of pronghorn in Texas

Theses Completed as a Member of the Advisory Committee:

Doctor of Philosophy

- 2003 S. Trumble. PhD. University of Alaska Fairbanks. Assessing the health of harbor seals in Alaska.
- 2007 C. Ihl. PhD. University of Alaska Fairbanks. Foraging ecology and sociality of muskoxen in northwestern Alaska.
- 2008 M.N. Grant-Hofmann. PhD. University of Alaska Fairbanks. The effects of invasive rats and burrowing seabirds on seed and seedling communities on New Zealand islands.
- 2010 T. Hegel. PhD. University of Alaska Fairbanks. Spatio-temporal recruitment dynamics of mountain-dwelling caribou in the Yukon territory, Canada.
- 2010 D. J. Rinella. PhD. University of Alaska Fairbanks. Marine-derived nutrients in Kenai Peninsula salmon streams: tracking techniques and fisheries management applications
- 2014 J-M. Seymour. PhD. University of Alaska Fairbanks. Pacific walrus use of higher trophic level prey and the relation to sea ice extent, body condition, and Trichenellosis.
- 2014 T. Mullett. Ph.D. University of Alaska Fairbanks. Effects of snowmobile noise and activity on a boreal ecosystem in south-central Alaska.
- 2017 Inglis, S. Ph.D. University of Alaska Fairbanks. Topic: Dietary effects on protein turnover in three pinniped species.
- 2020 Rachel Short. PhD. , Texas A&M Topic: Ecological metrics of ungulates

Master of Science

- 2002 W. T. O'Connell. MS. Role of wetlands and endogenous factors in incubation behavior of nesting eiders on the Yukon Kuskokwim Delta, Alaska.
- 2002 D.F. Spaeth. MS. Sexual segregation in moose: effects of incisor morphology, quality of willows and foraging behavior.
- 2002 S. Karpovich. MS. Hibernation in the ground squirrel.
- 2002 R. M. Swor. MS. The effect of a marginal copper diet on muskox calf growth and immune function.
- 2003 C. Nicolai. MS. Reproductive decisions by Black Brant: mechanisms to synchronize hatch and spatial variation in growth rates of goslings.
- 2004 M. Knoche. MS. King eider wing molt: inferences from stable isotope analyses.
- 2007 K. Martin. MS. Breeding ecology and fasting tolerance of scaup and other ducks in the boreal forest of Alaska.
- 2007 L. Parrett. MS. Summer ecology of the Teshekpuk caribou herd.
- 2013 K. Colson. MS. Genetic population structure of moose at multiple scales.
- 2014 S. Worker. MS. Causes and consequences of geophagy in snowshoe hares (*Lepus americanus*), an important generalist herbivore of the boreal forest.
- 2017 N. Alonso. MS. Texas A&M, Kingsville. Topic: Heat stress in young white-tailed deer
- 2019 A. Gugenheimer – MS. Topic: Body condition of wintering ducks in Texas

POST DOCTORAL ASSOCIATES

- 2004 A.J. Munn. Ph.D. Topic: Nutrition and thermal balance of young muskoxen and their mothers over winter.
- 2010 E.M. Ungerfeld. Ph.D. Co-sponsored by M.B. Leigh (UAF) and R.J. Forster (Lethbridge Research Center, AB Canada). Topic: Functional diversity of ruminal bacteria in muskoxen.
- 2014 R.E. Wilson. Ph.D. Co-sponsored by S.D. Farley (Alaska Department of Fish and Game) and S. Talbot (Alaska Science Center, USGS, Anchorage AK). Topic: Genetic comparisons of moose in relation to roads in Alaska.
- 2017 S.Garnick. PhD. Topic: Diet determination of rangeland herbivores.

PROFESSIONAL ACTIVITIES

EXTRAMURAL SERVICE

Peer Review:

Member of Editorial Board Ecological and Evolutionary Physiology (formerly Physiological and Biochemical Zoology (since 2005)

Member of Editorial Board for Wildlife section in Animals (December 2022 - Mar 2025).

Editor in Chief for Wildlife (August 2024 - Mar 2025)

Associate Editor for Physiological Ecology, Frontiers in Ecology & Evolution (2021 - 2023)

Associate Editor for Journal of Mammalogy (June 2015 - July 2020).

Ad hoc reviewer for Acta Theriologica; Animals, Arctic, Antarctic and Alpine Research; Canadian Journal of Zoology; Comparative Biochemistry and Physiology; Conservation Letters, Ecological Modeling; Ecology Letters; Functional Ecology; Journal of Comparative Physiology B; Journal of Experimental Biology; Journal of Fish and Wildlife Management; Journal of Mammalogy, Journal of Wildlife Management; PeerJ; Physiological and Biochemical Zoology, PLoS One, Polar Biology, Wildlife Biology, Wildlife Society Bulletin; Zoo Biology, National Science and Engineering Research Council (Canada), National Science Foundation, Research Council of Norway, Belmont Forum.

External PhD Examiner (since 2014): University of Nevada Reno, Texas State University, University of Cincinnati, University of Alberta (Canada), University of Aarhus (Denmark), University of Nevada Reno, University of Finland

Membership in Professional Societies

American Society of Mammalogists

Ecological Society of America

The Wildlife Society

American Association for the Advancement of Science

INTRAMURAL SERVICE

Texas A&M University

2015 – 2020; renewed 2021 - 2025

The Boone & Crockett Wildlife Conservation and Policy Program at Texas A&M

Represent A&M program at four meetings each year for B&C University Programs

Consult with B&C Members in management committee

Engage and sustain donor relationships with A&M Development Officers

Assisted Mark Klemm (Asst. VP Development) to raise \$1,055,000 for B&C endowment in 2018

Assisted B&C member F.S. "Jayar" Daily to produce promotional video for B&C Endowment

CURRICULUM VITAE
PEREGRINE (Perry) STEPHEN BARBOZA

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- Design & display of North American Wild Sheep “Grand Slam” collected by James H. “Red” Duke – work with Dawn Miles
- 2016 Chair, faculty review committee for Sid Kyle Endowed chairs (Ecosystem Sciences and Management)
- 2016 – 2021
Member of Faculty Search Committees – Diversity Fellow, Animal Behaviorist, Wildlife Extension, Research Scientist (Uvalde)
Chair, Animal Conservation Seminar for department (Wildlife and Fisheries Sciences)
Co-chair undergraduate curriculum review committee (Wildlife and Fisheries Sciences)
- 2019 Member, ad hoc advisory committee for reorganization of the departments of Wildlife and Fisheries Sciences and Ecosystem Sciences and Management, College of Agriculture and Life Sciences
- 2020 – 2021 Member of Graduate Curriculum Committee, Rangelands Wildlife and Fisheries Management; Member of Undergraduate Curriculum Committee, Rangelands Wildlife and Fisheries Management; Member of Wildlife Job Board Committee, Rangelands Wildlife and Fisheries Management; Member of Diversity and Inclusion Committee, Rangelands Wildlife and Fisheries Management
- 2020 – 2023 Chair, review committee for endowed chair reappointments, College of Agriculture and Life Sciences
- 2020 – 2024 Committee on Academic Freedom, Responsibility and Tenure (CAFRT)
- 2021 – present Institutional Animal Care and Use Committee
- 2023 – 2025 Member of COALS Promotion and Tenure Committee
- 2024 Chair, Faculty Search Committee (Ecology and Conservation Biology) - Applied Biodiversity Science

University of Alaska Fairbanks

- 1999 – 2014 Member of Radiation Safety Committee
- 2008 – 2010 Committee for Integration of Research and Teaching
- 2001 – 2002; 2006, 2007, 2009 – 2013
Member of User Committee for New Biosciences Building (Murie)
- 1999 – 2001 Member of Food Service Advisory Board

College of Natural Sciences and Mathematics

- 2013 Faculty Senate, Committee for Criteria to Evaluate Faculty with Joint Appointments
- 2010 – 2012 Faculty Senate, Representative for College and Chair of Unit Criteria Committee
- 2007 – 2009 Faculty Senate, Representative for College and member of Graduate Academic & Advisory Committee
- 2000 Chair for Committee to draft Mission and Vision Statements

Department of Biology and Wildlife and Institute of Arctic Biology

Academic Service

- 2007 – 2010,
2013 – 2014 Chair, Wildlife Biology Program (~120 undergraduates, 20 masters, 10 doctoral).
2001– 2003, 2005 – 2006
Masters Comprehensive Examination Committee; Chair for 2002–2003
- 2012 – 2014 Member of scholarship committee for Department of Biology and Wildlife
- 2007 – 2012 Chair, Irving Scholander Lecture Committee
- 2001– 2006 Member Irving Scholander Lecture Committee
- 1999 – 2001 Co-convenor of Life Sciences Seminars (4 semesters)

Administrative Service

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- 2005 – 2010 Science Director, R.G. White Large Animal Research Station
- 1998 – 2003 Chair, Large Animal Research Committee
- 2008 – 2011, 2002 – 2004
Member Director's Council, Institute of Arctic Biology
- 2000 – 2002 Member of Life Sciences Space Committee
- 2006 – 2007, 2002 – 2003
Integrative and Environmental Physiology (NSF EPSCoR Alaska) - Leader of Research
Focus Area

Service for Recruitment and Evaluation

- 2014 Chair, Unit Peer Review Committee for Promotion and Tenure
- 2014 Chair Faculty Search Committee – Wildlife Biologist (Human Dimensions)
- 2002 Chair Faculty Search Committee – Integrative Physiologist
- 2002 Chair Faculty Search Committee – Molecular Biologist
- 2003 Chair Faculty Search Committee – Wildlife Toxicologist
- 2000 Member of Faculty Search Committee – Organic Chemist
- 2000 Member of Faculty Search Committee – Conservation Biologist
- 1999 Member of Faculty Search Committee – Integrative Physiologist
- 1999 – 2011 Member of Staff Search Committees: IAB Fiscal Officer, Assistant to IAB Director,
Departmental Office Manager, Departmental Student Coordinator, Tour Coordinator for
LARS, IAB Fiscal Officer, Senior Research Technician, Administrative Assistant for
Grants

GRANTS AND CONTRACTS

EXTRAMURAL AWARDS: Total \$4,488,723

- 2023 – 2026 Organizational responses to addressing invasive species in the Great Plains. Natural Resources Conservation Service for the USDA Conservation Effects Assessment Project. \$337,744
- 2023 – 2026 Assessing diet quality for wild caribou in the Teshekpuk herd. Cooperative agreement #23-149 Teshekpuk Land use. Alaska Department of Fish and Game. \$225,000
- 2022 – 2025 Assessing diet quality for wild caribou in the Teshekpuk herd. Cooperative agreement #23-005 Teshekpuk health assessment. Alaska Department of Fish and Game. \$90,000
- 2022 – 2025 Forage Quality for the Porcupine Caribou Herd. Principal Investigator: P.S. Barboza. Sponsor: Heather Johnson, USGS Alaska Science Center. \$144,384
- 2016 – 2020 Food intake and food quality of Kenai moose. Principal Investigator: P.S. Barboza. Sponsor: J. Crouse, Alaska Dept Fish and Game. 1 July 2015 to 30 June 2017 - \$90,000. Extension 2018 - \$20,000. Extension 2019 - \$20,000.
- 2016 Blood indices of life-history constraints in wild caribou bulls. Principal Investigator: P.S. Barboza. Sponsor: Layne Adams, USGS Alaska Science Center through Gulf Coast Cooperative Ecosystem Studies Unit. \$45,000 1 August 2016 to 31 July 2018
- 2014 Food Intake of Kenai moose. \$25,000. Principal Investigator: P.S. Barboza. Sponsor: J. Crouse, Alaska Dept Fish and Game.
- 2014 Indices of protein balance in moose from contrasting ranges in South – Central Alaska \$20,000. Principal Investigator: P.S. Barboza. Sponsor: J. Crouse, Alaska Dept. Fish and Game.
- 2013 Dietary indicators for migratory mule deer. \$20,000. Principal Investigator: P.S. Barboza. Analytical support for project by Cody Schroeder. Sponsor: Kelley Stewart, University of Nevada at Reno.
- 2012 – 2015 Summer forage quality for Teshekpuk and Western Arctic caribou. \$85,000. Principal Investigator: P.S. Barboza. Sponsor: D.D. Gustine, USGS.

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- 2011 – 2014 Nutrient dynamics of forages for ungulates in the changing arctic. \$102,000 over 4 years
Principal Investigator: P.S. Barboza. Sponsor: D.D. Gustine, USGS.
- 2012 – 2017 Protein availability for caribou in the summer ranges of the Central Arctic and Teshekpuk
herds. Research Work Order for \$86,773 over 5 years. Principal Investigator/Advisor:
P.S. Barboza. Sponsor: D.D. Gustine, USGS.
- 2010 – 2012 Assessing body protein dynamics in female moose (*Alces alces*) during winter. \$18,500
over 2 years. Principal Investigator: P.S. Barboza. Sponsor: J. Crouse, Alaska Dept.
Fish and Game.
- 2010 Isotopic Evaluation of protein status in Northern Alaska Peninsula caribou. \$15, 505 from
US Fish and Wildlife Service Principal Investigator: P.S. Barboza. Sponsor: D. Watts,
USFWS.
- 2010 Diet and body protein status of Central Arctic muskoxen \$15, 000 from Alaska
Department of Fish and Game. Principal Investigator: P.S. Barboza. Sponsor: Steve
Arthur, ADFG.
- 2009 – 2013 Nutritional baselines for caribou. \$992,479 from National Council for Air and Stream
Improvement, USA. Principal Investigator for UAF: P.S. Barboza. Visiting Investigators:
K.L. Parker, J. Cook, R. Cook, D. Sleep.
- 2009 – 2013 Condition and movement of moose, wolves and black bears in relation to urban
development. \$472,000 from Army Corps of Engineers, US Department of Defense.
Principal Investigator for UAF: P.S. Barboza. Principal Investigator at Alaska
Department of Fish and Game: Sean Farley.
- 2008 – 2009 Fiber degrading microbes and enzymes in the rumen of muskoxen. \$43,526 from
University of Lethbridge with funds from Lethbridge Research Center. Host Investigators
at UAF: P. S. Barboza with M.B. Leigh. Canadian Investigators: E. Ungerfeld, R. J.
Forster, B. Selinger.
- 2007 Caribou body condition measures for the CARMA Network. \$113,000 from University of
Northern British Columbia over three years. Principal Investigator: P.S. Barboza.
Sponsor/Collaborator: K.L. Parker with funds from Canadian International Polar Year to
D.E. Russell.
- 2008 Preparation for caribou and nutrition research initiative at Large Animal Research
Station. \$19,737 from National Council for Air and Stream Improvement, USA. Principal
Investigator: P.S. Barboza. Collaborator: K.L. Parker.
- 2008 Monitoring the body condition of caribou in late winter: developing and evaluating a
'hands off' approach. \$78, 861 from USGS – Parks Oriented Biological Support.
Principal Investigator: P.S. Barboza. Sponsor: D.B. Griffith. Support for D. Gustine Ph.D.
research.
- 2008 Hormone assessment in blood, hair and feces of captive caribou and reindeer. \$20,000
in work orders from North Slope Borough and University of Saskatchewan. Principal
Investigator: P.S. Barboza. Sponsor/Collaborator: N. Owen-Ashley and M. Cattet.
- 2007 Physiological ecology of wintering porcupines – analytical support. \$2,627 from Alaska
Department of Fish and Game. Principal Investigator: P.S. Barboza. Support for J.
Coltrane Ph.D. research.
- 2007 Blood fractions as indicators of protein balance in Rangifer tarandus. \$16,000 from
USGS Alaska Science Center. Collaborator: L. Adams.
- 2007 Evaluating winter condition of Teshekpuk caribou. \$7,200 in work orders from North
Slope Borough. Principal Investigator: P.S. Barboza. Sponsor/Collaborator: B. Person.
- 2007 Comparative forestomach physiology in arctic ruminants - the basis for niche
partitioning. \$33,062 from University of Zurich. Principal Investigator: P.S. Barboza.
Sponsor: M. Clauss with funding from Swiss National Science Foundation.

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- 2007 Evaluating nutritional condition of arctic ungulates. \$63,000. National Parks Service PMIS 119377. Principal Investigator: P.S. Barboza. Sponsor/Collaborator: J. Lawler.
- 2006 Relationship Between Physiological Condition and Reproduction of Lesser Scaup. \$37,380. Yukon Flats National Wildlife Refuge. Co-Investigators M. Lindberg and P.S. Barboza.
- 2006 Sampling microbes for effects of usnic acid on reindeer. \$5,000 University of Tromso, Norway Principal Investigator: P.S. Barboza. Collaborator M. A. Sundset
- 2006 Metabolism of lichen in reindeer and caribou. \$14,000. M.J. Murdock Charitable Trust. Principal Investigator: P.S. Barboza. Support for R. Parsley. Research experience for High School Teachers.
- 2006 Nutritional status of Chisana caribou. \$17,250 Research Work Order for US Geological Survey. Principal Investigator: P.S. Barboza. Collaborator: L. Adams.
- 2005 Nutritive value of moss for muskoxen in winter. \$2,494. National Parks Service, Western Arctic National Parklands. Principal Investigator: P.S. Barboza. Support for C.Ihl, PhD research.
- 2004 Energetic costs of migration and over-wintering for Pacific black brant - analysis of tissues from migrating black brant. \$12,500. Fish and Wildlife Service Agreement Number 701814G286. Principal Investigator: P.S. Barboza.
- 2002 Effects of dietary N and lichen on body protein conservation in reproducing Rangifer. \$664,980 from Office of Polar Programs, Arctic Sciences Section, Arctic Natural Sciences Program (Biological Sciences), National Science Foundation. Principal Investigator: P.S. Barboza. Co-investigator: K.L. Parker (University of Northern British Columbia).
- 2000 Feeds for qiviut production: trace mineral nutrition in muskox. Project Renewal. Alaska Science and Technology Foundation. \$76,221. Principal Investigator: P.S. Barboza. Co-Investigators: J.E. Blake and C.E. Lewis.
- 1999 Feeds for qiviut production: trace mineral nutrition in muskox. Alaska Science and Technology Foundation. \$176,434. Principal Investigator: P.S. Barboza. Co-Investigators: J.E. Blake and C.E. Lewis.
- 1996 Nutritional constraints on body composition and muscle protein of wintering black ducks and migratory waterfowl. Patuxent Wildlife Research Center, US Geological Survey. \$226,539. Co-Principal Investigators: P.S. Barboza and D.G. Jorde.
- 1993 Nutritional Research on the desert tortoise in Southern Nevada. The Nature Conservancy, Supplementary Award of \$50,000. Principal Investigator: O.T. Oftedal Co-principal Investigator: P.S. Barboza.
- 1991 Nutritional research on the desert tortoise (*Gopherus agassizii*) in southern Nevada. The Nature Conservancy. \$236,000. Principal Investigator: O.T. Oftedal Co-principal Investigator: P.S. Barboza

GIFTS AND INTRAMURAL AWARDS: Total \$949,539

- 2023 M Fox Wildlife Conservation Endowment, Texas A&M. \$2,000
- 2022 Becky and Monty Davis Wildlife Conservation Endowment, Texas A&M. \$48,000
- 2022 Boone & Crockett Dr. James H "Red" Duke Wildlife Conservation and Policy Endowment, Texas A&M. \$38,000
- 2022 M Fox Wildlife Conservation Endowment, Texas A&M. \$1,000
- 2022 Becky and Monty Davis Wildlife Conservation Endowment, Texas A&M. \$40,000
- 2022 Boone & Crockett Dr. James H "Red" Duke Wildlife Conservation and Policy Endowment, Texas A&M. \$47,000
- 2021 Becky and Monty Davis Wildlife Conservation Endowment, Texas A&M. \$40,000
- 2021 Boone & Crockett Dr. James H "Red" Duke Wildlife Conservation and Policy Endowment, Texas A&M. \$60,000
- 2019 Boone & Crockett Dr. James H "Red" Duke Wildlife Conservation and Policy Endowment, Texas A&M. \$148,000
- 2018 Boone & Crockett Dr. James H "Red" Duke Wildlife Conservation and Policy Endowment, Texas A&M. \$100,000
- 2018 Rob and Bessie Welder Wildlife Foundation, Sinton TX. \$25,200 for student support to K. Hollingsworth
- 2017 Boone & Crockett Dr. James H "Red" Duke Wildlife Conservation and Policy Endowment, Texas A&M. \$74,000
- 2017 – 2020 Fauna Monitoring for Savanna Long Term Research Experiment Initiative. Sid Kyle Foundation, Department of Ecosystem Sciences and Management, Texas A&M. \$170,000. Principal Investigator: Perry S. Barboza.
- 2014 Instructional equipment for wildlife biology: telemetry, field camera & incubator. University of Alaska, Fairbanks, Technology Advisory Board. \$9,880. Principal Investigator: Perry S. Barboza & Denise Kind
- 2007 Extending the laboratory with data loggers. University of Alaska, Fairbanks, Technology Board. \$14,268. Principal Investigator: Perry S. Barboza.
- 2007 Monitoring winter body condition of barren ground caribou from the Bering Sea to the Hudson Bay. Cooperative Institute for Arctic Research (CIFAR) and National Oceanic and Atmospheric Administration (NOAA). \$26,697. Principal Investigator: P.S. Barboza. Support for D. Gustine.
- 2006 Physiology for populations. NSF EPSCoR Travel Awards \$2000. Principal Investigator: Perry S. Barboza.
- 2004 Molecular approaches to microbial diversity. NSF EPSCoR Travel Award \$1,314. Principal Investigator: Perry S. Barboza.
- 2003 A new mammalian stress model: male reindeer in rut. Alaska BRIN (NIH) – Faculty Mentoring and Development Grant. \$29,420. Principal Investigator: Perry S. Barboza.
- 2002 Digestive physiology of caribou: testing a nutritional mechanism for sexual segregation and niche partitioning. University of Alaska, President's Special Projects Fund and Alaska NSF EPSCoR. \$10,000. Principal Investigator: Perry S. Barboza. Co-Investigators: R. Terry Bowyer and Jonathan A. Jenks.
- 2002 Wintering strategies of an arctic nesting goose: energetic costs of migration and overwintering for Pacific black brant. \$15,000 from Angus Gavin Memorial Bird Research Grant. Principal Investigator: Perry S. Barboza on behalf of Danielle Mather (MS student). Co-investigator: David Ward, USGS.
- 2001 Active learning of physiology: upgrading non-invasive approaches. University of Alaska, Fairbanks, Technology Board. \$24,985. Principal Investigator: P.S. Barboza.
- 1999 Physiological monitors for humans and other large animals. University of Alaska, Fairbanks, Technology Board. \$16,175. Principal Investigator: P.S. Barboza.

- 1998 Nutritional resources of Alaskan wildlife: applied research for students. University Of Alaska, Natural Resources Fund. \$16,662. Principal Investigator: P.S. Barboza.
- 1998 Ultra-low temperature storage for biological preservation. MAPCO Foundation, University of Alaska Fairbanks. \$7,000. Principal Investigators: P.S. Barboza and J.F. Braddock.

PUBLICATIONS:

POPULAR ARTICLES & BOOK REVIEWS

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95. Martin, J.M., J. Zarestsky, D.D. Briske and P.S. Barboza. 2021. Vulnerability and adaptive capacity of the North American *Bison* coalition to climate change. *People and Nature* 3:711-722 <https://doi.org/10.1002/pan3.10209>
96. Hollingsworth, K.A, R.D. Shively, S. Glasscock, J. Light, D. Tolleson, and P.S. Barboza. 2021. Trace mineral supplies for populations of little and large herbivores *PLOS One* 16(3): e0248204
97. Johnson, H.; T. Golden, L. Adams, D. Gustine, E. Lenart, P.S. Barboza. 2021. Dynamic selection for forage quality and quantity in response to phenology and insects in an Arctic ungulate. *Ecology and Evolution* 11:11664–11688. DOI: 10.1002/ece3.7852
98. Shively, R.D. and P.S. Barboza. 2022. Monitoring diet by automated microhistology. *Wildlife Society Bulletin. Wildlife Society Bulletin*: 46(1): 1-10 doi:10.1002/wsb.1259
99. Benedict, B.M., and P.S. Barboza. 2022. Adverse effects of Diptera flies on northern ungulates: Rangifer, Alces, and Bison. *Mammal Review*. 1-12. doi:10.1111/mam.12287
100. Johnson, H.E., E.A. Lenart, D.D. Gustine, L.G. Adams, and Perry S. Barboza. 2022. Survival and Reproduction in Arctic Caribou are Associated with Summer Forage and Insect Harassment. *Frontiers in Ecology and Evolution*. 10.3389/fevo.2022.899585
101. Benedict, B.M., P.S. Barboza, J.A. Crouse, K. R. Groch, M. R. Kulpa, D. P. Thompson, G. G. Verocai, and D.J. Wiener. 2023. Sores of boreal moose reveal a previously unknown genetic lineage of parasitic nematode within the genus *Onchocerca*. *PLOS One* 18(1): e0278886 <https://doi.org/10.1371/journal.pone.0278886>.
102. Benedict, B.M., D.P. Thompson, J.A. Crouse, P.T. Shults, G.L. Hamer, and P.S. Barboza. 2023. Salivary cortisol response to flies by moose calves. *Alces* 59:1-13
103. Barboza, P.S., R.D. Shively, and D.P. Thompson. 2024. Robust responses of female caribou to changes in food supply. *Ecological and Evolutionary Physiology* 97(1): 29-52 <https://doi.org/10.1086/729668>
104. Singer M, D. Cordron, I. Lechner, R. Rudnik, P. Barboza, J. Hummel, and M. Clauss. 2024. The effect of size and density on the mean retention time of particles in reindeer (*Rangifer tarandus*). *Comparative Biochemistry and Physiology A*. 292: 111621 <https://doi.org/10.1016/j.cbpa.2024.111621>
105. Oster, K.W., D.D. Gustine, F.R. Smeins, and P.S. Barboza. 2024. Estimating mineral requirements of wild herbivores: Modelling Arctic caribou (*Rangifer tarandus granti*) in summer. *Animals* 14: 868 <https://doi.org/10.3390/ani14060868>
106. Benedict, B.M., D.P. Thompson, J.A. Crouse, G.L. Hamer, and P.S. Barboza. 2024. Trapped between food, heat, and insects: movement of moose (*Alces alces*) and exposure to flies in the boreal forest of Alaska. *Ecology and Evolution* 14: e11625. <https://doi.org/10.1002/ece3.11625>
107. Benedict, B.M., D.P. Thompson, J.A. Crouse, P.T. Shults, G.L. Hamer, and P.S. Barboza. Wounded but unstressed: moose tolerate injurious flies in the boreal. *Journal of Mammalogy* 105(5): 1166-1174
108. Johnson, H.E., G.L. Coulombe, L.G. Adams, C. Arnison, P. Barboza, M. Kienzler, W.B. Leacock and M.J. Sutor. 2025. DNA metabarcoding and video camera collars yield different inferences about the summer diet of an arctic ungulate. *Ecosphere* 16: e70319.

MANUSCRIPTS IN PROGRESS

Barboza, P.S., K. Stewart, T. Heater and B. Wakeling. Wildlife conservation in the United States: a system for bridging science, policy, and practice. Textbook. In Preparation for Routledge

SELECTED CONFERENCE PROCEEDINGS & ABSTRACTS SINCE 2009

2025 Huriega, A., A. Christian, A. Carnahan, C.T. Robbins, G. Ten-Have, J. McCleary-Smith, J. Thadden, N. Deutz and P.S. Barboza. Seasonal homeostasis of brown bears (*Ursus*

- arctos horribilis*); plasma osmolality varies with creatinine and urea. Annual Meeting of the Society for Comparative Biology, Seattle, WA, 7 January 2024
- 2025 Christian, A., C.T. Robbins, T. Tollefson, A. Carnahan, J. McCleary-Smith, P.S. Barboza. Reduced energy expenditure facilitates mass gain in brown bears (*Ursus arctos*). Annual Meeting of the Society for Comparative Biology, Seattle, WA, 5 January 2024
- 2024 Christian, A., C.T. Robbins, T. Tollefson, J. McCleary-Smith, C. Davis, A. Carnahan, E. Vincent, H. Havelock, P.S. Barboza. Protein metabolism limits mass gain in brown bears. Annual Meeting of the Society for Comparative Biology, Seattle, WA, 3 January 2024
- Barboza, P.S., N. Deutz, C.T. Robbins, G. Ten-Have, J. Thadden, A. Christian, A. Carnahan. Grizzly bears (*Ursus arctos horribilis*) alter amino acid kinetics during their winter fast. Annual Meeting of the Society for Comparative Biology, Seattle, WA, 3 January 2024
- Grange, A., C. Cuyler, L. Barbero-Palacios, G. Yannic, J. Nymand, P.S. Barboza, and M. Le Moullec. The role of diet in the body condition of Greenlandic caribou. Annual Meeting of the British Ecological Society, Liverpool, United Kingdom, 13 December 2024.
- 2023 Barboza, P.S., Rachel Shively, Daniel Thompson. Caribou mothers balance body protein and fat against dietary supplies to produce milk for their calves. The Wildlife Society, Louisville, KY, 7 November 2023
- Barboza, P.S., C.B. Graham Jr., T. Heater. Innovating for conservation: project-based learning for invasive species management. NAISMA Annual Conference 17 October 2023
- Barboza, P.S., Rachel Shively, Daniel Thompson. Tolerance of low food quality in female caribou and their calves. 13th International Mammalogical Congress 18 July 2023
- Christian, Amelia, P.S. Barboza, C.T. Robbins, T. Tollefson, J. McCleary, C. Davis, A. Carnahan, E. Vincent, H. Havelock. Diet protein limits mass gain in a carnivore. 13th International Mammalogical Congress 18 July 2023
- Crouse, John, P.S. Barboza, R.D. Shively, T. McDonough. Tracking seasonal nitrogen dynamics in a browsing ungulate: female moose in boreal forest. 13th International Mammalogical Congress 20 July 2023
- Thompson, D.P., and P.S. Barboza. Hot bodies: using wild ungulates to discover the effects of warming environments. A symposium of 8 presentations at the 13th International Mammalogical Congress 20 July 2023.
- Thompson, D.P., J. Crouse, P.S. Barboza, M. Spathelf, A. Herberg, S. Parker, M. Morris. Behavior influences thermoregulation of boreal moose during the warm season. 13th International Mammalogical Congress 20 July 2023.
- Benedict, B., D.P. Thompson, J. Crouse, G. Hamer, P.S. Barboza. The costs and consequences of flies for moose in the boreal forest of Alaska. 13th International Mammalogical Congress 20 July 2023.
- Johnson, H., E. Lenart, D. Gustine, L. Adams, P.S. Barboza, J. Severson, G. Coulombe, W. Leacock, M. Suitor. The influence of summer phenology on the habitat conditions, behavior, and demography of Arctic caribou. 13th International Mammalogical Congress 20 July 2023.
- Barboza, P.S., Rachel Shively, Daniel Thompson. Resilience of caribou to changing food supply: resistance, tolerance and thresholds for digestible energy and nitrogen. North American Caribou Workshop and Arctic Ungulate Conference. 9 May 2023.
- Johnson, H., E. Lenart, D. Gustine, L. Adams, P.S. Barboza. The influence of summer habitat conditions on the behavior and demography of caribou in the Arctic. North American Caribou Workshop and Arctic Ungulate Conference. 9 May 2023.
- Benedict, B., D.P. Thompson, J. Crouse, D. Weiner, G. Hamer, G. Verocai, M. Kupla, K. Grouch, P.S. Barboza. Wounded but unstressed: moose tolerate injurious flies in the boreal forest. North American Caribou Workshop and Arctic Ungulate Conference. 10 May 2023.

- 2022 Shively, R.D., and P.S. Barboza. Automated Microhistology: Using Computer Vision in Diet Monitoring. The Wildlife Society, Spokane WA. 9 November 2022.
- Benedict, B., John A. Crouse, Katia R. Groch, Gabriel L. Hamer, Matthew R. Kulpa, Dan P. Thompson, Guilherme G. Verocai, Dominique J. Wiener, and Perry S. Barboza. Cost and consequences of Diptera on moose. Oral presentation at: The Entomological Society of America, Entomological Society of Canada, and the Entomological Society of British Columbia Joint Annual Meeting; Vancouver, BC, 15 Nov 2022.
- Benedict, B., Dan P. Thompson, John A. Crouse, Phillip T. Shults, Gabriel L. Hamer, and Perry S. Barboza. Physiological resistance of moose calves to flies: cortisol and environmental stressors. Oral presentation at: American Society of Mammologists Annual Meeting; Tucson, AZ, 19 June 2022
- Benedict, B., Dan P. Thompson, John A. Crouse, Phillip T. Shults, Gabriel L. Hamer, and Perry S. Barboza. Physiological resistance of moose calves to flies: cortisol and environmental stressors. Virtual oral presentation at: Alaska Chapter of The Wildlife Society Annual Meeting; 18 April 2022
- Stinebaugh, W, B. Benedict and P.S. Barboza. Are bats commensal with bovids? American Society of Mammologists Annual Meeting, Tucson, AZ, 19 June 2022.
- 2019 Shively, R.D., J.A. Crouse, D.P. Thompson, and P.S. Barboza. Is summer food intake a limiting factor for boreal browsers? Diet, temperature, and reproduction as drivers of consumption in female moose. The Wildlife Society, Reno NV. 30 September 2019.
- Crouse, J.A., R.D. Shively, T. McDonough, and P.S. Barboza. Tracking winter protein stores of female moose in Alaska. The Wildlife Society, Reno NV. 30 September 2019.
- Thompson, D.P., Crouse, J.A., T. McDonough, P.S. Barboza and S. Jaques. Acute thermal and stress response in moose to chemical immobilization. The Wildlife Society, Reno NV. 2 October 2019.
- Barboza, P.S., R.D. Shively and D.P. Thompson. 2019. Tolerance of foraging constraints in female barren-ground caribou (*Rangifer tarandus granti*). American Society of Mammologists, Washington D.C. 30 June 2019
- Hollingsworth, K.A, R.D. Shively, S. Glasscock, J. Light, D. Tolleson, and P.S. Barboza. Little and large herbivores as indicators of trophic availability of essential trace nutrients. American Society of Mammologists, Washington D.C. 30 June 2019
- Martin, J. and P.S. Barboza. Drought and temperature influences spatial and temporal variation in growth of North American *Bison* American Society of Mammologists, Washington D.C. 2 July 2019
- 2018 Thompson, D.P., P.S. Barboza, J.A. Crouse, T.J. McDonough, O.H. Badajos, and A.M. Herberg. Body Temperature Patterns Vary with Pregnancy and Condition in Moose (*Alces alces*). International Deer Biology Congress. Estes Park CO. 9 July, 2018.
- Barboza, P.S. Educating for resilience: a new role for policy in natural resources. The Wildlife Society 8 October 2018
- Barboza, P.S., L. Van Someren, K.W. Oster, D.D. Gustine, H.E. Johnson. Windows of nitrogen and minerals for migratory caribou in Alaska. The Wildlife Society 11 October 2018
- 2017 Tolerance of foraging constraints in female barren-ground caribou (*Rangifer tarandus granti*). P.S. Barboza, R.D. Shively and D.P. Thompson. Annual Meeting of American Society of Mammologists. Moscow, Idaho.
- Mineral phenology of forages available for migratory caribou in Alaska. Keith Oster, P.S. Barboza and D.D. Gustine. Annual Meeting of American Society of Mammologists. Moscow, Idaho.
- Fossil *Bison* and past climates: a long-term trend of body size into the future. J.M.Martin, J.I. Mead and P.S. Barboza. Annual Meeting of American Society of Mammologists. Moscow, Idaho.

- 2014 Simulated ranges indicate the importance of seasonal habitat for female caribou. P.S. Barboza, D.P. Thompson, R. Hart. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK.
Evaluating protein balance in wintering moose. J. Crouse and P. Barboza. 48th North American Moose Conference and Workshop, Girdwood AK.
Natural and anthropogenic effects on the spatial genetic structure of moose. R. Wilson, S.D. Farley, T.J. McDonough, S. Talbot, P.S. Barboza. 48th North American Moose Conference and Workshop, Girdwood AK.
- 2013 Feeding behavior of caribou calves does not compensate for low forage quality. P.S. Barboza and R. Ruffner. Annual meeting of The Wildlife Society, Alaska Chapter, Fairbanks AK.
Activity and diet of Little Brown Bats in interior Alaska. R. Shively, P.S. Barboza, C. Stricker, and T. Jung. Annual meeting of The Wildlife Society, Alaska Chapter, Fairbanks AK.
Monitoring summer forages for Arctic caribou: correlating isotopes with diet and latitude. L.L. Van Someren, P.S. Barboza, D.D. Gustine, L.S. Parrett, and C. Stricker. Annual meeting of The Wildlife Society, Alaska Chapter, Fairbanks AK.
Browse intakes of caribou during summer. D.P. Thompson and P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Fairbanks AK.
Relationships between movement, diet, and habitat quality of urban moose. J.H. Welch, P.S. Barboza, S.D. Farley and D.E. Spalinger. Annual meeting of The Wildlife Society, Alaska Chapter, Fairbanks AK.
- 2012 Applying stable isotopes to wildlife nutrition: ²H and body composition, ¹⁵N and protein balance. P.S. Barboza. *Advances in Stable Isotope Techniques and Applications*. Fairbanks Alaska. Invited speaker.
Body condition of female caribou at first reproduction. E.M. Garrett, K.W. Oster, and P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK
Onset of breeding behavior in young male caribou. K.W. Oster, E.M. Garrett and P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK
An in vitro method for monitoring digestibility of forages for caribou. L.L. Van Someren, P.S. Barboza and D.D. Gustine. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK.
Plant secondary metabolites as indicators of lichen consumption. R.D. Shively, D. Zhipeng, T. Green, J. Lawler and P. S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK.
Nutritional ecology of moose in an urban landscape. J.H. Welch, P.S. Barboza, S.D. Farley and D.E. Spalinger. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK.
Response of caribou and reindeer to variable food supply in late winter. D.P. Thompson, D.P. and P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK.
- 2011 Isotopic indicators of protein dynamics in wintering reindeer, caribou, and muskoxen. P.S. Barboza, D.D. Gustine, J.A. Addison and R.D. Shively. Arctic Ungulate Conference, Yellowknife Canada.
Effects of food shortage in spring on compensatory intake and body mass of caribou (*Rangifer tarandus granti*) and reindeer (*R.t. tarandus*). D.P. Thompson and P.S. Barboza. Arctic Ungulate Conference, Yellowknife Canada.
Nutrition and post-weaning growth of caribou from interior Alaska. P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Juneau AK.
Are migratory caribou more active than sedentary caribou? J. Ball, L.L. Van Someren, and P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Juneau AK
What does a wet caribou weigh? L.L. Van Someren, J. Ball, and P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Juneau AK.

- 2010 Risk and resilience in wildlife nutrition. P.S. Barboza. Plenary Lecture to Comparative Nutrition Society, Tucson AZ. Invited speaker.
Physiology of recruitment in muskox populations. P.S. Barboza. Annual meeting of The Wildlife Society, Alaska Chapter, Anchorage AK and Annual Meeting of The Wildlife Society, Snow Bird UT.
- 2009 Trophic matches and mismatches: monitoring responses to variable environments. P.S. Barboza, K.L. Parker, I.D. Hume. Symposium on Trophic Matches and Mismatches at the Annual Meeting of The Wildlife Society, Monterrey CA. Invited speaker.
Wildlife nutrition: integrating animal responses to variable environments. P.S. Barboza Annual meeting of The Wildlife Society, Alaska Chapter, Fairbanks AK.
A tale of two males in the arctic: contrasting strategies for rut in reindeer and muskoxen. P.S. Barboza. Annual Meeting of the American Society of Mammalogists, Fairbanks AK.
Seasonal digestive function in arctic ruminants: flexible fermentation and a variable food supply. P.S. Barboza. Conference on Gastrointestinal Function, Chicago, IL. Invited speaker.

SELECTED SEMINARS & PRESENTATIONS SINCE 2015

- 26 November 2024 Invited Lecture: Resilience, nutrition and the art of living robustly. Ecology, Evolution and Conservation Biology Program, University of Nevada Reno.
- October 2022 - 2024 Guest Lecture: Nutrition in Wildlife Ecology. Ecology, Evolution and Conservation Biology Program, University of Nevada Reno.
- 16 April 2020 Invited Seminar (Webinar): Can we manage wild ungulates on a climatic scale? University of Wisconsin Stevens Point.
- 2 May 2019 Invited Lecture: Caribou currencies: valuing land for a migratory ungulate. Ecology, Evolution and Conservation Biology Program, University of Nevada Reno.
- 7 November 2018 Invited presentation: Bison as a model for informing and transforming wildlife systems in North America. Rethinking the North American Model of Wildlife Conservation PERC Conference Center, Bozeman, MT
- 13 November 2017 Seminar: A nutritional perspective of resilience in wildlife. Ecology and Evolutionary Biology program, Texas A&M University
- 2 October 2015 Seminar: What do wildlife cost? Department of Biology. Baylor University, Waco Texas.
- 5 March 2015 Invited Lecture. Cesar Kleberg Wildlife Research Institute, Deer Associate Meeting, San Antonio, Texas. Overheating in the Arctic.