

APPENDIX A

Personnel CV's

ANNIE BÉRUBÉ, biologist

PROJECT MANAGER, NATURAL ENVIRONMENT

AREAS OF PRACTICE

Impact study and emergency decree

Certificate of authorization

Screening report

Environmental study

Environmental Effects Monitoring (EEM)

Characterization of sediment and water

Biological study and characterization of habitat

Habitat compensation

Environmental monitoring

LANGUAGES

French

English

PROFILE

Annie Bérubé is a graduate in biology (specialized in marine sciences) at Quebec's University in Rimouski where she obtained a bachelor's degree in 2002. Since 2003, she works for WSP (formerly GENIVAR) and acts as project manager. She collaborated to most parts of projects, from field campaign planning to field work, and from data treatment to reporting. During the past years, she collaborated to several projects related to mining as well as coastal environment and ports.

She was involved in many environmental impact studies for various mining projects such as, the Bloom Lake tailings and waste rock expansion project, the Mont-Wright tailings expansion project, the Joyce Lake direct shipping iron ore project (in Labrador), the Lac à Paul apatite mine development project and the BlackRock Metal mine development (east of Chibougamau Lake). She was in charge of the following components: fish and fish habitat, benthic invertebrate, surface water quality and sediments quality.

Since the Metal Mining Effluent Regulations (MMER) came in force in 2002, she acted as project manager in several environmental effect monitoring (EEM) studies. In the context of these EEM studies, she was involved in field campaigns, data treatment and statistics, and she has produced study designs and interpretation reports.

She was also in charge of fish habitat characterization in coastal environment, mostly for shoreline stabilization projects. In addition, she conducted several marine sediment sampling campaigns for dredging projects. She was involved in the Anse du Moulin sediment characterization campaigns that lead to the rehabilitation project of the Anse which is contaminated in PAH and PCB.

Finally, she has collaborated to numerous biological studies, habitat characterization and monitoring projects as well as to the production of many certificates of authorization requests, emergency decrees and screenings.

EDUCATION

Bachelor's degree in Biology, Université du Québec à Rimouski 2002

PROFESSIONAL DEVELOPMENT

Certification " Secourisme en milieu de travail " 2013-on going

CARREER

Biologist, Project Manager, Environment, WSP 2014-Present

Biologist, Environment, GENIVAR (now named WSP) 2003-2013

Biologist, Société de la faune et des parcs du Québec 2002-2003

Assistant Coordinator, Biorex 2000, 2001 and 2002



ANNIE BÉRUBÉ, biologist

PROFESSIONAL EXPERIENCE

Impact Study and Emergency Decree

- In charge of the fish habitat and water, and sediment quality components of the environmental assessment study for the Mont-Wright tailing management facility expansion project (2013-on going)
- Responsible for the benthos and fish habitat sections in the impact assessment study concerning the project to increase the mining wastes storage capacity at Bloom Lake mining site in Fermont (2012-2013)
- Collaboration to the environmental impact assessment regarding the Lac-à-Paul Apatite mining project, water and sediment quality and benthic invertebrate community components (2012-2013)
- Collaboration to the environmental and social impact assessment of the Anse du Moulin sediment rehabilitation project on Alcoa's property in Baie-Comeau (2011-2013)
- Collaboration to the characterization of biological environment sediments in the impact study of the construction project of a new wharf for the operations of ArcelorMittal Mines Canada in Port-Cartier (2010-2011)
- Collaboration to the project notification concerning the Alcoa wharfs refecton, Baie-Comeau
- Collaboration for the production of the request for emergency decree for the realization of a dredging at the wharf of Forestville
- Collaboration in the environmental impact study for the implementation of the Bloom Lake iron mine in Fermont
- Collaboration in the environmental impact study of the road 138 redevelopment in the sectors of Thompson and La Ligne Lakes on the territory of Franquelin municipality
- Collaboration in the environmental impact study for the wharf breakwater rehabilitation project of Quebec Cartier mining company
- Collaboration in the environmental impact study for the linear rocky bank protection of the Aux Outardes River
- Collaboration in the environmental impact study for two hydroelectric power plants at the waterfalls Du Quatre Mille and Du Six Mille in the Du Sault aux Cochons River
- Collaboration in the environmental impact study for the project of construction of a bridge over the Natashquan River
- Collaboration in the environmental impact study for the project of construction of a bridge between Baie-Sainte-Catherine and Tadoussac
- Collaboration in the environmental impact study of the ten-year dredging project of the port installations of the IOC mining company of Sept-Îles

ANNIE BÉRUBÉ, biologist

Application for Certificate of Authorization

- Project manager of a request for review under the fish habitat protection provisions of the Fisheries Act concerning a shore stabilization project along a salmon river, Sainte-Florence (2013)
- Responsible of the applications for certificates of authorization for dredging 2012 to the ferry wharf on Isle-aux-Grues and 2013 to wharves on Isle-aux-Coudres and Rivière-du-Loup (2012-2013)
- Responsible of the applications for certificates of authorization for dredging 2011 to the ferry wharf on Isle-aux-Grues and 2012 to wharves on Isle-aux-Coudres and Rivière-du-Loup (2011-2012)
- Collaboration to the application for a certificate of authorization concerning the construction of protection embankment and beach nourishment in the area of Newport-Ouest in Gaspesia (2011)
- Collaboration to the application for a certificate of authorization for the construction of a clean span bridge over the Mazaré Lake on the property of Bloom Lake iron mine in Fermont (2011)
- Collaboration to the application for a certificate of authorization for the achievement of rehabilitation work on the water intake to the Sainte-Marguerite-1 hydroelectric power plant (2011)
- Project manager for application for a certificate of authorization (art. 22) for the realization of a rocky bank protection of the Aux Outardes River (2009-2010)
- Collaboration to the application for a certificate of authorization for an emergency dredging at the wharf of Forestville
- Collaboration to the application for a certificate of authorization (art. 22) for the emergency temporary repair project of Alcoa's port facilities in Baie-Comeau.
- Collaboration to the application for a certificate of authorization (art. 22) for the restoration project of the Bésy hydroelectric power plant on the Aux Sables River in Jonquière
- Collaboration to the application for certificates of authorization and environmental screenings within the context of development of two sections of snowmobile trail above the Sault aux Cochons (Foresville) and du Sault au Mouton (Longue-Rive) Rivers
- Collaboration to the application for a certificate of authorization (art. 22) within the context of the projects to rehabilitate the bridge over the Petite rivière de la Trinité (road 138) and the culvert of the Quicaquestagane River (road 389)

Screening report

- Collaboration in the environmental screening report of the extension project of the wharf 41 and dredging of its berth area in the bay of Sept-Îles for the port authority of Sept-Îles
- Collaboration in the environmental screening report for the construction project of a police station in Opitciwan

ANNIE BÉRUBÉ, biologist

- Collaboration in the environmental screening report for the extension of the snowmobile trail from the Blanche road linking Old-Fort to Blanc-Sablon
- Collaboration in the environmental screening report for the improvement of the infrastructure of the Baie-Trinité camping site

Environmental Study

- Project manager of the environmental baseline studies related to the environmental assessment required for the Joyce Lake Direct Shipping Iron Ore project in Labrador (2012-on going)
- Project manager for the environmental section of the preliminary economic assessment of the Rainy Lake mining project (Full Moon) (2013-on going)
- Collaboration to the assessment of alternatives for mining waste disposal at Bloom Lake mining site in Fermont (2012)
- Collaboration to the prefeasibility studies concerning the mining development project in the area of Lamelee Lake and the Bloom Lake mine expansion project (2012)
- Collaboration to the environmental baseline study concerning the construction of an iron ore processing plant in the area of Betsiamites (Argex Mining) (2011)
- Collaboration in strategic environmental assessment (SEA) on the development of hydrocarbon resources in the basins of Anticosti, Madeleine and Baie des Chaleurs (2010-2011)
- Translation (French to English) of the environmental study occurred within the context of the modernization project of Alcoa's plant in Baie-Comeau (2010)
- Collaboration in the feasibility study on management alternatives of sediments within the context of the dredging of capitalization in the navigation channel of the wharf of Forestville (2008-2011)

Environmental Effect Monitoring (EEM)

- Project manager for the Cycle 2 of the EEM at the Bloom Lake mining site, Fermont (2013-on going)
- Project manager for the preparation of the investigation of causes study design at the Mont-Wright mining site in Fermont, ArcelorMittal Mines Canada Wright (2012-2013)
- Project manager for the Cycle 2 of the EEM at the Fire Lake mine for ArcelorMittal Mines Canada (2012-2013)
- Project manager for the Cycle 1 of the EEM at the Bloom Lake mining site, Fermont (2010-2012)
- Project manager for the Cycle 3 of the EEM at the Mont-Wright mine, Fermont (2010-2011)
- Project manager for the Cycle 1 of the EEM program at the Fire Lake mine for ArcelorMittal Mines Canada
- Project manager for the Cycle 2 of the EEM at the Mont-Wright mine, Fermont for ArcelorMittal Mines Canada (2006-2007)

ANNIE BÉRUBÉ, biologist

- Collaboration in the Cycle 1 for the EEM at the Mont-Wright mine, Fermont for Quebec Cartier Mining Company (2003-2004)

Characterization of Sediments and Water

- Biannual ground water sampling for the environmental monitoring at Bois-Traitel plant in Saint-Joseph-de-Kamouraska (2011-on going)
- Characterization of the effluent E3 dispersion study at the pelletizing plant in Port-Cartier and summary of the effects on fauna, ArcelorMittal Mines Canada (2010)
- Project manager for the characterization of sediments to the dredging project in the navigation channel of Forestville
- Project manager for the 2008 sediment characterization program in the Anse du Moulin (Baie des Anglais) for Alcoa Remediation Group
- Responsible for characterization of sediment at the wharf of Forestville in the context of the application for emergency decree
- Collaboration to the 2007 sediment characterization program in the Anse du Moulin (Baie des Anglais) for Alcoa Remediation Group
- Collaboration to the 2006 sediment characterization program in the Anse du Moulin (Baie des Anglais) for Alcoa Remediation Group
- Collaboration in the sediment characterization study, sector of Pointe Noire in the bay of Sept-Îles in the context of the LabMag mining development project

Biological Study and Habitat Characterization

- Additional field work in regards to Bloom Lake tailing management facility expansion project: fish habitat, benthos sampling, anoura and chiropter recording and small mammal surveys (2013-on going)
- Characterization of fish habitat and benthic community using a submarine camera, benthos collection, sediment quality characterization and aquatic vegetation delineation and description in the area of Grande-Anse port on behalf of Saguenay Port Authority (2011)
- Collaboration to the characterization of the fish communities in lakes in the vicinity of the future Mista camp in an objective to find donor and receiving lakes for brook trout transfer, Romaine hydroelectric complex project (2011)
- Collaboration in the biological characterization of the Saint-Marguerite River portion encompassed between the upstream limit of the Sainte-Marguerite 2 Reservoir and the foot of the Sainte-Marguerite-3 dam (2011-2012)
- Collaboration in the characterization study of fish habitat on the beach along the road 132 in the sector of Newport West and characterization of the spawning activity of capelin
- Project manager for characterization of fish habitat and evaluation of habitat lost in the context of preliminary draft 2008-2009 for riprap protection work of the banks of Aux Outardes River
- Project manager for the characterization of fish habitat in seven coastline sectors on Gaspé Peninsula where the road 132 is threatened by erosion of the banks

ANNIE BÉRUBÉ, biologist

- Project manager for characterization of the riparian and aquatic habitats for the dredging project in the navigation channel in Forestville
- Project manager for characterization of the basin FL-1 and his emissary at the Fire Lake mine for ArcelorMittal Mines Canada
- Characterization of flora and fauna in the context of the application for a certificate of authorization under article 32 for the repair of Cleary Street in Forestville
- Characterization of flora and fauna in the context of the application for a certificate of authorization under article 32 for the repair of Bouchard Street in Ragueneau
- Characterization of flora and fauna in the context of the application for a certificate of authorization under article 32 for the residential development project Place des Cerisiers in Rivière-du-Loup
- Characterization of flora and fauna in the context of the application for a certificate of authorization under article 32 for the residential development project Place le Plateau in Rivière-du-Loup
- Characterization of flora and fauna in the context of the application for a certificate of authorization under article 32 for the project concerning the extension of Des Cèdres Street in Saint-Arsène
- Project manager of a study in Mogridge Lake located in the vicinity of the mine at Mont-Wright near Fermont concerning a problem of lake trout with bluish-colored viscera
- Project manager for the characterization of riparian and intertidal habitats in the context of preliminary study 2007 of the linear banks in rockfill protection project to the Aux Outardes River in Ragueneau
- Collaboration in the study of fish fauna in the Petit Mécatina River
- Collaboration in the synthesis study of survey and dynamics of mouths of wetlands of Saint-Jean Lake
- Collaboration in the Coregoninae spawning characterization study downstream to Manic-2 and Manic-3 hydroelectric powerplants
- Collaboration in the study of spawning area and its use by rainbow smelt in the estuary of Portneuf River in spring 2004
- Collaboration in the study on role of woody buffers for herpetofauna in right-of-way of electric transmission lines in Lanaudière and Laurentides regions
- Habitat descriptions of a portion of Moulin à Baude River (Tadoussac) within the context of a project to replace the wood bridge giving access to electric transmission lines
- Collaboration in the assessment of fish barriers in tributaries of flooding area located upstream of the dam SM-3
- Collaboration in the study of characterization of sediment, water, habitat, fish communities and benthic fauna of the Pointe-Noire area in the bay of Sept-Îles in the context of the mining development project LabMag

ANNIE BÉRUBÉ, biologist

- Collaboration in the study on role of woody buffers for micromammals, avifauna and herpetofauna in the right-of-way of electric transmission lines in Lanaudière and Laurentides regions
- Proposal for long-term solutions in order to control the population of gulls on the site of the IOC mining company in Sept-Îles

Habitat Compensation

- Project manager for the development of a compensation program aimed at transplant of American Bulrush in the estuary of the Aux Outardes River and the monitoring of this implementation
- Project manager for the development of the compensation program for the disruption of fish habitat caused by the dredging at the wharf of Forestville. Development of a spawning area for rainbow smelt in the Portneuf River
- Participation in field survey within the context of preparation of proposals compensation works in Hesse basins
- Collaboration in the preparation of a proposal of installation of fish infrastructure in the Clet Brook in Sept-Îles and in the Truite River in Ragueneau to compensate for fish habitat lost caused by the repair of bridges and culverts on Road 138
- Collaboration in the preparation of a proposal of installation of fish infrastructures in a portion of the Gabriel River related to the development project of truck crossing for the Forestry Kruger Company on the Manic 5 Reservoir
- Collaboration in the development of the compensation program aimed the transplantation of *Spartina alterniflora* in the estuary of the Sainte-Marguerite River in Sept-Îles

Environmental Monitoring

- Project manager to implement the environmental follow-up of the water level increase in De La Confusion Lake at Bloom Lake mining site. Compensatory monitoring in year 3 following the rise of the water level (2012-2013)
- Collaboration to the 2011 monitoring of mercury content in fish flesh in the Sainte-Marguerite 3 and Sainte-Marguerite 2 reservoirs (2011)
- Project manager for the monitoring of American Bulrush transplanted in the estuary of the Aux Outardes River in Ragueneau (2010-on going)
- Project manager for the monitoring of the rainbow smelt spawning area installed in the estuary of the Portneuf River (2010-on going)
- Project manager for the 2009 monitoring of integrity and use by the brook trout of the infrastructures made in lakes and assessment of abundance and biomass in lakes by capture-mark-recapture method
- Collaboration in the monitoring of integrity and use by brook trout of natural and artificial spawning area in the Portneuf and Du Sault aux Cochons Rivers (annual monitoring 2003 to 2007)
- Collaboration in monitoring the fish yields and mercury content in fish of the SM 2 and SM 3 reservoirs on the Sainte-Marguerite River, near Sept-Îles

ANNIE BÉRUBÉ, biologist

- Collaboration in the evaluation study of the effectiveness of the fishway at the effluent of the Portneuf Lake (2003 and 2005)
- Collaboration in the monitoring of integrity and use by the brook trout of the infrastructures made in lakes and assessment of abundance and biomass in lakes (2003, 2004, 2005, 2007)
- Collaboration in the monitoring of integrity of fish infrastructures made in a portion of the Soucy Brook in Saint-Alexandre (2003, 2004, 2006)
- Collaboration in the monitoring of water quality in the Sault aux Cochons, Portneuf and Sainte-Marguerite Rivers
- Collaboration in the monitoring of integrity and use by the rainbow smelt of the infrastructures made in the Du Poste River in Sept-Îles (2004 and 2005)

JEAN-FRANÇOIS POULIN, Biologist

PROJECT MANAGER, NATURAL ENVIRONMENT

AREAS OF PRACTICE

Environmental Studies
Wildlife Studies
Vegetation and Forest Environment
Scientific Redaction and Statistical Analyses

LANGUAGES

French
English

PROFILE

Jean-François Poulin is a biologist specialized in wildlife and habitat management. He completed his Master's degree in Biology in 2008, on the impact of partial cutting in hardwood forests on birds. In recent years, he has taken on numerous tasks such as directing sectoral studies on terrestrial and avian wildlife, and coordinating the biological aspects for environmental impact assessments for numerous mining projects for a variety of clients, mainly in northern ecosystems (ArcelorMittal Mines Canada, Quinto Mining, CLIFFS Natural Resources, WesternTroy Capital Resources, Rio Tinto Fer & Titane, Arnaud Mine, Canadian Royalties, BlackRock Metals, Arianne Resources, Century Iron Mines, IAMGOLD, Argex Mining, Xstrata Nickel). He regularly contributes to the land wildlife and vegetation sections of environmental impact assessments. He recently led a vast study of avian wildlife along two 800-km long corridors for a rail project on the Côte-Nord. Mr. Poulin also takes part in wildlife studies for road, power transmission line, wind power, port and industrial site projects. He has also taken part in wildlife studies near airports, regarding the ecosystem-based management of forests, on the impact of forest cutting (avifauna and mammals) as well as the monitoring of animal populations and the management of beaver-related problems.

EDUCATION

Master's degree in Biological Sciences, University of Moncton	2008
B. Sc. in Biology, Wildlife and Habitat management, Université du Québec à Rimouski	2006

PROFESSIONAL DEVELOPMENT

First aid training	2012
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DISTINCTIONS

Master's degree thesis with honours selected by the University of Moncton Biology department as thesis of the year in 2007	2008
3 rd prize, natural sciences and engineering, postgraduate program, 18 th contest of young researcher ACFAS-Acadie/FESR <i>Published in : Daoust-Boisvert, A. 2008. Un conseiller forestier ailé. Découvrir (ACFAS) 29(4): 22-23</i>	2007

CAREER

Biologist, Environment, WSP	2014 to today
Biologist, Environment, GENIVAR (now WSP)	2008-2013
Student-researcher, Canada research chair in landscape conservation, University of Moncton	2006-2008



JEAN-FRANÇOIS POULIN, Biologist

Teacher auxiliary, University of Moncton

2006-2007

Research auxiliary, Université Laval

2005

PROFESSIONAL EXPERIENCE

Environmental Studies

- **Environmental impact assessment for the tailings management project at the Mont-Wright complex**, Fermont, Québec (2013-2014): the project consisted in assessing the environmental and social impacts. Project Manager. Client: ArcelorMittal Exploitation minière Canada
- **Environmental impact assessment for the Raglan mine wind power project, Nunavik**, Québec (2013): the project consisted in assessing the environmental and social impacts. Presentation of impact assessment issues to the Inuit communities. Client: Xstrata
- **Environmental impact assessment for the Arianne Phosphate apatite mine project**, Lac-Saint-Jean, Québec (2012-2013): the project consisted in assessing the environmental and social impacts. Responsible for assessing the biological environment impacts and the additional avian wildlife and vegetation studies. Client: Arianne Phosphate
- **Strategic environmental assessment of oil and natural gas exploitation and development in the Baie des Chaleurs**, Anticosti and Magdalen Bassins, Québec (2010-2012). In charge of the section on marine and other aquatic birds. Client: ministère des Ressources naturelles et de la Faune du Québec
- **Environmental Impact Statement on Route 389 improvements program from Manic-3 to Manic-5**, Baie-Comeau, Québec (2012-2013): in charge of bird sectorial study. Client: ministère des Transports du Québec
- **Environmental Impact Statement on Arnaud mining project**, Sept-Îles, Québec (2012-2013): in charge of bird sectorial study (waterfowl, raptors and landbirds). Client: Mine Arnaud
- **Environmental Impact Statement on BlackRock mining project**, Chibougamau, Québec (2012-2013): in charge of bird sectorial study (waterfowl, raptors and landbirds). Client: BlackRock Metals
- **Environmental Impact Statement on tailings expansion at Bloom Lake iron mine**, Fermont, Québec (2012-2013): in charge of bird (waterfowl, shorebirds, raptors and landbirds) and mammals sectorial studies. Client: CLIFFS Natural Resources
- **Environmental Impact Statement on Joyce Lake mining project**, Schefferville, Québec (2012-2013): in charge of bird (waterfowl, shorebirds, raptors and landbirds) sectorial study. Client: Century Iron Mines
- **Environmental and social impact assessment for the Deception Bay wharf and sediment management**, Deception Bay, Québec (2012-2013): in charge of bird (waterfowl, shorebirds, raptors and landbirds) sectorial study. Client: Canadian Royalties

JEAN-FRANÇOIS POULIN, Biologist

- **Environmental Impact Statement on Ressources d'Arianne mining project**, Lac-Saint-Jean, Québec (2012-2013): collaboration to impact assessment. Client: Ressources d'Arianne
- **Environmental Impact Statement on the Côte-Nord mining railway between Sept-Îles and Schefferville**, Côte-Nord, Québec (2012): in charge of bird (waterfowl, shorebirds, raptors and landbirds) sectorial study. Client: Canadien National
- **Environmental Impact Statement on water and waste rocks management at Tio Mine**, Havre-Saint-Pierre, Québec (2012): in charge of bird and mammals sectorial study. Client : Rio Tinto Fer et Titane
- **Biodiversity portrait near ArcelorMittal Mines Canada infrastructures**, Côte-Nord, Québec (2012): Project Manager. Client: ArcelorMittal Mines Canada
- **Environmental Impact Statement on Niobec Mine expansion program**, Saint-Honoré, Québec (2011-12): in charge of vegetation, bird and mammal sectorial studies. Client: IAMGOLD
- **5th reconduction of the decennial dredging program at Iron Ore Company (IOC) port facilities, environmental impact statement**, Sept-Îles, Québec (2011-12): collaborator to biological and human environment descriptions. Client: Iron Ore Company
- **Environmental baseline study for a railway network improvement and the Mont Reed deposit exploitation projects**, Côte-Nord, Québec (2011): in charge of vegetation, birds and mammals sectorial studies. Client: ArcelorMittal Mines Canada
- **Environmental baseline study for the Mouchalagane deposit mining project**, Rivière Mouchalagane, Québec (2011): in charge of vegetation, birds and mammals sectorial studies. Client: Argex Mining Inc.
- **Environmental baseline study for the construction of a TiO₂ processing plant**, Pessamit, Québec (2011): collaboration to the writing of the study. Client: Argex Mining Inc.
- **Environmental Impact Assessment for Fire Lake's mining project**, Fermont, Québec (2010-11): in charge of bird sectorial report (inventories, analyses and redaction). Client: ArcelorMittal Mines Canada
- **Environmental Impact Assessment for the construction of a deep-water port**, Port-Cartier, Québec (2010-11): in charge of bird sectorial report (inventories, analyses and redaction). Client: ArcelorMittal Mines Canada
- **Environmental Impact Assessment for the construction of a new pelletizing plant**, Port-Cartier, Québec (2010-11): in charge of bird sectorial report (inventories, analyses and redaction). Client: ArcelorMittal Mines Canada
- **Avifauna study for a mining project**, Fermont, Québec (2010-11): participation to the analysis and the redaction of the report. Client: Consolidated Thompson Iron Mines Ltd
- **Installation of beaver control devices near the road 385**, Forestville, Québec (2010): Project Manager. Client: Ministère des Transports du Québec

JEAN-FRANÇOIS POULIN, Biologist

- **Gull breeding control on Serge-Bouchard's high school roofs**, Baie-Comeau (2010): project manager. Client: Commission Scolaire de l'Estuaire
- **Avifauna study for the highway 73 project between Sainte-Marie and Saint-Joseph-de-Beauce**, Beauce (2010): project manager. Client: Ministère des Transports du Québec
- **Environmental study for a bridge construction project over Saint-Augustin river**, Saint-Augustin (2010): in charge of birds and small-mammals inventories. Client: Corporation Pakatan Meskanau de la Grande Séduction
- **Avifauna study for Lake Macleod mining project**, James Bay (2010): project manager. Client: Western Troy Capital Ressources
- **Environmental Impact Assessment study revision for a mining project**, Schefferville (2010): in charge of revising sections relative to avifauna. Client: New Millenium Capital Corp.
- **Bird hazards formation to Sept-Îles airport employees**, Sept-Îles (2010): Project Manager. Client: Transport Canada
- **Strategic Environmental Assessment on offshore oil and gas exploration and development of the Baie-des-Chaleurs**, Anticosti and Magdalen bassins, Québec (2010-2011): in charge of the avifauna section. Client: Ministère des Ressources naturelles et de la Faune du Québec
- **Bird hazard study at the Sept-Îles airport**, Sept-Îles, Québec (2009-2010): in charge of inventories, analyses and redaction of the report. Client: Transports Canada
- **Management of problematic beaver dams near roads 138 and 385**, Haute-Côte-Nord, Québec (2009): Project Manager. Client: Ministère des Transports du Québec
- **Study on bird issues related to the ecosystemic forest project management in Réserve Faunique des Laurentides**, Réserve faunique des Laurentides, Québec (2009): in charge of the analyses and the redaction. Client: Canadian wildlife service, Environment Canada
- **Modenization project of Alcoa plant, internal environmental and social impact assessment**, Baie-Comeau, Québec (2009): in charge of the redaction of the biological environment description. Client: Alcoa
- **Diurnal avifauna inventory during the spring migration for a wind farm project**, Forestville, Québec (2008-2009): in charge of the inventories, the analyses and the redaction of the report. Client: Northland Power
- **Environmental scoping study for a wind farm project**, Baie-Trinité, Québec (2009): in charge of the analyses, the information integration and the redaction of the study. Client: Northland Power
- **Environmental Impact Assessment study for the road 170 amelioration project**, L'Anse-Saint-Jean, Québec (2009): in charge of the bird inventories. Client: Ministère des Transports du Québec
- **Breeding bird study for a port construction project at Deception Bay, Nunavik (Nunavik Nickel Project)**, Nunavik, Québec (2008): in charge of the

JEAN-FRANÇOIS POULIN, Biologist

inventories, the analyses and the redaction of the report. Client: Canadian Royalties

- **Breeding bird study for a mining project in Nunavik (Nunavik Nickel Project)**, Nunavik, Québec (2008): in charge of the inventories, the analyses and the redaction of the report. Client: Canadian Royalties
- **Avifauna study and determination of habitat potentials for threatened of vulnerable plant species**, Sept-Îles, Québec (2008): in charge of inventories planning and realization and of the analyses and redaction of the report. Client: Corporation de Promotion Industrielle et Commerciale de Sept-Îles
- **Environmental Impact Assessment study for the road 172 improvement project**, Sacré-Cœur, Québec (2008): in charge of the bird inventories, the analyses and the redaction of the report. Client: Ministère des Transports du Québec.
- Wildlife and buffer zones in power line rights-of-way. Synthesis of studies completed between 1998 and 2007, Québec (2008): participation to the redaction of the synthesis. Client: Hydro-Québec TransÉnergie
- **Species at risk inventory between Natashquan and Clay rivers on the Lower North Shore**, Lower North Shore, Québec (2008): participation to the report redaction. Client: Ministère des Transports du Québec
- **Environmental Impact Assessment study for the construction project of a bridge over the Saint-Augustin River (Lower North Shore)**, Saint-Augustin, Québec (2008): in charge of assessing the impacts of the project on the biological components of the environment. Client: Corporation Pakatan Meskanau de la Grande Séduction
- **Avifauna inventories**, Québec (2008): realization of various bird inventories for three small hydro-electrical projects
- Realization of a scientific study on the effects of single-tree selection harvesting on birds in deciduous stands of northwestern New Brunswick. Industrial partnership: J.D. Irving Ltd. and Acadian Timber Income Fund
- Realisation of a scientific study on the habitat use of the forest-dwelling caribou in the northern region of Saguenay Lac Saint-Jean
- Realisation of a scientific study on the population dynamic of the Fisher in the province of Québec
- Participation to a scientific study on the effects of various harvesting procedures on the snowshoe hare in the boreal forest

Vegetation and Forest Environment

- **Environmental Impact Assessment for Fire Lake's mining project**, Fermont, Québec (2010-11): in charge of the vegetation sectorial report (inventories, analyses and redaction). Client: ArcelorMittal Mines Canada
- **Environmental Impact Assessment for the construction of a deep-water port**, Port-Cartier, Québec (2010-11): in charge of the vegetation sectorial report (inventories, analyses and redaction). Client: ArcelorMittal Mines Canada

JEAN-FRANÇOIS POULIN, Biologist

- **Environmental Impact Assessment for the construction of a new pelletizing plant**, Port-Cartier, Québec (2010-11): in charge of the vegetation sectorial report (inventories, analyses and redaction). Client: ArcelorMittal Mines Canada
- **Comparison of various ragweed control methods**, Laval, Québec (2008-2010): project manager. Client: Hydro-Québec TransÉnergie
- **Wetland and watercourse crossings during Hydro-Québec power lines maintenance activities**, North Shore, Québec (2008-2010): collaboration to the analyses and redaction. Client: Hydro-Québec TransÉnergie
- **Vegetation evolution in the Manic-2 permanent dispositive**, Baie-Comeau, Québec (2008-2010): collaboration to the analyses and redaction. Client: Hydro-Québec TransÉnergie
- **Environmental Impact Study for the Anne-Hébert substation (315-25 kV) and 315 kV power line project, wetland study**, Saint-Augustin-de-Desmaures, Québec (2008): collaboration to the analyses and redaction. Client: Hydro-Québec Équipement
- **Environmental Impact Study for the Anne-Hébert substation (315-25 kV) and 315 kV power line project, plant species at risk study**, Saint-Augustin-de-Desmaures, Québec (2008): collaboration to the analyses and redaction. Client: Hydro-Québec Équipement
- **Avifauna study and determination of habitat potentials for threatened of vulnerable plant species**, Sept-Îles, Québec (2008): in charge of inventories planning and realization and of the analyses and redaction of the report. Client: Corporation de Promotion Industrielle et Commerciale de Sept-Îles
- **Efficiency evaluation of the biological herbicide *Chondrostereum purpureum* developed by the Victoria University**, Québec (2008): collaboration to the analyses and redaction. Client: Hydro-Québec TransÉnergie
- Participation to a research project on ecosystemic forest management on the North Shore
- Realization of various forest inventories

Scientific Redaction and Statistical Analyses

- Realization or contribution to the planning, data collection, statistical analyses and redaction of multiple studies on wildlife and their habitat (see publications)

PUBLICATIONS AND PRESENTATIONS

Publications

- VILLARD, M.-A., É. D'Astous, S. Haché, J.-F. Poulin and S. Thériault (2012). Do we create ecological traps when trying to emulate natural disturbances? A test on songbirds of the northern hardwood forest. *Canadian Journal of Forest Research* 42: 1213-1219.
- POULIN, J.-F. and M.-A. Villard (2011). Negative edge effect and influence of landscape matrix on reproductive success in an old forest specialist, the Brown Creeper (*Certhia Americana*). *Landscape Ecology* 26: 911-922.

JEAN-FRANÇOIS POULIN, Biologist

- POULIN, J.-F., M.-A. Villard and S. Haché (2010). Short-term demographic response of an old forest specialist to an experimental selection harvesting. *Ecoscience* 17: 1-8.
- MACLEAN, D.A., G. Adams, G. Pelletier, L. Amos-Binks, J.-F. Carle, B. Chicoine, A. Colford-Gilks, P. Forget, S. Haché, J. Henderson, K. La France, J.-F. Poulin, M. Smith, C. Ward, A. Witkowski, T. M. Beckley, M. Béland, M.G. Betts, T.A. Erdle, G.J. Forbes, K. Frego, J.A. Kershaw Jr., M.R. Roberts, R. Roy, C. Samson, M.-A. Villard, R.G. Wagner and J.S. Wilson. 2010. *Forest dynamics and habitat relationships under differing levels of silviculture*. Sustainable Forest Management Network, Edmonton, Alberta. 75 p.
- POULIN, J.-F. and Y. Plourde (2010). Nidification du canard pilet, du plongeon du Pacifique et du Cygne siffleur à la baie Déception, Nunavik, Québec. *Naturaliste Canadien* 134 : 70-72.
- POULIN, J.-F., M.-A. Villard, M. Edman, P. Goulet and A.-M Eriksson (2008). Thresholds in the nesting habitat requirements of an old forest specialist, the Brown Creeper, as conservation targets. *Biological Conservation* 141. 1129-1137
- POULIN, J.-F. (2007). *Entre l'arbre et l'écorce : facteurs expliquant la réponse du Grimpeur brun à la structure des forêts en paysage aménagé*. Thèse de Maîtrise ès sciences en biologie. Université de Moncton, Nouveau-Brunswick. 86 p.
- POULIN, J.-F., H. Jolicoeur, P. Canac-Marquis and S. Larivière (2006). *Investigation sur les facteurs à l'origine de la hausse de la récolte de pékans (Martes pennanti) au Québec depuis 1984*. Ministère des Ressources naturelles et de la Faune, Direction du développement de la faune. 61 p.

Presentations

- D'ASTOUS, É., A. Mackay, J.-F. Poulin and M.-A. Villard. *Partial harvesting and its effects on density, productivity and food provisioning in the Brown Creeper (Certhia Americana)*. 128th Stated Meeting of the American Ornithologists' Union, San Diego State University, February 7-11 2010, San Diego, California.
- RIOUX, J., A. Bérubé, M. Larose, J.-F. Poulin and J.G. Doucet. *Herpetofauna use of riparian buffer zones in high voltage powerline ROW in deciduous forests of Québec*. 9th Environmental concerns in rights-of way management International symposium. September 27-30 2009, Doubletree Hotel, Lloyd Center, Portland, Oregon.
- MEUNIER, D., J. Rioux, J.-F. Poulin and F. Gauthier. *Evaluation of different ragweed control methods on Hydro-Québec properties (affiche)*. 9th Environmental concerns in rights-of way management International symposium. September 27-30 2009, Doubletree Hotel, Lloyd Center, Portland, Oregon.
- POULIN, J.-F. and M.-A. Villard. *Effects of landscape structure on the reproductive success of an old forest associate*. 33th annual meeting of the Société Québécoise pour l'Étude Biologique du Comportement, October 31 to November 2 2008, Université du Québec à Rimouski, Rimouski, Québec.
- POULIN, J.-F., M.-A. Villard and S. Haché. *Response of forest birds to partial harvesting*. U. de Moncton. 100th annual congress of the Canadian Institute of

JEAN-FRANÇOIS POULIN, Biologist

Forestry, September 8-10 septembre 2008, Delta Hotel, Fredericton, New Brunswick.

- POULIN, J.-F. *Mechanisms underlying Brown Creeper response to habitat structure*. U. de Moncton. J.D. Irving Forest Research Advisory Committee (Sustainable Forest Management Network), November 28 2007, Hugh John Flemming Forestry Center, Fredericton, New Brunswick.
- POULIN, J.-F., M.-A., Villard, P. Goulet, M. Edman et A.-M. Eriksson. *Seuils de structure forestière associés à la nidification du Grimpereau brun (Certhia americana)*. U. de Moncton et Mid Sweden U. 32th annual meeting of the Société Québécoise pour l'Étude Biologique du Comportement, November 2-4 2007, Université Laval, Québec, Québec.
- POULIN, J.-F. et M.-A. Villard. *Effets de la coupe de jardinage sur la densité et la reproduction d'une espèce associée aux forêts matures, le Grimpereau brun (Certhia americana) (affiche)*. U. de Moncton. 32th annual meeting of the Société Québécoise pour l'Étude Biologique du Comportement, November 2-4 2007, Université Laval, Québec, Québec.
- POULIN, J.-F., M.-A. Villard, P. Goulet, M. Edman et A.-M. Eriksson. *Thresholds in nesting habitat requirements of an old forest specialist, the Brown Creeper*. U. de Moncton et Mid Sweden U. Acadian Forest Science Conference, October 10-13 2007, Hugh John Flemming Forestry Center, Fredericton, New Brunswick.
- POULIN, J.-F., M.-A. Villard, P. Goulet, M. Edman et A.-M. Eriksson. *Thresholds in nesting habitat requirements of a mature forest specialist, the Brown Creeper*. U. de Moncton et Mid Sweden U. 125th Stated Meeting of the American Ornithologists' Union, August 8-11 2007, University of Wyoming, Laramie, Wyoming.
- POULIN, J.-F. *Facteurs expliquant les seuils dans la réponse de Grimpereau brun (Certhia americana) à la structure de son habitat*. U. de Moncton, 18th concours des jeunes chercheurs et chercheurs ACFAS-Acadie/FESR, March 21 2007, Université de Moncton, Moncton, New Brunswick.
- POULIN, J.-F. et M.-A. Villard. *Entre l'arbre et l'écorce : Facteurs expliquant les seuils dans la réponse du Grimpereau brun (Certhia americana) à la structure de son habitat*. U. de Moncton, CONFOR (21th edition), February 15-18 2007, Université de Moncton, Edmundston campus, Edmundston, New Brunswick.
- POULIN, J.-F. *La situation du Pékan (Martes pennanti) au Québec : revue d'hypothèses*. UQAR. Presented to members of the Association des Chasseurs et Pêcheurs de la région de Matane, January 5 2007, Matane, Québec.
- POULIN, J.-F. et M.-A. Villard. *Entre l'arbre et l'écorce : facteurs expliquant la réponse du Grimpereau brun (Certhia americana) à l'exploitation forestière (affiche)*. U. de Moncton, 31th annual meeting of the SQÉBC, November 10-12, 2006, UQAM, Montréal, Québec.
- POULIN, J.-F. et S. Larivière. *Investigation sur les facteurs à l'origine de la hausse de la récolte de pékans au Québec depuis 1984*. UQAR. 15th workshop on furbearer animals, December 1st 2005, Clarion Hotel, Sainte-Foy, Québec.

DEREK LYNCH, Botanist and Technician

NATURAL ENVIRONMENT

FIELD OF EXPERTISE

Environmental Studies
Wetland and Vegetation Studies
Forest and Flora Survey and Habitat Characterization
Vegetation Control
Environment and Wildlife

LANGUES

French
English

PROFILE

Derek Lynch acts as a botanist as well as a forest and wildlife technician for WSP Canada since 2001. He collaborated to several environmental impact studies for mining projects on the Côte-Nord near Fermont and the Nord-du-Québec region, mostly regarding vegetation. Mr. Lynch has also conducted plant surveys and wetland characterization in the context of road, powerlines, port and industrial projects. He has a solid experience in forest and plant surveys. In addition, he is also specialized in rare plant surveys and, during his career, he has discovered several Quebec threatened, vulnerable or likely to be designated species. He has also collaborated to vegetation control projects. He also collaborates to photointerpretation of vegetation, habitat characterization and to aquatic biological studies.

EDUCATION

Biological Studies, Université du Québec à Rimouski	1999
Collegial Studies in Forest Management Technique, Cégep of Baie-Comeau	1997
Collegial Study Diploma in Technique d'aménagement cynégétique et halieutique, Cégep of Baie-Comeau	1992

PROFESSIONAL DEVELOPMENT

Marine First Aid	2012
CSST Workplace First Aid	2012
Attestation santé-sécurité générale sur les chantiers de construction, including WHMIS, ASP Construction	2009
First Aid and CPR/DEA Level A, Canadian Red Cross	2009
Marine Basic First Aid, Canadian Red Cross	2009
Oxygen Administration Certification, Canadian Red Cross	2009
Pesticide Application Certification	2002
Boating Safety Certification	2002
Manual Slashing and Cutting Foreman	2000

PROFESSIONAL ASSOCIATIONS

La Société Provencher d'histoire naturelle du Canada
Les Amis du Jardin botanique de Montréal
FloraQuebeca (Secretary, 2009 to present)
New England Botanical Club



DEREK LYNCH, Botanist and Technician

CAREER

Botanist, Forest and Wildlife Technician, Environment, WSP	2014
Botanist, Forest and Wildlife Technician, Environment, GENIVAR (now called WSP)	2001-2013
Entomology Technician, Centre de recherche Les Buissons	2010
Forest Technician, Société de développement de Ragueneau	2001
Foreman Trainer, Groupement forestier de la Haute-Côte-Nord et Rexforêt	2000
Forest Management Assistant, CLC-Camint	1998-2000
Research Auxiliary, Université du Québec à Rimouski	1999
Forest Technician, Université Laval	1997
Foreman assistant, L-F Beauséjour	1995-1996

PROFESSIONAL EXPERIENCE

Forest and Flora Survey and Habitat Characterization

- Responsible of the vegetation component: Rare plant survey, vegetation and wetland characterization, and production of the vegetation section in the environmental impact assessment of the Mont-Wright tailings management facility expansion project, ArcelorMittal Exploitation minière Canada
- Plant survey and coastal wetland characterization in the context of an alternative assessment study related to coastal erosion and submersion in the Baie de la Trinité, Ministère des Transports du Québec
- Plant survey and wetland characterization for the Road 138 relocation project, municipalities of Sacré-Cœur and Les Bergeronnes (Gobeil Lake), Ministère des Transports du Québec
- Plant survey and reporting results for a certificate of authorization request. Residential development of Labbé, Desbiens, Gionet and Aréna Streets, Chute-aux-Outardes, Municipality of Chute-aux-Outardes
- Field work and reporting results for an additional vegetation and wetland study related to the Niobec mine expansion project, Saint-Honoré, IAMGOLD
- Plant survey and reporting results for a certificate of authorization request. Borrow pit operation at BEX 1061 in Havre-Saint-Pierre, Carrières Polycor
- Wetland photointerpretation, rare plant survey, vegetation and wetland characterization. Production of the additional vegetation study for the Arianne Phosphate apatite mine project, Lac-Saint-Jean, Arianne Phosphate
- Responsible of the vegetation component: rare plant survey, vegetation and wetland characterization. Photointerpretation validation and production of the vegetation baseline study related to the Joyce Lake DSO Project, Schefferville, Labec Century Iron Ore Inc.

DEREK LYNCH, Botanist and Technician

- Responsible of the vegetation component: rare plant survey, vegetation and wetland characterization, and production of the vegetation section in the environmental impact assessment related to the Bloom Lake Iron Ore Mine tailings management facility expansion project, Fermont, Cliffs Natural Resources
- Responsible of the vegetation component: rare plant survey, vegetation and wetland characterization, and production of the vegetation section in the environmental impact assessment related to the railway project connecting Sept-Îles to Schefferville area, Côte-Nord, Canadien National
- Rare plant survey, vegetation and wetland characterization. Photointerpretation validation and production of the additional vegetation section related to the Lac Doré Iron Ore exploitation project, Chibougamau, Métaux BlackRock
- Rare plant survey, vegetation and wetland characterization, environmental impact assessment related to the Road 389 enhancement project between Manic-3 and Manic-5, Baie-Comeau, Ministère des Transports du Québec
- Rare plant survey, vegetation and wetland characterization. Photointerpretation and production of the vegetation section in the environmental impact assessment related to the Niobec mine expansion project, Saint-Honoré, IAMGOLD
- Aquatic vegetation photointerpretation and characterization in the Baie des Sept Îles, Port of Sept-Îles
- Rare plant survey, vegetation and wetland characterization, compensation project in the Baie des Sept Îles, Port of Sept-Îles
- Rare plant survey, vegetation and wetland characterization, Chute-des-Passes generating station, Rio Tinto Alcan
- Monitoring and characterization of the vegetation in compensation site, Baie-Comeau, SOPOR
- Review and collaboration to the biodiversity description in the area of ArcelorMittal Mines Canada facilities, Côte-Nord, ArcelorMittal Mines Canada
- Photointerpretation, wetland study and production of the vegetation section in the design development study related to Barlow mining site project, Abitibi, Explorations Barlow Inc.
- Rare plant survey, vegetation and wetland characterization and production of the vegetation section in the design development study related the development of a TiO₂ processing plant on Pessamit Land, Argex Mining
- Rare plant survey, vegetation and wetland characterization, development of a steel plant in Pointe-Noire, International Iron Benefication Group
- Characterization and plant survey in a peatland in Pointe-Noire, Cliffs Natural Resources
- Rare plant survey, vegetation and wetland characterization for the railway enhancement project related to the Mont Reed ore extraction project, Côte-Nord, ArcelorMittal Mines Canada
- Rare plant survey, vegetation and wetland characterization. Photointerpretation and production of the vegetation section in the report related to the Chamouchouane Power Station expansion, Hydro-Québec

DEREK LYNCH, Botanist and Technician

- Photointerpretation and production of the wetland study, Courbe du Sault generating station, Hydro-Québec
- Photointerpretation and production of the wetland study, Rivière-au-Tonnerre power station expansion, Hydro-Québec
- Photointerpretation and production of the wetland study, Bloom Lake power station connexion to power network, Hydro-Québec
- Anse à Norbert marsh plant survey, Comité ZIP de la rive nord de l'estuaire
- Plant survey in the areas of Mount Reed and former Town of Gagnon
- Rare plant survey and vegetation characterization in a peatland, Les Buissons, CRLB et BPH Environnement
- Pessamit marsh plant survey, Comité ZIP de la rive nord de l'estuaire
- Plant survey, Monts-Groulx, FloraQuebeca and Ministère du Développement durable, de l'Environnement et des Parcs
- Rare plant survey, vegetation and wetland characterization for the environmental impact assessment related to the Road 170 deviation project, between kilometre 70 to kilometre 73, in L'Anse-Saint-Jean, Ministère des Transports du Québec
- Supervision of a wetland compensation project and vegetation survey, Mogridge Lake, Fermont, Hydro-Québec
- Wetland survey and delineation for the Sandy Beach rehabilitation project, Gaspé, XStrata
- Vegetation survey and characterization related to a avian risk study, Sept-Îles Airport, Transports Canada
- Rare plant survey at Deception Bay and Puvurnituk Mounts, Ungava Bay, for the Nunavik Nickel mining project
- Rare plant survey, wetland and vegetation characterization in the area of the Havre-Saint-Pierre power station, Hydro-Québec
- Vegetation survey, slope and soil characterization for the Sandy Beach rehabilitation project, Gaspé, XStrata
- Rare plant survey and vegetation characterization, projected section of Road 138 between Natashquan and Kegaska, Ministère des Transports du Québec
- Rare plant survey, wetland and vegetation characterization for the environmental impact assessment study related to the Road 172 relocation project, from kilometre 36 to 40, Sacré-Cœur, Ministère des Transports du Québec
- Rare plant survey, wetland and vegetation characterization for the Pentecôte River generating station project.
- Rare plant survey, wetland and vegetation characterization for the environmental impact assessment study related to the generating station project on Bellefeuille falls on Franquelin River
- Rare plant survey and vegetation characterization for a steel plant development project in Sept-Îles, Corporation de Promotion Industrielle et Commerciale de Sept-Îles

DEREK LYNCH, Botanist and Technician

- Rare plant survey and riparian vegetation characterization, Saint-Augustin River, Basse-Côte-Nord
- Rare plant survey, wetland, maple stand and vegetation characterization, Saint-Augustin-de-Desmaures, Hydro-Québec
- Rare plant survey, wetland and vegetation characterization, Cap Bon-Désir, Ministère des Transports du Québec
- Riparian habitat characterization, Franquelin River, Chute à Thompson generating station
- Vegetation survey, Portneuf-sur-Mer, Ministère des Transports du Québec
- Rare plant survey, wetland and vegetation characterization, environmental impact assessment study related to Bloom Lake mine development project, Fermont, Consolidated Thompson Iron Mines
- Rare plant survey, wetland and vegetation characterization, environmental impact assessment study related to Raglan mine project, Ungava Bay, Canadian Royalties
- Rare plant survey, wetland and vegetation characterization, Uashat Reserve expansion project, Sept-Îles
- Wetland crossing survey and characterization during vegetation control, Hydro-Québec TransÉnergie
- Riparian and aquatic vegetation characterization, environmental impact assessment study related to Ragueneau shore stabilisation project, Ragueneau, Ministère des Transports du Québec
- Vegetation survey, Boisé de la Pointe-Saint-Gilles
- Rare plant survey, wetland and vegetation characterization, Trinité River
- Vegetation survey, Lac Beloeil water level increase, Ministère des Transports du Québec
- Vegetation characterization and pedestrian trail development, Matamec
- Fluoride-impacted vegetation survey, Bécancour, Alcoa
- Forest survey using permanent sampling plot method in the Réserve faunique des Chic-Chocs, Université Laval
- Forest survey using temporary sampling plot method in Lac Saint-Jean, Mauricie, Estrie and Montérégie, CLC Camint
- Black spruce seed germination test, UQAR
- Search and identification of vegetation structures in peat samples, UQAR
- Intervention, timber marking, post cut survey and stem quality assessment, Outaouais, CLC Camint

Vegetation Control

- Tree cutting to enhance visibility near sampling stations on ArcelorMittal Mines Canada mining site, Côte-Nord, ArcelorMittal Mines Canada

DEREK LYNCH, Botanist and Technician

- Implement a protocol designed to determine the efficiency of different types of biological phytocides near power stations, Hydro-Québec TransÉnergie
- Implement protocol and monitor the efficiency of ragweed control methods in powerline right of ways, Hydro-Québec TransÉnergie
- Implement and monitor MYCO-TECH biological phytocide tests, Hydro-Québec TransÉnergie
- Long term monitoring of various types of vegetation control treatment, Hydro-Québec TransÉnergie
- Implement protocol and monitor the efficiency of various types of phytocides used in aerial spray, Hydro-Québec TransÉnergie
- Implement protocol and monitor the use of various phytocides in Hydro-Québec stations
- Implement and monitor a vegetation critical management protocol, Hydro-Québec TransÉnergie
- Phytocide spraying, Alcoa
- Supervision of tree cutting work to reduce visual impacts, Aluminerie Alouette
- Survey, monitoring and supervision of vegetation control activities, La Compagnie hydroélectrique Manicouagan
- Sensitive components marking and phytocide spraying activity environmental management, Compagnie minière Québec-Cartier
- Vegetation and sensitive components survey, and supervision of cutting and phytocide spraying activities, Compagnie minière IOC
- Development of a vegetation management plan, Alcan, Lac-Saint-Jean
- Development of a management plan of the vegetation on dikes and dams, Mauricie, Hydro-Québec
- Photointerpretation and surveys in sensitive areas, Manicouagan and Matapédia, Hydro-Québec TransÉnergie
- Supervision and management of aerial spraying over powerline right of ways in the Côte-Nord region, Hydro-Québec TransÉnergie
- Cutting dangerous trees and various clearing work, La Compagnie hydroélectrique Manicouagan
- Supervision of a snow mobile trail construction activities (tree cutting, construction, sign installation), Hydro-Québec

Environment and Wildlife

- Entomofauna survey and identification in an experimental blueberry field, CRLB
- Beaver-impacted site analysis of the issue and dismantlement of dikes near Roads 138 and 385, Ministère des Transports du Québec
- Impact of ford crossing on the aquatic habitat, Hydro-Québec TransÉnergie
- Aber Lake sediment sampling, Alcoa

DEREK LYNCH, Botanist and Technician

- Snow sampling related to a fluoride monitoring, Alcoa
- Moss sampling related to a fluoride monitoring, Alcoa
- Marine sediment sampling, dredging project, IOC mining company
- Contaminated soil characterization, Heath Point, Anticosti
- Soils sampling and characterization, Murdochville and Gaspésie national park, XStrata
- Biomass assessment and fish habitat enhancement, Castle and De la Brume Lakes, Hydro-Québec
- Drilling rehabilitation sites in the Saguenay–Saint-Laurent marine parc
- Reptile and amphibian survey, Lanaudière, Hydro-Québec
- Brook trout spawning activity monitoring, Portneuf and Du Sault aux Cochons Rivers, Hydro-Québec
- Reptile and amphibian visual and auditory surveys, Uashat reserve expansion project, Sept-Îles

PUBLICATIONS

Publications

- FLORAQUEBECA. 2011. *Exploration botanique dans la Réserve de biodiversité des Monts-Groulx - Réserve de biodiversité Uapishka*. Rapport préparé pour la Direction du patrimoine écologique et des parcs, Ministère du Développement durable, de l'Environnement et des Parcs, Québec, 50 p.
- CAYOUILLE, J. et d. Lynch. 2009. FloraQuebeca aux Îlets-Jérémie, le passé rencontre le présent. Bulletin de FloraQuebeca 14 (2) : page 4-12.

JEAN DESHAYE, Biologist, M.Sc.

BOTANIST

FIELD OF EXPERTISE

Botanic
Rare Plant
Vegetal Ecology
Teledetection
Impact Study

PROFILE

Jean Deshaye is a doctorate in botanic and he is renowned as a senior botanist. He has collaborated, during the past 20 years, to various surveys in many parts of Canada, such as tundra or boreal, mixed or deciduous forest. He is also specialized in rare plant or particular plant surveys. He has developed good knowledge related to teledetection used in large scale projects.

EDUCATION

Doctorate in sciences, biology, vegetal ecology, Université Laval	On going
Master degree in biological sciences, vegetal ecology, Université Laval	1986
Baccalaureate in sciences, biology, University of Laval	1982

DISTINCTIONS

Postdegree award from *Conseil de recherches en sciences naturelles et en génie du Canada (C.R.S.N.G.)*

Postdegree award from Fonds F.C.A.R

CAREER

Biologist, botanist, Environment, WSP	2014 to present
Biologist, Botanist, Environment, GENIVAR (now called WSP)	2008-2013
Biologist, botanist, FORAMEC	1998-2008
Biologist, Department of biology, University of Laval	1998
Biologist, Department of chemistry-biology, University du Québec à Trois-Rivières	1988-2008
Biologist, Department of phytology, Université Laval	1982
Biologist, INRS-EAU, Université de Québec	1981
Technician, Canadian Wildlife Service, Environment Canada	1979
Technician, Department of Earth Science, Université de Montréal	1978
Technician, <i>Conseil consultatif des réserves écologiques, ministère des Terres et Forêts du Québec</i>	1976-1977
Technician, Department of phytology and <i>Centre d'études nordiques</i> , Université Laval	1976-1977
Technician, <i>Centre de foresterie des Laurentides</i> , Environment Canada	1975

JEAN DESHAYE, Biologist, M.Sc.

Technician, André Marsan et associés	1975
Technician, <i>Centre d'études nordiques</i> , Université Laval	1973-1974
Technician, <i>Direction générale du Nouveau-Québec, ministère des Richesses naturelles du Québec</i> , Kuujjuaq	1972-1974

PROFESSIONAL EXPERIENCE

Consultation

- Nunavik Nickel Port Facilities Vascular Rare Plant Study, Deception Bay, Quebec (2012)
- Wetland Study in the 315 kV Jacques-Cartier-Laurentides Powerline, Hydro-Québec (2012)
- Western Troy Mining Project Vegetation and Rare Vasculaire Plant Study, Eastmain River, Quebec (2008-2011)
- Wetland and Rare Vascular Plant Study in the 315 kV Chénier-Outaouais Powerline, Hydro-Québec (2008)
- Vascular Flora and Rare Plant Study Using LANDSAT 7 TM Imagery at Raglan Mining Site, Xstrata Nickel, Quebec (2008)
- Vascular Flora and Rare Plant Study Using LANDSAT 7 TM Imagery at the Romaine Complex, Quebec (2001-2005)
- Vegetation Study Using LANDSAT 7 TM Imagery at Eastmain-1-A-derivation Rupert Complex, Quebec (2002-2003)
- Rare Vascular Plan and Vascular Flora Study at the Eastmain-1-A—derivation Rupert Complex, Quebec (2002-2003)
- Biodiversity Study in Hydroelectric Powerline in Deciduous, Mixed and Boreal Forests, Quebec (1995-2006)
- Vegetation Study Using LANDSAT 7 TM Imagery and Vascular Flora Study in Auyuittuq National Park, Nunavut (1999-2000)
- Rare Vascular Plant Study in the Kenogami Lake Watershed, Quebec (2000-2002)
- Rare Vascular Plant Study in the 230 kV Powerline Les Cèdres-Cornwall, Quebec-Ontario (2001)
- Rare Vascular Plant Study in the Anse-aux-Sauvages marsh, Lévis, Quebec (1995)
- Rare Vascular Plant Study in the intertidal zone in Saint-Nicolas, Quebec. (1994)
- Rare Vascular Plant Study in the 735 kV Powerline, Lévis-Des-Cantons, Quebec (1994-1995)
- Rare Vascular Plant and Aquatic Vegetation Study at Rapides-des-Coeurs Complex and at Rapides-de-la-Chaudière, Haute-Mauricie, Quebec (1993)
- Eastmain 1 Complex Vegetation Study Using LANDSAT 5 TM Imagery, Quebec (1990-1991)

JEAN DESHAYE, Biologist, M.Sc.

- Grande-Baleine Complex Vegetation Study Using LANDSAT 5 TM Imagery and Vascular Vegetation Study, Quebec (1989-1992)
- Rare Vascular Plant Species Study at the Grande-Baleine, Eastmain-I and NBR Complexes, Quebec (1990-1992)
- Riparian and Aquatic Vegetation Study at the Grande-Baleine Complex, Quebec (1989, 1992)
- Grande-Baleine Collector Network Study, Québec (1990-1991): mapping and ecological assessment of the vegetation units in powerline right of way under study
- Projected Hydroelectric Powerline of Hydro-Québec, Located on the James Bay Territory (Nikamo-Brisay) (1989): Mapping and Assessment of the Ecological Value of Various Vegetation Units
- Projected Hydroelectric Powerline of Hydro-Québec, James Bay (Tilly-Nikamo) (1987-1988): Mapping and Assessment of the Ecological Value of Various Vegetation Units
- Assessment of the Accuracy of the Scientific Content in School Books from the Collection: "À la découverte des sciences de la nature", Dedicated to Children (1985)
- Movie "Pèlerinage anticostien" (1986): Member of a Botanist Team who was Making Botanical Exploration 50 years ago by Marie-Victorin in Some Coastal Areas of the Anticosti Island
- Delineation of Powerline Right of Way (1975): Natural Sciences Technician. Expert Assistant on the Field and in Preparation of the Impact Studies.

Teacher

- Evolution Biology Class (BIO-1002): Prepare Class and Lecture to Biology Baccalaureate Students
- Vegetal Ecology Class (ECL-1004): Prepare Class (including theoretical and practical parts) and Lecture to Biology Baccalaureate Students
- General Biogeography Class (ECL-1011): Prepare Class and Lecture to Biology Baccalaureate Students
- Botanic Class (BOT-1002): Prepare Class (including theoretical and practical parts) and Lecture to Biology Baccalaureate Students
- Quebec Vascular Plant Taxonomic Class (BOT-12283): in charge of practical work

Botanic and Vegetal Ecology

- Étude de la végétation et de la flore vasculaire du Parc national Auyuittuq, Terre de Baffin, Nunavut (1999-2000)
- Exploration botanique et étude des espèces vasculaires rares, Blanc-Sablon, Québec (1994, 2004 et 2006)
- Rare Vascular Species Study, Mont-Saint-Pierre, Quebec (1995)
- Botanical Exploration and Vegetal Association Study, Île Bylot (1991)

JEAN DESHAYE, Biologist, M.Sc.

- Montagne des Érables Botanical Exploration, Charlevoix, Quebec (1989)
- Botanical Exploration in the Archipel de Mingan and Anticosti Island, Gulf of St. Lawrence, Quebec (1986)
- Botanical Exploration in the Central Plateau of the Ungava, from Bienville Lake to Maguire Lake, Nouveau-Québec, Nunavik (1984-1986)
- Botanical Exploration in the Archipel des Manitounuk, Hudson Bay, North West Territory, Nunavut (1983 et 1985)
- Botanical Exploration in the Archipel des Hybrides, Guillaume-Delisle Lake, Nouveau-Québec, Nunavik (1983)
- Analysis and Identification of Caribou Stomach Contents Coming from Nouveau-Québec, Nunavik (1985)
- North Quebec and Adjacent Territory Vascular Flora Project (1982): Note on Standardized Labels the Information Found on Labels of Herbarium Specimens Discovered in the Study Area
- Botanical Exploration of the Ivik Island, Ungava Bay, Nunavut (1978)
- Collaboration to a Mining Discharge Environmental Impact Study, Rouyn-Noranda, Quebec
- Botanical Exploration in the Area of the Lac à l'Eau Claire, Nouveau-Québec, Nunavik (1980)
- Collaboration to Ecological Reserve Proposal Assessment Studies (1976)
- Botanical Exploration in the Area of the Rivière aux Feuilles, Nouveau-Québec, Nunavik (1976-1978)
- Botanical Exploration, Tasiujaq, Ungava Bay, Nouveau-Québec, Nunavik (1972)

Geology and Geomorphology

- De-Icing Study of the South-West Part of the Ungava Bay, Nouveau-Québec, Nunavik (1978): Collaboration to Field Work

Zoology

- Collaboration to a Research Program Related to the Snow Geese Feeding on Nesting Sites at Bylot Island, Nunavut (1991)
- Great Blue Heron and Three Seagull Species Study, St. Lawrence Estuary Islands, Between Berthier-sur-Mer and Trois-Pistoles, Quebec (1979): Collaboration to Field Work
- Preparation of Nuisance Insect Larvae Growing Site (spruce budworm) and biological insecticide tests, Québec, Québec (1975): Natural Sciences Technician
- Collaboration to Population Statistical Studies of Four Fish Species (*Salmonidae: Coregoninae and Salmoninae*) on the Area of James Bay, Quebec (1974)
- Collaboration to the Farming Program of Muskox Herd at the Ranching Station of Vieux-Fort-Chimo, Ungava Bay, Nouveau-Québec, Nunavik (1972-1974)

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- P. MORISSET, S. PAYETTE, J. DESHAYE, *La flore vasculaire du versant québécois de la baie d'Hudson : structure phytogéographique*. Communication présentée au Hudson/James Bay Symposium, Université de Guelph, 1981

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AREAS OF ACTIVITY

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Linguistic revision
Volunteering

LANGUAGES

English
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PROFILE

Olivier Barden is a wildlife biologist with an extensive background in avian fauna. He has been very active in the amateur sector since 1994, acting in the professional sector since 2004 and adding academic specialisation in studying avian migration ecology at the Master's level starting in 2011. His time as a seasonal avian field technician led him to work across Canada in both official languages, including two stints in the Northwest Territories. His combined amateur and professional experience has been the foundation of his knowledge on the biology and field identification (visual and aural) of birds across North America and beyond. He joined GENIVAR in June 2012 and acts as a specialist in mandates related to birds and terrestrial wildlife. He is currently involved in various aspects of several environmental impact assessment studies for mining projects in northern Québec and Labrador, notably involving birds and other wildlife, as well as proofreading and edition of English documents.

Master's degree in Forestry Sciences, Avian ecology, Laval University	In progress
Bachelor's degree in Biology, Laval University	2010
Diploma of College Studies in applied biology (<i>Techniques d'inventaire et de recherche en biologie</i>), Collège de Sainte-Foy	2006

PROFESSIONAL DEVELOPMENT

First aid and CPR training	2013
Bird banding internship at the Long Point Bird Observatory, Ontario	2006

AWARDS

Winner of the 2012 Québec birder's championship <i>At the biennial Congrès des ornithologues amateurs du Québec, Regroupement QuébecOiseaux</i>	2012
Holder of the "Big Day" provincial record in Québec : 175 species Registered by the American Birding Association	2007

CAREER

Biologist, bird specialist, Environment Unit, WSP, Baie-Comeau, Québec	2012 to this day
Consultant biologist, Environment Canada, Québec, Québec	2010
Bander In Charge and Wildlife Technician, Tadoussac Bird Observatory, Tadoussac, Québec	2008-2010



OLIVIER BARDEN, biologist

Avian field technician, various employers, seasonal work

Summer 2004-
2011

PROFESSIONAL EXPERIENCE

Wildlife studies

- **Environmental Impact Statement on water and tailings management at Tio Mine**, Havre-Saint-Pierre, Québec (2013): drafting of the avian and terrestrial fauna sectorial study. Client: Rio Tinto Fer et Titane.
- **Environmental Impact Statement for the Joyce Lake mining project**, Labrador (2012-2013): participation in drafting the avian and terrestrial fauna sectorial study. Client: Century Iron Mines.
- **Environmental Impact Statement on the Côte-Nord mining railway project between Sept-Îles and Schefferville**, Côte-Nord, Québec (2012): participation in field surveys and drafting of the bird sectorial study. Client: Canadian National.
- **Environmental and social impact assessment for the Deception Bay wharf and sediment management**, Deception Bay, Nunavik, Québec (2012): participation in field surveys and revision of the bird sectorial study. Client: Canadian Royalties Inc.
- **Environmental Impact Statement on tailings expansion at Lac Bloom iron mine**, Fermont, Québec (2012-2013): participation in terrestrial and wetland bird surveys. Client: Cliffs Natural Resources.
- **Quebec Breeding Bird Atlas** (2010-2011): in-depth research on aspects of breeding biology of the birds of Quebec relevant to the participants of the Atlas, synthesis and vulgarisation of the results in both English and French. Participation in the collection of data in the boreal forest of Québec. Clients: Environment Canada, Bird Studies Canada and *Regroupement QuébecOiseaux*.
- **Eastern Canada Seabirds at Sea (ECSAS) monitoring**, Québec and Newfoundland (2009 & 2010): at-sea observer aboard a Canadian Coast Guard Ship. Identification and positioning of all seabirds encountered in the Estuary and Gulf of St. Lawrence. Client: Environment Canada, Environmental Emergencies.
- **Maritimes Breeding Bird Atlas** (2009): participation in the collection of breeding bird evidence and completion of point counts across Nova Scotia, New Brunswick and Prince Edward Island. Client: Bird Studies Canada, Environment Canada.
- **Fall migration monitoring**, Tadoussac Bird Observatory, Québec (2008 & 2009): in charge of diurnal bird banding activities, including both regular (passive) and experimental targeted (active) mist-netting.
- **Renewed Environmental Impact Statement for the Mackenzie pipeline project**, Colville Lake and Inuvik, Northwest Territories (2006 & 2008): participation in breeding bird spot-mapping surveys and vegetation surveys. Client: Environment Canada.
- **Pointe de l'Est National Wildlife Area Survey**, Magdalen Islands, Québec (2007): participation in the complete survey of aquatic birds and landbirds in the breeding season, and the entry of all data collected, both geospatial and

OLIVIER BARDEN, biologist

alphanumeric. Client: Environment Canada, *Ministère des Ressources naturelles et de la faune*.

- **Lac St-François National Wildlife Area Survey & Rare bird and plant survey**, southwestern Québec (2004): participation in avian and vegetation field surveys. Client: Environment Canada.

Linguistic revision

- **Environmental Impact Statement for the Project to Build a New Rail Segment for the BlackRock Metals Inc. Mining Project**, Chibougamau, Québec (2013): edition of the final report translated in English. Client: BlackRock Metals Inc.

Volunteering

- Reviewer of content for certain songbird species in the Macaulay Library of Natural Sounds (Cornell Lab of Ornithology; 2013)
- Volunteer participant & provincial data validation committee board member for the Quebec Breeding Bird Atlas (2010-2013)
- Administrator of the *Regroupement QuébecOiseaux* (2007-2010)
- Birding guide for organised travel groups, Société de biologie de Montréal (2007)
- Regional co-editor of two quarterly reports on bird observations, one published in *Le Bulletin Ornithologique* (2006-2012), and the other in *North American Birds* (see under publications) and *QuébecOiseaux* (2005-2013)

PUBLICATIONS AND PRESENTATIONS

Publications

- BANNON, P., O. Barden, N. David and S. Denault. 2005—2013. *Quebec Region in Fall Migration, The Winter Season, Spring Migration & The Nesting Season*, North American Birds Vol. 59 No. 3—Vol. 66 No. 3.
- BARDEN, O. 2009. *Développement d'un nouveau programme de capture de passereaux boréaux à l'Observatoire d'oiseaux de Tadoussac, 2^e saison: automne 2008*; technical report. Observatoire d'oiseaux de Tadoussac, Explos-Nature, Les Bergeronnes (Québec), 22 pages + appendix. **Presentations**
- BARDEN, O. *Migration inverse printanière sur la Côte-Nord: patrons et mécanismes*, Congrès des ornithologues amateurs du Québec, 16 September 2012, St-Hyacinthe, Québec
- BARDEN, O. *Portrait auditif de la migration nocturne*, Congrès des ornithologues amateurs du Québec, 28 October 2006, Saint-Jean-sur-Richelieu, Québec.

BENOIT LALIBERTÉ

5752 rue de Bordeaux

Montréal (Qc), Canada, G2H 2R3

Phone: (514) 585-3104, *Email:* benoit_laliberte@hotmail.com**Bilingual****EDUCATION**

Master degree in Environment University of Sherbrooke	2006-2009
Baccalaureate in biology, wildlife management University of Québec in Rimouski	2001-2004
Exchange CRÉPUQ of one year in Île de la Réunion, France	2002-2003

STUDY PROJECT

Master project: The impact of climatic changes on birds in Quebec.

PROFESSIONAL EXPERIENCES

Environmental Specialist, SNC-Lavalin Environnement <i>Impact studies and environmental monitoring</i>	2011-on going
<ul style="list-style-type: none"> • Carry out environmental and social impact studies <ul style="list-style-type: none"> ○ Simandou Project in Guinée (West Africa) ○ Genesis Project (Québec/Labrador) • Prepare aerial surveys (birds, large mammals); • Analyse aerial survey data related to large mammal; • Collect First Nations information related to the land use; • Coordinate field work and collaborate to data collection; • Data analysis and reporting 	
Biologist, Regroupement QuébecOiseaux <i>Atlas des oiseaux nicheurs du Québec, coordination assistant</i>	2009-2011
<ul style="list-style-type: none"> • Prepare and carry out a major ornithological project; <ul style="list-style-type: none"> ○ Develop sampling plan; ○ Prepare mapping database (ArcGIS); ○ Produce sections of the Atlas (i.e. guide, guidelines, forms); • Communicate with partners and project collaborators; <ul style="list-style-type: none"> ○ Organise training session regarding the Atlas; ○ Provide conference regarding the project; ○ Prepare content for the web site; • Hire and coordinate field teams; • Conduct bird surveys; • Prepare subvention requests. 	
<i>Field Biologist</i>	
<ul style="list-style-type: none"> • Species at risk surveys 	
Field Biologist, Canadian Wildlife Service, Nunavut	2008

Long-term Eider monitoring, Eastbay Island

- Prepare and carry out experiment on the field;
- Collect field data:
 - Eider, seagull and snow bunting capture and mark;
 - Behavioural observations and daily count of birds;
 - Bathymetric surveys;
- Camp and equipment maintenance;
- Collect and tabulate data.

Student Trainee in Environment, Rio Tinto Alcan, Montréal**2007***Biodiversity Management*

- Collaborator to the development of the biodiversity management strategy;
- Act as a consulting-biologist at the biodiversity census table;
- Development of tools dedicated to biodiversity management projects and related to biodiversity management:
 - Elaborate a tool to select site to reduce the impact on biodiversity;
 - Develop a biodiversity risk analytical method;
 - Assess project impacts on biodiversity;
 - Develop indicators related to biodiversity monitoring;
 - Coordinate mining sites rehabilitation.

Wildlife Technician, University of Québec in Rimouski, Nunavut**2005 and 2006***Long-term monitoring of the Arctic ecosystem, Île Bylot*

- Manage the field crew;
- Establish a scientific camp in a remote area;
- Collect field data:
 - Capture and mark selected species (fox, snow goose, shore birds);
 - Habitat characterization: visit of nest and den
 - Behavioural observations.

Wildlife Technician, University of Québec in Rimouski, Rimouski**2005***Snow Goose Telemetric Survey*

- Project management;
- Elaborate a bird collar for telemetric survey;
- Prepare field tests;
- Built an area to keep geese in captivity.

SOCIAL INVOLVEMENT

- Administrator of the *Fiducie foncière de l'Île du Marais* 2007-2010
- Vice-president of the Student Association – Master in Environment 2007
- Administrator of the *Société de loisir ornithologique de l'Estrie* 2006-2008

SPECIFIC KNOWLEDGE

- Trilingual (French, English and spoken Spanish);
- Training: National Lifeguard (First Aids), Professional Radio Operator Certificates, *Accréditation de plongeur avancé* (PADI), Firearm Possession and Acquisition Licence (PAL), Hunter Certificate;
- Software: ArcGIS, Website (HTML), R, Microsoft Word, Excel et Power Point.

Joël Poirier

54 route 298 Nord

St-Donat, Qué.

G0K 1L0

Maison :(418) 739-5006 cell :(418) 730-5007

poirierjo@globetrotter.net

SPOKEN AND WRITTEN LANGUAGE

French

Basic English

EDUCATION

Techniques d'écologie appliquée, CÉGEP of La Pocatière

1989

PROFESSIONAL EXPERIENCE

SNC Lavalin (Gaspésie)

Wildlife Technician

Forest bird survey (threatened species)

2010

GENIVAR, Baie-James (Eastmain, Rupert)

Wildlife Technician

Installation of fish eggs collectors during May and October spawning
in Rupert River

Assembling wing measurement tower for windmill projects

2010

Tecsult, Baie-James (Rupert River)

Wildlife Technician

Waterfowl survey (breeding pairs and broods)

2009

Tecsult, Havre St-Pierre

Wildlife Technician

Large mammal survey (moose, caribou)

2009

Del Degan, Massé et Associés, Baie-James (Eastmain, Rupert)

Wildlife Technician

Beaver survey

2008

SNC Lavalin (Raglan, Baie Déception)

Wildlife Technician

Aerial and ground bird survey

Moose survey

2008

<u>Hémisphères, (Prince Edward Island and Schefferville)</u> <u>Wildlife Technician</u> Forest bird survey	2008
<u>SNC Lavalin (Bellechasse, Charlevoix, Gaspésie)</u> <u>Wildlife Technician</u> Prey bird survey	2008
<u>Tecsult, Baie-James (Rupert River)</u> <u>Wildlife Technician</u> Waterfowls survey (breeding pairs)	2007
<u>Del Degan, Massé et Associés, Baie-James (Eastmain)</u> <u>Wildlife Technician</u> Eastmain Reservoir Monitoring Large (moose and caribou) and small mammal aerial survey	2007
<u>Hémisphères, Rimouski</u> <u>Wildlife Technician</u> Prey bird survey Forest bird survey	2006
<u>Del Degan, Massé et Associés, Baie-James (Eastmain)</u> <u>Wildlife Technician</u> Large (moose and caribou) and small mammal aerial survey	2006
<u>Foramec, Baie-James (Eastmain, LG2)</u> <u>Wildlife Technician</u> Aerial waterfowl survey	2006
<u>Foramec, Havre-St-Pierre (La Romaine)</u> <u>Wildlife Technician</u> Aerial prey bird survey Ground survey and waterfowl behavioural study Waterfowl habitat characterization	2004-2005
<u>Del Degan, Massé et associés, Baie-James (Eastmain)</u> <u>Wildlife Technician</u> Aerial beaver survey	2004
<u>Del Degan, Massé et associés, Baie-James</u> <u>Wildlife Technician</u> Beaver catch and relocation Telemetric survey	2003

<u>Foramec, Baie James</u>	2003
<u>Wildlife Technician</u>	
Waterfowl aerial survey	
Waterfowl habitat assessment and proposition of habitat enhancement project	
<u>Tecsult inc., Baie James</u>	2002
<u>Wildlife Technician</u>	
Field work coordination	
Develop partnership between First Nations and the Consultant	
Observer during waterfowl survey	
<u>Department of Fisheries and Ocean Canada, Mont-Joli</u>	2001-2002
<u>Technician</u>	
Marine benthic organisms sampling and identification	
<u>Environment Canada, Québec</u>	2001-2002
<u>Observer</u>	
Canada goose aerial spring survey	
<u>Environment Canada, Sainte-Foy</u>	1997-2001
<u>Team Leader</u> (Study a Canada goose population)	
Capture, mark and morphometric studies	
Mark birds after hatching	
Use of net-gun, ground net, drive by helicopter	
Blood sampling	
Plant and stomach content identification	
Observer (waterfowl aerial survey)	
Use and reparation of ATV, pneumatic boat and other equipment	
<u>Fondation Les Oiseleurs du Québec, Havre-St-Pierre</u>	1999
<u>Wildlife Technician</u>	
Collaboration to an emergency plan following an oil spill	
Preparation of report for the Société d'intervention maritime de l'est du Canada	
Teaching techniques to capture soiled birds	
Supervision of a 6 worker team and coordination of capture activities	
<u>Université Laval, Cap Tourmente, Québec</u>	1997
<u>Wildlife Technician</u>	
Installation of net guns to capture snow goose	
Installation leg bands and emitter collars	
<u>Groupe Dryade Limitée (Tecsult), Laforge-1 and Laforge-2 (Baie-James)</u>	1990-1996
<u>Team Leader</u>	Field preparation
Observer during waterfowl aerial survey	
Waterfowl survey in boat on the Baskatong Reservoir	
Canada goose capture and installation of collars	
Telemetric survey in helicopter	
Shore habitat plant survey	
Benthos sampling and identification	

Université Laval, Île-aux-Grues and Montmagny region, Québec 1994-1995

Wildlife Technician

Data collection on Snow goose
Spotting scope observation to determine sex-ratio and age-ratio
Collar reader

Foramec Incorporé, La Grande (Baie-James), Québec 1990-1995

Wildlife Technician

Observer during waterfowl aerial survey
Observer during small game aerial survey
Beaver habitat assessment

Gauthier et Guillemette, Baie-James 1991-1992

Wildlife Technician

Observer during waterfowl aerial survey
Observer (moose, caribou and wolf aerial survey)
Behavioural study of waterfowl during migration
Validation of aerial photograph using helicopter
Marsh vegetation survey in Rupert Bay
Benthos and fish sampling
Phytomass sampling
Dendrometric survey

La Fondation Les Oiseleurs du Québec, Québec 1989-1994

Wildlife Technician

Observer during waterfowl aerial survey
Morphometric data collection on Snow goose
Spotting scope observation to determine sex-ratio and age-ratio
Collar reader
Responsible of a waterfowl marking station in: Plaisance (Outaouais), St-Félicien (Lac St-Jean) and Parent (Abitibi)
Registration of small games during hunting opening season
Contaminated bird rehabilitation during an oil spill

SOFTWARES: Word, Excel

OTHERS: Wilderness & Remote First Aid (2007)

Pleasure Craft Operator Card
Class 5, driver licence
Firearm Possession and Acquisition Licence (PAL)

Simon Duval

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Repentigny, Québec
J5Y 0A5
Tel.: (450) 704-4402
Cell.: (514) 501-5852
simon@migrationresearch.org
duvalsimon@hotmail.com

*Language: French, English

EDUCATION

Practical Training McGill Bird Observatory Montréal	April-May 2008
<i>Diplôme d'Études Collégiales in Applied Ecology</i> Cégep of La Pocatière La Pocatière	2008
<i>Diplôme d'Études Secondaires</i> College of L'Assomption L'Assomption	2005

ADDITIONAL TRAINING

Bird First Aids Training Le nichoir	2009
Subpermit for Bird Banding Government of Canada	2008
Standard First Aid, Canadian Red Cross La Pocatière	2007
Leadership Training Program College L'Assomption	2003-2005

PROFESSIONAL EXPERIENCE

Bird Banding Leader Bird Observatory of McGill	May 2009-to present
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- Collect birds from nets
- Identify, band, measure, determine age, sex and weight birds
- Teach extraction and banding techniques to volunteers
- Station maintenance
- Daily survey of birds

Ornithologist Consultant

Services Environnementaux Faucon

June and September-October 2011

- Point count in boreal forest
- Prey bird aerial survey
- Waterfowl aerial survey
- Beaver aerial survey

Wildlife Technician

Services Environnementaux Faucon

June 2010

- Peregrine falcon banding in nest

Wildlife Technician

Société d'histoire naturelle de la vallée du Saint-Laurent

June-July 2009

- Daily telemetric survey of map turtle
- Collect data related to location and habitat
- Driving a boat for the survey

Ornithologist Consultant

Communauté Abénaquise d'Odonak

May-June 2009

- Birds surveys
- Confirm nesting of specific species

Guide Interpreter

Nature-Action Québec

May 2009

- Guide children in a path
- Interpret at stations related to the wood
- Answer questions from children
- Guide an ornithological tour for general public

Technician in Biological Survey

Nature-Action Québec

May 2009

- Search of bird of prey nest
- Play bird of prey song

Horticulturist / Technician in Biological Survey

Nature-Action Québec

October to December 2008

- Nesting site maintenance
- Invasive plant control
- Tree planting
- Site patrol
- Inform trail rider

Technician in Biological Survey

Nature-Action Québec

June to August 2008

- Bird, plant, reptile and amphibian surveys
- Tabulate data
- Prepare equipment
- Contact land owners

Technician in applied ecology for the
Société d'histoire naturelle de la vallée du Saint-Laurent
 Herpetofauna survey in 10 sites in St-Jean-sur-Richelieu

October 2006

- Complete survey at 10 sites
- Identification of captures

Technician in applied ecology for the
Société d'histoire naturelle de la vallée du Saint-Laurent
 Project on artificial snake hibernaculum

April 2006

- Installation of fence to maintain snakes near the hibernaculum

Technician in applied ecology for the
Société d'histoire naturelle de la vallée du Saint-Laurent
 Project on the brown snake in Île des Sœurs and in Verdun

October 2005

- Brown snake survey near the shore
- Determine sex, mark and measure

VOLUNTEERISM

Long Point Bird Observatory
 Bird banding
 Long Point

September-October 2008

- Extract birds from nets
- Band, measure, determine sex, and weight birds
- Collect and tabulate data

Opération Nez Rouge
 Community help service
 Ville of Mascouche

2007-2009

- Safe ride service
- Complete safe ride service forms

ACTIVITIES AND INTERESTS

- Wildlife and flora of Québec
- Music (guitar)
- Sports
- Horticulture

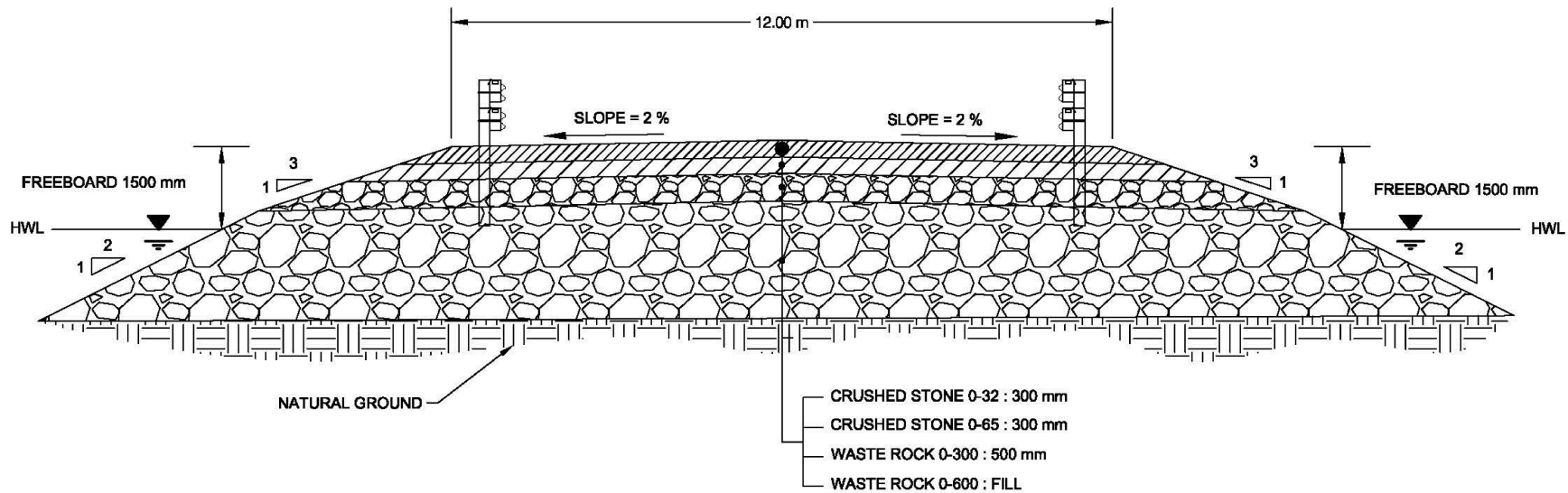
PROFESSIONAL QUALITY AND APTITUDES _____

- A good sense of self help and initiative
- Good capacity to work under pressure
- Stimulated by challenges
- Team spirit

References will be provided on request.

APPENDIX B



Rock Causeway Design

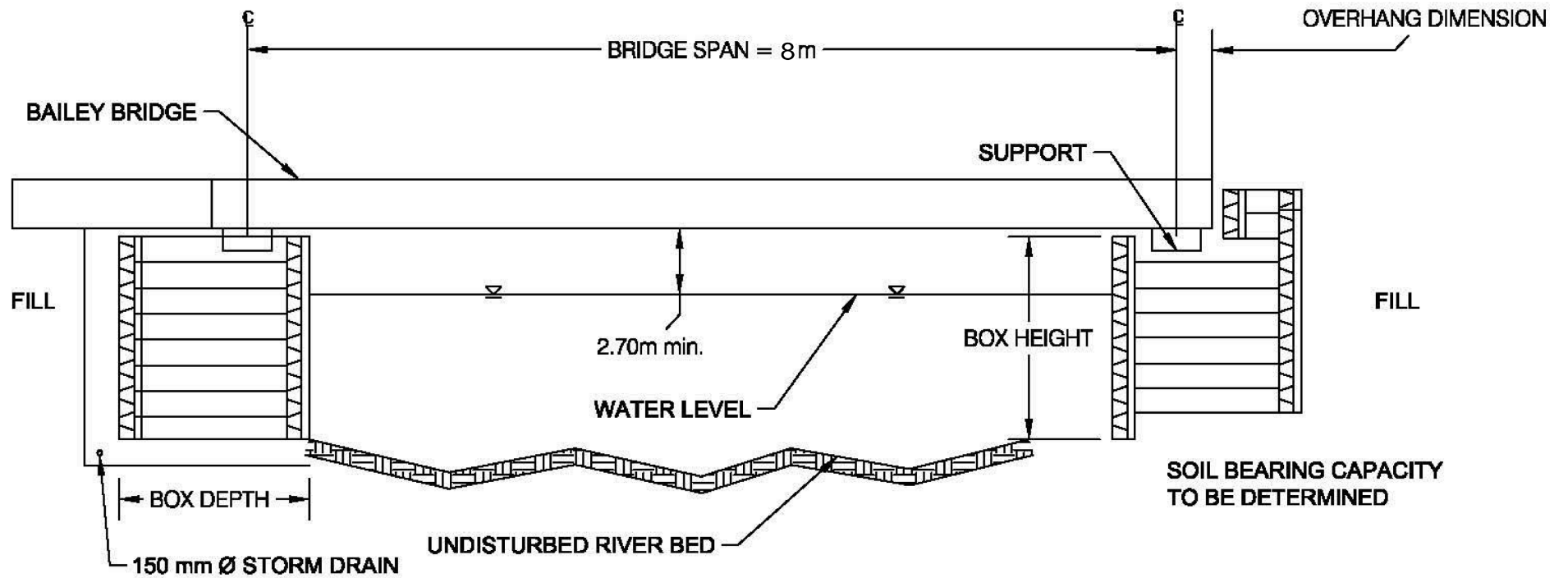


NOT TO SCALE

2- CAUSEWAY TYPICAL CROSS SECTION

GIS ID: CIM_ST_360

	FIGURE TITLE:			Proposed Causeway Cross Section	
	CLIENT:			LABEC CENTURY IRON ORE INC.	
	CHECKED BY: DF	FIGURE ID: FIGURE B-1	PROJECT NUMBER 121511139	FIGURE SOURCES: Illustration provided by BBA, received 2015/02/24.	



NOT TO SCALE

1- CAUSEWAY BRIDGES DETAILS

GIS ID: CIM_ST_361



FIGURE TITLE: Proposed Causeway Bridge			
CLIENT: LABEC CENTURY IRON ORE INC.			
CHECKED BY: DF	FIGURE ID: FIGURE B-2	PROJECT NUMBER 121511139	FIGURE SOURCES: Illustration provided by BBA, received 2015/02/24.

