



ANNUAL REPORT

2012-13

JOGGINS FOSSIL INSTITUTE



A message from the Executive Director

UNESCO World Heritage sites are places that are important to and belong to everyone, irrespective of where they are located. They have universal value that transcends the value they hold for a particular nation. These qualities are expressed in the Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention). The World Heritage Convention aims to promote cooperation among nations to protect heritage from around the world that is of such outstanding universal value that its conservation is important for current and future generations.

The Joggins Fossil Cliffs UNESCO World Heritage Site produces many benefits at an international, national, provincial and local scale. Nova Scotia's economic growth strategy is based on the concept of five capitals. Natural, financial, built, human and social capitals are the building blocks or constituent elements that must interact to form the foundation of a strong economic structure. The Joggins Fossil Cliffs UNESCO World Heritage Site and the Joggins Fossil Institute, as a managing partner for the site, contribute in many ways to the five building blocks of prosperity.

Since inscription on the UNESCO World Heritage List in 2008, the Joggins Fossil Institute and partners have generated close to \$1,200,000 in new revenue based on sales from admissions, merchandise, educational programming and food services. Sales figures per year are approximately \$180,000. The annual operating budget of the site is nearly \$500,000 and since inscription on the World Heritage List, the site has managed through its operations more than \$3,000,000.

World Heritage listing has featured in

promotions that have resulted in increased tourist visitation from overseas and within Canada. Furthermore, the World Heritage Site has hosted more than 100,000 visitors who originate from international, national and regional locations. Purdy et al. (2013, unpublished) have estimated that, on average, \$1,600,000 in income is brought into Cumberland County annually due to visitors to the Joggins Fossil Cliffs UNESCO World Heritage Site and Centre. Based on a salary estimate of \$40,000 per year, this income translates to 14 full time job equivalents generated by visitor spending associated with the Joggins Fossil Cliffs UNESCO World Heritage Site.

The local communities benefit from increases in employment opportunities and income. Approximately four new full time year round positions have been supported through the development of the Joggins Fossil Institute with an additional ten full time term positions to provide for the promotion and presentation of the outstanding universal value of the Joggins Fossil Cliffs World Heritage Site, and for maintenance of the Site and the Joggins Fossil Centre. Based on data for four fiscal years (2010- 2013), funds dedicated for human resources by the Joggins Fossil Institute for the protection, promotion and presentation of the Cliffs, average approximately \$310,000 annually. More than 65 percent (approximately \$196,000) is allocated for staff living within District 9 of the County. Moreover; the Joggins Fossil Institute has allocated more than 77 percent (approximately \$233,000) of wages to residents of Cumberland County.

Through the development and management of this Site, there has been additional investment in a facilitation and delivery of specific training programs to enable local community residents and employees to develop skills, knowledge and abilities

to participate in the presentation and promotion of the Site and associated heritage values provincially and regionally. The Joggins Fossil Institute hosts numerous educational groups including K-12 school groups, university courses, and special interest groups. Additionally, the Joggins Fossil Institute provides for professional development opportunities for staff and for community members. Through the Institute's research program, our understanding of the geological past has been enhanced permitting us to be better informed about the present and future. Through the employment of a full time research scientist and with the support of a scientific advisory committee, the Institute has conducted and facilitated research that has resulted in the publication of numerous scientific papers, presentations at conferences and development of new information of interest to the general public. A key outcome of inscription of the Joggins Fossil Cliffs on the World Heritage List is the validation of the importance of the site to all of humanity.

More than 11 million dollars has been invested in the development and maintenance of the World Heritage Site and associated buildings and infrastructure. The Joggins Fossil Centre, a LEED accredited building, was recognized through the Lieutenant Governor's Award for Architecture in 2008, was featured in numerous architectural publications. Since inscription the Province of Nova Scotia has invested in associated local infrastructure renewal including road paving, bridge construction and basic utilities such as sewer treatment.

The Institute facilitates connections and relationship building between diverse

sets of people. World Heritage listing promotes local and national pride in the property and develops feelings of responsibility for protect the area. To quote a Joggins resident,

"I think I have a passion for the Centre!! I still pinch myself every time I walk into the building; I am so proud to be from Joggins!!"

The Joggins Fossil Centre is a focal point for community services. Partnership agreements between government and non-government organizations have been developed to enable appropriate site management. The Joggins Fossil Institute has been a leader and innovator in tourism and education and has received recognition at an international, national and local level. For example, the Joggins Fossil Institute has won the Tourism Industry Association of Nova Scotia "Innovator of the Year" award; the Institute was shortlisted for the Progress Magazine Marketer of the Year" award; the site

was featured in the LA Times as one of the top 29 Global Travel Destinations. Furthermore; the Joggins Fossil Institute was honoured with a Silver Leaf Award for its work in engaging stakeholders and communications. This award was one of 30 national awards presented by the International Association of Business Communicators (IABC) to recognize communications professionals for outstanding achievement. The Centre continues to host local meetings and events (including weddings, retirement and Christmas functions, and celebrations of cultural and industrial heritage etc).

The Joggins Fossil Cliffs has appropriate legislative protection through the expanded area of designation as a Special Place, closures for mining, and application of the Beaches Act and Regulations. The protective designation for the Fossil Cliffs increased from approximately three kilometres of coast line to nearly fifteen. Onsite presentations are held to protect, promote and present natural geological

heritage that is in the public domain.

The Joggins Fossil Institute has adopted a natural landscaping policy to enhance the once contaminated mining site, to increase biodiversity and to provide for learning experiences that build wonder of the natural world. The Joggins Fossil Institute has partnered with local, national and international organizations to assist in these efforts. Moreover, the Joggins Fossil Institute continues to reach out to the local communities through the Adopt a Highway program and the Great Canadian Shoreline Cleanup.

Finally, the members of the Board, volunteers and partners, and the staff and management team of the Joggins Fossil Institute continue to take great pride in realizing the vision of the organization. We strive to foster an environment that promotes teamwork and fun while providing quality services to the public at large.

On behalf of the Joggins Fossil Institute,



Jenna Boon
Executive Director

Board of Directors

Gerald Read

(resigned August 2012)
replaced by

Don Trenholm

(September 2012) Ex-officio
Cumberland Regional Development Authority

Bill Fairbanks

Resident-Cumberland County

R.M. (Larry) Latta

(Vice Chairman and Acting Chairman)
Member at Large

Rob Naylor

Ex-officio & non-voting
Department of Natural Resources,
Government of the province of Nova Scotia

Dr. Scott Swinden

(Chair, Science Advisory Committee)
Scientific Background

Carla Wheaton

Ex-officio & non-voting
Parks Canada,
Government of Canada

John Reid

(resigned October 2012)
replaced by

Mike McLellan

(October 2012)
Ex-officio, Municipality of the County of Cumberland

Robert Barnes

Resident-Cumberland County

Rhonda Kelly

Resident-Cumberland County

Carolyn Melanson

Resident-Cumberland County, District 9

Gary Tower

(Treasurer/Secretary)
Member at Large

Vacant

Ex-officio & non-voting
Department of Economic Development and Tourism,
Government of the province of Nova Scotia

Management Team and Staff

Jenna Boon

Executive Director

Dr. Melissa Grey

Curator of Paleontology

Jordan LeBlanc

(Resigned September 2012)
Assistant Superintendent

Stephanie Viera

(Hired October 2012)
Operations Manager

Lorna Terrio

Office Manager



Key figures

For the past three years the Joggins Fossil Institute has expended approximately \$299,925 annually for human resources. Most of the funds for human resources were allocated to residents of Cumberland County demonstrating that the Joggins Fossil Institute is a significant local employer.

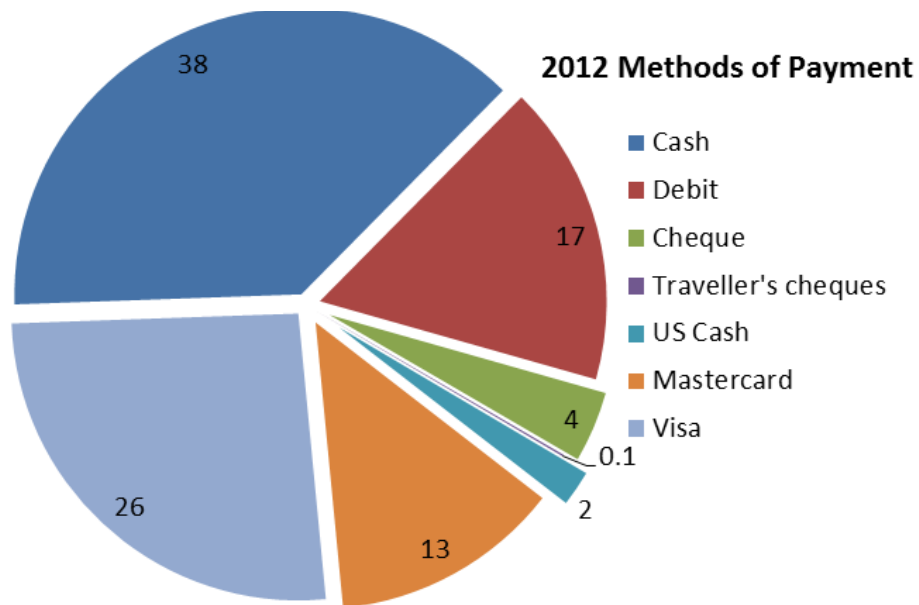
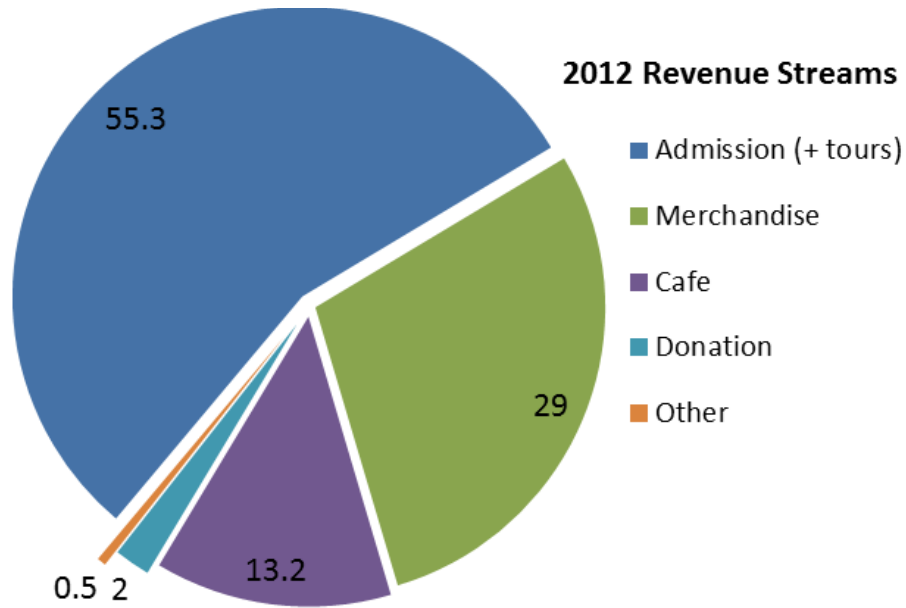
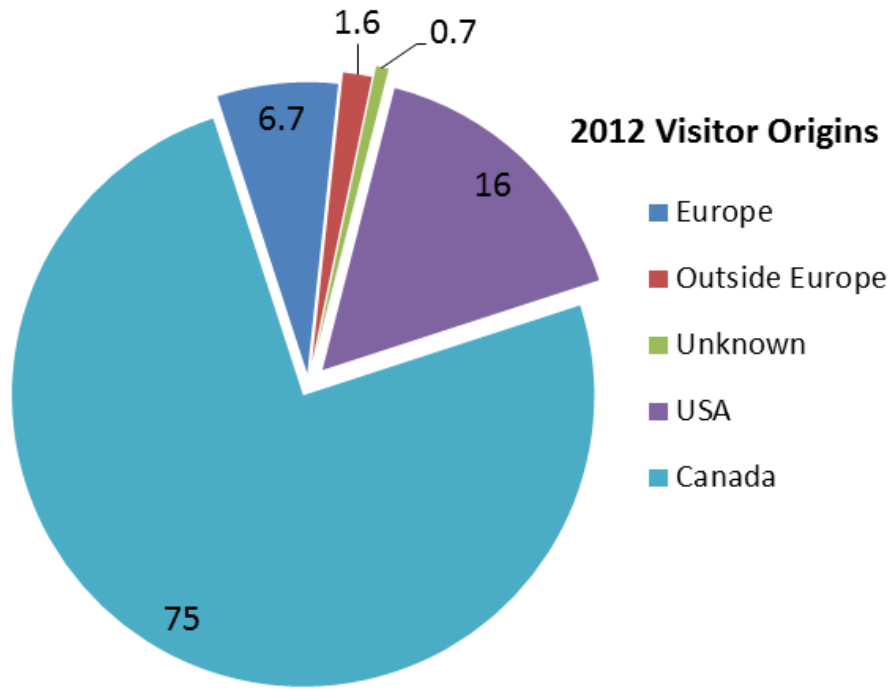
- More than 65 percent of funds allocated for human resources were expended for employees who resided in District Nine of Cumberland County

- More than 41 percent of employees hired in the past three years have resided in District Nine of Cumberland County

- More than 77 percent of funds allocated for human resources were expended for employees who resided in Cumberland County

93.8% of surveyed visitors agree that the Joggins Fossil Centre and Cliffs are a “world-class experience”

Number of memberships	569
Number of Facebook fans	1461
Average number of website hits per day	513
Total number of website hits this year	189,651
Number of people who paid admission	10,752
Estimated to visitors to the Joggins Fossil Cliffs UNESCO World Heritage Site	18,000
Average rating from feedback through “Trip Advisor”	4.56/5
Highest weekly sales (Aug 5th to 11th):	\$14,378
Number of hours of learning on the UNESCO Site: (= number of people on a tour * tour hours)	5687



Education, Outreach, and Events

The Joggins Fossil Institute recognises the need for the planning and management of both formal and informal learning opportunities. Everyone who visits the site is immersed in some form of education: from multi-generational family groups visiting the beach and discovering fossils to planned visits by school groups who are seeking to accomplish specific learning outcomes.

EDUCATION / TOUR GROUPS

The Joggins Fossil Centre hosted 43 educational groups, totalling nearly 1,300 students/visitors. Group/educational bookings earned nearly \$8000. A typical group visits the Exhibition Gallery, and the beach, and may also participate in a curriculum-oriented activity such as: CSI Joggins (Carboniferous Scene Investigation), Geological Timeline Exploration, or casting and molding of fossils. In 2012, the Centre held its first day camps and children attended from the local region (Advocate, Joggins, River Hebert, Maccan, and Amherst). The day camps were very well attended with about 20-25 children in each.

Student groups ranged from kindergarten to university-aged. Other tour groups that visited the site included local tour company participants, life-long learners (primarily composed of retirees on a guided tour of the province), and scientific conference visits.

GALLERY AND EXHIBITIONS

The 2012 season saw two new exhibits to the Gallery: a "Current Research" display, highlighting CT scanning of fossilised tree trunks for bones; and an exhibit on the "Smallest Tetrapod Trackway in the Fossil Record". A new model of a dragonfly was also purchased from a local (Oxford) model-maker and is hanging in the Gallery. Small additions of models, including millipedes, dragonflies, and lizards were also purchased and placed on the model trees in the Gallery. An intern also began to develop a historical timeline exhibit, which remains in progress.

OUTREACH

The Curator of Paleontology attended and presented at two scientific conferences in 2012, including: the Atlantic Geosciences Society Colloquium in



Dartmouth, NS and the Canadian Paleontology Conference (CPC) in Toronto, ON. The Executive Director participated in the World Heritage Panel of the International Union for the Conservation of Nature in Switzerland. The panel meets to review the state of conservation of existing World Heritage Sites and also provides advice to the World Heritage Committee on new nominations for potential inscription on the World Heritage List.

The Management Team delivered presentations to community, school, and professional groups, with attendees totalling approximately 450 people in 2012. The Institute's staff delivers talks when requested by groups at either the Joggins Fossil Centre or at other locations around the Maritime Provinces. A sampling of groups we delivered off-site talks to include: Huntsman Marine Science Centre (St. Andrew's, NB); Probus Club (Halifax, NS); Amherst Shore Provincial Park (NS); Baked Ham Community Lecture Series (Sackville, NB), Nova Scotia Community College Tourism Program (Kentville, NS).

The Curator of Paleontology also participated as a Mentor in Techsploration (www.techsploration.ca), a program that encourages young girls to explore careers in science, trades and technology.

A self-guided tour booklet was completed (in both French and English) and is for sale in the Gift Shop – this was funded by the Canadian Geological Foundation.



Events of 2012

March Break: 3 days of free workshops for students and 1 day of hockey hosted by the Centre; local and regional attendees; local media coverage.

Earth Day/Centre Opening (April 22): unveiling of the book on Joggins entitled "The Coal Age Galapagos" by John Calder. Local and regional attendees; local and regional media coverage (newspapers, radio)

Artist's exhibition (Robert Lyon, graphic artist; April 22-Oct 31)

Local Tree Planting with the River Hebert Gardening Club and Cadet Corps (May 7)

Adopt-A-Highway Clean-up (May 25)

Mother's Day Brunch (May): local and regional attendees

Father's Day BBQ and Lobster Boil (June): local and regional attendees

Canada Day participation in Joggins parade (July 1): local and regional attendees

Baby-sitting course (July 4): held at Centre, hosted by Maggie's Place (Amherst, NS)

Inscription Day (July 7): cake-cutting ceremony to celebrate the anniversary of UNESCO World Heritage Inscription

Kid's Camps (July 19 and August 14): free, education and fun day camps (20 participants from local area each day)

Great Canadian Shoreline Clean-up (September 18): participation by volunteers from the local community and the River Hebert Elementary School (grade 5/6 class)

Halloween Party (October 27): Children's costume party! Local and regional attendees

Holiday Sale (December 16): annual gift shop sale and chowder lunch

Scientific Research

SCIENTIFIC ADVISORY COMMITTEE (SAC)

The Joggins Fossil Institute's Science Advisory Committee is an advisory body to the Board of Directors on matters of research and other scientific matters related to the site and its management. The SAC currently consists of 10 volunteer members that come from two government departments (Department of Natural Resources and Department of Communities, Culture, and Heritage) and four maritime universities (Acadia University, Dalhousie University, Mount Allison University and St. Mary's University). Members specialize in geology, paleontology, biology, or environmental sciences. The Curator of Paleontology is an ex-officio member of the SAC and is responsible for organising meetings, taking and distributing minutes, and reporting to the Board on SAC recommendations. The SAC meets three times a year and submits an annual report to the Board summarizing the committee's work.

In 2012 the SAC contributed to the JFI website "Research" pages by submitting a short summary of their work. The SAC, for the first time, was highlighted on the website: <http://jogginsfossilcliffs.net/research/SAC.php>.

The group also participated in a strategic planning session whereby they identified short and long-term goals; these include:

- Event planning for the 100th anniversary of the IGC field trip to Joggins
- Environmental site management/natural landscaping position statement
- Explore the potential for a Research Associate Program and research grant program
- Assessment of impact of climate change on the site
- Assess fundraising potential / contacts
- Assess biodiversity at the site (not just of fossils)

Items to explore in future years (or current year):

- Artist-in-residence program
- Assess potential to add another criteria to World Heritage designation

COLLABORATIONS

Formal research collaborations remain established between JFI, Acadia University and Mount Allison University (the Curator of Paleontology is an adjunct professor at both universities). JFI has also retained collaborations with the University of British Columbia and the University of Bristol on two research projects. JFI has recently entered into a new collaboration with the Nova Scotia Museum, Fundy Geological Museum, and University of Toronto on a newly discovered fossil vertebrate (nicknamed "Superstar") from the Northumberland Shore area. This work will eventually lead to one or more published papers on the specimen, which may be an entirely new species, and perhaps genus.

PUBLICATIONS

In 2012, two journal publications were published specifically on Joggins and these references can be found on the JFI website: <http://jogginsfossilcliffs.net/research/recentpapers.php>

Institutional research:

GREY, M., FINKEL, Z.V., PUF AHL, P.K., and REID, L.M. 2012. Evolutionary mode of the ostracod, *Velatomorpha altilis*, from the Joggins Fossil Cliffs UNESCO World Heritage Site. *Lethaia* 45: 615–623

Collections

NEW ACQUISITIONS

The on-line database for the Collection held at the Joggins Fossil Centre is maintained by both JFI and the Nova Scotia Museum can be found at:

<https://mims.ednet.ns.ca/Joggins/search.aspx>

Forty-one specimens, collected under the Heritage Research Permit system, were added to the Nova Scotia Paleontological Collection for research and educational purposes. The total number of specimens in the Collection now numbers just over 800, with a Working Collection of nearly 60 specimens. The Working Collection is used for educational experiences and activities in the Gallery and off-site for outreach.

Taxonomy Category	New Specimens in 2012	Total
Invertebrates	12	67
Paleobotany	8	470
Structural	0	18
Traces	12	105
Vertebrates	9	143
Total	41	803

LOANS

Loans of fossil material from the Working Collection were sent to the Fundy Tidal Interpretive Centre for their summer display and to a Falmouth (NS) school teacher in the Fall for teaching purposes. A long-term loan went to Brandon University's Geology Department for use in their laboratory teaching.

“An Education in a Building”: While the fossil cliffs are naturally the central point, the recently constructed (and energy friendly!) interpretation centre has fantastic exhibits. I like the attention on the people and historical side, as well as the science. The staff are enthusiastic and some of them actually do scientific research and/or are born near the site. The gift shop and lunch room are both excellent as well”.

Support

PARTNERSHIPS & SUPPORTERS

Atlantic Geoscience Society, Councillor and Education Committee member
Bay of Fundy Ecosystem Partnership, Steering Committee member
Canadian Geological Foundation
Canadian National Geoparks Committee
Cape Chignecto Provincial Park
Central Nova Tourism Association
Cumberland County Heritage Network
Cumberland Regional Development Authority
Fundy Geological Museum
Geological Association of Canada, Paleontology Division
Government of Canada
Government of Nova Scotia
Gros Morne Institute of Sustainable Tourism
International Union for Conservation of Nature World Heritage Panel
Joggins Legion
Municipality of Cumberland County
Nova Scotia Community College
River Hebert Gardening Club
Super 8 Hotel

KEEPERS OF THE CLIFFS

Mrs. Edna Boon, Mr. Mark Boon, Dr. John Calder, Dr. Laing Ferguson,
Mrs. Rhonda Kelly and Mr. Don Reid.

WHO WE SUPPORTED IN 2012

Adopt-a-Highway
Rotary Club of Amherst
Cross Border Challenge
Joggins Volunteer Fire Department
Not-Since Moses
River Hebert Co-op
River Hebert Curling Club
River Hebert High School
River Hebert Gardening Club
World Heritage Fund; King Edward Lodge
NSCC – Springhill
Holland College Tourism & Culinary Centre
Cumberland YMCA

***“Don’t miss
it - fabulous!
Even if
you are
not keenly
interested
in geology
this is a must
see”.***

Tripadvisor review by David M.,
Toronto, Canada (December 11, 2012)

Statement of Financial Activity

	2012-13	2011-12	Difference
REVENUE			
Federal student funding	5,812	10,716	-4,904
Provincial funding	258,330	253,570	4,760
Municipal funding	25,000	57,450	-32,450
Non-government funding	10,000	8,557	1,443
Earned Income	178,636	179,502	-866
Total Revenue	<u>477,778</u>	<u>509,795</u>	-32,017
EXPENSES			
Advertising and promotion	14,218	3,616	10,602
Board meetings	563	209	354
Events	822	2,088	-1,266
Insurance	2,608	3,542	-934
Interest and bank charges	3,257	5,678	-2,421
Capital purchases	1,562	0	1,562
Memberships	581	495	86
Office	3,281	6,733	-3,452
Photocopier	2,135	2,160	-25
Professional fees	2,500	5,500	-3,000
Purchases (Gift Shop and Cafe)	38,992	42,234	-3,242
Repairs and maintenance	35,525	29,609	5,916
Salaries and wages	319,037	323,306	-4,269
Supplies	1,710	1,705	5
Telephone	8,772	11,336	-2,564
Training	8,144	1,964	6,180
Travel	12,009	7,932	4,077
Utilities	31,889	28,872	3,017
Total Expenses	<u>487,605</u>	<u>476,979</u>	10,626
Excess (deficiency) of revenue over expenses	<u>-9,827</u>	<u>32,816</u>	



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