

John S. Nishi

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EDUCATION

1993 M.Sc. Zoology

- University of Alberta, Edmonton, AB
- Thesis: “*Range ecology of an introduced population of reindeer on the Belcher Islands, Northwest Territories*”

1990 B.Sc. Agriculture and Forestry (Graduated with Distinction)

- University of Alberta, Edmonton, AB

PROFESSIONAL CERTIFICATION

- Professional Biologist (P.Biol.), Alberta Society of Professional Biologists
- Professional Agrologist (P.Ag.), Alberta Institute of Agrologists

PROFESSIONAL EXPERIENCE

2007-Present **President - EcoBorealis Consulting Inc.**

I established EcoBorealis Consulting Inc. as a means of working in the private sector (after leaving the civil service) and providing technical services to government, private industry, and aboriginal clients on a broad array of wildlife and natural resource management issues. Projects have included design and execution of field research projects and aerial wildlife surveys, wildlife co-management planning, land-use planning, and review of environmental impact assessments.

2007-Present **Wildlife and Landscape Biologist, ALCES Group - Associate**

My focus is on the application of ALCES™ and its integration with other modelling tools to address land use and wildlife management issues in northern Canada. I have worked with ALCES Group members on several projects that are focused on cumulative effects of boreal caribou in northern Alberta (Athabasca Landscape Team) and the southern Northwest Territories, as well as migratory barren-ground caribou in the Canadian arctic. Additional project opportunities have included technical writing and modelling support for the Alberta Land-Use Framework Lower Athabasca Regional Plan (LARP).

2006-2007 **Senior Wildlife Biologist, Department of Environment & Natural Resources, Government of the Northwest Territories (GNWT)**

My focus was on completing a variety of bison project files through data analysis and report write-up. I also assisted other GNWT biologists with projects on barren-ground caribou surveys as well as cumulative effects modelling on boreal caribou.

1998-2006 **Bison Ecologist, South Slave Region, Department of Environment & Natural Resources, GNWT**

I worked with communities and First Nations in the Dehcho, Akaitcho, and North and South Slave Regions on issues concerning northern bison and disease management (*i.e.*, wild bison herds infected with bovine tuberculosis, brucellosis, and/or anthrax). Through collaboration with aboriginal communities, university researchers and other federal/provincial/territorial government agencies, my GNWT colleagues and I used a

team approach to provide leadership in understanding and developing options for sustainable use and conservation of the threatened wood bison including development of disease eradication and genetic salvage techniques, and development of genetic conservation strategies. We established and operated a long term wood bison genetic salvage and captive-breeding project. I also served on numerous territorial, national and international bison technical committees.

1993-1998 Regional Wildlife Biologist, Kitikmeot Region, Department of Renewable Resources, GNWT

I started my professional career in the central arctic and worked on field projects encompassing a variety of wildlife species including caribou (Peary and barren-ground herds – Dolphin and Union, Bluenose East, Bathurst, and Ahiak), muskoxen, grizzly bear, wolverine, polar bear, gyrfalcon, and peregrine falcon. I collaborated with community Hunters and Trappers' Committees / Associations / Organizations and other GNWT biologists and University researchers on wildlife research and management projects, environmental impact assessments, land-use planning, community consultation and conservation education. I also liaised with co-management groups including the Nunavut Wildlife Management Board (NWMB), and the Wildlife Management Advisory Council (WMAC-NWT).

PUBLICATIONS AND PRESENTATIONS

REFEREED JOURNALS

- Gunn, A., K. Poole, and **J.S. Nishi**. 2012. A conceptual model for migratory tundra caribou to explain and predict why shifts in spatial fidelity of breeding cows to their calving grounds are infrequent. *Rangifer Special Issue No. 20*. 259-267.
- Nielsen, O., D. Waltner-Toews, **J.S. Nishi**, and B. Hunter. 2012. Whither ecosystem health and ecological medicine in veterinary medicine and education. *Canadian Veterinary Journal*. 53: 747-753.
- Himsworth, C.G., B.T. Elkin, **J.S. Nishi**, T. Epp, K.P. Lyashchenko, O. Surujballi, C. Turcotte, J. Esfandiari, R. Greenwald, and F.A. Leighton. 2010. Comparison of test performance and evaluation of novel immunoassays for tuberculosis in a captive herd of wood bison naturally infected with *Mycobacterium bovis*. *Journal of Wildlife Diseases*. 46: 78-86
- Thundathil, J., D. Whiteside, B. Shea, D. Ludbrook, B. Elkin, and **J. Nishi**. 2007. Reproductive technologies in wood bison (*Bison bison athabasca*): implications for preserving genetic diversity. *Theriogenology*. 68: 93-99.
- Nishi, J.S.**, T.R. Ellsworth, N. Lee, D. Dewar, B.T. Elkin, D.C. Dragon. 2007. An outbreak of anthrax (*Bacillus anthracis*) in free-roaming bison in the Northwest Territories, June–July 2006. *Canadian Veterinary Journal*. 48: 37-39
- Lutze-Wallace, C., C. Turcotte, D.A. Stevenson, B. Elkin, M. Koller-Jones, **J. Nishi**, G. Wobeser. 2006. Isolation of *Mycobacterium bovis* from a wood bison in a wildlife conservation project in the Northwest Territories. *Canadian Veterinary Journal*. 42: 317-318.
- Nishi, J.S.**, T. Shury, and B.T. Elkin. 2006. Wildlife reservoirs for bovine tuberculosis (*Mycobacterium bovis*) in Canada: strategies for management and research. *Veterinary Microbiology*. 112: 325-338.
- Wilson, G.A., **J.S. Nishi**, B.T. Elkin, and C. Strobeck. 2005. Effects of a recent founding event and intrinsic population dynamics on genetic diversity in a salvaged ungulate population. *Conservation Genetics*. 6: 905-916.
- Larter, N.C., **J.S. Nishi**, T. Ellsworth, D. Johnson, G. More, and D.G. Allaire. 2003. Observations of wood bison swimming across the Liard River, Northwest Territories, Canada. *Arctic*. 56: 408-412.
- Kutz, S.J., E.P. Hoberg, **J. Nishi** and L. Polley. 2002. Development of the muskox lungworm, *Umingmakstrongylus pallikuukensis* (Protostrongylidae), in gastropods in the Arctic. *Canadian Journal of Zoology*. 80: 1977-1985.
- Larter, N.C., A.R.E. Sinclair, T. Ellsworth, **J. Nishi**, and C.C. Gates. 2000. Dynamics of reintroduction in an indigenous large ungulate: the wood bison of northern Canada. *Animal Conservation* 4:299-309.

- Dragon, D.C., B.T. Elkin, **J.S. Nishi**, and T.R. Ellsworth. 1999. A review of anthrax in Canada and implications for research on the disease in northern bison. *Journal of Applied Microbiology*. 87: 208-213.
- Hoberg, E.P., L. Polley, A. Gunn, and **J.S. Nishi**. 1995. *Umingmakstrongylus pallikuukensis* gen. nov. et. sp. nov. (Nematoda: Protostrongylidae) from muskoxen, *Ovibos moschatus*, in the central Canadian Arctic, with comments on biology and biogeography. *Canadian Journal of Zoology*. 73: 2266-2282.

BOOK CHAPTERS

- Gunn, A., C.J. Johnson, **J.S. Nishi**, C.J. Daniel, M. Carlson, D.E. Russell, and J.Z. Adamczewski. 2011. Addressing Cumulative Effects in the Canadian Central Arctic – Understanding the Impacts of Human Activities on Barren-ground Caribou. *In* Krausman, P.R., and L.K. Harris (Eds.) *Cumulative Effects in Wildlife Management: A Critical Aspect of Impact Mitigation*. Taylor & Francis Group, Boca Raton, FL.
- Aune, K., C. Gates, Elkin, B.T. M. Hugh-Jones, D.O. Joly. and **J. Nishi**. 2010. Chapter 5 - Reportable or Notifiable Diseases *in* C.C. Gates, C.H. Freese, P.J.P. Gogan, and M. Kotzman (eds.) *North American Bison Conservation Status Survey and Action Plan 2010*, The IUCN American Bison Specialist Group and Species Survival Commission. Gland, Switzerland. [Online]
http://cmsdata.iucn.org/downloads/american_bison_report.pdf

PUBLISHED PROCEEDINGS

- Carlson, M., T. Antoniuk, D. Farr, S. Francis, K. Manuel, **J. Nishi**, B. Stelfox, M. Sutherland, C. Yarmoloy, C. Aumann, and D. Pan. 2010. Informing Regional Planning in Alberta's Oilsands Region with a Land-use Simulation Model. *In* D.A. Swayne, W. Yang, A. A. Voinov, A. Rizzoli, and T. Filatova (Eds.) *International Environmental Modelling and Software Society (iEMSs) 2010 International Congress on Environmental Modelling and Software Modelling for Environment's Sake, Fifth Biennial Meeting*, Ottawa, Canada. Online [URL]: <http://www.iemss.org/iemss2010/index.php?n=Main.Proceedings>
- Jensen, O.C., **J. Nishi**, N.L. Cool, D. Poll, and H.W. Reynolds. 2004. Assessing suitable and critical habitat for wood bison (*Bison bison athabasca*) using geographic information systems (GIS) and remote sensing: Preliminary results. *In* T.D. Hooper, editor. *Proceedings of the Species at Risk 2004 Pathways to Recovery Conference*. March 2–6, 2004, Victoria, B.C. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, B.C.
- Nishi, J.S.**, R.S. Morley, S. Chen, and B.T. Elkin. 2004. Risk assessment as a tool to evaluate health status of a salvaged herd of captive wood bison. *In* T.D. Hooper, editor. *Proceedings of the Species at Risk 2004 Pathways to Recovery Conference*. March 2–6, 2004, Victoria, B.C. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, B.C.
- Wilson, G., **J.S. Nishi**, and K. Zittlau. 2004. Developing an adaptive genetic management framework for wood bison in Canada. *In* T.D. Hooper, editor. *Proceedings of the Species at Risk 2004 Pathways to Recovery Conference*. March 2–6, 2004, Victoria, B.C. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, B.C.
- Wilson, G., **J.S. Nishi**, and K. Zittlau. 2004. Genetic management of a small and recently salvaged herd of wood bison. *In* T.D. Hooper, editor. *Proceedings of the Species at Risk 2004 Pathways to Recovery Conference*. March 2–6, 2004, Victoria, B.C. Species at Risk 2004 Pathways to Recovery Conference Organizing Committee, Victoria, B.C.
- Nishi, J.S.**, B.T. Elkin, and T.R. Ellsworth. 2002. The Hook Lake Wood Bison Recovery Project: Can a disease-free captive wood bison herd be recovered from a wild population infected with bovine tuberculosis and brucellosis? *Annals of the New York Academy of Sciences*. 969: 229 – 235.
- Nishi, J.S.**, C. Stephen, and B.T. Elkin. 2002. Implications of agricultural and wildlife policy on management and eradication of bovine tuberculosis and brucellosis in free-ranging wood bison of northern Canada. *Annals of the New York Academy of Sciences*. 969: 236 – 244.
- Nishi, J.S.**, D.C. Dragon, B.T. Elkin, J. Mitchell, T.R. Ellsworth and M.E. Hugh-Jones. 2002. Emergency Response Planning for Anthrax Outbreaks in Bison Herds of Northern Canada: A Balance Between Policy and Science. *Annals of the New York Academy of Sciences*. 969: 245 - 250.

- Nishi, J.S.**, B.T. Elkin, T.R. Ellsworth, D. Balsillie, G. Wilson, and J. van Kessel. 2001. An overview of the Hook Lake Wood Bison Recovery Project: where have we come from, where are we now, and where we would like to go? Pages 215-233 in Rutley, B.D., ed., *Bison are Back – 2000*. Proceedings of the Second International Bison Conference, Aug 2-4, 2000, Edmonton, AB.
- Gunn, A., F.L. Miller, and **J. Nishi**. 2000. Status of endangered and threatened caribou on Canada's Arctic Islands. *Rangifer Special Issue 12*. 39-50.
- Nishi, J.S.**, and G.H.R. Henry. 1992. Introduced reindeer on the Belcher Islands, Northwest Territories: effects of grazing on vegetation. *Musk-Ox*. 39: 241

TECHNICAL REPORTS (2005 – PRESENT)

- Francis, S., S. Kennett, T. Antoniuk, and **J. Nishi**. 2013. Fish and wildlife values in cumulative effects assessment: current status and Yukon needs assessment. Yukon Environment, Fish and Wildlife Management Branch, Whitehorse, YK. 111 pp.
- Antoniuk, T., E. Dzus, and **J.S. Nishi**. 2012. A methodological framework for caribou action planning in support of the Canadian Boreal Forest Agreement. Canadian Boreal Forest Agreement, Ottawa, ON. 46 pp. [Online] http://canadianborealforestagreement.com/publications/CBFACaribou_guidelines_EN.pdf
- Antoniuk, T., L. McNeil, **J. Nishi**, and K. Manuel. 2012. Caribou Protection and Recovery Program - Technical Guidance, Oil Sands Leadership Initiative, Calgary, AB. 84 pp. [Online] http://www.osli.ca/uploads/files/OSLI_Caribou_Protection_Workshop_Findings_2012_07.pdf
- Nishi, J.S.**, B. Croft, J. Boulanger, and J. Adamczewski. 2011. An estimate of breeding females in the Bathurst herd of barren-ground caribou, June 2009. Department of Environment and Natural Resources. Government of the Northwest Territories. File Report No. 1XX. 98 pp. [Online] http://wrrb.ub4.outcrop.com/sites/default/files/public_registry/Nishi.2010.BathurstCalvGrd2009v9.Marc_h3_2010.pdf
- Campbell, M., **J. Nishi**, and J. Boulanger. 2010. A calving ground photo survey of the Qamanirjuaq migratory barren-ground caribou (*Rangifer tarandus groenlandicus*) population – June 2008. Nunavut Department of Environment, Technical Report Series 2010 – No. 1-10, 247 pp. [Online] http://env.gov.nu.ca/sites/default/files/report_-qamanirjuaq_caribou_nov_2010.pdf
- Nishi, J.S.** 2010. A Review of Best Practices and Principles for Bison Disease Issues: Greater Yellowstone and Wood Buffalo Areas. Wildlife Conservation Society and American Bison Society (ABS), ABS Working Paper No. 3. Bronx, New York, USA. 101 pp. [Online] <http://www.americanbisonsocietyonline.org/Publications.aspx>
- Nishi, J.S.** and T. Antoniuk. 2010. Cumulative Effect Thresholds and Natural Gas Development Scenarios in the southern Dehcho. Unpublished Report submitted to Indian and Northern Affairs Canada, Yellowknife. ALCES Group. Calgary, Alberta.
- Bidwell, W.A., **J.S. Nishi**, and T.R. Ellsworth. 2009. Bison Control Area Program annual report of survey activities January 2005- April 2005. Department of Environment and Natural Resources. Government of the Northwest Territories. Manuscript Report No. 196. 46 pp.
- Antoniuk, T., **J. Nishi**, K. Manuel, M. Sutherland, and C. Yarmaloy. 2009. ALCES III Scenario Modelling Report – Athabasca Landscape Area. Unpublished Report, ALCES Landscape and LandUse Ltd., Calgary, AB. 90 pp.
- Nishi, J.S.**, T. Antoniuk, and J.B. Stelfox. 2009. Review of land cover data and suitability of ALCES for evaluating cumulative effects on boreal caribou in the Dehcho Region. Department of Environment and Natural Resources. Government of the Northwest Territories. Manuscript Report No. 182. 52 pp.
- Gunn, A., D. Russell, L. Adams, L. Baskin, J. Boulanger, C. Cuyler, J. Dau, **J. Nishi**, J. Nagy, D. Paetkau. 2008. Monitoring *Rangifer* herds (population dynamics) – Manual. CircumArctic Rangifer Monitoring and Assessment Network. 50. pp. Online [URL]: <http://www.carmanetwork.com/display/public/Population+Monitoring>
- Nishi, J.S.**, Croft, B., J. Williams, J. Boulanger, D. Johnson. 2007. An estimate of breeding females in the Bathurst herd of barren-ground caribou, June 2006. Department of Environment and Natural Resources. Government of the Northwest Territories. File Report No. 137. 84 pp.

- Canadian Circumpolar Institute (Nishi, J.S. and R.J. Hudson). 2007. Options for implementing a new wildlife harvest study in Nunavut. Canadian Circumpolar Institute Unpublished Report. Edmonton, AB. 39 pp.
- McFarlane, K., G.A. Wilson, and **J.S. Nishi**. 2006. Management strategies for conservation of genetic diversity in wood bison. Department of Environment and Natural Resources. Government of the Northwest Territories. File Report No. 135. 76 pp.
- Woodbury, M., E. Garde, H. Schwantje, **J. Nishi**, and B. Elkin. 2006. Workshop on *Mycobacterium avium* subsp. Paratuberculosis in North American Bison: Proceedings and Workshop Report. Department of Resources, Wildlife and Economic Development. Government of the Northwest Territories. Manuscript Report No. 170. 87 pp.
- Gunn, A., **J. Nishi**, J. Boulanger, and J. Williams. 2005. An estimate of breeding females in the Bathurst herd of barren-ground caribou, June 2003. Department of Resources, Wildlife and Economic Development, Government of the Northwest Territories. Manuscript Report No. 164. 75 pp.

SELECTED PAPERS PRESENTED AT CONFERENCES / INVITED LECTURES / PROFESSIONAL WORKSHOPS (2005 – PRESENT)

- Nishi, J.** 2012. A Changing Veterinary Landscape. Invited Guest Lecture for VTM440 (Ecosystem and Public Health). 27 March 2012. Faculty of Veterinary Medicine, University of Calgary, Calgary, AB.
- Nishi, J.** 2012. Bison in the Greater Wood Buffalo Nation Park Ecoregion – an Ecosystem Health Perspective. Invited Guest Lecture for VMED451 (Ecosystem and Public Health). 16 March 2012. Faculty of Veterinary Medicine, University of Calgary, Calgary, AB.
- Berryman, S., J. Straker, A. Garibaldi, B. Stelfox, and **J. Nishi**. 2012. A community-led approach for landscape planning. 97th Ecological Society of America Annual Meeting, 5-10 August, 2012. Portland, OR.
- Nishi, J.** 2011. Counting Caribou: Visual Demonstration and Classroom Activity. 13th Arctic Ungulate Conference. 25 August 2011. Yellowknife, NT.
- Nishi, J.** 2011. A Perspective on Wildlife Management Priorities. 13th Arctic Ungulate Conference. 25 August 2011. Yellowknife, NT.
- Gunn, A., K. Poole, J. Adamczewski, and **J. Nishi**. 2011. Geographical and changing abundance influences winter, pre-calving and calving distribution of a continental caribou herd. 13th Arctic Ungulate Conference. 24 August 2011. Yellowknife, NT.
- Adamczewski, J., A. Gunn, **J. Nishi** and K. Poole. 2011. Dealing with uncertainty in management of declining herds of migratory tundra caribou: an evaluation of evidence and implications for the decline of the Beverly caribou herd in northern Canada. 13th Arctic Ungulate Conference. 24 August 2011. Yellowknife, NT.
- Massolo, A. E. Bertolotto, T. Ellsworth, **J. Nishi** and T. Armstrong. 2011. Carry-over effects of raising a son in wood bison (*Bison bison athabascae*). 13th Arctic Ungulate Conference. 24 August 2011. Yellowknife, NT.
- Garner, K., B. Croft, **J. Nishi** and J. Adamczewski. 2011. Decline and harvest management of the Bathurst caribou herd – a collaborative approach in a time of crisis. 13th Arctic Ungulate Conference. 23 August 2011. Yellowknife, NT.
- Nishi, J.** 2011. A Changing Veterinary Landscape – “Why Veterinarians Should Care About People and Land-use”. Invited Guest Lecture for VTM440 (Ecosystem and Public Health). 27 January 2011. Faculty of Veterinary Medicine, University of Calgary, Calgary, AB.
- Adamczewski, J., K. Garner, B. Rabesca-Zoe, **J. Nishi**, J.B. Zoe, S. Fleck, A. Pape, and E. Campbell. 2010. Accelerated decline in the Bathurst herd of barren-ground caribou 2006-2009: Developing a co-management solution to harvest management and recovery. Paper presented at 13th North American Caribou Workshop. 28 October 2010, Winnipeg, MB.
- Gunn, A., K. Poole, and **J. Nishi**. 2010. Fidelity of migratory tundra caribou to traditional calving grounds: a narrow orthodoxy or a robust hypothesis? Paper presented at 13th North American Caribou Workshop. 26 October 2010, Winnipeg, MB.

- Nishi, J.S.**, T. Antoniuk, E. Dzus, R. Bjorge, M. Duhaime and G. Hamilton. 2010. Evaluating boreal caribou management options in northeast Alberta. Paper presented at 13th North American Caribou Workshop. 27 October 2010, Winnipeg, MB.
- Nishi, J.S.** 2010. Land-use in Alberta – “Implications and Challenges for Future Sustainability”. Invited Guest Lecturer at St. Mary’s University (BIOL 451), 28 September 2010. Calgary, AB.
- Nishi, J.S.** 2009. Bison Production Systems – A Wildlife Ecologist’s Perspective. Invited Speaker at Bison Producers of Alberta Workshops, 17 January 2009, Claresholm, AB., 24 January 2009, Red Deer, AB., and 31 January 2009, Grande Prairie, AB.
- Nishi, J.S.** 2008. ‘Best Principles’ and ‘Best Practices’ for disease management: a framework for bison recovery and restoration. Invited Speaker at American Bison Society Meeting, 17-18 Nov.2008, Rapid City, SD.
- Nishi, J.S.** and B. Stelfox. 2008. Landscape Change: Drivers for Ecosystem and Wildlife Health. Invited Speaker at the 57th Annual International Conference of the Wildlife Disease Association, 3-8 August 2008, Edmonton, AB.
- Nishi, J.S.** 2008. A Changing Alberta Landscape: Historic Patterns and Future Challenges. Invited Speaker at the 45th Annual Alberta Soil Science Workshop, 19-21 February 2008, Lethbridge, AB.
- Antoniuk, T.A., and **J.S. Nishi**. 2008. ALCES[®]: A Decision Support Tool For Cumulative Effects. Presentation at a Workshop on Modelling Cumulative Effects in Barren-ground Caribou Range, 21-22 February 2008. Yellowknife, NT.
- Nishi, J.S.** 2008. What are Models? – A Way to Integrate Data and Knowledge. Presentation at a Workshop on Modelling Cumulative Effects in Barren-ground Caribou Range, 21-22 February 2008. Yellowknife, NT.
- Nishi, J.**, T. Antoniuk, and A. Gunn. 2008. An Integrated Modelling Approach. Presentation at a Workshop on Modelling Cumulative Effects in Barren-ground Caribou Range, 21-22 February 2008. Yellowknife, NT.
- Nishi, J.S.** and B.T. Elkin. 2007. Lessons learned from the Hook Lake Wood Bison Recovery Project: relevance to the northern diseased bison issue in Canada. Oral presentation at the 56th Annual International Conference of the Wildlife Disease Association, 3-8 August 2007, YMCA of the Rockies, Estes Park, CO.
- B.T. Elkin and **J.S. Nishi**. 2007. An outbreak of tuberculosis in a captive breeding herd of wood bison: the Hook Lake Wood Bison Recovery Project. Oral presentation at the 56th Annual Wildlife Disease Association Conference, 12-17 August 2007, YMCA of the Rockies, Estes Park, CO.
- Nishi, J.S.** and B. Stelfox. 2007. A Changing Alberta Landscape – Linkages and Challenges for the Veterinary Profession. Presentation at “The Changing Socio-economic and Environmental Context for Veterinary Services and Practices in Alberta – An Exploratory Workshop,” Alberta Veterinary Research Institute, 26 February 2007, Leduc, AB.
- Stelfox, B., and **J. Nishi**. 2007. The Dynamics of Animal Health in Alberta – A Systems Dynamics Approach. Presentation at “The Changing Socio-economic and Environmental Context for Veterinary Services and Practices in Alberta – An Exploratory Workshop,” Alberta Veterinary Research Institute, 26 February 2007, Leduc, AB.
- Nishi, J.S.**, B.T. Elkin, T.E. Ellsworth, and D. Dragon. 2006. Recent anthrax outbreaks in northern bison. Oral presentation at Anthrax in North American Wildlife and Domestic Animals – Disease Research and Management Workshop, 18-19 November 2006, University of Calgary, Calgary, AB.
- Nishi, J.S.**, T. Shury, and B.T. Elkin. 2005. Wildlife reservoirs for bovine tuberculosis (*M. bovis*) in Canada: strategies for management and research. Oral presentation to M. Bovis IV – 4th International Conference, 22-26 Aug. 2005. Dublin, Ireland.
- Nishi, J.S.**, B.T. Elkin, and M. Koller-Jones. 2005. Bovine Tuberculosis in the Hook Lake Wood Bison Recovery Project: Options for the Future. Oral presentation to M. Bovis IV – 4th International Conference, 22-26 August, 2005. Dublin, Ireland.
- Wilson, G., K. Zittlau, and **J. Nishi**. 2005. Management of genetic diversity in wood bison. Presentation to National Wood Bison Recovery Team, Canadian Wildlife Service, Edmonton, AB. 12 July 2005.
- Elkin, B.T., D.C. Dragon, and **J.S. Nishi**. 2005. Evaluation of carcass disposal techniques after an anthrax outbreak in free-ranging bison in northern Canada. Oral presentation to Wildlife Health in a Shrinking

- World: Ecology, Management, and Conservation - Wildlife Disease Association International Conference. 26 June – 1 July 2005. Cairns, Queensland. Australia.
- Woollen, N., G. Carter, W. Dorman, D. Bader, D. Dragon, M. Wolcott, **J. Nishi**, and J. Mitchell. 2005. Field laboratory diagnosis of *Bacillus anthracis* infection from swab and insect samples collected from dead bison. Poster presentation to Wildlife Health in a Shrinking World: Ecology, Management, and Conservation - Wildlife Disease Association International Conference. 26 June – 1 July 2005. Cairns, Queensland. Australia.
- Carlson, M., B. Stelfox, D. Farr, **J. Nishi** and L. Roy. 2005. Integrated landscape modelling strategies and challenges: An ALCES perspective. Poster presentation to Visioning a Federal Facility for Integrated Landscape Management Modelling Workshop. Policy Research Initiative, Ottawa ON, February 28, 2005.
- Elkin, B.T. and **J.S. Nishi**. 2005. Current status of *Mycobacterium avium* spp. *paratuberculosis*: Canadian bison populations. Oral presentation at Workshop on *Mycobacterium avium paratuberculosis (Mptb)*/Johne's Disease in North American Bison. 18-19 February 2005, University of Alberta, Edmonton, AB.
- Nishi, J.S.**, and B.T. Elkin. 2005. *Mptb*: Surveillance strategies for bison conservation herds in Canada – some considerations. Oral presentation at Workshop on *Mycobacterium avium paratuberculosis (Mptb)*/Johne's Disease in North American Bison. 18-19 February 2005, University of Alberta, Edmonton, AB.
- Nishi, J.S.**, and B.T. Elkin. 2005. *Mptb*: Implications for bison conservation and wildlife management. Oral presentation at Workshop on *Mycobacterium avium paratuberculosis (Mptb)*/Johne's Disease in North American Bison. 18-19 February 2005, University of Alberta, Edmonton, AB.
- Nishi, J.S.**, and B.T. Elkin. 2005. The Hook Lake Wood Bison Recovery Project: Challenges and Opportunities for Conservation. Oral presentation at Science in the Changing North Conference, Yellowknife, NT. 14-16 February 2005.

GRADUATE STUDENT FIELD SUPERVISION

- Jensen, O. 2005. Defining Critical and Suitable Habitat for Wood Bison Using Remote Sensing & Geographic Information Systems, M.Sc Candidate. Univ. Alberta, Edmonton, AB.
- Van Kessel, J.C. 2002. Taking care of bison: community perceptions of the Hook Lake Wood Bison Recovery Project in Fort Resolution, NT, Canada. M.Sc Thesis. Univ. Alberta, Edmonton, AB. 155 pp.
- Wilson, G.A. 2001. Population genetic studies of wood and plains bison populations. PhD. Dissertation. Univ. Alberta, Edmonton, AB. 156 pp.
- Kutz, S.J. 1999. The biology of *Umingmakstrongylus pallikuukensis*, a lung nematode of muskoxen in the Canadian Arctic: field and laboratory studies. PhD Dissertation. Univ. Saskatchewan, Saskatoon, SK. 190 pp.
- Quinlan, A.E. 1999. Prescribed fire and vegetation dynamics in northern boreal sedge-grass meadows of the Slave River Lowlands, Northwest Territories. M.Sc Thesis. Univ. Alberta, Edmonton, AB. 109 pp.

AWARDS AND RECOGNITIONS

- Alberta Society of Professional Biologists – Peggy Thompson Publication Award (2010) in the category of biological technical report (A Review of Best Practices and Principles for Bison Disease Issues: Greater Yellowstone and Wood Buffalo Areas)
- Northwest Territories Premier's Award for Excellence – Anthrax Emergency Response Group (2007)
- Northwest Territories Premier's Award for Excellence – Bison Project (2003)
- Beverly and Qamanirjuaq Caribou Management Board, Scholarship (1992)
- Northern Scientific Training Program Grant in support of M.Sc. research (1991-1992)
- Province of Alberta Graduate Student Scholarship (1990-1992)
- Department of Biological Sciences, University of Alberta Graduate Teaching Assistantship (1991-1992)
- Canadian Wheat Board Undergraduate Scholarship (1989-1990)

- Alexander Rutherford High School Achievement Scholarship (1986)
- Douglas Gyorfı Memorial Scholarship (1986)

PROFESSIONAL ACTIVITIES

PEER REVIEW ACTIVITIES

- Research proposals – *Alberta Conservation Association ACA Grants in Biodiversity* (2012, 2010, 2009)
- Scientific paper – *Rangifer* (2012)
- Scientific paper – *Northern Review* (2012)
- Research proposal – *Deutsche Forschungsgemeinschaft - German Research Foundation; German-African Cooperation Projects in Infectology* (2011)
- Book manuscript – *University of Montana Press* (2010)
- Scientific paper – *Wildlife Biology* (2009)
- Research proposal – *European Science Foundation Workshop* (2003)

WORKSHOPS (2005 – PRESENT)

- Collaborated with T.M. Antoniuk (Salmo Consulting Inc.) and L. McNeil (McNeil Consulting) on “Oil Sands Leadership Initiative - Caribou Protection and Recovery Program Workshop, 16-17 May 2012, Banff, AB.
- Collaborated with J. Adamczewski (GNWT) on “Workshop on Counting Caribou,” in conjunction with 13th Arctic Ungulate Conference, 25 August 2011. Yellowknife, NT.
- Collaborated with K. Garner (Tlicho Government) on “Tlicho Ekwo Working Group – Orientation Workshop,” 13-15 December 2010, Yellowknife, NT.
- Collaborated with J. Adamczewski (GNWT) on “Workshop on Modelling Cumulative Effects in Barren-ground Caribou Range,” 21-22 February 2008. Yellowknife, NT.
- Organizing committee for a Workshop on *Mycobacterium avium paratuberculosis (Mptb)*/Johne’s Disease in North American Bison. Workshop held with the Alberta Cooperative Conservation Research Unit, 18-20 February, 2005, Univ. Alberta, Edm. AB.

COMMITTEES

- IUCN/SSC Bison Specialist Group - North America (2001 – present)
- Government of the Northwest Territories, Department of Environment and Natural Resources, Wildlife Care Committee member (2004 – 2006)
- National Recovery Team for Wood Bison (1998 – 2007) and Chair of Genetic Management Recovery Implementation Group (2000 – 2007)
- Government of the Northwest Territories, Department of Transportation, Bison-Vehicle Committee (2003 – 2005)
- Bison Interim Measures Technical Working Group (2002 – 2004)
- Research Advisory Committee, Wood Buffalo National Park Bison Research and Containment Program (1998 – 2001)

PROFESSIONAL AFFILIATIONS

- Alberta Institute of Agrologists, Professional Agrologist, P.Ag.
- Alberta Society of Professional Biologists, Professional Biologist, P.Biol.
- Alberta Chapter of the Wildlife Society