

R. Scott McNay, PhD, RPF, RPBio

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Career Objective

To provide innovative solutions to key issues of conflict that impedes the effective integration of management tactics for wildlife and sustainable development of renewable natural resources.

Profile

- Accreditations include: Bachelor of Science, Masters of Science, Doctor of Philosophy, Registered Professional Forester (BC), Registered Professional Biologist (BC), Professional Biologist (AB).
- 32 years of experience in ecological research and management including formal affiliations with academia (University of British Columbia), government (BC Ministry of Forests), industry (Slocan Forest Products), consulting (Wildlife Infometrics Inc.), and not-for-profit societies (Resources North Association);
- Initiated, managed, and successfully completed large projects with multi-million dollar budgets (coastal black-tailed deer, coastal montane biodiversity, Omineca northern caribou project, effectiveness monitoring for mountain goat management, industrial environmental assessments)
- Championed the use of habitat supply modeling and adaptive management (see published literature)
- 37 peer-reviewed publications, lead author on 19.

Work Experience

Forest/Wildlife Ecologist, Wildlife Infometrics Inc.

Mackenzie, BC, 2004 – present

In this position I:

- Plan and conduct operational inventories of aquatic and terrestrial vertebrates and their habitat;
- Plan, conduct, and report on original applied research concerning the interactions among industrial development and habitat values for sensitive terrestrial wildlife;
- Analyze data and develop models (frequentist and non-frequentist) to assist in landscape management decision making and conservation of at risk species;
- Write script to analyze data and manage databases using SAS
- Plan, manage, and coordinate environmental studies associated with industrial Environmental Impact Assessments;
- Develop techniques to further the application of habitat supply modeling as a tool to aid integrated planning for industrial and non-industrial natural resource values;
- Assist in the development of policy and guidance documents associated with the conservation of terrestrial wildlife; and
- Provide leadership in teams associated with the recovery of caribou in British Columbia including: BC Mountain Caribou Recovery Science Team (2004-present), Recovery Implementation Group for Northern Caribou in North Central BC (2000-2007), BC Peace Northern Caribou Committee (initiated 2012), First Nations Caribou Alliance (2011-present)
- Engage with stakeholders and part of wildlife management policy development
- Develop and implement multipart engagement strategies for wildlife management
- Supervise field work, including wildlife capture and collaring, population surveys, and taxonomy of vascular plants, aquatic species, and mammals.

Forest Biologist, Slocan Forest Products Ltd.

Mackenzie, BC, 1997–2004

In this position I:

- Consulted with Silviculture and Operations Foresters (1.4M cubic meters of Allowable Annual Cut) to provide advice and direction for plans and legal document submissions;
- Provided advice and direction to Forest Planners (e.g., habitat modeling, landscape and stand-level biodiversity targets) for issues that affect forest management plans;
- Developed or reviewed policy on the management of sensitive species;
- Provided extension and liaison with researchers conducting investigations on sensitive species;
- Planned, conducted, and reported inventories of aquatic and terrestrial resources and applied research on management of biodiversity and management techniques within Wildlife Habitat Areas;
- Planned, conducted, and reported operational trials of management guidelines concerning biodiversity.

Wildlife Habitat Ecologist, B.C. Forest Service

Victoria, BC, 1984–1997

In this position I:

- Planned, conducted, and reported original applied research in wildlife habitat ecology, particularly the relationships between forest characteristics and wildlife responses;
- Initiated a major program to enhance integrated management and sustainability of coastal Montane forests;
- Initiated research projects concerning management of logging-road bridges as habitat for bats and integrated management of small coastal owls; and
- Completed all phases of a 15-year project concerning the integrated management of forests and habitat for Columbian black-tailed deer.

Education

PhD, Forestry (Wildlife Ecology) Univ. of British Columbia

Vancouver, BC

1991–1995

Colorado State Univ.Ft. Collins, CO

1995

MSc, Forestry (Wildlife Ecology) Univ. of British Columbia

Vancouver, BC

1981–1984

BScF, Forestry (Wildlife Management) Univ. of New Brunswick

Fredericton, NB

1976–1981

Awards and Distinctions

- Canadian Forest Products Fellowship in Wildlife Management 1982–83 and 1983–84
- Gilbert White Ganong Scholarship 1976

Scholarly Activities

Graduate students supervised

I have acted as a field supervisor for several post-graduate students:

- Laurie Kremsater (MSc) – Edge habitat for black-tailed deer (1994);
- Jeff Morgan (MSc) – Summer habitat selection by black-tailed deer (1994);
- Mandy Kellner (MSc) – Ecology of Montane bats (2001);
- Randy Sulyma (MSc) – Management of pine-lichen woodlands (2001)

Visiting lecturer or speaker

I have lectured or provided informal talks on an ad hoc basis to:

- University of British Columbia (FRST 395);
- University of Northern British Columbia;
- University of Victoria;
- Cowichan Valley Naturalists;
- Nanaimo Fish and Game Protective Association.

Memberships or Committees

I am or have been a member of:

- The Wildlife Tree Committee (technical advisor 1994-1997);
- The Integrated Wildlife – Intensive Forestry Research working group (working member 1981-1991);
- Mountain Caribou Technical Advisory Committee (working member 1998 – 2004);
- Northern Caribou Technical Advisory Committee (working member 2000 – 2005);
- Northern Caribou Recovery Implementation Group for North-central BC (2003-present); first five years as chair;
- Mountain Caribou Science Team (working member 2004-present);
- First Nations Caribou Alliance (working member 2011-present);
- Peace Northern Caribou Committee (initiated 2012);
- Mackenzie Land and Resources Management Plan round table (1998);
- Risk to Biodiversity Technical Review Team (1999);
- Forest Science Board Sustainability Priority Advisory Committee (2004 – 2008); last two years as chair of the committee.

Reviewer

I provide technical reviews (approximately 2/yr) for the following:

- Journal of Wildlife Management;
- American Midland Naturalist;
- Government agencies internal peer reviews; and
- Other review solicited from other organizations, most predominately the Lands Office of many Aboriginal organizations.

Consulting

I consult with forest, wildlife, and lands managers on a regular basis (4/yr) for:

- Government agencies regional and district staff;
- Lands Offices of Aboriginal organizations (Saulteau First Nation, Halfway River First Nation, West Moberly First Nation, Takla Lake First Nation, Tsay Keh Dene, Kwadatcha);
- TimberWest Forest Ltd.; and
- Canadian Forest Products Ltd.

I also consult on a less frequent basis (1/yr) to:

- Alaska Dept. of Fish and Game;
- Yukon Fish and Wildlife
- Washington State Dept. of Fish and Game; and

- Oregon Dept. of Fish and Game.

References

Available upon request.

Peer-reviewed publications

- Bunnell, F.L., **R.S. McNay**, and C.C. Shank. 1985. Trees and snow: the deposition of snow on the ground - a review and quantitative synthesis. British Columbia Min. of Environ. and Min. of For., Research. IWIFR-17. Victoria. 440 p.
- Bunnell, F.L., F.W. Hovey, **R.S. McNay**, and K.L. Parker. 1990. Forest cover, snow conditions, and black-tailed deer sinking depths. Can. J. Zool. 68:2403-2408.
- Bunnell, F.L., K.L. Parker, **R.S. McNay**, and F.W. Hovey. 1990. Sinking depths of black-tailed deer in snow, and their indices. Can. J. Zool. 68: 917-922.
- Cichowski, D., D. Culling, and **R.S. McNay**. 2012. Performance measures for Resource Review Areas for woodland caribou in British Columbia. Internal Rept., British Columbia Ministry of Forests, Lands, and Natural Resource Operations, Prince George, BC.
- Dickie, M., R. Serrouya, R.S. McNay, and S. Boutin. 2016. Faster and farther: Wolf movement on linear features and implications for hunting behaviour. J. Appl. Ecol. <https://doi.org/10.1111/1365-2664.12732>
- Eng, M.A. and **R.S. McNay**. 1990. Development of a habitat assessment and planning tool: A problem reference and project working plan. (EP 1087) British Columbia Min. of Environ. and Min. of For., Research. IWIFR-40. Victoria. 44pp.
- Eng, M.A. and **R.S. McNay**. 1990. Using geographic information systems to assist with the integrated management of forestry and wildlife habitat. Pages 146-156 *In* (A. Chambers, ed.) Proceedings of the Forestry Wildlife Symposium, March 7-8, 1990. British Columbia Min. of For., Research FRDA 160. Victoria. 182pp.
- Eng, M.A., **R.S. McNay**, and R.E. Page. 1991. Integrated management of forestry and wildlife habitat with the aid of a GIS-based habitat assessment and planning tool. Pages 331-336 *In* (M. Heit and A. Shortreid, eds.) GIS applications in natural resources. GIS World, Inc. Fort Collins, CO
- Eng, M.A., **R.S. McNay**, and R.E. Page. 1990. Integrated management of forestry and wildlife habitat with the aid of a GIS-based habitat assessment and planning tool. Pages 185-190 *In* (M.J. Heit, ed.) GIS- making it work. Proceedings of a workshop March 13-16, 1990 at Vancouver, British Columbia. FRDA 107. Victoria. 541pp.
- Eng, M.A., **R.S. McNay**, and R.E. Page. 1989. Refinement of a model used to integrate the management of deer and forests. Page 67 *In* (J. McPhalen, ed.) GIS - a wider perspective. Proceedings of a workshop March 6-10, 1989 at Vancouver, British Columbia. 227pp.
- Eng, M.A., **R.S. McNay**, D.W. Janz, L.L. Kremsater, I. MacDougall, and R.E. Page. 1992. Assessing and planning the spatial and temporal features of black-tailed deer habitat. Pages 81-111 *In* (J. B. Nyberg and W. B. Kessler, eds.) Proceedings of the Habitat Futures Workshop, October 16-20, Pack Experimental Forest, Eatonville, Washington. British Columbia Min. of Forests, Research. Victoria. 161pp.
- Heath, R.H., **R.S. McNay**, and L.D. Peterson. 1988. Operational trials of winter habitat creation for black-tailed deer in young forests: Working plan. (EP 1095) British Columbia Min. of Environ. and Min. of Forests, Research. Victoria. 39pp.
- Marcot, B.G., **R.S. McNay**, and R.E. Page. 1988. Use of micro computers for modeling silviculture-habitat relationships. USDA For. Serv., Pac. Northwest Res. Stn. Gen. Tech. Rep. PNW-GTR-228. Portland, OR. 19 p.

- McNay, R.S.** 2011. An expert-based modeling approach to inform strategic and operational land management decisions for the recovery of woodland caribou. Pp 131-152. In Perera, A.H., C.A. Drew, and C.J. Johnson (eds.) *Expert knowledge and its application in landscape ecology*. Springer Science and Business Media, New York.
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- McNay, R.S.** 2009. Spatial and temporal patterns of predation risk on woodland caribou in the Wolverine and Chase herds, north-central British Columbia 1991-2006. *Peace Williston Fish and Wildlife Compensation Program Report No. 323*. Prince George, BC 24p.
- McNay, R.S.** 2006. Towards comprehensive and transparent use of ecological information in decisions about recovery of mountain caribou. Pp. 90-99, In *Multidisciplinary approaches to recovering mountain caribou in mountain ecosystems*. Proceedings of a workshop held May 29-31, 2006 in Revelstoke, British Columbia. Columbia Mountains Institute of Applied Ecology. Revelstoke, BC.
- McNay, R.S.** 1995. The ecology of movements made by Columbian black-tailed deer. PhD Thesis, Univ. of British Columbia. Vancouver. 194pp.
- McNay, R.S.** 1985. Forest crowns, snow interception, and management of black-tailed deer winter habitat. British Columbia Min. of Environ. and Min. of For., Research. IWIFR-19. Victoria. 111pp.
- McNay, R.S.** and F.L. Bunnell. 1994. Behavioural limits to movement: the effect on habitat choices for Columbian black-tailed deer. *Trans. Congr. Int. Union Game Biol.* 21(2):295-303.
- McNay, R.S.** and R. Davies. 1985. Interactions between black-tailed deer and intensive forest management: problem analysis. (EP 923) British Columbia Min. of Environ. and Min. of For., Research. IWIFR-22. Victoria. 110pp.
- McNay, R.S.** and D.D. Doyle. 1995. Black-tail behavior. British Columbia record book.
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- Serrouya, R., S. Gilbert, R.S. McNay, B. McLellan, D. Heard, D. Seip, and S. Boutin. 2016. Comparing population growth rates between census and recruitment-mortality models. *J. Wildl. Manage.* DOI: 10.1002/jwmg.21185