

***The Big Picture After 15 Years:  
Revisoning the Vision***

**Conference Schedule**

<b>Registration &amp; Welcome</b>	
<b>8:30 – 9:00</b>	<b>Registration</b> (refreshments)
<b>9:00 – 9:10</b>	<b>Welcome &amp; Introduction</b> Don Pearson, Chair, Carolinian Canada Michelle Kanter, Executive Director, Carolinian Canada
<b>9:10 – 11:00 Opening Plenary</b>	
<b>9:10 – 9:30</b>	<b>Carolinian Canada’s Big Picture Vision After 15 Years</b> Jarmo Jalava, Director of Ecosystem Recovery, Carolinian Canada
<p>Jarmo will provide a brief overview of the history of “Big Picture” natural heritage planning and implementation in southern Ontario, with an emphasis on the Carolinian life zone. Past and ongoing efforts include the establishment of parks and protected areas systems, land trusts, watershed plans, greenbelts and greenways, stewardship programs, tree planting and habitat restoration programs, evolving policies and incentives for land and water conservation (ESAs, ANSIs, PSWs, etc.), species at risk legislation and recovery planning, citizen science and monitoring initiatives, academic research, outreach, and education. But the perennial questions remain. Are we gaining or losing ground?</p>	
<b>9:30 – 10:00</b>	<b>“Why don't ecologists get more respect?”</b> Dr. Dawn Bazely, Professor of Biology, York University
<p>Scientists, including ecologists, are increasingly frustrated that their research is not heard and acted upon by policy makers, politicians and members of the public. I will discuss the communication challenges that exist at the science-policy-politics interface, and explore some solutions. The Human Security framework of Political Science may be useful for scientists for more effective mobilization of science research into policy. In this space, ecology can contribute to the interdisciplinary and collaborative sustainability research table in many ways. For example, I developed the concept of knowledge as a nutrient, for framing the field of adaptation and resilience in the face of climate change. The knowledge-flow cycle concept is rooted in ecosystem studies and can help to clarify the relationship between knowledge, eco-justice and human adaptive capacity. Illustrated by an ecosystem ecology approach, this framework draws analogies between the knowledge that circulates among communities at the local and global levels and energy and ecosystem nutrient cycles. By recognizing and modifying knowledge flows, through the Open Access movement of our university’s Institutional Repository, I propose that we can increase the adaptive capacity of disenfranchised peoples faced with climate change, and increase the voice of science and ecology at the policy and public tables.</p>	

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<b>10:00 – 10:45</b>	<b>Aliens: The Big Picture</b> <b>Dr. Brendon Larson, Associate Professor,</b> <b>Environment and Resource Studies, University of Waterloo</b>
<p>As conservationists, we tend to focus on the dramatic effects of alien and invasive species at relatively small scales, in front of our eyes. In this presentation, I'll zoom out to contextualize their place in much larger and more encompassing forms of global change, including social trends. If the Carolinian Canada Coalition seeks to adequately revise its vision for Carolinian ecosystems in the 21st century, I'll suggest that it needs to both hold true to past values while wrestling with how they must change in light of this big picture.</p>	
<b>10:45 – 11:00</b>	<b>Health Break</b> (refreshments)
<b>11:00 – 12:30</b> <b>PM</b>	<b>Concurrent Sessions: Big Picture Planning</b>
<p><b>Session A</b> <b>Moderator: Michelle Kanter, Executive Director, Carolinian Canada</b></p>	
<b>11:00 – 11:45</b>	<p><b>Natural Heritage Systems (NHS) and Forests as Climate Adaptation Tools</b> <b>Gary Nielsen, Climate Change Coordinator and Dr. Danijela Puric-Mladenovic, Senior Analyst – Settled Landscapes, Science &amp; Research Branch, Ontario Ministry of Natural Resources and Forestry</b></p>
<p>The fragmented landscape of southern Ontario is more vulnerable to the effects of Climate Change than it should be. As climate change impacts range from global to local scale, it is necessary to build regional scale Natural Heritage Systems (NHS) that will serve as a backbone of healthy, resilient and functional working landscapes. Natural Heritage Systems need to nest into each other so that local enhances regional and regional enhances provincial and so on up to continental and global. Forests, as the predominant NHS component both spatially and structurally, are the main building block of green systems. Therefore as a means to minimize landscape and forest vulnerability to climate change and build NHS, it is necessary to enhance forest diversity, improve forest age structure, minimize fragmentation, improve and build forest connectivity. It is not the job of any single agency but the efforts of every single agency could be rendered more effective if hierarchical nested Natural Heritage Systems exist as aspirational blueprints. As a result, Natural Heritage System planning needs to move to the next level of integrated and strategic landscape planning where emerging needs are accounted for and where the system is not only defined to capture present day conservation values, but also be carefully planned to include possible climate impacts. This presentation will give an overview of a number of science and implementation initiatives that have been undertaken by MNRF and partners to define and develop forest dominated Natural Heritage Systems. It will profile new technology and tools which practitioners can use to better understand what is likely to happen to forest and tree species, where knowledge and information gaps exist and what future steps are needed.</p>	
<b>11:45 – 12:30</b>	<p><b>A Provincial Perspective on Natural Heritage System Planning</b> <b>Victor Doyle, Manager, Provincial Planning Policy Branch, Ministry of Municipal Affairs and Housing</b></p>
<p>Recognizing their importance, Ontario has a rich legacy of promoting and planning natural heritage systems at a landscape or bioregional level. This is accompanied by an increased focus on the need for regional/local/municipal scale systems, including new requirements in the Provincial Policy Statement</p>	

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2014. This policy framework is supported by a suite of planning tools and guidance materials to assist practitioners and stakeholders in implementation efforts. This session will provide an overview of this multi-pronged provincial approach.

**Session B**

**Moderator: Ron Wu-Winter, Watershed Forester, Grand River Conservation Authority**

**11:00 – 11:40**

**Ontario Nature’s Greenway: Conservation approaches in southern Ontario**

**Joshua Wise, Greenway Coordinator & Sarah Hedges, Conservation and Education Coordinator, Ontario Nature**

This session will highlight Ontario Nature’s Greenway program, which aims to establish an interconnected web of core natural areas and natural corridors throughout southern and eastern Ontario. The Greenway Program’s work focuses on three key areas:

1. Strengthen land-use policy to promote systems approaches to planning;
2. Promote private land owner stewardship; and
3. Protect the province’s best remaining examples of imperiled and vulnerable habitats.

The session will focus on:

- 1) How community groups can become active partners in growing municipal natural heritage systems and helping create more resilient communities. We will take a look through Ontario Nature’s new Best Practices Guide to Natural Heritage Systems Planning.
- 2) Important insights on opportunities and risks around the future of biodiversity offsetting in Ontario.

**11:40 – 12:20**

**Canadian Wildlife Service Landscape Assessment and Planning in 2014 and beyond**

**Graham Bryan, Biodiversity Coordinator, Canadian Wildlife Service, Environment Canada**

This presentation will focus on:

- 1) Environment Canada’s coarse and fine scale landscape assessments of the Mixedwood Plains ecoregion in Ontario, including mapping of Canadian Wildlife Service areas of program interest in southern Ontario.
- 2) Grasslands thus far – what we have learned from trying to identify existing and potential grassland landscapes and the elusive and changing nature of grassland habitat.
- 3) New programs of potential interest under the new national Conservation Plan.

**12:20 – 12:30**

**Ontario's Greenbelt at 10 Years**

**Felix Whitton Program Officer, Friends of the Greenbelt Foundation**

The Greenbelt was created in 2005 by the province of Ontario to safeguard vulnerable environmental and agricultural lands. At almost 2 million acres, it is the world’s largest permanent greenbelt, and is vital to the future sustainability of the Greater Golden Horseshoe region. This talk will give an update on the Greenbelt, the upcoming 10-year Review in 2015, and the work of the Friends of the Greenbelt Foundation.

**12:30 - 1:30**

**Lunch**

<b>1:30 – 4:30 PM</b>	<b>Concurrent Sessions</b>
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<b>Session A: The Big Picture in Action – Natural Heritage Systems</b> <b>Moderator: Mary Elder, Senior Planner, Norfolk County</b>
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<b>A1</b> <b>1:30 – 1:55</b>	<b>Chatham-Kent Natural Heritage Implementation Strategy</b> <b>Jennifer Lawrence, Jennifer Lawrence and Associates</b>
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The municipality of Chatham-Kent has a rich history in agricultural production. Fertile soils and excellent growing conditions have made this part of Ontario extremely desirable for intense agricultural production. Over the decades, wetlands have been converted to farm fields and prairie and woodland habitat have been removed. With less than 6% natural cover in the municipality (4% forest cover in woodlands greater than 4ha and 2% forest cover in smaller woodlands and other habitats), many residents are speaking up and asking for Council to protect the remaining natural cover and to come up with a plan to enhance the current system for the benefit of future generations. A request by Council for staff to prepare a tree cutting by-law for their consideration appears to have triggered the removal of over 1500 acres (607 ha) of woodlands over the span of 1 1/2 years. Municipal staff, cognizant of the concerns expressed by the agricultural community, looked for an alternate, non-regulatory, approach to try and stop the loss of natural cover. The outcome is a Natural Heritage Implementation Strategy that has been supported by municipal Council, Carolinian Canada and the Lower Thames Valley Conservation Authority. The Strategy identifies 29 Implementation Actions that involve collaboration and cooperation between Chatham-Kent, the Lower Thames Valley and St. Clair Region Conservation Authorities, Carolinian Canada, agricultural federations, non-profit organizations and the general public in order to not only protect the natural heritage that currently exists but to also enhance the natural heritage in order to improve resilience and to enhance the health and well-being of the natural environment as well as the social and economic environment in Chatham-Kent.

<b>A2</b> <b>1:55 – 2:20</b>	<b>The Matrix, Too: Enhancing the Impact of Corporate Habitat Stewardship</b> <b>Martha Gruelle, Director, Huron to Erie Waterways for Wildlife Project</b>
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Natural heritage systems reasonably focus on core habitats and connecting corridors, but the matrix in which they're embedded is also crucial. As Environment Canada notes (How Much Habitat Is Enough? 2013), in highly developed landscapes such as "... much of the Mixedwood Plains Ecozone, the attributes of the matrix can be as important in influencing species composition and abundance as the attributes of the natural habitat patches themselves." In Carolinian Canada, much of the landscape is owned and managed by companies. Wildlife Habitat Council engages corporations in maintaining portions of their land as habitat. To encourage documented habitat stewardship, WHC offers an independent certification. These certified corporate wildlife programs improve the quality of the landscape matrix for native species, while offering employees and community members the health benefits of increased contact with nature. Currently, WHC is enhancing its certification program, with updates to be launched in November 2015. The new certification will involve a menu of conservation and education actions, with assigned points. The new points-value system will be aligned with existing conservation goals of agencies and NGOs, working at multiple scales. To set up the points system, WHC is consulting with a set of broadly representative advisory committees in multiple topic areas, including habitat types, management techniques, and education themes. This presentation will share what WHC has learned about benchmarking conservation actions. In addition, participants will be invited to comment on metrics being developed for corporate wildlife habitat-making.

<p><b>A3</b> <b>2:20 - 2:45</b></p>	<p><b>Lake Ontario Integrated Shoreline Restoration: Making the Connections</b> <b>Karen Chisholme, Program Coordinator – Special Projects, Credit Valley Conservation</b></p>
<p>Credit Valley Conservation's (CVC's) Lake Ontario Integrated Shoreline Strategy is a multi-year, multi-discipline study aimed at understanding the biophysical and chemical characteristics of the Lake Ontario shoreline within CVC's jurisdiction. The baseline information is being used to help inform priority areas and disciplines for restoration.</p>	
<p><b>Session B: The Big Picture in Action – Reports from our Conservation Action Plan Partners</b> <b>Moderator: Tara Borwick, Partnership and Granting Program Advisor, Ontario Ministry of Natural Resources &amp; Forestry– Stewardship and Conservation Incentives Section</b></p>	
<p><b>B1</b> <b>1:30 - 1:55</b></p>	<p><b>Implementing the Western Lake Erie Islands Natural Area Conservation Plan</b> <b>Kristen Bernard, Program Manager – Southwestern Ontario, The Nature Conservancy of Canada</b></p>
<p>Pelee Island is the largest of the Canadian islands in the Western Lake Erie Islands (WLEI) archipelago, and is the most southerly inhabited part of Canada. The Nature Conservancy of Canada (NCC) has protected over 1,000 acres (390 hectares) on Pelee Island. NCC manages these lands to ensure that the natural habitat is protected and is properly maintained or restored. Rare communities within the WLEI include globally rare shoreline and alvar habitats, as well as savannah and forest communities, all of which provide critical stopover habitat for migratory birds and insects, and serve as nesting sites for colonial waterbirds. Conservation actions taken to conserve some of the best examples of Pelee's important habitats including invasive species removal, habitat restoration and education and outreach.</p>	
<p><b>B2</b> <b>1:55 - 2:20</b></p>	<p><b>Farming with Biodiversity</b> <b>David Ainslie, Essex County Farmer / Canada South Land Trust</b></p>
<p>From starting to farm in early 80's and recognizing that I could not farm in Essex County without biology alongside, I began the yearly addition of landscape features (i.e protection of forest, tree lines to hedgerows, wetlands, pollinator park, prairie grasslands, hibernacula, no-till farming, cover crops, the identification of existing species at risk, etc.). All these events occurred in the context of farm economics, farm norms and peer attitudes. The most demanding project has been the restoration of a rich Carolinian Forest greatly disturbed in the ash cut of 2004 leaving extensive rutting and invasive plants. Since the fall of 2011 to the present, significant labour, time and material has been spent and finally this year positive results have been realized. In the process much has been learned about the richness of our biological past. I am 70 years of age and I am leaving the monoculture behind and embracing complexity and resilience. I look forward to the next 20 years, initiating projects that I can learn from and share with others.</p>	
<p><b>B3</b> <b>2:20 - 2:45</b></p>	<p><b>Community Action to Reduce the Negative Impacts of Roads on Ecosystems</b> <b>Rick Levick, LCPIP Coordinator, Long Point World Biosphere Reserve Foundation</b></p>

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This presentation will describe the community-based effort to restore historic hydraulic connections between the Big Creek Marsh National Wildlife Area and Long Point Bay and reduce wildlife road mortality, especially of Species at Risk reptiles, along the 3.6 km causeway that connects the Long Point sand spit with the mainland. The Causeway is regarded locally as the “entrance” to the Long Point World Biosphere Reserve. Ironically, the road was also known as the fourth deadliest road for turtles in North America. To date, the project has raised more than \$1.4 million and installed more than 4.5 km of exclusion fencing and three wildlife culverts along the Causeway. Three more culverts will be installed in October 2014. As well, six more culverts are planned for installation, subject to funding availability. The project has carried out an annual monitoring program that has found a 50% reduction in reptile road mortality since work began in 2008. For the past two years, the monitoring program has used remote cameras to record wildlife using the culverts installed in 2012. The project is managed and administered by the Long Point World Biosphere Reserve Foundation on behalf of the consortium of local organizations committed to improving the Causeway. The work is carried out in cooperation with Norfolk County because the Causeway is a municipal road, and with the Canadian Wildlife Service which manages the Big Creek National Wildlife Area.

**2:45 – 3:00**      **Health Break** (refreshments)

**3:00 - 4:15 PM**      **Concurrent Sessions (continued)**

**Group A: Big Picture Tracking – Initiatives, Tools and Resources**

**Moderator: John Urquhart, Conservation Science Manager, Ontario Nature**

**A4**  
**3:00 – 3:25**      **Conservation Halton's Long-term Monitoring in the 7E-3 CAP Area**  
**Andrea Dunn, Monitoring Ecologist** **Julia Marko Dunn, Natural Heritage Ecologist, Conservation Halton**

As part of our Long-term Monitoring Program, Conservation Halton undertakes ecological monitoring across our watershed, including in the Hamilton Burlington 7E-3 CAP area. The program includes monitoring of forest health parameters at Waterdown Woods; marsh monitoring at Kerncliff Park; water quality, benthic macroinvertebrate and fish monitoring in Grindstone Creek, the North Shore of Cootes Paradise, and urban creeks in Burlington; and inventories and monitoring of populations of various species at risk. Results are used to produce Watershed Report Cards, inform stewardship and restoration activities, plan review and land management decisions. Our presentation will give an overview of our monitoring activities and results.

**A5**  
**3:25 – 3:50**      **Big Picture Tree Monitoring Involving Citizen Scientists**  
**Daniel Jun Sun Kim, Forest Biodiversity Specialist, ACER**

The purpose of Association for Canadian Educational Resources (ACER)’s tree monitoring is to involve the community in understanding the consequences of climate change and human impact on our ecosystems and enable comparison with global forests. For this, ACER has adopted Smithsonian Institution’s tree monitoring protocols and produced manuals, role cards, training videos, and affordable equipment to involve volunteers, students, and anyone interested in trees. To increase public awareness of trees in their neighborhood, ACER launched "QR-code-on-trees" ([www.acer-acre.ca/treecaching](http://www.acer-acre.ca/treecaching)) program this year.

<b>A6</b> <b>3:50 – 4:15</b>	<b>Big Picture Monitoring with Miradi</b> <b>Sarah Hodgkiss, Program Manager, Carolinian Canada</b>
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Since 2008, Carolinian Canada has worked with over 100 partner groups to develop Conservation Action Plans in 13 biodiversity hotspots across the Carolinian Life Zone. The Conservation Action Planning approach is an internationally proven method that can be applied at any scale in any place. Its methods are science-based, focused, and efficient, and have evolved over three decades of trial and error in an array of landscapes, cultures and political environments. The CAPs are clear, achievable, measureable and can easily be monitored. The Carolinian Canada facilitated CAPs, along with The Nature Conservancy of Canada's Natural Area Conservation Plans, cover most of the Carolinian Life Zone. Using the data from these plans, and other sources, we aim to create our Big Picture Report Card to assess the state of the Carolinian Life Zone. Moving forward, how can we continue to monitor all of these plans and measure success? One tool to help us monitor our Big Picture Vision is Miradi, a computer program designed specifically for the CAP process. Learn about how Miradi can help us to prioritize threats, develop objectives and actions, and select monitoring indicators to assess the effectiveness of strategies.

## **Group B: The Big Picture in Action – Reports from our Conservation Action Plan Partners**

**Moderator: Audrey Heagy, Project Coordinator, Bird Studies Canada**

<b>B4</b> <b>3:00 – 3:25</b>	<b>Carolinian Canada's Landowner Leaders, Eco Trail and Elgin Natural Heritage Inventory Initiatives</b> <b>Kelly Johnson, Habitat Stewardship Specialist, Bronwen Buck, Outreach Coordinator, and Sara Howe, Elgin Natural Heritage Inventory Assistant Carolinian Canada</b>
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Carolinian Canada's Landowner Leader program assists private landowners with development of Carolinian Habitat Action plans for wildlife habitat creation, restoration and management. Through this program we aim to highlight the good work being done on the landscape and recognize individuals for their contributions to conservation.

EcoTrails can revitalize a local pathway, showcase a restoration area and highlight the importance of place. Explore how Carolinian Canada is working with our partners to engage trail visitors and empower them to care for local habitats. If you enjoy hiking, the outdoors, or even telling your own nature stories, consider joining us on our journey.

Carolinian Canada is bringing together private landowners, novice and professional volunteers, and CAP partners to update Elgin County's Species at Risk and natural heritage data through the Elgin Natural Heritage Inventory.

<b>B5</b> <b>3:25 – 3:50</b>	<b>Conservation of Aerial Insectivores</b> <b>Kristyn Richardson, Stewardship Biologist, Bird Studies Canada</b>
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Chimney Swifts, Barn Swallows, and Bank Swallows once inhabited most chimneys, barns, and river banks throughout the Carolinian region of Ontario, but are now disappearing at an alarming rate. These species of birds are aerial insectivores, which specialize in eating flying insects, and they have undergone steeper declines than any other group of birds in Canada over the past 40 years. These birds will only recover if they are seen as an integral part of our neighbourhoods and ecosystems. As such, Bird Studies Canada is dedicated to the conservation of this group of birds and their habitats by building on the enthusiastic

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contributions and efforts of hundreds of citizen scientists. Across the Carolinian, we are engaging communities in monitoring, stewardship, and conservation for aerial insectivores in order to fill critical knowledge gaps and address key threats affecting this group of birds in Southern Ontario. Activities include taking steps to uncap suitable chimneys to restore access to swifts and researching ways to create nesting habitat for Barn and Bank Swallows. With these efforts we hope to see a reversal in the steep declines of these species throughout the Carolinian of Ontario.

**B6  
3:50 - 4:15**

**Tools for Monitoring Agricultural Best Management Practice Effectiveness**  
**Brynn Upsdell-Wright, Water Quality Technician, Ausable Bayfield Conservation Authority**

Rural non-point sources of nutrients (particularly phosphorus) and suspended solids can limit both the human uses and the ecological integrity of the nearshore area of Lake Huron. To address these concerns, agricultural producers in the Gully Creek watershed (15 km<sup>2</sup>) of Huron County have been encouraged to adopt Best Management Practices (BMPs). A study was then undertaken to evaluate the environmental effectiveness of four BMPs – conservation tillage, cover crops, nutrient management, and Water and Sediment Control Basins (WASCoBs) – through land use and management data collection, water quality monitoring, and watershed modelling with the Soil and Water Assessment Tool (SWAT). Water quality monitoring results indicated that storm events were key periods for the transport of phosphorus and suspended solids from the landscape to the stream. The effectiveness of conservation tillage, cover crops, and nutrient management was difficult to measure through water quality monitoring at the field scale, but the SWAT estimated reductions in total phosphorus and suspended solids as a result of implementing these practices. Field-scale monitoring of a WASCoB showed a reduction in peak flow and the SWAT predicted reductions in suspended solids and total phosphorus with the addition of multiple WASCoBs to the watershed. The successful evaluation of these BMPs would not have been possible without the collection of land use and management data and modeling of the watershed, in addition to monitoring of water quality under both baseflow and storm conditions.

**4:15 - 5:00 PM**

**Updating the Big Picture Vision - Key Challenges and Opportunities**  
**Moderator: Jarmo Jalava, Carolinian Canada**

The Forum will close with an invitation to all delegates to participate in a discussion concerning the two key Big Picture questions:

1. Over the coming decades, how do we realistically achieve ecosystem health and functionality on a stressed landscape of such immense cultural and economic importance?
2. How do we monitor our success, as a society, in achieving our Big Picture goals?

## Speaker Biographies

### **David Ainslie**

#### **Essex County Farmer / Canada South Land Trust**

David Ainslie has been farming in Essex County since 1980, using both organic and conventional farming practices. Additional to its ecological emphasis, the farm has in the past included a grain milling and baking operation and continues to have an apiary. David is a graduate of Western University (History and Geography) and University of Guelph (Agricultural Science). He has recently been a recipient of lifetime environmental achievement awards from the Essex Region Conservation Authority and the Ontario Soil and Crop Association. This spring David received recognition from Carolinian Canada for contributions towards natural diversity and habitat. He currently serves as vice-president of The Canada South Land Trust. David began his most significant farming project in the autumn of 2011, with the intent of restoring ecological integrity to the farm's Carolinian forest.

### **Kristen Bernard**

#### **Program Manager – Southwestern Ontario, The Nature Conservancy of Canada**

Kristen graduated from the University of Waterloo in 2006, Environment and Resources Studies and from Niagara College's Ecosystem Restoration program in 2007. Kristen started her career in southern Saskatchewan working for Parks Canada in Grasslands National Park as a species at risk technician and later on as the Project Coordinator for the Frenchman Wood River Weed Management Area and Education Coordinator for the Prairie Conservation Action Plan. Kristen moved back to Ontario in 2009 to join the Norfolk Alternative Land Use Service project where she worked with farmers and private landowners to implement on farm stewardship projects in Norfolk County. Kristen began working for NCC May 2011 as an Administrative Officer, Executive Assistant and Relationship Manager and began her current role with NCC as a Program Manager for Southwestern Ontario in 2014.

### **Dawn Bazely, Ph.D.**

#### **Professor of Biology, York University**

Dawn Bazely has taught at York University, Toronto, since 1990. She was Director of IRIS, the university-wide Institute for Research and Innovation in Sustainability (2006-11 and 2012-13) where her mission was to develop, lead and support interdisciplinary research on diverse fronts. The Globe and Mail's 2014 Canadian University Report singled her out as York University's HotShot Professor. Dawn trained as an ecologist, in the field of plant-herbivore interactions, and she has carried out extensive field research in grasslands and forests, from temperate to arctic regions. Dawn has a B.Sc. in Biogeography and Environmental Studies and a M.Sc. in Botany from the University of Toronto. Her D.Phil. in Zoology, from Oxford University's Edward Grey Institute in Field Ornithology, looked at sheep grazing behaviour. In 2006, Dawn led the Canadian section of the International Polar Year project: Gas, Arctic Peoples and Security. As well as publishing dozens of journal articles, chapters, conference proceeding papers, and technical reports, Dawn wrote the textbook, Ecology and Control of Introduced Plants: Evaluating and responding to invasive plants, (2003 monograph with Judith Myers), and she co-edited Environmental and Human Security in the Arctic, (2013). She contributed to the 2nd edition of Ecology: A Canadian Context by Bill Freedman et al. (2014). In 2011 Dawn received a Charles Bullard Fellowship from Harvard University, to work on a book examining conservation and ecological issues in Southern Ontario from scientific, policy and political perspectives.

### **Graham Bryan**

#### **Biodiversity Coordinator, Canadian Wildlife Service, Environment Canada**

Graham Bryan is the Biodiversity Coordinator for the Canadian Wildlife Service – Ontario. A major part of Graham's job is to look at the various mandates and programs that form CWS' biodiversity portfolio, and devise landscape and ecosystem approaches to conserve that portfolio. He's 5' 11" and lives in an old hardware store.

### **Bronwen Buck**

#### **Outreach Coordinator, Carolinian Canada**

Bronwen Buck is the Social Marketing and Outreach Coordinator for the Carolinian Canada Coalition (CCC). She is currently developing pilot projects, such as the Biodiversity Awareness Trail Initiative, that combine nature interpretation with social marketing methods to foster conservation stewardship. Within her outreach capacity,

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she also enjoys hosting an annual Species at Risk Youth Camp, sharing conservation success stories through the CCC newsletter and strengthening the Coalition's ecosystem recovery efforts through multi-partner collaboration. Bronwen joined CCC in 2008 after completing a master's degree focusing on corporate community engagement.

### **Karen Chisholme**

#### **Program Coordinator – Special Projects, Credit Valley Conservation**

Karen Chisholme has worked for Conservation Authorities for over 12 years. Currently she is coordinating the Lake Ontario Integrated Shoreline Strategy project as well as various elements of its implementation including the detailed design phase of Lakeview Waterfront Connection. Previously Karen worked as a Planning Ecologist for over 10 years. In this role her primary responsibility was reviewing development applications under the Planning Act and Regulation 160/06 to ensure consistency with appropriate policies. This work requires the ability to integrate information from various disciplines to develop a holistic understanding of landscape features and their functions.

### **Victor Doyle**

#### **RCP MCIP, Ontario Ministry of Municipal Affairs and Housing**

Victor is currently a Manager in the Provincial Planning Policy Branch of the Ministry of Municipal Affairs and Housing. He has been involved in provincial scale natural heritage system planning for over 25 years, including the Oak Ridges Moraine Conservation Plan and the Greenbelt Plan, and has worked extensively with municipalities in implementing provincial natural heritage system policies.

### **Andrea Dunn**

#### **Monitoring Ecologist, Conservation Halton**

Andrea Dunn has been with Conservation Halton for ten years as a Monitoring Ecologist, specializing in aquatic ecosystems. Prior to joining Conservation Halton, Andrea worked for the Ministry of Natural Resources and non-profit organizations completing stream and wetland monitoring and restoration.

### **Julia Marko Dunn**

#### **Natural Heritage Ecologist, Conservation Halton**

Julia Marko Dunn has been with Conservation Halton for two years with roles in planning ecology and terrestrial monitoring with a specialization in birds and plants. Prior to joining Conservation Halton, Julia worked in land management at two Ontario land trusts and as an Ecologist at a consulting firm.

### **Martha Gruelle**

#### **Director, Huron to Erie Waterways for Wildlife Project, Wildlife Habitat Council**

Martha Gruelle directs the Huron to Erie Waterways for Wildlife Project in southeast Michigan and southwest Ontario, utilizing more than 25 years' experience in non-profit volunteer management. Martha is based in Detroit, Michigan, at the offices of DTE Energy. She previously directed a neighborhood environment and development organization in Detroit, and earned a mid-career Masters degree in ecosystem management from the University of Michigan School of Natural Resources and Environment; those studies focused on natural habitats within urban settings. Besides her work for WHC, Martha volunteers as a team leader for a local watershed group on sampling for in-stream invertebrates, and for an urban natural area where she leads control of invasive plants. She also co-founded and coordinates a local chapter of the Stewardship Network, which connects people and organizations to expand conservation capacity.

### **Sarah Hedges**

#### **Conservation and Education Coordinator, Ontario Nature**

Sarah Hedges joined Ontario Nature in August 2010. As Conservation and Education Coordinator, Sarah oversees the Nature Guardians Program, an environmental education program for youth, and is involved in various conservation projects, including biodiversity offsetting.

**Sarah Hodgkiss**

**Program Manager, Carolinian Canada**

Sarah has been Carolinian Canada's Program Manager since 2011. She works on the development, implementation and monitoring of Conservation Action Plans across the Carolinian zone. She has worked in the conservation field for over a decade, including contracts with Ontario Parks, the Canadian Wildlife Service, the Toronto Zoo and The Couchiching Conservancy. She completed her Masters degree in conservation biology, and has volunteered for several environmental organizations, including the Thames Talbot Land Trust. Sarah is a graduate of the Young Conservation Professionals program through the University of Guelph, and is a trained facilitator through the Conservation Coaches Network.

**Sara Howe**

**Elgin Natural Heritage Assistant, Carolinian Canada**

Sara joined the Carolinian Canada Coalition (CCC) team in 2014 as the Elgin Natural Heritage Inventory Assistant. She graduated from the University of Waterloo in 2012 with a degree in Environment and Resource Studies, and then went on to Niagara College and did a post-graduate certificate in Ecosystem Restoration. She worked for the Nature Conservancy of Canada as a Conservation Intern where she assisted with the implementation of various stewardship programs. Sara has also volunteered at Long Point Waterfowl assisting with two on-going monitoring projects. She grew up on a farm in Elgin County and has enjoyed meeting other Elgin landowners through this Elgin Inventory.

**Jarmo Jalava**

**Director of Ecosystem Recovery, Carolinian Canada**

Jarmo Jalava oversees Carolinian Canada's programs, all of which contribute to the Big Picture vision. Since volunteering at the Long Point Bird Observatory as a teenager in the 1970s, Jarmo has worked in many capacities in the conservation field – from extensive field surveys in some of Ontario's most treasured natural areas to high-level international, provincial and regional conservation planning. He has authored or co-authored more than 120 reports and articles in the fields of ecology and the environment, including the original "The Big Picture: A Natural Heritage Vision for Carolinian Canada" and ecological studies of two of Ontario's UNESCO World Biosphere Reserves (Niagara Escarpment and Georgian Bay Littoral). Jarmo's vision is to promote the informed protection and recovery of ecosystems, sustainable land uses and lifestyles, and deep reverence for the natural world, as an ecologist, writer, songwriter, educator and facilitator.

**Kelly Johnson**

**Habitat Stewardship Specialist, Carolinian Canada**

Kelly joined the Carolinian Canada team in 2013 as a Habitat Stewardship Specialist. Kelly assists landowners in developing Carolinian Habitat Action Plans for the property. She enjoys working with her neighbours and fellow community members on achieving the conservation objectives set out in the various Conservation Action Plans focused in the Chatham-Kent area. Kelly received her Honours Bachelor of Environmental Studies and Education degrees from Lakehead University. After graduation Kelly taught elementary and secondary school, including Outdoor Education in the Northwest Territories, Nunavut and Muskoka. Since returning to southern Ontario Kelly has worked in a variety of contract positions including with the Ministry of Natural Resources. Kelly was the co-lead for the Upper East Sydenham River Watershed and Strathroy-Caradoc Sand Plain Strategic Habitat Restoration Initiative which focused on mapping priority areas for habitat restoration and implementation of land stewardship projects. Along with working for CCC, Kelly is the Community Trees Initiative Coordinator with Lower Thames Valley Conservation Authority, and a Superintendent of McLean Conservation Lands near Rondeau.

**Michelle Kanter**

**Executive Director, Carolinian Canada**

Michelle Kanter has held the position of Executive Director of the Carolinian Canada Coalition since 2003 and has been involved with the Coalition since its inception in 1984. With 30 years of experience in wildlife research and

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land stewardship, she has worked with a broad range of stakeholders around the world on innovative conservation partnerships to save, steward and seed important habitat and rare species. Since she started at the Coalition, programs have grown five-fold, thanks to a strong team of individuals and groups that focus on ecosystem recovery in southwestern Ontario. With a home base in Dorchester Swamp, she enjoys exploring nature's role in healthy communities, photography, hiking and writing. She currently sits on the Ontario Species at Risk Public Advisory Committee.

### **Daniel J. S. Kim**

#### **Forest Biodiversity Specialist, Association for Canadian Educational Resources**

Daniel J.S. Kim is a forest biodiversity specialist at ACER. Working for Alice Casselman, Head of ACER, he's leading Go Global project which involves gathering, analyzing and interpreting biodiversity data of 12 one-hectare forest plots. He's also a co-creator of ACER's treepedia and treecaching (QR-code-on-trees) program.

### **Brendon M.H. Larson, Ph.D.**

#### **Associate Professor, Environment and Resource Studies, Faculty of Environment, University of Waterloo**

Brendon Larson is a life-long naturalist who is now an associate professor in the Department of Environment and Resource Studies, Faculty of Environment, University of Waterloo. He holds degrees from the University of Guelph (BSc), the University of Toronto (MSc), and the University of California at Santa Barbara (PhD). He is on the editorial board of the journal Diversity and Distributions and is currently chair of the board of the Invasive Species Centre.

### **Jennifer Lawrence, BES, MCIP, RPP**

#### **President, Jennifer Lawrence and Associates Inc.**

Jennifer is a registered professional planner and a member of the Ontario Professional Planner's Institute. As the President of Jennifer Lawrence and Associates Inc., Jennifer specializes in environmental planning, environmental and regulatory approvals, planning policy and project management for private and public sector clients. Jennifer takes a collaborative approach to planning that recognizes and understands the important inter-relationships between planning, engineering, ecology and urban design. Jennifer was the Manager of Environmental Planning as well as the lead planner and project manager for Conservation Halton for 17 years. Her work at Conservation Halton involved numerous complex studies involving federal, provincial, municipal, and private development stakeholders. Jennifer's extensive background in both planning and regulatory processes has given her a unique perspective on the approvals process; the result of which is a more streamlined, respectful, proactive and efficient approach to working with government agencies.

### **Rick Levick**

#### **LCPIP Coordinator, Long Point World Biosphere Reserve Foundation**

Rick Levick has been the coordinator for the Long Point Causeway Improvement Project since 2007. His initial involvement in this community-based initiative in road ecology was as a volunteer representing the Long Point Bay Anglers Association. As coordinator, Rick is responsible of all aspects of the project including fundraising, project management, financial administration and communications. He works under a part-time contract with the Long Point World Biosphere Reserve Foundation, which provides management and administrative support to the project. A "Long Pointer" since age 3, Rick brings more than 30 years of experience in public relations, project and non-profit management and science outreach to the Project.

### **Gary Nielsen**

#### **Climate Change Coordinator, Science & Research Branch, Ontario Ministry of Natural Resources & Forestry**

Gary Nielsen graduated as a forester from University of New Brunswick 1981. He took several years to travel, working in forestry and generally exploring the world before settling in Eastern Ontario to work as a Management Forester, Stewardship Coordinator and Supervisor with the Ontario Ministry of Natural Resources. A birder, a hunter and avid telemark skier, he moved to MNR Peterborough in the late 2000s to take up the position of Climate Change Project Coordinator.

**Don Pearson**

**General Manager/Secretary-Treasurer, Lower Thames Valley Conservation Authority**

Don Pearson joined the Lower Thames Valley Conservation Authority on January 1, 2012. Prior to that, he served as General Manager of Conservation Ontario, the umbrella organization of Ontario's 36 Conservation Authorities, from May of 2005. He is a member of the Ontario Biodiversity Council; a Trustee with Trees Ontario; and a member of the Boards of Ontario Heritage Trust, and the Canadian Water Network. From 1981 until 2003, Mr. Pearson served as the General Manager of the Upper Thames River Conservation Authority, where under his leadership the Authority earned a reputation for excellence and innovation in environmental management with particular emphasis on water quality, soil conservation and community involvement programs. With the Conservation Authority's support, the Thames was designated as a Canadian Heritage River in 2000. Don earned a Masters Degree in Public Administration from the University of Western Ontario in 1998 and holds an Honours Science Degree from the University of Waterloo (1975).

**Danijela Puric-Mladenovic**

**Senior Analyst – Settled Landscapes, Science & Research Branch, Ministry of Natural Resources & Forestry**

Danijela Puric-Mladenovic has a B.Sc. and M.Sc. in Forestry (major in Landscape architecture/urban forestry) from the University of Belgrade, Serbia, and a Ph.D. from the Faculty of Forestry, University of Toronto. Danijela works as a Senior Analyst-Settled Landscape with Science and Research Branch, OMNRF. She holds a status of Assistant professor at the Faculty of Forestry, University of Toronto that enables her to bridge the gap between science and application. Her work has a focus on applied science and research that support conservation, restoration and long-term strategic planning and management of forests and green areas in settled, developed and urbanized landscapes. She works on developing innovative science methods and approaches that support strategic, integrative landscape and green system planning, spatial planning of green systems and restoration areas in both urban and rural areas of southern Ontario.

**Kristyn Richardson**

**Stewardship Biologist, Bird Studies Canada**

Kristyn Richardson joined Bird Studies Canada in the fall of 2010 as Stewardship Biologist. She leads both Ontario SwiftWatch and the Barn Swallow Research and Conservation Project and has played an integral role in directing BSC's aerial insectivore conservation initiatives. She has extensive experience working with landowners to create, restore and maintain habitat for aerial insectivores. She is also the co-lead on the development of the Bank Swallow Recovery Strategy for Ontario. Born and raised in Brantford, Ontario, Kristyn completed her B.Sc. in biology at the University of Toronto. She then moved to Winnipeg and completed a Masters of Natural Resources Management at the University of Manitoba, focusing her thesis research on the forest management public participation process in Northern Manitoba and Cape Breton Island. All of her previous work involved public outreach and education for an assortment of agencies including the City of Toronto, Canadian Forest Service, and various forest product companies.

**Brynn Upsdell-Wright**

**Water Quality Technician, Ausable Bayfield Conservation Authority**

Brynn Upsdell Wright has been the Water Quality Technician at Ausable Bayfield Conservation since 2008. There, she works as part of a team that monitors water quality and aquatic species, and engages landowners in improving the health of watersheds. She recently contributed to a project in which the effectiveness of agricultural best management practices was evaluated with field monitoring and a watershed model. In her time away from work, Brynn enjoys reading (Three Day Road by Joseph Boyden was her favourite read this year), pattering around the house (busy weeks make time at home feel like a treat), listening to music (one highlight of the summer was her first trip to the Greenbelt Harvest Picnic), and yoga (a welcome quieter of her mind).

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### **Felix Whitton**

#### **Program Officer, Friends of the Greenbelt Foundation**

Felix joined the Foundation in November 2013. Originally from the UK, he brings with him more than five years' experience in philanthropy, international conservation and ecological research. Growing up in the English countryside instilled in him a deep love of nature, and he has since travelled and worked in some of the most remote and biodiverse regions of the world. He was attracted to the Greenbelt by its visionary goal of balancing social and environmental needs, and sees it as a model for sustainable urban growth to be widely replicated. Felix holds an MSc in Ecology, Evolution and Conservation from Imperial College London, and a BSc in Biology from the University of Nottingham.

### **Joshua Wise**

#### **Greenway Coordinator, Ontario Nature**

Joshua Wise has been leading Ontario Nature's Greenway program since the spring of 2011. His work focuses on promoting systems-based approaches to planning throughout southern Ontario and helping build the Alternative Land Use Services (ALUS) program throughout Ontario.