

Appendix H

Curricula Vitae

Nicole Kopysh is a Terrestrial Ecologist and Project Manager who has been involved in projects of varying sizes from multiple sectors including aggregates, renewable energy and development. Nicole has successfully managed or directed the natural terrestrial field programs and reporting requirements for Environmental Impact Assessments, constraints analyses, natural environment technical reports, Environmental Implementation Reports, Natural Heritage Assessments for the Renewable Energy Assessment program and natural heritage monitoring programs. These have included extensive agency and public consultation and Nicole demonstrates effective communication skills in the execution of these projects.

Nicole's experience involves the implementation of the natural heritage policy of the Ontario Provincial Policy Statement, Greenbelt Plan, *Oak Ridges Moraine Act*, *Migratory Birds Convention Act*, *Green Energy Act* and municipal policy documents for municipal draft plan applications throughout southern Ontario. Nicole is also experienced with the interpretation and application of the *Endangered Species Act* (ESA), including the development and completion of permit applications under the ESA. Nicole is a skilled birder and has field experience conducting bird surveys, Species At Risk surveys, general terrestrial monitoring and assessments, wildlife inventories and habitat assessments. She is a member of the steering committee for Environment Canada's and the Canadian Wind Association's Bird Monitoring Database Project.

EDUCATION

BES, University of Waterloo / Bachelor of Environmental Studies, Honours Environment and Resource Studies, Co-op Program, Waterloo, Ontario, 1998

MEMBERSHIPS

Member, Society of Canadian Ornithologists

Member, Ontario Field Ornithologists

PROJECT EXPERIENCE

Aggregate Services

Neubauer Pit, Township of Puslinch, Ontario (Project Assistant, Ecologist)

Natural environment field inventories and Level II Natural Environment Technical Report

Hillsburgh Huxley Pit, Hillsburgh, Ontario (Project Assistant, Ecologist)

Natural environment field inventories, Woodlot Assessment of Significance and Level II Natural Environment Technical Report

Proposed Bromberg Pit, Ayr, Ontario (Project Assistant, Ecologist)

Natural environment field inventories and Level I Natural Environment Technical Report

Commercial / Retail Development

First Capital Holdings Trust, Guelph, Ontario (Project Manager)

Environmental Implementation Report. Vegetation buffers, wildlife corridor, tree conservation plan, planning and design of invasive species removal, design of compliance and performance monitoring program.

Natural Sciences & Heritage Resources

Forest Bird Research - Canadian Wildlife Service* (Field Assistant)

Located Wood Thrush nests, monitored nesting success, banded adult and nestling birds, and conducted vegetation surveys.

Forest Bird Research - Smithsonian Institution* (Field Assistant)

Located and monitored Hooded Warbler nests and conducted insect sweep net sampling. Located Blue-headed Vireo nests and conducted playback experiments.

Ontario Breeding Bird Atlas - Ontario Nature-Federation of Ontario Naturalists* (Assistant Coordinator)

Coordinated and managed various aspects of a province-wide conservation/research project. This involved coordinating coverage to ensure project goals were met; hiring, training and managing contract staff; development of funding proposals; coordination of field work; management of volunteers and working committees; assistance in preparation of Atlas book for publication.

Colonial Marshbird Census - Bird Studies Canada* (Project Coordinator)

Developed the project outline, scope, organization and staffing. Scheduled the project timelines and tasks. Performed key field work in marshes throughout southern Ontario.

* denotes projects completed with other firms

Nicole Kopysh BES

Ecologist / Project Manager

Ontario Eastern Screech-owl Survey - Ontario Breeding Bird Atlas* (Project Manager)

Developed project proposal, project timeline, schedule and budget. Responsible for communications, data management and handling. Launched survey and coordinated volunteer involvement.

Renewable Energy

Post-construction: Renewable Energy Projects, Various Sites, Ontario (Team Lead - Field Program and Technical Reporting)

Post-construction monitoring and reporting for various wind energy projects in Ontario, including:

- Melancthon I Wind Plant
- Wolfe Island Wind Power Project

Pre-construction: Renewable Energy Projects, Various Sites, Ontario (Team Lead - Field Program and Technical Reporting)

Study design, direction of field programs, agency and public consultation, evaluation and assessment of natural features, significant wildlife habitat, presence of Species At Risk, assessment of project impacts and preparation of final reports for the following projects:

- White Pines Wind Project Natural Heritage Assessment, Environmental Impact Study and Endangered Species Act Assessment and Permitting
- Ostrander Point Wind Energy Park Natural Heritage Assessment, Environmental Impact Study and Endangered Species Act Assessment and Permitting
- Springwood Wind Project Natural Heritage Assessment
- Whittington Wind Project Natural Heritage Assessment, Environmental Impact Studies and Endangered Species Act Assessment and Permitting
- Port Dover and Nanticoke Wind Project Natural Heritage Assessment, Environmental Impact Study and Endangered Species Act Assessment and Permitting
- Brooke-Alvinston Wind Project Natural Heritage Assessment

Chinodin Melancthon and Grey Highlands Wind Projects, Ontario (Terrestrial Ecologist)

Coordinating and conducting monitoring of bats and migratory and breeding birds for wind turbine development.

Proton Wind Program, Southgate Township, Ontario (Terrestrial Ecologist)

Coordinating and conducting monitoring of migratory and breeding birds for wind turbine development, preparation of comprehensive technical appendix to the Environmental Screening Report.

Wolfe Island Wind Power Project, Wolfe Island, Ontario (Terrestrial Ecologist)

Study design, coordination and conducting of monitoring for spring migratory birds, fall migrating raptors, staging waterfowl, winter raptors and grassland bird populations. Design and conducting specific studies to target avian Species at Risk. Assessment of amphibian populations, mammal populations, and wildlife corridors. Preparation of technical report appendix to the Environmental Screening Report.

Residential Development

Almas Property, Hamilton, Ontario (Project Manager)

Environmental Impact Statement and Natural Heritage Assessment

Golhar Residence, Hockley Valley, Ontario (Project Manager)

Development of environmental review for a proposed pond located within the Niagara Escarpment Protection Area.

Glaspell Homeowner's Guide, Whitby, Ontario (Project Manager)

Fourteen Mile Creek Long-term Natural Heritage Monitoring Program, Oakville, Ontario (Natural Heritage Monitoring Project Director)

A watershed-based inventory and monitoring program for a study area in the Fourteen Mile Creek watershed was developed in association with the Conservation Authority to assess human induced stress on the greater ecosystem. The program included one year of inventory work and four subsequent years of monitoring and incorporated the following components: streamflow and rainfall monitoring, erosion and creek morphology, groundwater, vegetation and Ecological Land Classification, breeding birds, fish, water quality and benthos.

Sports, Recreation & Leisure

Clublink Wyndance Golf Courses, Uxbridge, Ontario (Project Manager)

Natural heritage assessment and development of environmental report addendum and significant species plan.

* denotes projects completed with other firms

Nicole Kopysh BES

Ecologist / Project Manager

PUBLICATIONS

Eastern Screech-Owl pp. 290-291. *Atlas of the Breeding Birds of Ontario*, 2007.

Kopysh, N. Other Owls!. *Ontario Breeding Bird Atlas Newsletter*. Vol 5, Issue 1., 2005.

Kopysh, N. On the Prowl for Owls. *OFO News* 22(1): 12-13., 2004.

Kopysh, N. and C. Weseloh. Reporting Colonial Species. *Ontario Breeding Bird Atlas Newsletter*. Vol 3, Issue 2., 2003.

Kopysh, N. Owling for EASO. *Ontario Breeding Bird Atlas Newsletter*. Vol 3, Issue 2., 2003.

Buehler, D.M., D.R. Norris, B.J.M. Stuchbury and N.C. Kopysh. Food Supply and Parental Feeding Rates of Hooded Warblers in Forest Fragments. *Wilson Bulletin* 114(1), 122-127., 2002.

Morton, E., J. Howlett, N.C. Kopysh and I. Chiver. Overcoming the cost of male incubation: blue-headed vireos memorize the locations where intruders sing. *In submission to Proc Royal Soc of London, biology letters.*, 2002.

Timmermans, S. and N. Kopysh. What's Happening With Colonial Marshbirds?. *Ontario Breeding Bird Atlas Newsletter*. Vol 1, Issue 2., 2001.

Sean Spisani is a Senior Terrestrial Ecologist with expertise in the fields of plant community ecology, wetland science and ecological restoration. He has practiced in southern Ontario for over ten years, assuming project management roles on various projects, including environmental impact studies, environment assessments, habitat mapping, ecological management plans, and research oriented projects. Sean's client base includes municipal, provincial and federal governments, as well as private industry and land developers. He has acquired experience with a number of government and non-government organizations, including positions with Credit Valley Conservation, Rouge Park, Royal Botanical Gardens, and the Canadian International Development Agency.

Sean maintains memberships with scientific organizations, including Halton Region Ecological and Environmental Advisory Committee (2011), Society for Ecological Restoration (2001-2010), and Field Botanists of Ontario (2003-2010). He is trained in ELC protocols for Southern Ontario and certified under OWES. In 2008, Sean co-instructed his first ELC training course on behalf of the MNR. In 2006, he served as an expert witness at the Ontario Municipal Board for natural heritage matters regarding a site plan application.

Sean is a graduate of Wilfrid Laurier University with a Bachelor of Science in Biology and Physical Geography, and Niagara College with a Post-Graduate Certificate in Ecosystem Restoration. These provide a foundation to assess key biophysical components of ecological planning and management, including surficial geology, landform, hydrology, soil texture, soil moisture, vegetation cover and flora composition.

EDUCATION

B.Sc., Wilfrid Laurier University / Biology and Physical Geography, Waterloo, Ontario, 2001

ERGC, Niagara College / Ecosystem Restoration, Niagara-on-the-Lake, Ontario, 2002

Certificate, Canadian Environmental Assessment Agency / Screenings Under the Environmental Assessment Act, Ottawa, Ontario, 2011

Certificate, Canadian Environmental Assessment Agency / Orientation to the Canadian Environmental Assessment Act, Ottawa, Ontario, 2011

Certificate, Link to Life / First Aid and CPR, Markham, Ontario, 2010

Certificate, Trent University / Temperate Wetland Restoration Training Course, Peterborough, Ontario, 2007

Certificate, Ontario Ministry of Natural Resources / Ontario Wetland Evaluation System (OWES), North Bay, Ontario, 2005

Certificate, Ontario Ministry of Natural Resources / Ecological Land Classification (ELC) for Southern Ontario, Peterborough, Ontario, 2004

MEMBERSHIPS

Member, Society for Ecological Restoration, Ontario Chapter

Member, Halton Region Ecological and Environmental Advisory Committee

Member, Field Botanists of Ontario

PROJECT EXPERIENCE

Assessments, Permitting, and Compliance

York Region, 9th Line and 16th Avenue Trunk Sewer Construction Monthly Monitoring for Water Taking*, Markham, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for monitoring wetland health along dewatering influence zones during construction phase of two separate sewer lines (9th Line and 16th Avenue).

* denotes projects completed with other firms

Sean Spisani B.Sc., ERGC

Senior Ecologist

Peel Region, Credit Valley Sanitary Trunk Sewer Extension Monitoring for Water Taking*, Mississauga, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for monitoring vegetation community health during dewatering activities associated with test pumping activities and sewer construction.

York Region, Rainbow Creek Ecological Needs Assessment for PTTW*, Ontario (Ecology Lead)

Ecology lead for wetland monitoring components of PTTW in support of sewer construction.

Halton Region, Impacts to Hospital Tributary Study, Ecological Needs Assessment for Water Taking*, Georgetown, Ontario (Ecologist)

Ecologist responsible for wetland needs assessment to inform municipal water-taking requirements in proximate well fields. Groundwater sensitive features include organic soils and calciphile flora.

Walker Brothers Quarries, Ecological Needs Assessment for PTTW*, Niagara Region, Ontario (Ecologist)

Ecologist responsible for wetland monitoring program, including eleven permanent and temporary ponds and springs. Several groundwater sensitive features were identified in the analysis area, including productive amphibian habitat and calciphile flora species.

York and Durham Regions, Southeast Collector EMP, Ecological Needs Assessment for Water Taking*, Markham and Pickering, Ontario (Lead Ecologist)

Lead ecologist responsible for wetland monitoring program to address water-taking construction requirements. The program included over 40 wetlands in York and Durham regions. Multidisciplinary approach incorporated input from the fields of wetland hydrology, soil science, and ecology.

Ecological Monitoring

Royal Botanical Gardens, Species at Risk and Sensitive Habitat Monitoring*, Hamilton, Ontario (Field Botanist)

*Field botanist responsible for implementation of field monitoring for populations of the nationally endangered *Scirpus verecundus* and *Morus rubra*. Implemented prairie ecosystem management plans.*

Rouge Park, ESA Inventory and Species at Risk Assessment*, Aurora, Ontario (Ecologist)

*Completed forest inventory of the Little Rouge environmentally significant area and population assessments of the nationally endangered *Scirpus verecundus*.*

Rouge Park, Forest Succession Monitoring*, Aurora, Ontario (Ecologist)

Ecologist responsible for design and implementation of terrestrial restoration monitoring protocol to track watershed-wide restoration initiatives and forest inventories.

Credit Valley Conservation, Terrestrial Monitoring Program, Credit River Watershed*, Ontario (Lead Ecologist)

Lead ecologist for collection of data according to ecological monitoring assessment network (EMAN) protocol for the watershed-wide monitoring program.

Peel Region, Credit Valley Sanitary Trunk Sewer Extension Monitoring*, Mississauga, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for monitoring vegetation community health during dewatering activities associated with test pumping activities and sewer construction.

Municipality of Clarington, Robinson and Tooley Watershed Management Plans*, Clarington, Ontario (Ecologist)

Ecologist responsible for inventory of watershed scale vegetation inventory and ELC mapping.

Niagara Region, Glenridge Naturalization Site Forest Sensitivity Study*, Ontario (Ecologist)

Monitored the effect of increased salt concentration on vegetation health associated with the former Glenridge Quarry.

Peel Region, Assessment of Woody Vegetation on Various Landfill Sites*, Ontario (Project Manager)

Project manager responsible for five-year monitoring program to assess woody vegetation response to methane leachate on seven landfills throughout the region.

Environment Canada, Big Creek National Wildlife Area Detailed Habitat Mapping*, Port Rowan, Ontario (Project Manager)

Project manager responsible for habitat mapping of the Big Creek Marsh to inform species at risk habitat mapping initiatives.

Awenda Provincial Park Life Science Inventory*, Penetanguishene, Ontario (Ecologist)

Co-author of the Life Science Inventory for the park on behalf of the Ontario Ministry of Natural Resources. Research included over 30 days of field inventory.

* denotes projects completed with other firms

Sean Spisani B.Sc., ERGC

Senior Ecologist

Slokker Wetland Monitoring Program*, Nobleton, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for the design, implementation, and reporting of a program to track wetland function within a developing landscape.

Ecosystem, Conservation and Reclamation Planning and Design

Niagara Parks Commission, Paradise Grove Restoration*, Niagara-on-the-Lake, Ontario (Ecologist)

Ecologist responsible for development of strategies to restore a 20-hectare degraded woodlot to Black Oak Savannah.

Fundacion Pro-Bosque, Habitat Rehabilitation*, Guayaquil, Ecuador (Ecologist)

Ecologist responsible for implementation of habitat rehabilitation strategies for the endangered Great Green Macaw, including the collection and interpretation of baseline data, and the development of habitat rehabilitation.

Royal Botanical Gardens Sensitive Habitat Restoration*, Hamilton, Ontario (Ecologist)

Ecologist responsible for implementation and reporting on tallgrass restoration, including the planning and communication of a prescribed burn on a 3-hectare remnant of Oak Savannah.

Yukon Construction Property Assessment*, King City, Ontario (Terrestrial Ecologist)

Terrestrial lead for monitoring of wetland and terrestrial vegetation communities pre-, during-, and post- construction of a new regional pumping station, including the development of a post-construction restoration plan.

Pretty River Academy Environmental Impact Study*, Collingwood, Ontario (Project Coordinator)

Project coordinator for the completion of an impact study to address the proposed construction of a private school complex near the Silver Creek Wetland Complex provincially significant wetland, including the design and implementation of wetland restoration plan.

Deacon Property Environmental Impact Study*, Markham, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for the production of a scoped impact study for a proposed plan of subdivision and Valley Corridor restoration plan to restore manicured portions of the Bruce Creek floodplain and valley slope to a naturalized condition and improve the ecological functions of the valley corridor.

Holy Cross Cemetery Restoration Plan*, Markham, Ontario (Ecologist)

Developed a plan to restore banks of a tributary of the Don River eroded during a large storm event in August 2005.

Kolter Property Environmental Management Plan*, Toronto, Ontario (Project Manager)

Project manager responsible for production of environmental management plan/ravine stewardship plan in support of a redevelopment plan on Bayview Avenue.

City of Brampton, Citywide Lake Assessment*, Brampton, Ontario (Ecologist)

Ecologist responsible for terrestrial input into a citywide lake atlas and the production of a management recommendations report to document lake-specific restoration plans to improve the features and functions littoral and riparian vegetation communities.

City of Hamilton, Windermere Basin Wetland Enhancement Environmental Assessment*, Hamilton, Ontario (Ecologist)

Responsible for ecological input into wetland design, including documentation of existing conditions, planting plans, water-level operating guidelines, and stakeholder correspondence.

York Region, 16th Avenue Trunk Sewer Environmental Enhancement Initiative*, Markham, Ontario (Ecologist)

Ecologist responsible for contract administration of over 20 ecological restoration projects in York Region.

York and Durham Regions, Southeast Collector Environmental Enhancements Initiative*, Markham and Pickering, Ontario (Ecologist)

Ecologist responsible for the evaluation and design of more than 50 ecological enhancement projects, including the coordination of a government and non-government of stakeholders.

Municipality of Clarington, Robinson and Tooley Natural Heritage System*, Clarington, Ontario (Ecologist)

Ecologist responsible for landscape analysis and modeling to identify a targeted natural heritage system, within the context of future land use objectives.

Environmental Assessments

City of Toronto, Dragonboat Feasibility Study*, Toronto, Ontario (Ecologist)

Completed background review and discussions with federal, provincial, and municipal agencies to determine the viability from a fisheries perspective for the design and construction of a dragonboat racing course on the Toronto waterfront.

* denotes projects completed with other firms

Sean Spisani B.Sc., ERGC

Senior Ecologist

Halton Region, Highway 6 Widening - Highway 403 to Highway 5*, Flamborough, Ontario (Terrestrial Ecologist)

Provided vegetation and wildlife habitat inventory and assessment for the preliminary design study.

Rainbow Creek Sanitary Trunk Sewer Environmental Assessment*, York Region, Ontario (Terrestrial Ecologist)

Terrestrial lead for environmental input for Schedule C requirements of the MEA class EA process.

Town of Oakville Cornwall Road Improvements Class Environmental Assessment*, Oakville, Ontario (Terrestrial Ecologist)

Responsible for documentation of terrestrial features in the study area, including two environmentally sensitive areas, and preparation of an environmental study report and tree audit and management report.

York Region East Holland Trunk Sewer Class Environmental Assessment*, Aurora, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for inventory of the provincially significant East Aurora wetland complex, including an impact assessment for the proposed dewatering and construction of the East Holland trunk sewer.

New North Oakville Transportation Corridor Class Environmental Assessment*, Halton Region, Ontario (Terrestrial Ecologist)

Project manager for natural environment input to the Schedule C class EA, reporting as a subconsultant to the prime EA management firm.

Southeast Collector Trunk Sewer Environmental Assessment*, York and Durham Regions, Ontario (Terrestrial Ecologist)

Responsible for ELC and flora inventories for the purposes of generating a more detailed description and understanding of the environment, including the screening, analysis, and evaluation of alternatives and impact assessment.

Ministry of Transportation Ontario, New Highway Transportation Corridor Environmental Assessment*, Kitchener to Stratford, Ontario (Terrestrial Ecologist)

Ecologist responsible for coordination of natural heritage components of the individual EA.

Ministry of Transportation Ontario, New Highway Transportation Corridor Environmental Assessment*, Brantford to Cambridge, Ontario (Terrestrial Ecologist)

Project manager responsible for natural heritage components of the transportation class EA, reporting as a subconsultant to the prime EA management firm.

SkyPower Ltd., Renewable Energy Act Records Review*, Southern Ontario (Terrestrial Ecologist)

Ecologist responsible for desktop and field review of environmental constraints under the REA for development of solar power infrastructure at various sites.

International Power, Renewable Energy Act Records Review*, Southern Ontario (Terrestrial Ecologist)

Ecologist responsible for desktop and field review of environmental constraints under the REA for development of wind power infrastructure at various sites.

NextERA, Renewable Energy Act Environmental Assessment*, Huron and Lambton Counties, Ontario (Terrestrial Ecologist)

Ecologist responsible for terrestrial components of environmental assessment study under the REA for development of wind power infrastructure.

Environmental Impact Assessments

Grovetree Road Natural Heritage Impact Study*, Toronto, Ontario (Terrestrial Ecologist)

Provided terrestrial ecology input into an environmental impact study for the proposed development of seven single detached residential dwellings and a road allowance in support of an Ontario Municipal Board (OMB) hearing on behalf of the city.

Jackson Property Environmental Impact Study*, Dunnville, Ontario (Project Manager)

Project manager responsible for the completion of an environmental impact study for a proposed single-family development along the Grand River Marsh provincially significant wetland complex.

Kinsale Property Environmental Impact Study*, Pickering, Ontario (Project Manager)

Project manager responsible for the completion of an impact study to address the proposed development of a 12-hole golf course.

* denotes projects completed with other firms

Sean Spisani B.Sc., ERGC

Senior Ecologist

Various Lake Eugenia Environmental Impact Studies*, Flesherton, Ontario (Project Coordinator)

Project coordinator of four separate lot severance and impact studies to address proposed development of single-family residences at various lake front properties along Lake Eugenia.

Lefroy Harbour Natural Area Inventory*, Innisfil, Ontario (Project Manager)

Project manager responsible for ELC, wetland delineation, and flora inventory of subject property and development of existing conditions report including a constraints analysis.

Old Mill Road Natural Heritage Impact Study*, Toronto, Ontario (Project Manager)

Project manager of an environmental impact study for the proposed development located at property along a ravine feature of the Humber River.

Marcy's Woods Environmental Impact Study*, Fort Erie, Ontario (Terrestrial Ecologist)

Terrestrial input to an environmental impact study (EIS) for the proposed development of a single residence on the subject property that includes Marcy's Woods, Point Abino provincially significant wetland, and the Point Abino environmentally sensitive area.

Huttonville Cemetery Environmental Impact Study, Credit River Watershed*, Ontario (Project Manager)

Project coordinator for the production of an environmental implementation report for a proposed cemetery in the headwaters of Huttonville Creek on behalf of the Catholic Cemeteries Archdiocese.

Sandringham Drive Natural Heritage Impact Study*, Toronto, Ontario (Project Manager)

Project manager of an environmental impact study for the proposed development located at the above noted property along a ravine feature of the Don River Valley.

Edgewood Environmental Impact Study*, Orangeville, Ontario (Terrestrial Ecologist)

Terrestrial ecologist responsible for ELC and wetland delineation in support of a plan of subdivision.

Expert Testimony

Ontario Municipal Board, 56 Grovetree Road Development within Ravine* (Expert Witness)

Represented City of Toronto, including preparation of Environmental Impact Study.

Ontario Municipal Board, Bloorview Children's Hospital Development Adjacent to Ravine* (Expert Witness)

Represented private landowner, including preparation of Environmental Impact Study.

* denotes projects completed with other firms

Sean Spisani B.Sc., ERGC

Senior Ecologist

PUBLICATIONS

Leadbeater, D. and S. Spisani. Twilight to 2000: The Evolution of Ontario's Flora. *Presentation: Society for Ecological Restoration (Ontario Chapter) Symposium and Annual General Meeting, 2011.*

Spisani, S. and J. Cole. Robinson Creek and Tooley Creek Watershed Management Plan. *Presentation: Municipality of Clarington Open House, 2011.*

Spisani, S. and B. Valve. Natural Heritage Systems: A Systems Approach to Restoration Planning. *Presentation: Niagara College, 2011.*

Spisani, S. Southeast Collector (IEA) Environmental Management Plan: Wetland Hydrology. *Presentation: Toronto and Region Conservation Authority, 2010.*

Spisani, S. Awenda Provincial Park Life Science Inventory, Penetanguishene, Ontario. *Presentation: Field Botanists of Ontario, 2010.*

Spisani, S. Humber River Valley Restoration Plan at The Old Mill. *Presentation: Community Meeting, Toronto, Ontario, 2009.*

Spisani, S. and J. Paterson. Talus Slope Disturbance and Flora Composition: Silver Creek Area of Natural and Scientific Interest. *Presentation: Field Botanists of Ontario, 2008.*

Leadbeater, D., K. Ursic and S. Spisani. Ecological Land Classification Certification Course. *Presentation: Ontario Ministry of Natural Resources, 2008.*

Spisani, S. Southeast Collector (IEA) Ecological Enhancement Workshop: Designing a Natural Heritage Systems Approach. *Presentation: Toronto and Region Conservation Authority, 2008.*

James completed his Bachelor of Environmental Studies at the University of Waterloo, with a focus on applied ecology and environmental policy. He has successfully completed numerous certificate workshops, such as wetland evaluation and Ecological Land Classification (ELC) and is a designated health assessor of Endangered butternut trees, issued by the Ontario Ministry of Natural Resources.

James has acquired a variety of terrestrial and aquatic field skills, including winter wildlife surveys, herpetofauna identification (egg mass / call / specimen), bat monitoring, raptor surveys, spawning and stream flow surveys, and has assisted with backpack and boat electrofishing. James specializes in vegetation assessments, particularly plant identification, ELC, wetland delineation, and vegetation monitoring. Additionally, he has gained experience writing natural heritage components of Environmental Impact Studies, Environmental Assessments, and Natural Environment Technical Reports.

James provides expertise in a variety of sectors, including aggregate extraction, energy, urban lands development, and highway infrastructure. He has led or assisted in project tasks pertaining to forest restoration, ecological monitoring, and field research of rare species, among others.

EDUCATION

Certificate, Ontario Wetland Evaluation System, North Bay, Ontario, 2009

Certificate, Ecological Monitoring and Assessment Network, Turkey Point, Ontario, 2008

Certificate, Ecological Land Classification for Southern Ontario, Kingston, Ontario, 2007

Certificate, Butternut Health Assessment, Burlington, Ontario, 2009

B.E.S., University of Waterloo / Environmental Studies / Geography, Waterloo, Ontario, 2006

Certificate, Humboldt Field Research Institute / Applied Field Identification of Grasses and Sedges, Steuben, Maine, 2010

MEMBERSHIPS

Member, Botanical Society of America

Member, Field Botanists of Ontario

PROJECT EXPERIENCE

Aggregate Services

Proposed Duntroon Quarry Expansion, Duntroon, Ontario (Terrestrial Ecologist)

Designed and conducted a multi-year research program to assess the habitat characteristics of American hart's-tongue fern – a federal and provincial Special Concern species. Research examined various features of soil, ambient air, tree canopy cover, associate species, and snow depth. The purpose of this research was to compare and contrast known habitat with potential transplant locations. A preliminary transplant of over 500 ferns was conducted where post-transplant monitoring studies are ongoing. Unrelated surveys conducted onsite include butternut health assessments and forest plot assessments using protocols outlined in the Ecological Monitoring and Assessment Network (EMAN).

Proposed Flamborough Quarry, Hamilton, Ontario (Ecologist)

Aquatic surveys included stream flow discharge and uploading of data loggers. Terrestrial surveys included winter wildlife surveys and health assessments of over 100 butternut trees using 2009 OMNR guidelines.

Acton Quarry Environmental Review, Acton, Ontario (Terrestrial Ecologist)

Assist with extensive amphibian surveys to identify significant wildlife habitat, species composition, and presence or absence of pure Jefferson salamander specimens. Surveys included call-counts, egg mass surveys, pit and aquatic trapping, and tail clippings of potential Jefferson species (in conjunction with the OMNR). Assisted with surveys in 2007 and thereafter, which remain ongoing.

James Leslie B.E.S.

Terrestrial Ecologist

Environmental Mitigation and Monitoring

Various Urban Lands Projects, Waterloo and Oakville, Ontario (Terrestrial Ecologist)

Monitor vegetation communities using Ecological Monitoring and Assessment Network (EMAN) and local Conservation Authority guidelines. Field surveys consisted of identifying vascular plants growing within pre-determined plots and determining their respective cover; photographic records were compiled each year for temporal comparison. Data analysis included calculation of frequency, dominance, and importance value.

Georgia Pacific PCB Remediation, Thorold, Ontario (Terrestrial Ecologist)

ELC; mapping and evaluation of species at risk (Butternut); develop vegetation monitoring plots to determine density, frequency, dominance, and importance value; data synthesis, and technical memorandum.

Oil & Gas

Union Gas Lobo Compressor Station Expansion, Strathroy, Ontario (Terrestrial Ecologist)

Assist with Project Management of a proposed compressor station expansion, including proposal and budget; conduct/delegate appropriate field surveys; compile background data through review of Official Plan, Significant Wildlife Habitat Technical Guide, Ontario Provincial Policy Statement, etc.; agency consultation. Deliverables consisted of an Environmental Impact Study report.

Power Transmission & Distribution

Bruce to Milton Transmission Project, Milton, Ontario (Terrestrial Ecologist)

180 km linear study area of proposed hydro transmission lines from Bruce Nuclear to Milton, Ontario. Assisted with ELC, butternut health assessments, flora inventories, and winter wildlife surveys.

Renewable Energy

Terrestrial Surveys for Wind and Solar Projects, Various Municipalities, Ontario (Terrestrial Ecologist)

Conducted numerous site assessments based on the Renewable Energy Approvals (REA) process for proposed layouts near Belwood, Port Dover, Sydenham, Whittington, St. Columban, and Prince Edward County. Field work included ELC, wetland delineations and evaluations using the Ontario Wetland Evaluation System (OWES), floral and faunal species inventories, and identification of significant wildlife habitat. Study areas included proposed turbine locations, access roads, and transmission corridors. Data analysis and summaries were provided in the respective Natural Heritage Assessment Reports.

Island Falls Energy Project, Smooth Rock Falls, Ontario (Terrestrial Ecologist)

Field work component of a proposed hydroelectric dam in Northern Ontario. Assist with ELC, botanical inventory, and soil surveys in remote areas.

Avian Surveys for Wind and Solar Projects, Various Municipalities, Ontario (Terrestrial Ecologist)

Avian monitoring was conducted at Kingsbridge, Melancthon, Ostrander, Parkhill, and Plateau wind energy locations. Field work consisted of installation, troubleshooting, and data retrieval of Anabat SD1 monitoring devices. Received training for data interpretation and isolation of bat calls based on digital graph patterns. Post-construction surveys of avian mortality under active wind turbines were completed for the Kingsbridge and Melancthon locations.

Terrestrial Assessments

Master Service Plan, Cayuga and Jarvis, Ontario (Terrestrial Ecologist)

Develop ELC mapping for the towns of Jarvis and Cayuga. The purpose was to update natural heritage data for the respective Master Service Plan revisions. Data analysis included ecological constraints mapping and authoring a technical memorandum.

Transportation Planning

Highway 3 Rehabilitation, Detail Design, Renton to Jarvis, Ontario (Terrestrial Ecologist)

This work was conducted to identify natural features where road widening and culvert replacement was proposed. Performed ELC and compiled records of local flora and fauna. The study area included Endangered butternut trees and a variety of forested, wetland, and cultural communities. A Terrestrial Ecosystems Report was submitted to characterize existing conditions, and to address predicted impacts and required mitigation to on-site vegetation communities, terrestrial wildlife and their habitat. Fieldwork and reporting conducted in accordance with MTO regulations and guidelines.

Highway 69, Preliminary Design, Patrol Yard Selection, Parry Sound to Sudbury, Various Sites, Ontario (Terrestrial Ecologist)

This study was undertaken in order to assess a number of alternative locations for patrol yards within the study area, and to identify preferred alternatives at three locations. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. Natural heritage features consisted of numerous wetland communities, large, contiguous forests, significant wildlife habitat and observations of a Threatened species. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

* denotes projects completed with other firms

James Leslie B.E.S.

Terrestrial Ecologist

Highway 17, Preliminary Design, Sudbury Southwest Bypass, Sudbury, Ontario (Terrestrial Ecologist)

The purpose of this study was to identify a four-lane highway plan for a section of Highway 17 through the Sudbury area, with access restricted to interchange locations only. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included a variety of upland and wetland habitats, including Areas of Natural and Scientific Interest. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Highway 11, Preliminary Design Study, Access Review from Powassan to Callander, Ontario (Terrestrial Ecologist)

This project was part of a study to upgrade the highway to 'full freeway standard', which included eliminating at-grade intersections and entrances and providing access to highway only at interchanges. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included a variety of upland and wetland habitats. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Highway 401 and Highway 8 Improvements, Preliminary Design, Kitchener, Ontario (Terrestrial Ecologist)

This study was undertaken to assess proposed interchange improvements in the cities of Kitchener and Cambridge along Highway 401 and Highway 8. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included rare flora, Provincially and Locally Significant Wetland, and an Area of Natural and Scientific Interest (ANSI). A Terrestrial Ecosystems Report was submitted to characterize existing conditions, and to address predicted impacts and required mitigation to on-site vegetation communities, terrestrial wildlife and their habitats. The preliminary impact assessment included constraint ratings of each ELC unit and the calculation of the areas potentially affected by the Preferred Plan. Fieldwork and reporting conducted in accordance with MTO regulations and guidelines.

Highway 11, Preliminary Design Study, Improvements North of Highway 144, Huntsville, Ontario (Terrestrial Ecologist)

The purpose of this study was to undertake the Planning, Preliminary Design and Environmental Assessment for improvements to Highway 11 from 1 km north of Highway 141, northerly for 5.5 km. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included a rare vegetation community not previously documented and a variety of upland and wetland habitat. A Terrestrial Ecosystems Report was submitted to characterize existing conditions, and to address predicted impacts and required mitigation to on-site vegetation communities, terrestrial wildlife and their habitats. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Highway 11, Preliminary Design Study, South Entrance to Powassan, Powassan, Ontario (Terrestrial Ecologist)

This study was carried out to update a Preliminary Design Report that recommended interchange locations for this stretch of Highway 11. Performed ELC, compiled records of local flora and fauna, and identified significant wildlife habitat. The study area included significant features, a variety of habitats, and cultural communities. Fieldwork and reporting were conducted in accordance with MTO regulations and guidelines.

Municipal Road Improvement Projects, Various Sites, Ontario (Terrestrial Ecologist)

Conducted ELC and wetland delineations using OMNR protocols. Identified wildlife habitat and determined potential impacts and mitigation options.
- City of London, Southdale Road Widening
- City of London, Hamilton Road Improvements

Victoria Road North Class EA, Guelph, Ontario (Terrestrial Ecologist)

Assist with Task Management for a proposed road widening, including background data review of applicable legislation and guidelines; conduct or delegate appropriate field surveys; agency consultation; prepare a draft Natural Environment Technical Report and constraints analysis for a proposed parking area.

Jon joined Stantec in 2007 as an avian ecologist. He obtained his Bachelor of Science Degree (Zoology) from the University of Guelph in 2007 and has since been conducting bird survey programs in Ontario and Alberta. From Ottawa originally, he is a keen birder who enjoys traveling throughout southern Ontario in search of new species to add to his life list. At Stantec, Jon is responsible for carrying out seasonal bird and wildlife field surveys throughout Ontario, including pre and post construction monitoring at wind farms across the province.

EDUCATION

Bachelor of Science, Honors, University of Guelph,
Zoology, Guelph, Ontario, 2007

Bachelor of Education, Pending, Queen's University,
Intermediate-Senior Divisions (Biology/Chemistry)
Consecutive Program, Kingston, Ontario, 2008

University of Alberta, Department of Renewable
Resources, Alberta* (Field Assistant)

Conducted breeding songbird point counts in northern Alberta and studied Swainson's Thrush behavior. The tasks included navigation of rough and remote terrain, utilizing Global Positioning Systems (GPS), compasses and maps.

PROJECT EXPERIENCE

Environmental Sciences

Wildlife Education and Environmental Program,
Department of Zoology, Ontario* (University Peer
Helper)

Attended laboratory sessions for fourth year Mammology course, guided students through anatomical and taxonomically related questions, and led pre-lab talk about fruit eating mammals, including bats.

Wildlife Education and Environmental Program,
Ontario* (Aviary Supervisor)

Oversaw volunteer operations and animal care, trained new bird handlers and education of team members.

Bird Counts, Ontario* (Environmental Scientist)

Performed bird counts in the Region of Ottawa-Gatineau, and the Region of Peel-Halton.

Haveman Brothers Forestry Services, Ontario*
(Tree-Planter)

Navigated rough and remote areas to re-plant logged areas with spruce and pine saplings.

* denotes projects completed with other firms

Melissa Straus completed her undergraduate degree with honours in Environmental Sciences at the University of Guelph and her Masters degree in Biology at Trent University. Her M.Sc. focused on the effects of silvicultural practices on reproductive success of cavity-nesting birds in southwestern Ontario.

Melissa is a Terrestrial Ecologist with experience in various sectors, including aggregate services, electrical power distribution, oil and gas, renewable energy, residential development and transportation planning. Her experience involves implementation of the *Migratory Birds Convention Act* and *Species at Risk Act*. Melissa is a skilled birder and has field experience conducting avian, reptile, amphibian, Ecological Land Classification (ELC), and botany surveys, as well as conducting post-construction monitoring at wind farms.

EDUCATION

B.Sc. in Environmental Sciences, Co-op Program,
University of Guelph, Guelph, Ontario, 2003

M.Sc. in Biology, Trent University, Peterborough,
Ontario, 2009

Certified in the Ecological Land Classification System for
Southern Ontario, Ontario Ministry of Natural Resources,
Kemptville, Ontario, 2010

PROJECT EXPERIENCE

Aggregate Services

Proposed Melancthon Quarry, The Highland Companies,
Melancthon Township, Ontario (Terrestrial Ecologist)
Conducted habitat assessment and species at risk surveys.

Proposed Acton Quarry Extension, Dufferin Aggregates,
Acton, Ontario (Terrestrial Ecologist)
*Conducted evening amphibian surveys in accord with MNR
protocols.*

Electrical Power Distribution

Hydro One Bruce X Milton Transmission Reinforcement,
Bruce County, Ontario (Ecologist)
*Located and protected active bird nests during land clearing to
ensure client compliance with the Migratory Birds Convention
Act.*

Multi-Unit / Family Residential

Natural Heritage Evaluations for Various Residential
Development Projects, Southern Ontario (Terrestrial
Ecologist)
*Terrestrial surveys included breeding bird, species at risk,
habitat assessment, and ELC for various residential development
projects.*

Natural Sciences & Heritage Resources

Conservation Planning*, Mississauga, Ontario
(Conservation Planning Assistant)

*Created conservation plans for private landowners in the Credit
Valley Watershed and inventoried vegetation using Ecological
Land Classification for Southern Ontario protocol.*

Forestry Impacts on Regeneration Rates and Bird
Communities Research*, East Lansing, Michigan (Field
Assistant)

*Performed avian point counts in the upper peninsula of
Michigan, estimated White-tailed Deer densities, and completed
specialized vegetation surveys to assess forest regeneration
rates.*

Forest Bird Research*, London, Ontario (Project
Biologist)

*Prepared a manuscript on the nesting success of cavity-nesting
birds in woodlots subjected to silviculture, conducted a meta-
analysis of edge effects on nesting success of songbirds, and
created fact sheets for a landowner stewardship guide.
Conducted salamander mark and recapture surveys, nest
searching and monitoring, completed numerous vegetation
surveys, located and reported avian and vegetative species at
risk, collected and identified invertebrates to Order.*

Oil and Gas Pipelines

Enbridge Project Nexus Interconnect Pipeline,
Mooretown, Ontario (Terrestrial Ecologist)

*Species at risk surveys for various vegetation species and
coverboard surveys for Butler's Gartersnake.*

Renewable Energy

Melancthon Ecopower Centre, Melancthon Township,
Ontario (Terrestrial Ecologist)

*Participated in environmental monitoring of post-construction
wind turbine impacts on bird and bat mortalities.*

* denotes projects completed with other firms

Melissa A. Straus M.Sc.

Terrestrial Ecologist

White Pines, Picton, Ontario (Terrestrial Ecologist)

Conducted ELC, amphibian, and crepuscular bird auditory surveys.

Grand Renewable Energy Park, Cayuga, Ontario (Terrestrial Ecologist / Technical Reporting)

Conducted ELC and wildlife habitat assessment; coordinated and conducted winter raptor and Short-eared Owl surveys; assisted with NHA, EIS, and APRD reporting for proposed wind and solar project.

Wolfe Island Wind Plant, Wolfe Island, Ontario (Terrestrial Ecologist)

Conducted winter raptor and raptor disturbance surveys as well as assisting with permitting reports and post-construction mortality monitoring trials.

Kruger Energy Port Alma, Port Alma, Ontario (Terrestrial Ecologist / Coordinator)

Coordinated on site subcontractors conducting mortality monitoring and scavenger trials, some permit reporting.

Transportation Planning

MTO Highway 40, Chatham, Ontario (Terrestrial Ecologist)

Conducted reptile and species at risk surveys and habitat assessment.

MTO Highway 24, Cambridge, Ontario (Terrestrial Ecologist)

Conducted reptile and avian species at risk surveys and habitat assessment.

Melissa A. Straus M.Sc.

Terrestrial Ecologist

PUBLICATIONS

Straus, M.A., K. Bavrlic, E. Nol, D.M. Burke, K.A. Elliott. Reproductive success of cavity-nesting birds in partially harvested woodlots. *Canadian Journal of Forest Research*, 41: 1004-1017, 2011.

Burke, D., K. Elliott, K. Falk, and T. Pirano. (M. Straus, contributing author). A land manager's guide to conserving habitat for forest birds in southern Ontario. *Ministry of Natural Resources and Trent University*, 2011.

Straus, M. Reproductive success of cavity-nesting birds in partially harvested woodlots in southwestern Ontario. *M.Sc. Thesis, Department of Biology, Trent University, Ontario, Canada*, 2009.

Straus, M. The effects of partial harvesting on cavity-nesting bird communities in southwestern Ontario. *Society of Canadian Ornithologists (SCO-SOC) Conference Poster*, 2007.

Peterborough Field Naturalists Guest Speaker. *Impacts of partial harvesting on cavity-nesting birds in southwestern Ontario*, 2006.

Straus, M. Carolinian forests of southern Ontario: Species at risk and cavity-nesters. *Guelph Field Naturalists Guided Hike*, 2006.