

PATRICK LILLEY, *M.Sc., R.P.Bio.*

Raincoast Applied Ecology
#102 – 1661 West 2nd Avenue
Vancouver, B.C. Canada
V6J 1H3

Phone: 604-742-9890
Fax: 604-742-1339
Email: patrick@raincoastappliedecology.ca
www.raincoastappliedecology.ca



■ EDUCATION

M.Sc., Plant Ecology/Conservation Biology (2008). Department of Botany & Biodiversity Research Centre, University of British Columbia, Vancouver, BC, Canada. Thesis entitled: *“Determinants of native and exotic plant species diversity and composition in remnant oak savannas on southeastern Vancouver Island”* (Advisor: Dr. Mark Vellend).

B.Sc. (Honours), Environmental Sciences (2000). Faculty of Science, University of British Columbia, Vancouver, BC, Canada. Honours thesis entitled: *“Investigations of Options for Restoration of Camosun Bog, Pacific Spirit Regional Park”*.

■ PROFESSIONAL EXPERIENCE

Raincoast Applied Ecology (July 2006–present), *Biologist*

Inter-disciplinary consulting company focusing on urban watershed management, environmental monitoring, species at risk biology, plant ecology and invasive plant management, urban environmental design, and restoration planning.

Trinity Western University (May 2004–Aug 2005), *Field Resources Coordinator*

Management and assessment of two field research sites; campus planning advising; research project oversight and support; lab instruction; thesis student supervision.

A Rocha Canada (Jan 2002–Apr 2004), *Coordinator*

Project management, fundraising, and administration for growing national environmental stewardship organization.

TLC The Land Conservancy of British Columbia (Sep 2001–Nov 2001), *Outreach Officer*

Communications and community liaison for land acquisition projects.

Institute of Urban Ecology, Douglas College (Sep 2000–Apr 2001), *Environmental Programs Coordinator*

Delivery of habitat restoration and environmental education programs; volunteer management.

■ PROFESSIONAL MEMBERSHIPS

College of Applied Biology of British Columbia (No. 1969)
Association of Professional Biology of British Columbia
Society for Conservation Biology
Xerces Society for Invertebrate Conservation
Entomological Society of British Columbia
Native Plant Society of British Columbia

■ URBAN STREAMS & WATERSHEDS

Maple Creek Integrated Watershed Management Plan (IWMP). Comprehensive inventory, analysis, and planning for a highly urbanized tributary of the Coquitlam River (for City of Port Coquitlam & City of Coquitlam with KWL Associates, HB Lanarc, and Piteau Associates, 2011–present).

Shaw Creek Integrated Stormwater Management Plan (ISMP). Comprehensive inventory, analysis, and planning for a mixed urban-agricultural watershed on Boundary Bay (for Corporation of Delta and City of Surrey with KWL Associates, 2010–present).

Clayburn Creek Integrated Stormwater Management Plan (ISMP) Comprehensive inventory, analysis, and planning for the Clayburn Creek watershed on lower Sumas Mountain (for City of Abbotsford with KWL Associates, HB Lanarc, and Piteau Associates, 2009–present).

Little Campbell River Integrated Stormwater Management Plan (ISMP) Scoping Study. Overview assessment of stormwater-related management issues for urban-agricultural watershed in south Surrey and Langley (for City of Surrey and Township of Langley with KWL Associates, 2008–2011).

Analysis of Streamflow, Water Quality, and Benthic Community Changes in North Creek (1999–2009). Comprehensive analysis of trends in different measures of stream health in the developing East Clayton neighbourhood in Surrey (for City of Surrey, 2009–2010).

Whistler Integrated Stormwater Management Study. Detailed inventory, assessment, and planning for watersheds in the Whistler Valley (for Resort Municipality of Whistler with KWL Associates, 2008–2009).

■ ENVIRONMENTAL MONITORING

City of Surrey Benthic Monitoring Program. Collection, analysis, and management of long-term benthic invertebrate sampling program to monitor stream health in the City of Surrey (2008–present).

Metro Vancouver Benthic Monitoring Program. Collection, analysis, and management of long-term sampling program to monitor stream health in 16 watersheds in Metro Vancouver (2007–2012).

City of North Vancouver Environmental Monitoring Program. Collection and analysis of benthic invertebrates, fecal coliform sampling, water and sediment sampling for metals and nutrients, and general water quality sampling in four streams in the City of North Vancouver (2006–2010).

University of British Columbia Stormwater Monitoring Program. Sampling, data analysis, and management for an intensive water quality monitoring program from August 2001 to 2009 for UBC Utilities. Includes continuous water quality monitoring, storm event sampling, and fecal coliform sampling (2003–2009).

■ BIODIVERSITY & SPECIES AT RISK

British Columbia Butterfly Atlas. Planning and implementation of a volunteer-driven butterfly survey initiative for British Columbia (2011–present).

Species at Risk in Garry Oak Ecosystems Manual Factsheets. Development of new and revised species accounts and occurrence maps for three butterfly and seven plant species at risk (for Garry Oak Ecosystems Recovery Team, 2011).

Coastal Sand Ecosystems Status Report and Action Plan. Preparation of multi-species recovery planning documents for species at risk in sand dunes, sand beaches, and spits in coastal BC (for Parks Canada by N. Page, I. Walker, and P. Lilley. 2009–11).

Surveys for Butterfly Species at Risk in Coastal BC. Planning and implementation of comprehensive surveys for Taylor's Checkerspot, Dun Skipper, and other rare species on southeastern Vancouver Island and the Gulf Islands (for BC Ministry of Environment, 2007–2010).

Recovery Action Planning for Taylor’s Checkerspot, Island Marble, and Island Blue butterflies. Development of draft recovery action plans for three butterfly species at risk in the Georgia Basin (for Garry Oak Ecosystems Recovery Team, 2009–10).

Reproduction and life history of the Oregon Forestsnail, *Allogona townsendiana*, (Mollusca, Gastropoda, Pulmonata) in a British Columbia population. Published in Invertebrate Biology 128 (By K. M. M. Steensma, P. L. Lilley, and H. M. Zandberg, 2009).

Using subsets of species in biodiversity surveys. Published in Journal of Applied Ecology 45 (by M. Vellend, P. L. Lilley and B. M. Starzomski, 2008).

Assessment of critical habitat and predation effects for the Oregon forestsnail, *Allogona townsendiana* (Years 1 and 2). Interim and final reports submitted to the Endangered Species Recovery Fund (by K. M. M. Steensma and P. L. Lilley, 2005–2006).

■ PLANT ECOLOGY & INVASIVE PLANTS

Integrated Pest Management Plans for Wild Chervil (*Anthriscus sylvestris*) and Yellow Archangel (*Lamium galeobdolon*) in Campbell Valley Regional Park. Inventory and planning for management of two invasive plant species in a large regional park in south Langley (for Metro Vancouver Regional Parks, 2009).

Invasive Plant Mapping in Tynehead Regional Park. Comprehensive inventory and mapping of invasive plant species on former house sites in a large regional park in north Surrey (for Metro Vancouver Regional Parks, 2009).

Giant Hogweed Management Strategy for the French Creek Watershed. Strategy to guide management of giant hogweed (*Heracleum mantegazzianum*) in a small watershed near Parksville, BC. (for BC Ministry of Forests & Range, 2009).

Negative native-exotic diversity relationship in oak savannas explained by human influence and climate. Published in Oikos 118 (by P. L. Lilley and M. Vellend, 2009).

City of Coquitlam Invasive Plant Management Strategy. Policy framework to guide invasive plant management in City of Coquitlam (2008).

Determinants of native and exotic plant species diversity and composition in remnant oak savannas on southeastern Vancouver Island. M.Sc. thesis, Department of Botany, University of British Columbia, Vancouver, BC (by P. L. Lilley, 2007).

■ ENVIRONMENTAL PLANNING

City of Richmond Environmentally Sensitive Areas Study. Updated mapping and development of strategies to protect and manage a network of natural and semi-natural areas across the City (with HB Lanarc, 2010–present).

City of Surrey Environmental Management Study. Mapping and spatial analysis of environmental features, development of a green infrastructure network, and recommendations for management in the City of Surrey (with HB Lanarc, 2008–2010).

Albion Flats Environmental Baseline Report. Field inventory, mapping, and assessment of environmental features and functions for a 125-hectare land parcel in Maple Ridge to guide land use decision-making for the area (for District of Maple Ridge with HB Lanarc, 2010).

Overview Biophysical Inventory and Environmental Assessment for Manitoba Pioneer Camp, Shoal Lake, Ontario. Included vegetation mapping, ecosystem classification, and environmental management recommendations (by M. Kostamo and P. L. Lilley, 2003).

■ ENVIRONMENTAL DESIGN

Sasamat Lake Shoreline and Slope Rehabilitation Project. Inventory and assessment of degraded shoreline sites, prioritization of sites for restoration, and restoration prescriptions (for Metro Vancouver Regional Parks, 2008).

Greening the Gravel for Fish & Wildlife. Video on habitat restoration in gravel pits in the City of Coquitlam (by P. L. Lilley and J. Scott, Centre for Environmental Studies and Urban Ecology, Douglas College, 2001).

Investigations of Options for Restoration of Camosun Bog, Pacific Spirit Regional Park. B.Sc. honours thesis, Environmental Sciences Program, Faculty of Science, University of British Columbia, Vancouver, BC (for Camosun Bog Restoration Group and Greater Vancouver Regional District by N. Baker, P. L. Lilley, T. Sasaki and H. Williamson, 2000).

■ VOLUNTEER ACTIVITIES

BC Invertebrates at Risk Recovery Team (2008–present). Member of committee that assists in developing and implementing recovery plans for rare invertebrates in British Columbia, including Dun Skipper and Oregon Forestsnail.

Garry Oak Ecosystems Recovery Team Invertebrates at Risk Recovery Implementation Group (2008–present). Member of committee that assists in developing and implementing recovery plans for rare invertebrates in Garry oak ecosystems. Role emphasizes the recovery of rare butterflies and moths.

Greater Vancouver Invasive Plant Council (2008–present). Co-chair of Science & Research Committee which provides technical advice on initiatives and projects of the council, with emphasis on mapping, inventory, and assessment as well as management and control options.

A Rocha Canada Conservation Science Advisory Committee (2005–present). Member of committee that provides oversight and advice on the development and implementation of A Rocha Canada's conservation science projects and initiatives. Role emphasizes assistance with watershed and species at risk habitat stewardship projects.

North Shore Streamkeepers (2002–2004). Active member involved in the stewardship and restoration of streams as well as public education initiatives on Vancouver's North Shore.

■ SCHOLARSHIPS AND AWARDS

2005–07	NSERC Postgraduate Scholarship (CGS M)
2005	UBC Graduate Entrance Scholarship
1999	Volkoff Scholarship in Science
1999	Charles and Jane Banks Scholarship
1998	Charles and Jane Banks Scholarship
1997	C. A. Rowles Alumni Prize
1996–2000	UBC Outstanding Student Initiative Scholarship
1996	SFU Summit Entrance Scholarship (declined)
1996	W. H. MacInnes Entrance Scholarship in Mathematics
1996	Premier's Excellence Award, Capilano College Region
1996	BC Government Scholarship