



# The Joggins Fossil Institute Annual Report

2011 - 2012



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## Vision

...to hold for the benefit and education of humanity, a collection and a geographic site representative of the Carboniferous Period.

.... to ensure that the Joggins Fossil Cliffs UNESCO World Heritage site and the associated collection are conserved, safely studied, and presented.

...to provide engaging visitor experiences that inspire wonder and build an understanding of the natural world.



A view of the cliffs at Coal Mine Point

## Message from the Board of Directors



Mr. Gerald Read, Chair

*This past year was an exciting and eventful time for the Joggins Fossil Institute. In 2011, the Institute, in partnership with the Atlantic Geoscience Society and the Nova Scotia Museum, was able to bring the first reptile fossil ever found, Hylonomus lyelli, back to Joggins. This famous fossil was discovered by Sir William Dawson in 1859 when he visited the Fossil Cliffs. The oldest known reptile fossil was included in a temporary exhibit at the Joggins Fossil Centre, drawing a wide range of local and national media attention. The Natural History Museum in London, UK provided the fossil on loan to the Institute for the entire year. We were also pleased to host Dr. Jenny Clack, Professor and Curator of Vertebrate Palaeontology,*

*University Museum of Zoology - Cambridge for a public presentation about reptilian and amphibian life in the Coal Age.*

*This year, for the first time since being inscribed on the World Heritage List, the Joggins Fossil Institute compiled a Periodic Report for submission to UNESCO. The report provides a review of the status of the Site relative to the goals of the World Heritage Convention.*

*I am honoured to work with such an exceptional volunteer Board of Directors. The members of the Board are dedicated, hard working and committed to furthering the goals of the Joggins Fossil Institute. This year three new members joined the board and we welcome their unique insight and guidance. In addition, the Board is proud to be associated with the management, staff, volunteers, scientists, and educators who assist us with the protection, presentation and promotion of the Joggins Fossil Cliffs UNESCO World Heritage Site.*



The beach at low tide

## Message from Management and Staff



Ms. Jenna Boon, Director

*After four excellent years of working to ensure that the Joggins Fossil Cliffs are protected, presented and promoted, I am pleased to report that the Joggins Fossil Institute is not only maturing as an organization but that we have managed to achieve our mission with a balanced budget. As a not-for-profit, charitable, non-government organization, the Joggins Fossil Institute has welcomed the financial contributions from funding partners, including the Government of the Province of Nova Scotia and the Municipality of the County of Cumberland. The operation of the Institute is dependent upon the continued visitation to the site by educational groups, tourists, residents, scientists and educators. Moreover, financial donations by individuals and corporations are starting to enhance our ability to ensure the sustainability of the site.*

*We are pleased with the continued volunteer support from the Board of Directors and community members and appreciate that through partnerships and collaboration we can be most effective in realizing the goals of the organization. I sincerely thank our donors, collaborators, and team members for their engagement and support.*

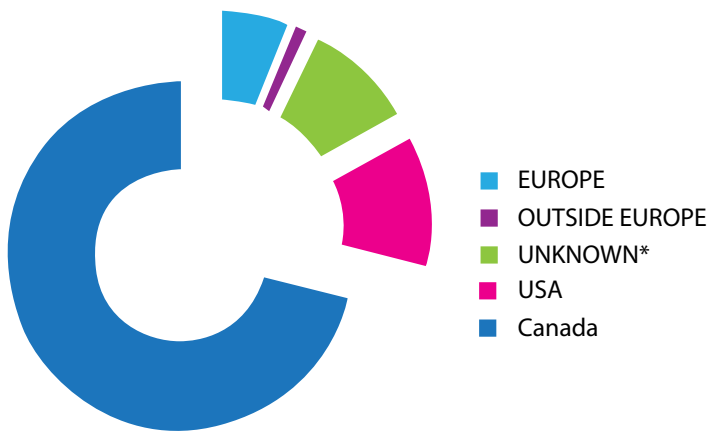
*The Joggins Fossil Cliffs are of exceptional value to this and future generations. We are fortunate to be able to contribute to sharing this site with people around the world. We are committed to furthering our understanding of the heritage values at this site and to providing experiences that inspire wonder!*



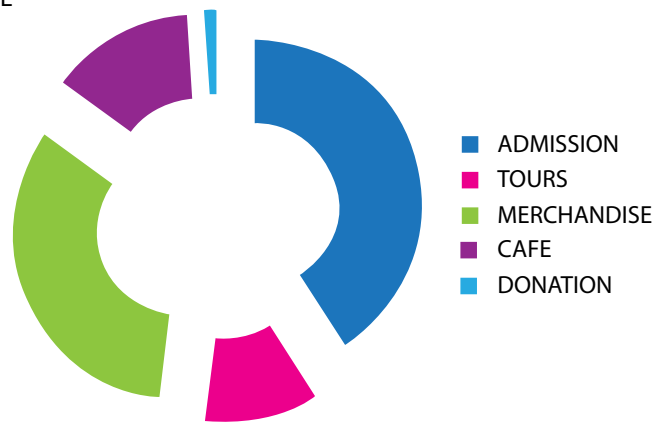
The beach at high tide

## The Joggins Fossil Institute's Numbers

Number of memberships:	569
Number of hours of guided beach tours:	396
Number of Facebook fans:	1097
Average number of website hits per day:	462
Total number of website hits this year:	169,422
Number of people who paid admission:	12,000
Estimated visitors to the Joggins Fossil Cliffs UNESCO World Heritage Site:	20,000
Average rating from "Trip Advisor":	4.56/5
Highest weekly sales:	\$13,190 (Aug 4th -10th)



Visitor Origins



Revenue Streams



Erin Burnley (right) and her brother, Jacob, with Erin's fossil discovery.

***Chris Burnley from Nanaimo, BC: "We really enjoyed our visit to Joggins –the display was excellent and our beach walk with Tammy was fascinating. Being able to see so many fossils in place and to learn about them was a real treat. Thanks ... and all the best with the great work you are doing at Joggins. We'll definitely visit again the next time we are back in the Maritimes"***

## Board of Directors, Management Team and Permanent Staff

Mr. Gerald Read	(Member at Large-CREDA)
Mr. Robert Barnes	(Resident-Cumberland County)
Mr. Neal Conrad	(Government of Nova Scotia: Ex-Officio)
Mr. Bill Fairbanks	(Resident-Cumberland County)
Mrs. Rhonda Kelly	(Resident-Cumberland County)
Mr. R.M. (Larry) Latta	(Member at Large)
Mrs. Carolyn Melanson	(District 9 Resident)
Mr. Rob Naylor	(Government of Nova Scotia: Ex-Officio)
Mr. John Reid	(Municipality of the County of Cumberland)
Dr. Scott Swinden	(Scientific Background)
Mr. Gary Tower	(Member at Large)
Dr. Carla Wheaton	(Government of Canada: Ex-Officio)

### Management Team

Ms. Jenna Boon	(Director)
Ms. Lorna Terrio	(Administrative Assistant)
Mr. Jordan LeBlanc	(Assistant Superintendent)
Dr. Melissa Grey	(Curator of Palaeontology)

## Education, Outreach, and Events

**Kimberley Drysdale, Advocate School, NS: “*The trip was great and Dana was super! You folks have a wonderful spot to share... have a great year! Thanks for the experience.*”**

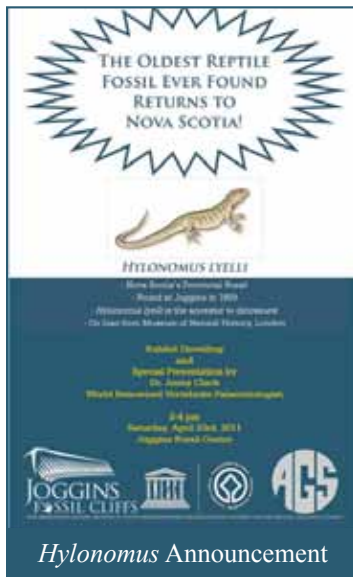
The Joggins Fossil Institute recognises the need for planning and managing both formal and informal learning opportunities. Everyone who visits the site is immersed in some form of education: from multi-generational family groups visiting the beach and discovering fossils to planned visits by school groups who are seeking to accomplish specific learning outcomes. Outreach is also an important component of education at the Institute and allows us to reach an even broader audience (see page 5).

### Education/Tour Groups

The Joggins Fossil Centre hosted 60 school groups, totalling over 1,188 students, ranging from kindergarten to university groups and bringing in approximately \$12,478, in 2011. 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, or casting and molding of fossils.

Other groups that visited the site included tour groups from hosted by Maritime tour companies, life-long learners (primarily composed of retirees on a guided tour of the province), and scientific conference visits.

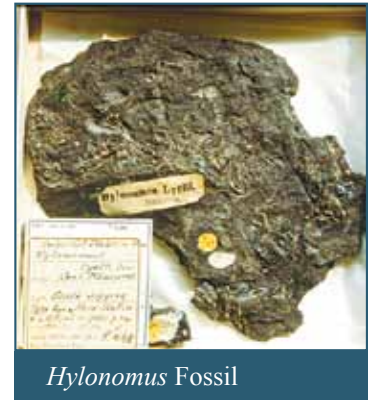
## Gallery and Exhibitions



2011 - 2012 season was exciting because *Hylonomus lyelli*, the oldest known reptile in the fossil record, came to the Centre on loan from the Museum of Natural History (London).

The specimen was originally discovered in Joggins by William Dawson who later sent it to the museum in London where it had resided for over 100 years.

The new, temporary, display garnered a wide array of local and national media attention and was a highlight of the gallery. This exhibit was supported by a \$5000 grant from the Atlantic Geoscience Society.



Hylonomus Fossil

Two more displays were also unveiled in 2011: “Biodiversity of the Coal Age” and “New Fossil Finds” highlighting visitor finds from the previous season.

## Outreach

The Curator of Paleontology attended and presented at two conferences in 2011, including: the Atlantic Geosciences Society Colloquium in Fredericton, NB and the Canadian Paleontology Conference (CPC) in Vancouver, BC. The Curator of Paleontology organised a special session at the CPC entitled “Celebrate Canada’s Geologic Heritage”, highlighting research at the geological World Heritage Sites in Canada. Joggins Fossil Cliffs, Burgess Shale, and Mistaken Point sites were represented at this session that was attended by over 50 conference attendees.

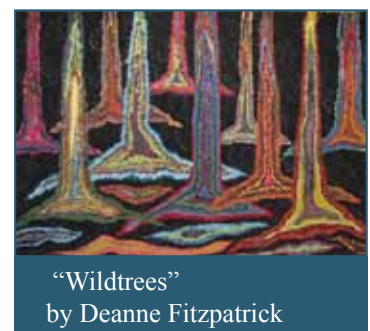
The Director participated in the World Heritage Panel of the International Union for the Conservation of Nature in Switzerland. The panel meets to review the state of conservation of existing World Heritage Sites and also provides advice to the World Heritage Committee on new nominations for potential inscription on the World Heritage List. In addition, the Joggins Fossil Institute has provided support for sites on Canada’s Tentative List for World Heritage inscription including: Mistaken Point (Newfoundland and Labrador), Grand Pre (Nova Scotia) and Pimachiowin Aki (Manitoba).

The Management Team delivered presentations to community, school, and professional groups, with attendees totalling over 250 people in 2011. The Institute’s staff delivers talks when requested by groups at either the Joggins Fossil Centre or at other locations around the Maritime Provinces.

The Curator of Palaeontology also participated in Techsploration ([www.techsploration.ca](http://www.techsploration.ca)), a program that encourages young girls to explore careers in science, trades and technology.



Halloween at the Centre



“Wildtrees”  
by Deanne Fitzpatrick

## Events in 2011

- **Earth Day/Centre Opening** (April 22): local and international attendees; local, regional, and national media coverage (newspapers, radio, TV)
- **Artist's exhibition** (Deanne Fitzpatrick, rug-hooker; April 22-Oct 31)
- **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
- **Inscription Day** (July 7): 4th Anniversary of JFC as a World Heritage site. Trees native to the Acadian forest planted on-site by Community Forests International; local media coverage (newspaper and radio)
- **50th Anniversary of Last Run of Joggins Train** (September 23): local attendees; local media coverage (newspaper)
- **Halloween Party** (October): Little Ray's Reptile show and costume party! Local and regional attendees; local media coverage (newspaper)
- **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.

## Scientific Research

### Science Advisory Committee (SAC)



Fossilized tree in the cliff

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, palaeontology, biology, or environmental sciences. The Curator of Palaeontology 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 2011, the SAC welcomed two new members to the committee: Peir Pufahl (Acadia University) and Danika van Proosdij (St Mary's University). Members advised on: the Periodic Report to UNESCO; potential new site development opportunities; and a new display highlighting current research for the exhibition gallery.

## Research

Publications: In 2011, two journal publications were published specifically on Joggins and these references can be found on the JFI website:

<http://jogginsfossilcliffs.net/research/recentpapers.php>

GREY, M. and FINKEL, Z.V. 2011. The Joggins Fossil Cliffs UNESCO World Heritage site: a review of recent research. *Atlantic Geology* 47: 185-200.

GREY, M., PUFAHL, P.K. and AZIZ, A.A. 2011. Using Multiple Environmental Proxies to Determine Degree of Marine Influence and Paleogeographical Position of the Joggins Fossil Cliffs UNESCO World Heritage Site. *Palaios* 26: 256-263.



## Collections

### New Acquisitions



Collections space at the Joggins Fossil Centre

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>

Twenty-seven specimens, collected under the Heritage Research Permit system, were added to the Nova Scotia Paleontological Collection for research and educational purposes. These specimens were collected under two permits: one to the Joggins Fossil Institute (JFI) and another to a researcher from the University College of Cape Breton. Those specimens collected under the JFI permit were found by the Curator of Palaeontology, JFI Interpreters, or visitors to the site.

The total number of specimens in the Collection now numbers over 750, with a Working Collection of over 50 specimens. The Working Collection is used for educational experiences and activities in the Gallery and off-site for outreach.

Taxonomic Category	# New Specimens in 2011	Total
Invertebrates	5	444
Paleobotany	10	93
Structural	4	156
Traces	6	56
Vertebrates	2	19
<b>Total</b>	<b>27</b>	<b>768</b>

## Outreach

A paper, co-authored by M. Grey and D. Skilliter (NS Curator of Geology), was published in the journal *Geological Curator*, outlining the unique and successful co-management of the paleontological collections housed at the Centre and loaned from the Provincial Collection:

GREY, M. and SKILLITER, D. 2011. Collections Management at the Joggins Fossil Cliffs UNESCO World Heritage Site: A New Model? *The Geological Curator* 9: 273-278.

## Loans

A significant loan of fossil material from the Joggins Fossil Institute was granted jointly through JFI and the Province to the Discovery Centre in Halifax for after-school programming that reached over 3000 school children.

## Collaborations

### Collaborations

Formal research collaborations remain established between the Institute, Acadia University and Mount Allison University (the Curator of Palaeontology is an adjunct professor at both universities). We have also undertaken new collaborative work with the University of British Columbia and the University of Bristol.

In 2011 the Curator of Palaeontology became a Corresponding Member for the Subcommittee on Carboniferous Stratigraphy.

The Joggins Fossil Institute partnered with regional tourism associations to participate in promoting the Bay of Fundy as a natural wonder of the world. Significant media and marketing efforts were made to secure votes for this international contest.



The Joggins Fossil Centre from the air

**JFI was awarded Gold certification for Leadership in Energy and Environmental Design (LEED) in 2012**

## Partnerships and Supporters

Atlantic Geoscience Society, 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  
Super 8 Hotel

### **Honorary 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 2011**

**Adopt-a-Highway; Amherst Rotary; Cross Boarder Challenge; Joggins Volunteer Fire Department; Not-Since Moses; River Hebert Co-op; River Hebert Curling Club; River Hebert High School; World Heritage Fund**

## 2011 Financial Summary

	2012	2011
<b>Revenue</b>		
Federal student funding	\$ 10,712	\$ 4,611
Provincial funding	253,570	257,140
Municipal funding	57,450	55,000
Non-government funding	8,557	12,478
Fundraising	6,285	4,032
Admissions	89,228	79,948
Gift shop	53,451	61,681
Café	28,307	34,615
Rental	1,302	1,584
Other	929	3,747
	<b>509,795</b>	<b>514,836</b>
<b>Expenses</b>		
Advertising and promotion	3,616	5,935
Board meetings	209	204
Events	2,088	4,778
Insurance	3,542	4,816
Interest and bank charges	5,678	3,956
Legal fees	-	236
Membership	495	1,057
Office	6,733	6,276
Photocopier	2,160	2,135
Professional fees	5,500	6,623
Purchases (Gift Shop and Café)	42,234	78,118
Repairs and maintenance	29,609	21,669
Salaries and wages	323,306	326,294
Supplies	1,705	1,602
Telephone	11,336	14,940
Training	1,964	3,484
Travel	7,932	13,981
Utilities	28,872	26,745
	<b>476,979</b>	<b>522,849</b>
<b>Excess (deficiency) of revenue over expenses</b>	<b>32,816</b>	<b>(8,013)</b>