

# THE JOGGINS FOSSIL INSTITUTE

ANNUAL REPORT 2015-2016



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**The Joggins Fossil Institute is a not-for-profit, charitable organization.**

**Our MISSION is to be exemplary in fulfilling our responsibilities under the United Nations Convention for the Protection of World Cultural and Natural Heritage to protect, conserve, and present the outstanding value of the Joggins Fossil Cliffs through research, education and tourism.**

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# MESSAGE FROM THE DIRECTOR

Message from Director (interim)/Curator

The geological record tells us that change is constant and the Joggins Fossil Institute is certainly no exception to that ancient rule. This past year has seen many changes – from staffing to stairs! In particular, the Institute now has four new Directors on the Board, new committee members and new staff. Probably the Institute's most significant change was the Executive Director's (Jenna Boon) resignation to work with Parks Canada. Jenna would be the first to remind her staff that change can be positive and, indeed, I believe the Institute will continue to grow and change for the better. As a tribute to our past ED, Jenna was awarded the Institute's highest honour as "Keeper of the Cliffs". Below is an extract of our speech to Jenna as she received her award:

*"Jenna inspired us to improve, learn and do more than we ever thought possible. She is the mother of the Institute and her legacy will be long-lasting – long into geologic time! Under her guidance, JFI has become internationally renowned and one that other World Heritage Sites and parks look to for standards of excellence.*

*The Joggins Fossil Institute thanks you for your drive, vision, passion and your strength!"*

Our aim is to honour Jenna's contribution to this special place by continuing to succeed and exceed our goals!



Dr. Melissa Grey



# BOARD OF DIRECTORS

## EXECUTIVE

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**Mr. Don Trenholm**

Chair

**Mr. Rod Tyson**

Vice-Chair

Resident-Cumberland County

**Mr. Alan Walter** (May 2015)

Treasurer

Member at Large

## OTHER DIRECTORS

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**Ms. Heather Hoeg**

Resident- Cumberland County, District 9

**Dr. Elisabeth Kusters**

Scientific Background

**Ms. Joanne Porter** (Nov 2015)

Resident-Cumberland County

**Ms. Laura Reinsborough** (Nov 2015)

Member at Large

**Mr. Doug Wilson** (May 2015)

Member at Large

## APPOINTED

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**Mr. Craig Beaton**

Ex-officio & Non-voting

Department of Communities, Culture and Heritage  
Government of the Province of Nova Scotia

**Mr. Rob Naylor**

Ex-officio & Non-voting

Department of Natural Resources  
Government of the Province of Nova Scotia

**Mr. Mike McLellan**

Ex-officio

Municipality of the County of Cumberland



# MANAGEMENT TEAM

**Ms. Jenna Boon**

Executive Director  
(Resigned June, 2015)

**Dr. Melissa Grey**

Director (Interim)/Curator

**Mr. Jordan LeBlanc**

Education and Outreach Manager  
(Hired September, 2015)

**Ms. Lorna Terrio**

Office Manager

**Ms. Jude Weatherbee**

Operations Manager  
(To December, 2015)

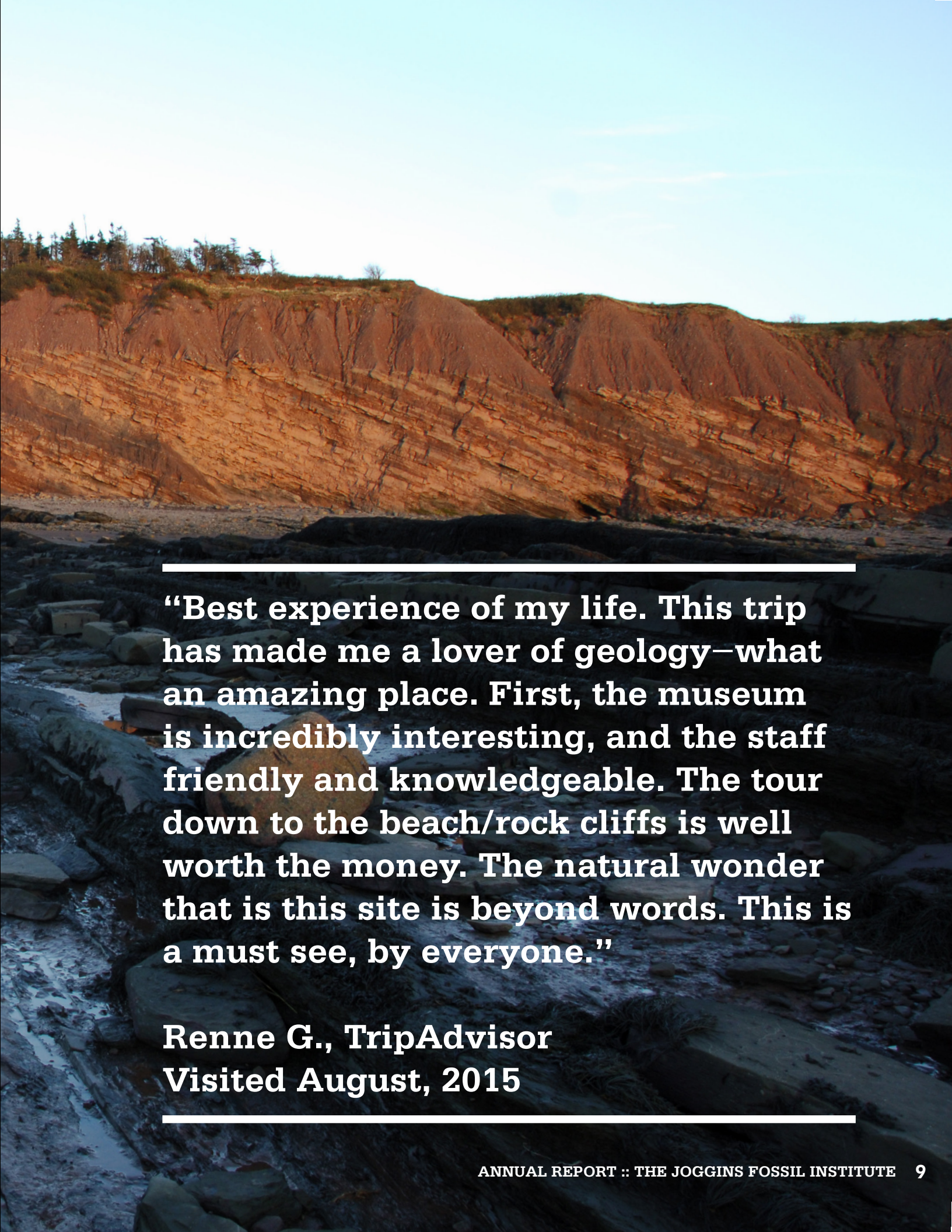




# JOGGINS FOSSIL CLIFFS







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**“Best experience of my life. This trip has made me a lover of geology—what an amazing place. First, the museum is incredibly interesting, and the staff friendly and knowledgeable. The tour down to the beach/rock cliffs is well worth the money. The natural wonder that is this site is beyond words. This is a must see, by everyone.”**

**Renne G., TripAdvisor  
Visited August, 2015**

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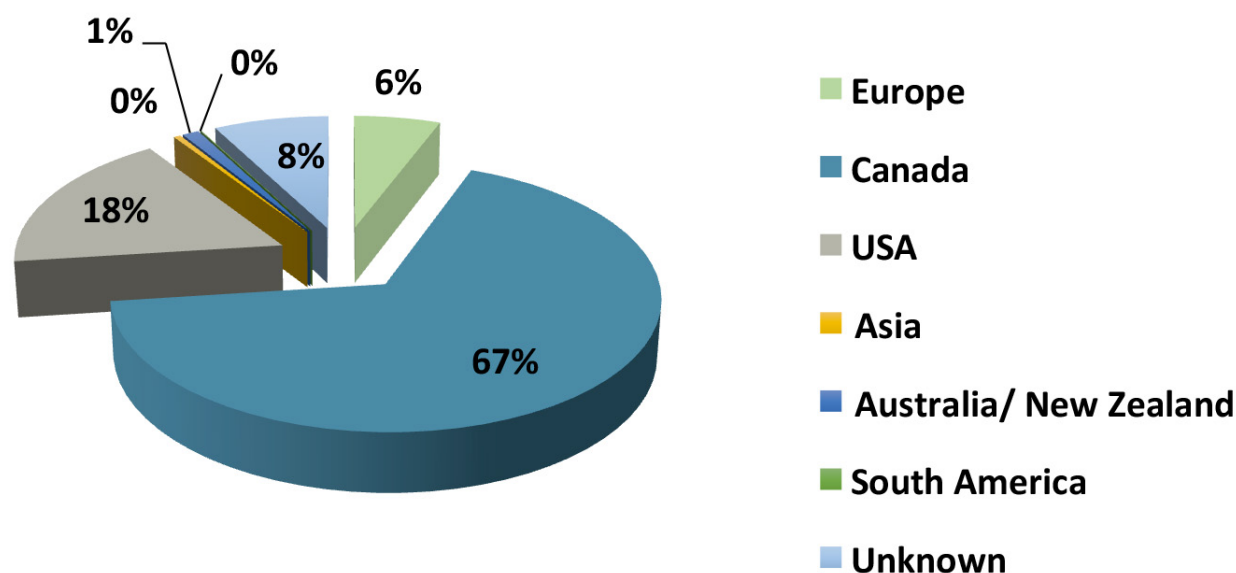


# THE NUMBERS

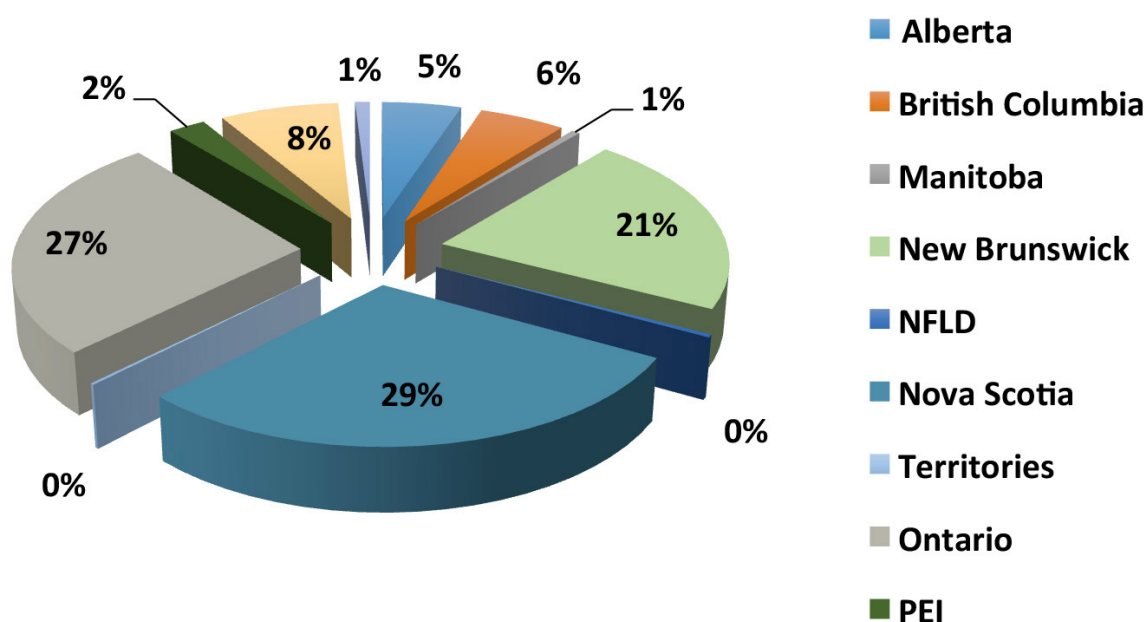
Number of Facebook fans	2,063
Number of Twitter followers	430
TripAdvisor rating	4.8 out of 5
Average number of website sessions per day	155
Total number of website sessions this year	56,575
Number of people who paid admission	12,468
Estimated visitors to Joggins Fossil Cliffs UNESCO World Heritage Site	20,000
Highest weekly sales (August 16th to August 22nd)	15,168
Number of learning hours on the World Heritage Site	Over 8,000!



## COUNTRY/CONTINENT OF ORIGIN



## PROVINCE OF ORIGIN





# EDUCATION, EXHIBITIONS & OUTREACH

Education is a critical component of our Mission at the Joggins Fossil Institute. Everyone who visits the UNESCO World Heritage 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.

## EDUCATION/TOUR GROUPS

The Joggins Fossil Centre hosted 45 educational groups, totalling approximately 1,165 students/visitors. Group bookings are nearly split 50/50 between school groups and special interest/tour bus groups. Group/educational bookings earned nearly \$9,400 in 2015/2016. Student groups ranged from kindergarten to university, mainly visiting from around the Maritime Provinces. Other groups that visited the site included those from private tour companies, life-long learners (primarily composed of retirees on a guided tour of the province), and scientific conference visits.

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. Popular activities for university groups include: creating a stratigraphic log of a portion of the cliffs and fossil quadrat surveys.

## SUMMER AND MARCH BREAK DAY CAMPS

The Joggins Fossil Institute offered day camps on Tuesdays in July and August for children throughout the summer of 2015. These camps were popular and offered new learning opportunities for local children. Sally Faulkner, JFI Interpreter and day camp leader (pictured below in orange!), entertained the children with crafts, scavenger hunts, fossil explorations, games, planting and caring for the Learning Garden, a Discovery Centre workshop, and more. Thanks for a great job, Sally! Many thanks also to workshop providers, volunteers and participants for making this year another success!



JFI offered its fifth year of March Break day camps, coordinated by Education Assistant, Laurie Glenn Norris. These were our most successful camps to date, with 57 registrations over 4 days! Presentations and workshops were given by: Clean Nova Scotia (including a visit from Eddie the Eco-Cat!); an organic gardening workshop from Broadfork Farm; a Mad Science for the Maritimes workshop; rug-hooking (with Mary Williams); a writing workshop from a local author (Sara Jewell); and a babysitting course facilitated by Maggie's Place. Local volunteers were integral in offering workshops and providing support. The Municipality of the County of Cumberland generously provided a grant of \$850 in support of the day camps.



## EXHIBITIONS

The Centre's new Fossil Finders exhibit was unveiled in early May (image right, left with Jenna Boon, Don Reid, Len Reid, John Reid and Dr. Melissa Grey). The exhibit is participatory and ever-changing as new fossils are discovered on the beach – visitors are able to see their finds on display! Funding was generously provided from both the Canadian Geological Foundation and the Atlantic Geoscience Society. Goose Lane Editions, Fredericton, NB, designed and installed this fun, new exhibit.

A new model of Joggins' top predator, an amphibian nicknamed "Rex" (image below), was donated by Mount Allison University student, Anna Farrell, a Fine Arts major with an interest in palaeontology. Rex makes for a wonderful addition to the Gallery!



## OUTREACH

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### Conferences

The Curator of Paleontology was invited to present at Mount Allison University's (MTA) "Cabinets of Wonder" – a symposium dedicated to the interplay of art and science. From this, a new collaboration with MTA English professor, Dr. Janine Rogers, that will result in a small exhibit at the Centre and a presentation at the 2016 European Geosciences Union's session entitled "Earth Sciences and Art: a fruitful co-operation for the benefit of the planet and its inhabitants".

### Presentations and Talks

The Joggins Fossil Institute delivered presentations to community, school, and professional groups, with attendees totalling approximately 200 people in 2015/16. The Institute's staff delivers presentations, as requested, either at the Joggins Fossil Centre or at other locations around the Maritime Provinces. A sampling of groups we delivered off-site talks to this year include: Nature Moncton and Mount Allison University Introductory Biology (1st year) and Natural Hazards (3rd year) classes.

### Other

The Curator of Paleontology taught a Spring session, week-long course at Mount Allison University (based primarily at the Joggins Fossil Centre) entitled "Research Methods in Palaeontology". Fun fact: Anna, who created the model of "Rex" for JFI (image, previous page) is a graduate of this course!



# SCIENTIFIC RESEARCH & COLLECTIONS

## SCIENCE ADVISORY COMMITTEE (SAC)

The Joggins Fossil Institute's Science Advisory Committee (SAC) advises the Board on matters of research and other scientific matters related to the site and its management. The SAC currently consists of 10 volunteer members 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, in conjunction with the Chair (currently Dr. Elisabeth Kusters), is responsible for organizing meetings, taking and distributing minutes, and reporting to the Board on SAC recommendations. The SAC meets twice a year and submits an annual report to the Board summarizing the committee's work.

The SAC welcomed four new members: Drs. Suzie Currie and Jeff Ollerhead (Mount Allison University), Lynn Dafoe (Natural Resources Canada), and Grant Wach (Dalhousie University) after the terms of Drs. John Calder, Zoe Finkel, Diana Hamilton, Martin Gibling, and Andrew MacRae came to a six-year completion. Many thanks to our "retiring members" for all your enthusiasm and efforts, and welcome to our new members.

The bulk of efforts from the SAC in 2015 surrounded the creation a Research Associate Program to support ongoing research at the site that is now being implemented at the JFI.



## RESEARCH

Formal research collaborations remain established between JFI, Acadia University and Mount Allison University (the Curator of Palaeontology is an adjunct professor at both universities). Research with both Honour's and Master's students at Acadia University continues into 2015. Three papers on Joggins, co-authored by the Curator of Palaeontology, are in various stages of publication:

Carpenter, D., Falcon-Lang, H., Benton, M. and Grey, M. 2015. Early Pennsylvanian (Langsettian) fish assemblages from the Joggins Formation, Canada, and their implications for palaeoecology and palaeogeography. *Palaeontology*.

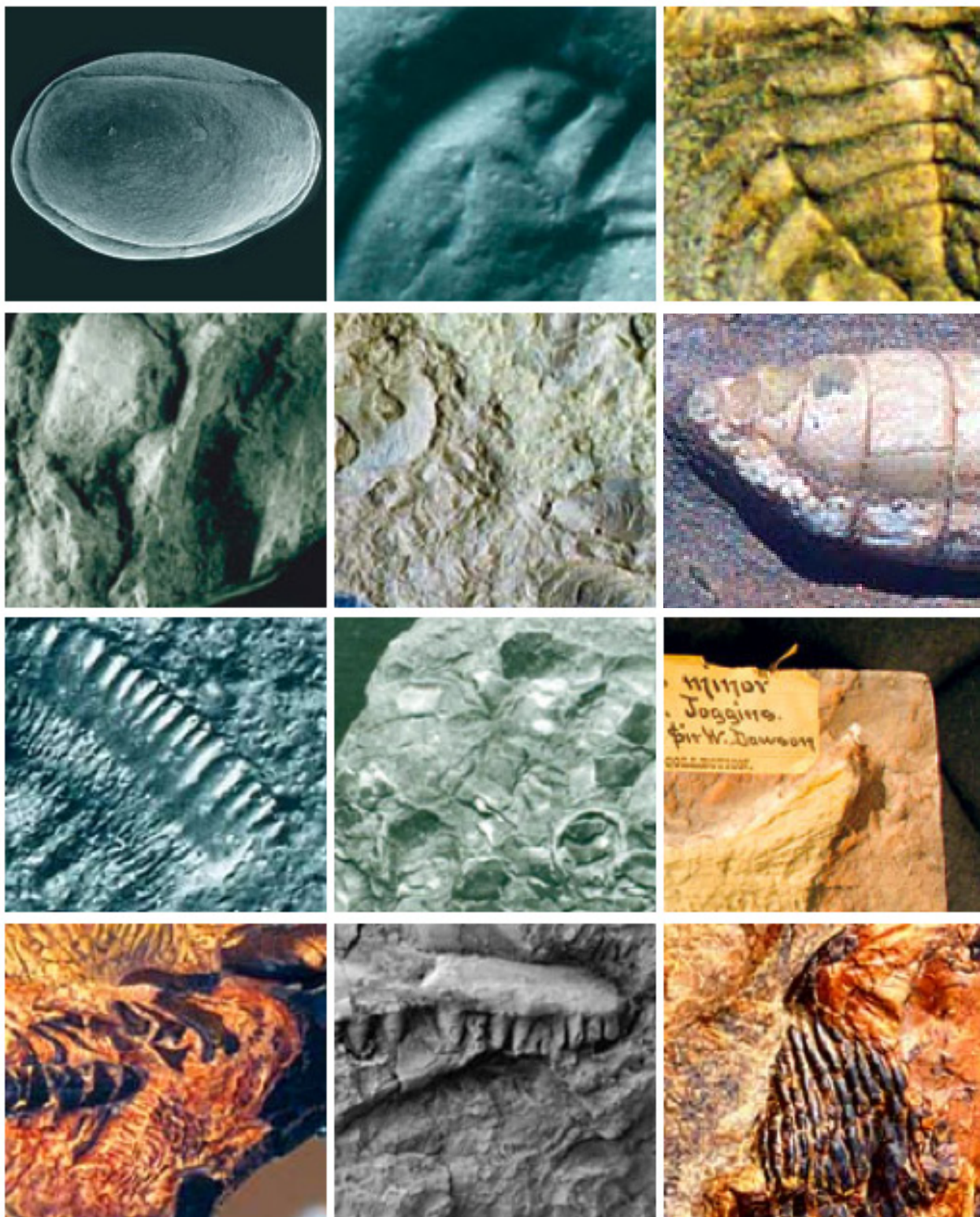
Buhler, P.B. and Grey, M. accepted. Limulid burrowing traces at the Late Carboniferous Joggins Fossil Cliffs UNESCO World Heritage Site, Nova Scotia, Canada. *Ichnos*.

Prokop, J., Pecharová, M., Nel, A., Grey, M., Hörschemeyer, T. submitted. A remarkable insect from the Pennsylvanian of the Joggins Formation in Nova Scotia, Canada: insights into unusual venation of Brodiidae and nymphs of Megasecoptera. *Journal of Systematic Palaeontology*.

Visiting Researchers: The field season of 2015 also brought teams from Carleton University and Baylor University to study vertebrates and paleosols (fossil soils), respectively.







## COLLECTIONS

Eight new specimens, collected under the Heritage Research Permit system, were added to the Nova Scotia Paleontological Collection (housed at the Joggins Fossil Centre) for research and educational purposes. The total number of specimens in the collection now numbers over 1700, with a Working Collection of approximately 60 specimens. The Working Collection is used for educational experiences and activities in the gallery and off-site for outreach.

A significant donation was received from Mount Allison University of Working Collection fossils (including cabinets) from various time periods and geographic locations (these are not included in the table below because they are specimens owned by JFI and not the Province).

TAXONOMIC CATEGORY	# OF NEW SPECIMENS IN 2015	TOTAL
Invertebrates	3	90
Paleobotany	5	712
Structural	—	19
Traces	—	541
Vertebrates	—	351
Unknown	—	27
<b>TOTAL</b>	<b>8</b>	<b>1740</b>



# MEMBERSHIPS, PARTNERSHIPS & SUPPORTERS

Association of Nova Scotia Museums.....	Member
Atlantic Geoscience Society.....	Member
Bay of Fundy Ecosystem Partnership.....	Member
Canadian Geological Foundation.....	Supporter
Canadian National Geoparks Committee.....	Member
Cape Chignecto Provincial Park.....	Supporter
Clean Nova Scotia.....	Supporter
Central Nova Tourism Association.....	Member
Cumberland County Heritage Network.....	Member
Fundy Geological Museum.....	Partnership
Geological Association of Canada, Paleontology Division.....	Council Member
Government of Canada.....	Supporter
Government of Nova Scotia.....	Supporter
Gros Morne Institute of Sustainable Tourism.....	Supporter
International Union for Conservation of Nature World Heritage Panel.....	Member
Municipality of the County of Cumberland.....	Supporter
Nova Scotia Community College.....	Supporter
River Hebert Gardening Club.....	Supporter
Super 8 Hotel .....	Partnership

## LIFETIME KEEPERS OF THE CLIFFS

Lifetime Keepers of the Cliffs are those exceptional individuals who have made a significant contribution to the development and support of the Joggins Fossil Institute.

Ms. Jenna Boon  
Mrs. Edna Boon  
Mr. Mark Boon  
Dr. John Calder

Dr. Laing Ferguson (1935-2013)  
Mrs. Rhonda Kelly  
Mr. Don Reid

## VOLUNTEERS

The individuals listed below have enthusiastically donated their time to assist with activities, events and/or sit on our Board of Directors and various committees:

Louanne Berry.....	Children's Camp Volunteer
Susan Beaton.....	Children's Camp Volunteer
Edna Boon.....	Keeper of the Cliffs
Mark Boon.....	Keeper of the Cliffs
John Calder.....	Science Advisory Committee Member (to Oct. 2015)
Suzie Currie.....	Science Advisory Committee Member (as of Oct. 2015)
Charlene Daborn.....	Children's Camp Volunteer
Lynn Dafoe.....	Science Advisory Committee Member (as of Oct. 2015)
Zoe Finkel.....	Science Advisory Committee Member (to Oct. 2015)
Martin Gibling.....	Science Advisory Committee Member (to June 2015)
Laurie Glenn Norris.....	Children's Camp Volunteer
Don Grey.....	Volunteer
Diana Hamilton.....	Science Advisory Committee Member (to Oct. 2015)
Pam Harrison.....	Volunteer
Heather Hoeg.....	Board of Directors Member
Elisabeth Kosters.....	Science Advisory Committee Member
Peter Lelievre.....	Volunteer
Andrew MacRae.....	Science Advisory Committee Member (to June 2015)
Su Morin.....	Volunteer
Jeff Ollerhead.....	Science Advisory Committee Member (as of Oct. 2015)
Joanne Porter.....	Board of Directors Member
Peir Pufahl.....	Science Advisory Committee Member
Don Reid.....	Keeper of the Cliffs
Laura Reinsborough.....	Board of Directors Member
Rod Tyson.....	Board of Directors Member
Alan Walter.....	Board of Directors Member
Doug Wilson.....	Board of Directors Member

## WHO WE SUPPORTED IN 2015

Adopt-a-Highway; Joggins Volunteer Fire Department; River Hebert Co-op; River Hebert Curling Club; River Hebert High School; River Hebert Gardening Club; Nova Scotia Council on the Family; Nova Scotia Nature Trust; World Heritage Fund; King Edward Lodge; NSCC – Springhill; Cumberland YMCA; Amherst Rotary Club; Sackville Rotary Club; Joggins Legion; River Hebert and Joggins Development Association; Heritage Models; Atlantic Universities Geoscience Conference



# EVENTS IN 2015 & 2016

<b>Centre Opening</b>	April 22, 2015: Earth Day – Centre opened for the season!
<b>Fossil Finders Exhibit Opening</b>	May 5, 2015. A well-attended event that included the River Hebert grade 5-6 class who were the first to populate the exhibit!
<b>Canada Day</b>	July 1, 2015. JFI staff, dressed in costume and participated in the Joggins Canada Day Parade.
<b>Summer Day Camps</b>	Tuesdays in July and August, 2015. Activities included organic gardening, speakers from a number of area organizations, games and tons of learning.
<b>Volunteer Appreciation Luncheon</b>	October 21, 2015. Over 20 volunteers and supporters attended this event in appreciation of their time and efforts.
<b>Halloween Party</b>	October 31, 2015. Trick-or-treating at the Centre with jack-o-lantern display.
<b>Community Coffee Breaks</b>	November 5, 2015. Local community members participated in a casual coffee break and gab session at the Centre.  March 3, 2016. Local community members participated in a casual coffee break and learned about the future of the Centre's stairs.
<b>Holiday Sale</b>	November 29, 2015. Local vendors set-up tables to sell their wares in the Multipurpose room. Sales in the Gift Shop and Café reached almost \$1,000.
<b>March Break</b>	March 14-18, 2016. Children's day camps.

# STATEMENT OF FINANCIAL ACTIVITY

	2014-2015	2015-2016	DIFFERENCE
<b>REVENUE</b>			
Federal Student Funding	\$14,064	\$7,129	-\$6,935
Provincial Funding	\$258,239	\$258,139	-\$100
Municipal Funding	\$55,600	\$850	-\$54,750 * <sup>1</sup>
Non-Government Funding	\$37,000	\$8,000	-\$29,000 * <sup>2</sup>
Earned Income	\$197,925	\$186,159	-\$11,766
Total Revenue	\$562,828	\$468,253	-\$94,570
<b>EXPENSES</b>			
Advertising and Promotion	\$8,227	\$4,100	-\$4,127
Bad Debts	\$55,000	—	—
Insurance	\$7,070	\$5,386	-\$1,684
Interest and Bank Charges	\$4,289	\$3,796	-\$493
Memberships	\$75	\$420	\$345
Miscellaneous	\$2,585	\$1,604	-\$981
Office	\$7,764	\$4,601	-\$3,163
Professional Fees	\$5,500	\$5,500	\$0
Project Expense (New Exhibit)	\$36,819	\$8,345	-\$28,474
Purchases (Gift Shop and Café)	\$33,015	\$35,520	\$2,505
Repairs and Maintenance	\$22,883	\$31,952	\$9,069
Salaries and Wages	\$310,929	\$293,311	-\$17,618
Supplies	\$422	\$2,929	\$2,507
Telephone	\$8,337	\$11,402	\$3,065
Training	\$2,644	\$3,797	\$1,153
Travel	\$5,409	\$257	-\$5,152
Utilities	\$37,014	\$38,017	\$1,003
<b>Total Expenses</b>	<b>\$547,982</b>	<b>\$453,446</b>	<b>-\$94,536</b>
<b>Excess (Deficiency) of Revenue Over Expenses</b>	<b>\$14,826</b>	<b>\$14,807</b>	<b>\$39</b>

\*1 Funding was not received from the Municipality for either 14/15 or 15/16 but a funding agreement is being negotiated.

\*2 Grant for exhibit from Canadian Geological Foundation



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