

Adrian de Groot

MSc., R.P.Bio.
Vegetation Ecologist

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Academic Training

Master of Science (Ecology)

University of Otago
Dunedin, New Zealand
1999

Bachelor of Science (Ecology)

Massey University
Palmerston North, New Zealand
1997

Diploma in Natural Resource Management; Fish, Wildlife, and Recreation Option

British Columbia Inst. Technology
Burnaby, B.C.
1991

Professional History

Drosera Ecological Consulting

Owner/Ecologist
Smithers, B.C.
2000 to present

Johnson-Schwarz Forest Mgmt.

Forestry Technician
Smithers, B.C.
1994/95

D. Bustard and Associates and SKR Environmental Services

Fisheries Technician
Smithers, B.C.
1994/95

Oikos Ecological Services Ltd

Ecological Technician
Smithers, B.C.
1994

Professional Work Summary

Adrian de Groot is a Vegetation Ecologist who has worked on a wide variety of vegetation inventory, management and research projects over many years. His work covers areas from southern to northern British Columbia, northern Alberta, Yukon and Arctic regions. He has experience in many different ecosystem types including floodplains, wetlands, forests, grasslands and alpine, from coastal to interior areas.

Adrian's work has included Terrestrial Ecosystem Mapping, Sensitive Ecosystem Mapping, wetland sampling and mapping, vegetation classification, floodplain dynamics research, SIBEC sampling, terrestrial lichen sampling, grassland restoration, research plot remeasurements and writing park and vegetation management plans.

Adrian has extensive experience working with the BC Conservation Data Centre and their Biotics database, including writing ecosystem Characterization Abstracts and Element Occurrence Specifications, mapping and ranking element occurrences, and assigning status ranks to ecosystems. Much of this work has been using TEM projects from the south coast of BC, Gulf Islands and Vancouver Island to create element occurrences.

Adrian recently developed GIS tools for modelling structural stage of ecosystems and assessing ecological integrity of element occurrences.

Adrian has completed hundreds of ecosystem field plots; completing the site, vegetation, soils and terrain information. This range of projects requires Adrian to have a good understanding of ecological patterns and processes, plant species and the Biogeoclimatic Ecosystem Classification system.

The importance of data quality control and quality assurance is recognized by Adrian. He has experience in QC/QA through managing projects he has completed. He is able to analyze and interpret the data collected, and write technical reports that clearly communicate the results of the project.

Adrian is well organized and able to manage field crews and fieldwork, and works co-operatively with all team members. This includes cooperating with other professionals and training junior crew members. Adrian strives to meet the needs of clients through regular communication.

Mapping Projects

- **de Groot, A.** 2018-20. Terrestrial Ecosystem Mapping lead, Tenas Project, Telkwa, BC.
- **de Groot, A.** 2010-2020. Mapping element occurrences for the BC Conservation Data Centre using data from TEM, PEM and SEI mapping projects. Ministry of Environment, Victoria, BC.
- **de Groot, A.** 2017-2019. Mapping element occurrences for at-risk tree species. Alberta Conservation Information Management System, Edmonton, Alta.
- **de Groot, A.** and A. Banner. 2015. Mapping the ESSF woodland biogeoclimatic subzone boundary in NW BC. *for* Ministry of Forests, Lands and Natural Resource Operations, Smithers, BC.
- Ciarniello, L. and **A. de Groot.** 2014. Decision-making support for management of the proposed Tl'ó ba Wildlife Habitat Area. *for* Ministry of Forests, Lands and Natural Resource Operations, Fort St. James, BC.
- McKenna, K., T. Braumandl, R. Rosie, R.C. Albicht, K. Stehle, **A. de Groot** and P. Dykstra. 2010. Bioclimate, Ecodistrict and Ecologically Significant Features Mapping for the Dawson Planning Region, Yukon. Silvatech Consulting, Salmon Arm, BC. *for* Environment Yukon, Whitehorse, YT.
- **de Groot, A.** and J. Pojar. 2009. Sensitive Ecosystems of the Atlin-Taku Planning Area. Bulkley Valley Research Centre, Smithers, BC. *for* Integrated Land Management Bureau, Smithers, BC
- **de Groot, A.,** S. Haeussler and D. Yole. 2005. Landscape and Stand Scale Structure and Dynamics, and Conservation Ranking, of the Skeena River Floodplain Forests. Bulkley Valley Research Centre, Smithers, BC.
- **de Groot, A.** 2003. Toboggan Creek Sensitive Area Management Plan. *for* Ministry of Sustainable Resource Management, Smithers, BC.

Reports

- McKenna, K., M. Heynen and **A. de Groot.** 2020. Beaver River wetlands classification. *for* Ecological Land Classification Program, Environment Yukon, Whitehorse, Yukon.
- **de Groot, A.** and C. Welsh. 2018. Red Hills Fire History. *for* BC Parks, Smithers, BC and SERNbc, Vanderhoof, BC.
- **de Groot, A.** 2018. Using the EBM Seamless TEM/PEM layer for Conservation Status Ranking of Ecosystems. *for* Ministry of Forests, Lands and Natural Resource Operations, Nanaimo, BC.
- **de Groot, A.** and S. Haeussler. 2016. Red Hills Prescribed Fire: Eight Years Post-burn Vegetation Monitoring. *for* Society for Ecosystem Restoration in Northcentral BC (SERNbc), Vanderhoof, BC.
- **de Groot, A.** and S. Casley. 2016. Ecosystem integrity analysis tool description and user's manual. *for* B.C. Conservation Data Centre, Victoria, BC.
- Philip. E., E. Hillier and **A. de Groot.** 2015. Element Occurrence Ecological Assessment Pilot Project. Cloverpoint Cartographics *for* Conservation Data Centre, Victoria, BC
- **de Groot, A.** and N. Flynn. 2014. Predictive Ecosystem Map of the Yukon North Slope Planning Part 1 -Technical Specifications. *for* Wildlife Management Advisory Council – North Slope, Whitehorse, Yukon.
- **de Groot, A.** 2014. Babine Watershed Indicator Data Summary Report. *for* Babine Watershed Monitoring Trust, Smithers, BC.
- **de Groot, A.,** A. Banner and J. Pojar. 2013. Ecosystem Classification Rationale and Gap Analysis Component for the Northwest Cumulative Effects Demonstration Pilot Project. Bulkley Valley Research Centre, Smithers, BC *for* Ministry of Forests, Lands and Natural Resource Operations, Smithers, BC.
- **de Groot, A.** 2012. Ecosystem Status Report for Douglas-fir/ dull Oregon-grape ecosystem. *for* Conservation Data Centre, Victoria, BC
- **de Groot, A.,** W.H. MacKenzie, R. Klassen and I. Ronalds. 2011. Classification and Description of Vegetation Associations in Arctic Regions; Phase 1: Data Acquisition and Data Entry, Phase 2: Data Analysis and Classification and Phase 3: Classification and Association Descriptions. Bulkley Valley Research Centre, Smithers, BC *for* Environment Yukon, Whitehorse, Yukon.
- **de Groot, A.** 2011. Babine River Watershed Recreation Opportunity Spectrum Analysis. Bulkley Valley Research Centre, Smithers, BC *for* Babine Watershed Monitoring Trust, Smithers, BC.
- Cichowski, D. and **A. de Groot.** 2010. The Response of Caribou Terrestrial Forage Lichens to Fire in Entiako Provincial Park: Annual Report – 2009-10 – Year 3. *for* Ministry of Environment, Prince George, B.C
- Haeussler, S. and **A. de Groot.** 2009. Effects of Grassland Restoration Treatments on Ungulate Use of Northwest BC Grasslands. Bulkley Valley Research Centre, Smithers, BC.
- **de Groot, A.** and S. Haeussler 2009. Uncha Mountain Red Hills Provincial Park Grassland Restoration Prescribed Fire: Results of First Year Vegetation Monitoring. Bulkley Valley Research Centre, Smithers, BC.

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- **de Groot, A.** 2008. Hyland Post Prescribed Fire Vegetation Monitoring. *for* Ministry of Environment, Smithers, BC.
 - **de Groot, A.** 2008. Uncha Mountain Red Hills Provincial Park: Grassland Description and Restoration. Bulkley Valley Research Centre, Smithers, BC.
 - Haeussler, S. and **A. de Groot.** 2008. Effects of Prescribed Burning on Aspen Mortality and Vigour. Bulkley Valley Research Centre, Smithers, BC.
 - **de Groot, A.** 2006. Element Occurrence Specifications for 12 coastal ecosystems. *for* Conservation Data Centre, Victoria, BC.
 - **de Groot, A.** 2005. Review of the Hydrology, Geomorphology, and Ecology of the Skeena River Floodplain Downstream of Terrace. Bulkley Valley Centre for Natural Resource Research and Management, Smithers, BC.
 - **de Groot, A.** 2004. The Babine River Watershed: An Annotated Bibliography of Monitoring, Inventory, Research and Planning Reports. Bulkley Valley Research Centre, Smithers, BC.

Protected Area Management Projects

- **de Groot, A.** 2015 - 2018. Ecosystem Overview Assessments for 9 protected areas in northwest BC for management planning purposes. *for* BC Parks, Ministry of Environment, Prince George and Smithers, BC.
- **de Groot, A.** 2013. Draft management plan for Monashee Provincial Park. *for* Ministry of Environment, Penticton, BC.
- **de Groot, A.** 2013. Management plan information compilation for Hanna-Tintina Conservancy. *for* Ministry of Environment, Terrace, BC.
- Cichowski, D. and **A. de Groot.** 2010. Management plans for 6 Morice LRMP protected areas – Atna River, Burnie-Shea, Morice Lake, Nadina Mountain, Nanika – Kidprice and Old Man Lake provincial parks. *for* Ministry of Environment, Smithers, BC.
- **de Groot, A.** 2010 - 2012. Draft management plans for 13 North Coast LRMP conservancies. *for* Ministry of Environment, Terrace, BC.
- **de Groot, A.** 2008. Tunkwa Provincial Park Vegetation Management Plan. *for* Ministry of Environment, Kamloops, BC.
- **de Groot, A.** and K. Price. 2007. Babine River Corridor Park Background Information Summary. *for* Ministry of Environment, Smithers, BC.
- **de Groot, A.** and B. Armitage. 2007. Uncha Mountain Red Hills Provincial Park: Vegetation Management in a Post-mountain Pine Beetle Landscape. *for* Ministry of Environment, Prince George, BC.
- **de Groot, A.** and D. Cichowski. 2006. Conservation and Recreation Risk Assessments for Morice LRMP protected areas. *for* Ministry of Environment, Smithers, BC.
- **de Groot, A.** and D. Cichowski. 2006. Conservation Risk Assessments for 31 Coastal Protected Areas. *for* Ministry of Environment, Terrace, BC.
- **de Groot, A.** and P. Bartemucci. 2003. Vegetation Inventory Analysis for Protected Areas in the Skeena Region. *for* Ministry of Water, Land, and Air Protection, Terrace BC.
- Cichowski, D. and **A. de Groot.** 2003. Management Plan for Stikine Country Protected Areas. *for* Ministry of Water, Land, and Air Protection, Smithers, BC.
- Cichowski, D. and **A. de Groot.** 2001. Swan Lake Kispiox River Provincial Park Hunting Regulation and Harvest Summary – 1975-1999. *for* Ministry of Environment, Lands and Parks, Smithers, BC.
- **de Groot, A.,** D.W. Wellwood and C. Schell. 2001. Commercial Canoeing and Bear – Human Interaction Management in Swan Lake Kispiox River Provincial Park. *for* Ministry of Environment, Lands and Parks, Smithers, BC.
- **de Groot, A.** 2000 - 2002. Management Direction Statements for 19 protected areas in the Skeena Region. *for* Ministry of Water, Land, and Air Protection, Smithers, BC.
- Cichowski, D. and **A. de Groot.** 2000. Technical Background Information Summary for Stikine Country Protected Areas. *for* Ministry of Environment, Lands and Parks, Smithers, BC.

Publications

- **de Groot, A.** and C. Cadrin. 2018. Ecosystem Status Report for *Pseudotsuga menziesii* / *Mahonia nervosa* (Douglas-fir / dull Oregon-grape) Ecological Community in British Columbia. *for* Ministry of Environment and Climate Change Strategy, Conservation Data Centre, Victoria, B.C. 34 pp.
- MacKenzie, W.H., C. Kennedy and **A. de Groot.** 2014. Arctic Vegetation Associations of the Yukon Territory (draft). Yukon Government, Whitehorse, YT.

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- Lawrence Lodge, R.H.E., B.J. Anderson, **A. de Groot**, A. Bill, A.A.M. McQueen, J.B. Steel, M. Mistral, N.W.H. Mason and J.B. Wilson. 2007. Spatial autocorrelation in plant communities: vegetation texture versus species composition. *Ecography* 30:801–811.
 - **de Groot, A.** and Haeussler S. 2006. Knowledge of the past helps plan for the Skeena River's future. *LINK* 7(3):10-11.
 - Kranabetter, J.M., A. Banner and **A. de Groot**. 2005. An assessment of phosphorus limitations to soil nitrogen availability across forest ecosystems of north coastal British Columbia. *Can. J. of For. Res.* 35:530-540.
 - Banner, A., P. LePage, J. Moran and **A. de Groot** (editors). 2005. The HyP³ Project: Pattern, Process and Productivity in Hypermaritime Forests of Coastal British Columbia – a synthesis of 7-year Results. BC Ministry of Forests, Victoria, BC. *Special Report 10*.
 - Emili, L.A., S.L. Lortie, **A. de Groot**, A. Banner and P. LePage. 2004. Soil Biogeochemical Dynamics in Hypermaritime Ecosystems of North Coastal British Columbia. BC Ministry of Forests, Smithers, BC. *Extension Note 54*.
 - Banner, A., **A. de Groot**, P. LePage and J. Shaw. 2002. The Blanket Bog – Upland forest complex of north coastal British Columbia: succession, disturbance and implications for management. BC Ministry of Forests, Smithers, BC. *Extension Note 52*.
 - Fitzgerald, D.F., J.S. Price, **A. de Groot**, A. Banner and P. LePage. 2002. Surface water discharge and groundwater storage patterns in a hypermaritime bog near Prince Rupert, B.C. BC Ministry of Forests, Smithers, BC. *Extension Note 51*.
 - Asada, T., A. Banner and **A. de Groot**. 2002. Moss growth, moss production, and paludification in the hypermaritime north coast of British Columbia. BC Ministry of Forests, Smithers, BC. *Extension Note 50*.
 - Maloney, D., S. Bennett, **A. de Groot** and A. Banner. 2002. Canopy interception in a hypermaritime forest on the north coast of British Columbia. BC Ministry of Forests, Smithers, BC. *Extension Note 49*.
 - LePage, P., A. Banner and **A. de Groot**. 2002. The Oona River Operational Trial. BC Ministry of Forests, Smithers, BC. *Extension Note 48*.

Field-based Projects (last 5 years only)

- 2019 - Environment Yukon, Wetland ecosystem sampling and model development assistance, Mayo, YT
- 2018/19 - Golder and Associates for Teck, Terrestrial Ecosystem Mapping sampling, Elk Valley, Elkford, BC.
- 2017/18/19 - Golder and Associates for Teck, Restoration vegetation surveys, Elk Valley, BC
- 2017 - B.A. Blackwell and Associates, Wetland sampling, MacKenzie and Tsay Keh Dene, BC
- 2017 - Cedrus Consulting, Fleet Creek research trial remeasurement, McBride, BC
- 2016 - AMEC, Pacific Traverse Trail ecosystem mapping sampling, Ucluelet, BC
- 2016 - RK Forestry, Tomentosus root rot research trial remeasurement and mapping, Hazelton, BC
- 2016 - BC Forest Service, Date Creek forest succession research trial remeasurement, Hazelton, BC
- 2015 - SKR Consulting, Forceman Landfill ecosystem sampling, Terrace, BC
- 2015 - Tyhee Forestry, Ecosystem sampling for forestry planning, Smithers, BC

Posters

- **de Groot, A.**, C. Welsh and M. Parminter. 2018. Red Hills Fire History and Changing Restoration Goals.
- Flynn, N., C. Kennedy, W.H. MacKenzie, **A. de Groot** and K. Baldwin. 2014. Ecological Land Surveys in Northern Yukon Past, Present and Future.
- **de Groot, A.** and S. Haeussler. 2006. Processes and structures of the lower Skeena River.

Conferences and Courses

2019 - Northern Conference for Wildfire Resilience, Burns Lake, BC

2015 - Natural Resource Connections, Annual Conf. of the Assoc. of Professional Biologists, Prince George, BC

2012 - Adding It All Up: Balancing Benefits and Effects of Resource Development conference, Smithers, BC

2010 - Water, Wind and Wildlife, Annual Conference of the Assoc. of Professional Biologists, Kelowna, BC

2007 - Innovative Monitoring and its Influence on Resource Decision Making conference, Smithers, BC

2006 - BC Protected Area Research Forum - Fostering Connections between Protected Areas and Research, Victoria, BC

2004 - Species at Risk: Pathways to Recovery Conference, Victoria, BC

- Managing Ecological Integrity in BC's Parks and Protected Areas Course – BCIT, Burnaby, BC.

2001 - Disturbance and Recovery in Northwest British Columbia Forests Course – Northwest Field School

2000 - Field Identification of Forest Soil Properties and Classification Course – Northwest Field School

Memberships

- College of Applied Biologists of British Columbia
- Association of Professional Biologists of British Columbia
- Bulkley Valley Centre for Natural Resource Research and Management, Director 2012-2020

References

Emily Cameron, MSc, RP Bio
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Bob Green, MSc, RPF, RP Bio
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