



Aaron Deans M.Sc.F., R.P.Bio.

Aaron is a Registered Professional Biologist (R.P.Bio.) and an associate of Valhalla Consulting Inc. with over 10 years of academic and applied experience gained through working for a variety of industrial clients, government agencies, and non-government organizations. Aaron has a demonstrated capacity to develop and deliver applied field research and wildlife effectiveness monitoring programs in forestry and energy resource development industries. Aaron has been the lead biologist on numerous environmental impact assessments (wind and linear corridor developments) and on projects related to wildlife habitat and species inventory (waterbirds, raptors, woodpeckers, songbirds, bats, small mammals, furbearers, ungulates, amphibians and insects), monitoring and reporting.

Areas of Speciality

- Forest ecology
- Ornithology
- Wildlife habitat inventory and management
- Biophysical impact assessment
- Effectiveness monitoring

Employment History

Valhalla Consulting Inc	<i>Nov. 2009 – present</i>
Ministry of Forests and Range, Wildfire Protection Branch	<i>July 2009 – Sept 2009</i>
Manning, Cooper and Associates Ltd	<i>Sept 2004 – July 2009</i>
University of British Columbia	<i>Sept 2003 – May 2004</i>
Institute for Bird Populations	<i>May 2003 – July 2003</i>
Ontario Forestry Association	<i>April 2000 – April 2001</i>
University of Toronto, Faculty of Forestry	<i>Aug 1999 – May 2002</i>

Education

M.Sc.F. Master of Science in Forestry , Faculty of Forestry, University of Toronto	2002
B.Sc. Bachelor of Science, Biological Sciences , Simon Fraser University	1998

Professional Associations and Committees

R.P.Bio. – Association of Professional Biologists of BC and Member (No. 1817) of the College of Applied Biology

Select Publications

- Rothenbach, C. and A.M. Deans. 2009. Forest songbird and woodpecker monitoring in the Quesnel Defined Forest Area. Report of Canadian Forest Products Ltd. Quesnel, BC. 56pp.
- Deans, A. M., P.P. Bitton, K.D. Bachmann. 2008. Forest songbird and woodpecker monitoring in the Mackenzie Defined Forest Area, 2007. Report of Canadian Forest Products Ltd. Mackenzie, BC. 36pp.
- Christie, K., A.M. Deans, Z. McDonnell, and J.M. Cooper. 2007. Forest songbird and woodpecker monitoring in the Prince George Forest District. Report of Canadian Forest Products Ltd. Prince George, BC. 50pp.
- Deans, A.M., S.M. Smith, J.R. Malcolm, W.J. Crins, and M.I. Bellocq. 2007. Hoverfly (Syrphidae) communities respond to varying structural retention after harvesting in Canadian peatland black spruce forests. *Environmental Entomology* 36(2): 308-318.
- Manning, E.T., A.M. Deans, and D. Rowe. 2006. An assessment of tree condition and worker safety concerns in mountain pine beetle-killed and fire-damaged lodgepole pine stands in central interior British Columbia. BC Ministry of Forests and Range, Forest Practices Branch, Victoria, BC. 47pp.
- Manning, E.T., A.M. Deans, and J.M. Cooper. 2006. Draft Management Plan for Vaseux-Bighorn National Wildlife Area. Prepared for Canadian Wildlife Service, Pacific and Yukon Region. March 2006. 96pp.
- Manning, E.T., W.J. Golding, J. Baker, and A.M. Deans. 2005. Strategies for maintaining or recruiting habitat in areas affected by mountain pine beetle and other catastrophic events. Ministry of Environment, Ecosystems Branch, Victoria, BC. 73pp.



Deans, A.M., J.R. Malcolm, S.M. Smith, and M.I. Bellocq. 2005. Edge effects and the responses of aerial insect assemblages to structural-retention harvesting in Canadian boreal peatland forests. *Forest Ecology and Management* 204: 249-266.

Cooper, J.M., E.T. Manning, A.M. Deans and R. Howie. 2005. Flammulated Owl management plan for British Columbia. Ministry of Water, Land and Air Protection, Penticton, BC. March 2005. 50pp.

Cooper, J.M., P. Chytky, M. Wheatley, A. Deans C. Holschuh, and S.M. Beauchesne. 2004. Potential impacts on birds in the Mackenzie Valley from pipeline clearings for the Mackenzie Gas Project. Technical Report Series No. 442. Canadian Wildlife Service, Yellowknife, NT. 128pp.

Deans, A.M., Malcolm., J.R., Smith, S.M., and Carlton, T.J., 2003. A comparison of forest structure among old-growth, variable retention harvested, and clear-cut peatland black spruce (*Picea mariana*) forests in boreal northeastern Ontario. *Forestry Chronicle* 79: 579-589.

Select Professional Work Experience

Environmental Impact Assessments

- **Natural Power Consultants – George Mountain Wind Park Environmental Impact Assessment (EIA)**, Prince George, BC. Lead biologist, project manager and coordinator of personnel and implementation of a multi-year biophysical inventory of terrestrial wildlife and associated habitat elements. Designed and conducted pre-construction baseline studies along ridge tops and within a proposed transmission line corridor for assessment of potential impacts. Surveys conducted included: ungulates, furbearers, owls, raptors, resident and migratory passerines, bats, amphibians, vegetation, and forest stand structure. Additional management responsibilities included: data analyses, report writing, client liaison, and presentation of findings to public and working group members.
- **Rupert Peace Power Corporation – Mount MacDonald Wind Energy EIA**, Port Edward, BC. Initiated and coordinated a multi-phase biophysical field study as a sub-consultant to Ecosystems Consulting LLP. Co-wrote work plans (including surveys for terrestrial vertebrates, birds, bats, and vegetation), managed budgets, logistics, personnel, and regular communications with client and regulators.
- **Aeolis Wind Power Corporation – Hackney Hills & Thunder Mountain Wind Energy EIA's**. Coordinated the biophysical assessments for two multi-phase EA's as a sub-consultant to Hemmera. Managed budgets, personnel and logistics for field assessments completed within permit and transmission line areas at numerous remote and mountainous locations. Co-wrote the terrestrial wildlife, birds and bats and vegetation sections of the BCEAA applications. Responsible for client and government regulator liaison as well as presentation of findings to public at open houses. Baseline studies were conducted on ungulates, furbearers, owls, raptors, resident and migratory songbirds, bats, amphibians, vegetation and habitat elements with the aim of identifying appropriate restoration activities and methods of minimizing potential impacts to sensitive plants, ecosystems and wildlife species.
- **Canadian Wildlife Service, Yellowknife, NWT – Mackenzie Valley gas pipeline extension project EIA**. Collaborated on the assessment of potential impacts that clearings for pipeline development could have on birds as a sub-consultant to Manning, Cooper and Associates Ltd. Utilized long-term datasets and contemporary detailed field data collected at various locations along the pipeline routing to determine net habitat loss and extent of potential impacts on breeding birds. Co-wrote impact mitigation options for developers.
- **BC Ministry of Agriculture and Lands – Land and Resource Management Plan (LRMP) review**. Collaborated on an assessment of mountain pine beetle implications to strategic land use management plans for the Thompson – Okanagan areas as a sub-consultant to Mike Fenger and Associates. Participated in and synthesized information gained through multiple stakeholder interviews and workshops focused on various sections and values outlined in the Kamloops and Okanagan-Shuswap LRMPs. Co-wrote a synthesis of LRMP working group amendment recommendations.
- **Katabatic Power – Mount Hayes & Banks Island North Wind Energy Project EIA's**. Conducted field studies as a sub-consultant to Golder Associates. Surveys included: spring and fall passage migration surveys, diurnal raptor stand watches,



stopover surveys, breeding bird surveys and Marbled Murrelet surveys on Mount Hayes. Co-managed logistics and deployment of personnel and equipment to Banks Island North Wind Energy Project.

- **Earth First Canada Inc. – Dokie Ridge & Wartenbe Wind Energy Project EIA's.** Participated in field surveys as a sub-consultant to Jacques Whitford. Conducted spring and fall nocturnal passage migration surveys, diurnal raptor stand watches, stopover surveys, and breeding bird surveys at two BCEAA certified wind energy project sites near Chetwynd, BC.
- **Kinder Morgan Canada – Trans Mountain Pipeline EIA – Breeding Bird Inventory.** Conducted breeding bird surveys as a sub-consultant to Westwind Resource Group along pipeline routings in Jasper National and Mount Robson Provincial Parks.

Wildlife Ecology and Habitat Management

- **Canadian Forest Products (Canfor) Ltd. – Species at Risk Training.** Prepared and presented Species at Risk training (identification, ecology, and best management practices) for operational field staff in Fort St. John, Grande Prairie, Peace River, Prince George, Valemount, Radium and North Island and Central Coast.
- **Canadian Wildlife Service, Pacific and Yukon Region – Vaseux-Bighorn National Wildlife Area Management Plan.** Conducted multi-stakeholder interviews and synthesized information on current land use priorities, best management practices and natural history of the National Wildlife Area. This five year plan for federal lands incorporated an overview of the species accounts for 26 species as well as habitat recovery team initiatives for 13 Species at Risk.
- **BC Ministry of Water, Land and Air Protection, Biodiversity Branch – Flammulated Owl Management Plan.** Completed a literature review and synthesis of ecological information and best management practices known for Flammulated Owl in British Columbia as a sub-consultant to Manning, Cooper and Associates Ltd (MCA). Co-wrote a synthesis of impact mitigation options and habitat management guidelines for identified habitats in BC.
- **BC Timber Sales – Species at Risk Training.** Co-created a terrestrial vertebrate Species at Risk identification training seminar for operational field staff in the North Island and Central Coast Forest District as a sub-consultant to MCA Ltd.
- **BC Ministry of Sustainable Resource Management, Conservation Data Centre.** Conducted literature reviews and co-wrote characterization abstracts for the CDC Species Explorer database as a sub-consultant to MCA Ltd. Synthesized ecological information and regional study findings on four bird species including: Great Blue Heron *herodias* subspecies, Broad-winged Hawk, Flammulated Owl and Barn Owl.

Biophysical Inventory

- **Canfor Ltd. – Habitat elements monitoring strategy for 2nd growth forests.** Initiated and developed a strategy and sampling plan to monitor site level habitat elements that contribute to biodiversity in second growth stands of the Prince George Timber Supply Area. Habitat elements included: riparian areas, shrubs, hardwoods, dead and dying trees, coarse woody debris and seral stages existent within previously harvested forest areas.
- **Pope & Talbot – Pine biodiversity investigations.** Designed and conducted a multi-phase biodiversity research project in mountain pine beetle impacted lodgepole pine stands in central interior British Columbia. Completed surveys and co-ordinated field staff and logistics to assess small mammal, woodpecker, songbird, and owl species richness and abundance and quantify existent habitat elements (vegetation community, coarse woody debris volumes and stand structure characteristics) within harvested and un-harvested Sub-Boreal Spruce forests of the Vanderhoof and Fort St. James Forest Districts.
- **Canfor Ltd. – Coarse woody debris benchmark investigations.** Conducted research to determine amount of coarse woody debris (CWD) characteristically associated to mature forests within Sub-Boreal Spruce, Interior Cedar-Hemlock and Engelmann Spruce-Subalpine Fir forests in the Prince George Timber Supply Area for purposes of setting CWD objectives and guiding management planning.



- **University of British Columbia, Centre for Applied Conservation Research – Old growth forest benchmark study.** Conducted old growth forest field surveys and reporting on baseline site associations, coarse woody debris volumes and stand structure characteristics in Coastal Western Hemlock forests of northern Vancouver Island.
- **University of Toronto, Forest Entomology and Wildlife Ecology Laboratories.** Completed a comparative field study on forest insect family richness and abundance within managed peatland black spruce forests that were logged using traditional and innovative methods in northeastern Ontario. Collected, managed, and analyzed large datasets. Presented research findings at conferences and through peer-reviewed publications. Collaborated with researchers from Ontario Ministry of Natural Resources, McGill University, and the Lake Abitibi Model Forest. Prepared 1000's of specimens for the Royal Ontario Museum.

Effectiveness Monitoring

- **BC Hydro Operations, Kinbasket Reservoir Wildlife Effectiveness Monitoring.** Conducted and managed studies on the effects of reservoir operations and the riparian habitat enhancement program on insects, small mammals and ungulates in the drawdown zone of Kinbasket Reservoir. Collaborated with researchers at the Royal British Columbia Museum.
- **BC Ministry of Forests and Range, Forest Practices Branch – Wildlife Danger Tree Assessment (WDTA) Research.** Designed and completed a study on the performance of WDTA procedures in mountain pine beetle-killed and fire-impacted lodgepole pine forests. Surveys were focused on lodgepole pine forests distributed throughout the Sub-Boreal Spruce zone of the Nadina, Fort St. James, Vanderhoof, Prince George, and Quesnel Forest Districts.
- **Sea Breeze Power Corp – Knob Hill Wind Farm, Environmental Monitoring and Reporting.** Co-wrote pre- and post-construction field monitoring plans for birds and bats. Managed logistics of bat survey equipment field deployment, personnel and budgets, and liaised with client, construction crews and regulators.
- **Canfor Ltd. – Breeding Bird Monitoring.** Initiated and participated in several multi-year and district-wide forest songbird and woodpecker inventory projects on tenured forest lands. Managed budgets, logistics, schedules, personnel and reporting for projects conducted in the Prince George, Mackenzie, and Quesnel Forest Districts. Delivered presentations on study design and yearly monitoring results to clientele and public advisory groups.
- **Institute for Bird Population Studies – Monitoring Avian Populations and Survivorship (MAPS).** Conducted ornithological research on avian survivorship and population monitoring as an intern field biologist. Surveys including constant effort mist-netting and banding of songbirds and habitat assessments at banding stations located in Denali National Park, Alaska.

Skills and Certifications

Fieldwork Skills

- Breeding bird point count surveys
- GPS/aerial photo navigation
- Forest and habitat elements mensuration
- Raptor stand watch surveys
- Small mammal trapping/tagging
- Helicopter safety awareness
- Winter snow tracking

I.T. Skills

- Web page development
- Office suite competency

Courses and Certificates

- WorkSafe BC Level 1 First Aid, CPR Level C and Transportation Endorsement
- Wildlife/Danger Tree Assessor – Parks and Recreation Sites Module
- Bear Awareness Training
- ATV and Snowmobile Safety Training
- Avalanche Safety Skills, Level 1
- H₂S Alive (sour gas exposure safety training)