



ANNUAL REPORT

2013-14

JOGGINS FOSSIL INSTITUTE



“...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.”

Joggins Fossil Institute - Vision

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A message from the Board of Directors

This year, we celebrated the fifth anniversary of inscription of the Joggins Fossil Cliffs on the UNESCO World Heritage List and welcomed more than 20,000 to the site. On behalf of the Joggins Fossil Institute Board, I want to thank all of the volunteers who contributed so much to these milestones. We could not do it without you. Our thanks are extended to the

Management Team and Staff; your hard work and dedication is appreciated. To the Province of Nova Scotia, our gratitude for the productive and collaborative partnerships that continue to thrive. Fortunately, Joggins Fossil Institute continues to have dedicated Board Members whose collective goal is to expand the Institute's role in the local,

scientific and tourist communities. Our future is determined by how well we interpret the past and Joggins Fossil Cliffs (as a UNESCO site) has a role to dynamically act as a focal point reflecting the past to the world.

Again, we want to thank our benefactors, staff, and visitors for their past, present, and future support.



A handwritten signature in black ink, reading "Don Trenholm".

Don Trenholm
Chair

***“Our
future is
determined
by how
well we
interpret
the past...”***

A message from the Management and Staff

On July 7, 2013, the Joggins Fossil Cliffs celebrated its 5th anniversary as a UNESCO World Heritage site and the excitement of being nestled between the Canadian Rocky Mountain Parks and Gros Morne National Park is still pervasive in the hearts, minds and souls of all involved in the Joggins Fossil Institute. Our volunteers on the Board of Directors, on the Science Advisory Committee, on the Emergency Response Committee, Keepers of the Cliffs and our local community residents work collaboratively and tirelessly with us to protect and promote this heritage of outstanding universal value for current and future generations. We continued to be inspired by the ever-increasing number of visitors to maintain and perfect the Joggins Fossil Cliffs experience to exceed International standards. Our vision to hold for the benefit and education of humanity, a collection and geographic site representative of the Carboniferous period is demonstrated by eleven new specimens added to the Nova Scotia Paleontological Collection. Recruitment of Dr. Elisabeth Kisters as Chair of the Science Advisory Committee (SAC) has re-ignited the excitement to provide expert and comprehensive advice and support to the Joggins Fossil Institute.

The Science Advisory Committee deliberates on scientific matters respecting the development, conservation and management of the property, the content of programs, scientific research related to the fossil cliffs, and scientific issues arising from the site's status as a UNESCO World Heritage Property.

Our vision to ensure that the Joggins Fossil Cliffs UNESCO World Heritage site and the associated collection are conserved, safely studied, and presented is evidenced by sustained, solid relationships with members of the scientific community in Maritime universities, Nova Scotia Museum, Fundy Geological Museum, Natural Resources Canada as well as new relationships with the California Institute of Technology and the University of Silesia, Poland. Dr. Melissa Grey, Curator of Palaeontology of Joggins Fossil Institute, will chair a new committee for the Atlantic Geosciences Society (AGS) to initiate a geosciences speaker series in public venues throughout the Atlantic Provinces.

Our vision to provide engaging visitor experiences that inspire wonder and build an understanding of the natural world is substantiated by a 33% increase over last year in Hours of Learning on the

World Heritage site while the estimated visitations increased by 4%. The Visitor Survey (2013) provided a myriad of positive comments including 'friendly, knowledgeable staff', 'excellent exhibits', 'unique experience', 'amazing tour' and 'spectacular'.

Strong support from both provincial and federal levels of government thrives and develops as they watch us cultivate the world international standard for all of our visitors. Local community support is strengthening and we work toward positive collaboration with partners. We can work together to identify, initiate and participate in the boundless opportunities to promote heritage values regionally and provincially. We can make a difference in our environment and continue to increase our understanding of the past in order to inform our collective future. It is essential that we continuously seek and source funding opportunities to ensure that the organization can continue to protect and promote the amazing Joggins Fossil Cliffs. We welcome ideas and participation in any and all of our fundraising activities and encourage citizens (locally, regionally and nationally) to become involved in this great organization.



Jenna Boon
Executive Director

BOARD OF DIRECTORS

R.M. (Larry) Latta

(resigned March 2013)
replaced by

Don Trenholm

(April 2013) Chair
Member at Large

Bill Fairbanks

(resigned October 2013)
replaced by

Margo Glennie

(November 2013)
Resident-Cumberland County

Dr. Scott Swinden

(resigned May 2013)
replaced by

Dr. Elisabeth Kusters

(June 2013) Chair, Science Advisory Committee
Scientific Background

Carolyn Melanson

(resigned October 2013)
replaced by

Heather Baker

(November 2013)
Resident-Cumberland County, District 9

Rob Naylor

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

Rhonda Kelly

Vice Chair
Resident - Cumberland County

Mike McLellan

Ex-officio
Resident - Cumberland County

Gary Tower

Member at Large

Vacant

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

Robert Barnes

Resident - Cumberland County

MANAGEMENT TEAM

Jenna Boon

Executive Director

Dr. Melissa Grey

Curator of Paleontology

Lorna Terrio

Office Manager

Stephanie Viera

Operations Manager

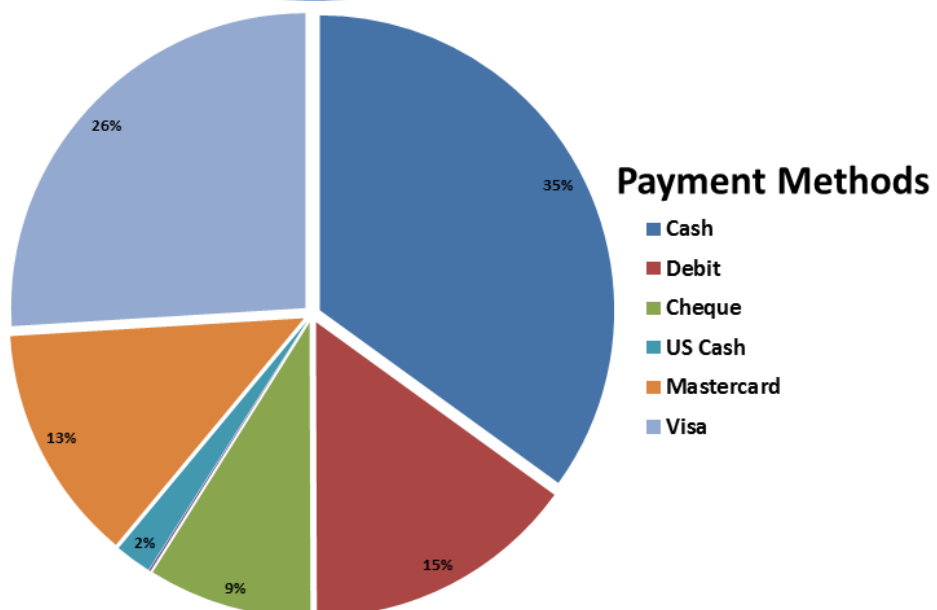
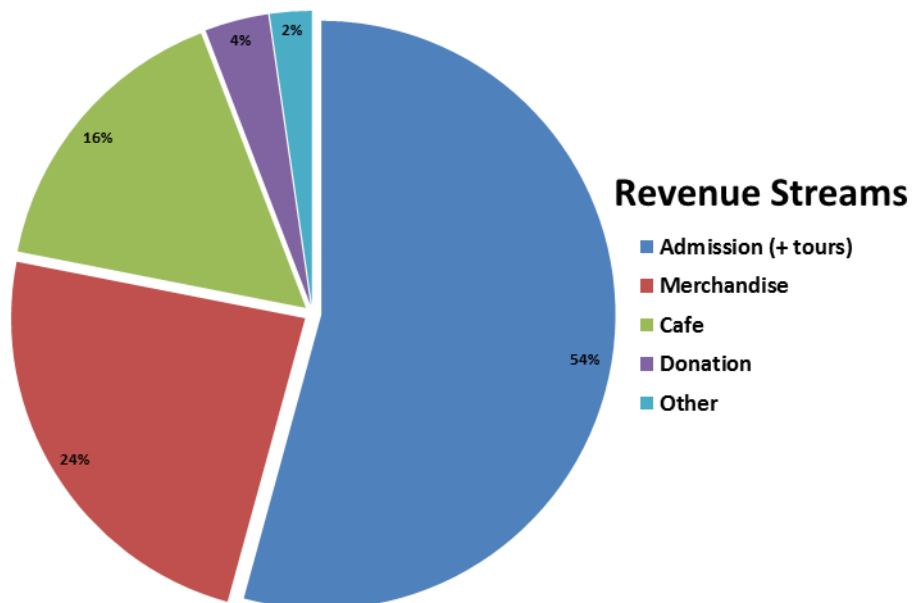
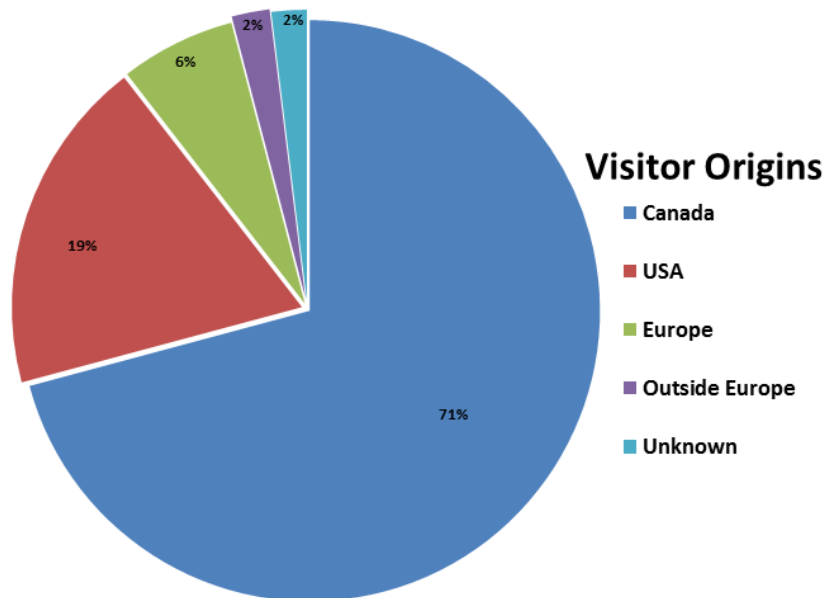


Key figures



Our total number of website hits this year reached the highest it's ever been - 232,878 !

Number of resident memberships	569
Number of Facebook fans	1584
Number of Twitter followers	203
TripAdvisor Rating (Certificate of Excellence, 2013)	4.5/5
Average number of website hits per day	630
Total number of website hits this year	232,878
Number of people who paid admission	10,742
Estimated to visitors to the Joggins Fossil Cliffs UNESCO World Heritage Site	18,742
Highest weekly sales (Jul 29 - Aug 4)	\$19,212
Number of hours of learning on the UNESCO Site	7568



Education, Exhibits, and Outreach

The Joggins Fossil Institute recognises the need for the planning and management of both formal and informal learning opportunities. 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 40 educational groups, totalling just over 1100 students/visitors. Group bookings are nearly split 50/50 between school groups and special interest/tour bus groups. Student groups ranged from kindergarten to university-aged. Other groups that visited the site included tour groups from Maritime tour companies, life-long learners (primarily composed of retirees on a guided tour of the province), meeting/conference groups 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.

March Break and Summer Day Camps

March Break day camps were offered for the third year at the Centre. Sessions for children involved: a babysitting course from Maggie's Place; crafts (sock puppets); art lessons; paleontological investigations; zumba; a magic show by Mister J.; and rock and bug sessions from Mad Science. Enthusiastic volunteers from the local community helped to ensure the camps were a great success!

Summer 2013 Day Camps

The summer of 2013 marked the first time that the Joggins Fossil Institute offered day camps for children

on a weekly basis throughout the summer. These camps were immensely popular and offered new learning opportunities. Guest presenters from the RCMP, the Confederation of Mainland Mi'kmaq, the River Hebert Gardening Club, Nova Scotia Museum, and the local community, volunteered their time to lead workshops. Other activities/resources were provided by JFI staff. In partnership with the River Hebert Gardening Club, the Joggins Fossil Centre created two Children's Learning Gardens that were planted and maintained for the first time by children attending summer day camps.

Educational Speaker Series

A component of the JFI's 5th anniversary celebration as a World Heritage Site was to host a free speaker series at the Centre throughout the 2013 season. Guest speakers came from Maritime universities to speak about scientific studies at the site and around the Bay of Fundy: Dr. Trevor Avery (Acadia University); Dr. Martin Gibling (Dalhousie University); Dr. Diana Hamilton and Dr. Colin Laroque (Mount Allison University); and Dr. Danika van Proosdij (Saint Mary's University). Pam Harrison, a dedicated volunteer of the JFI, also helped to organize other talks ranging in topics from sea bass fishing to electric cars to participation in the Ironman!

GALLERY AND EXHIBITIONS

The Joggins Fossil Centre hosted an exhibition of Canadian World Heritage paintings by artist Bernard Pelletier. Admission to the exhibition was by donation.

This was a planning and fundraising year for new exhibits both in and outside the Centre. A grant for \$20,000 was received from the Canadian Geological Foundation to create a new display/interactive exhibit entitled "Fossil Finders". Another grant (\$1000) was received from the Atlantic Geoscience Society to create a new outdoor exhibit on grindstones.

OUTREACH

Conferences and Meetings

The Curator of Paleontology attended and presented at one scientific conference in 2013, the Atlantic Geosciences Society (AGS) Colloquium in Dartmouth, NS. The Curator and the Operations Manager also participated in the Atlantic Science Teachers' conference, both as workshop presenters ("Educational Opportunities at the Joggins Fossil Cliffs UNESCO World Heritage Site") and as exhibitors. The Executive Director participated in the annual 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.

Presentations and Talks

The Joggins Fossil Institute delivered presentations to community, school, and professional groups, with attendees totalling approximately 300 people in 2013. 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: Amherst Shore Provincial Park; Dalhousie University Marine Management Program, Probus Club of Dartmouth; Nova Scotia Community College (Kingstec Campus) tourism students; Mount Allison University Earth System Science class; and New Brunswick Community College tourism students. This year marked the first time that JFI used video streaming for outreach purposes: the Curator of Palaeontology gave a presentation to Bathurst (New Brunswick) Elementary's grade 5 class!! The Curator of Palaeontology is also chairing a new committee for the AGS to initiate a geoscience speaker series in public venues across the Atlantic Provinces.

Other

The Curator of Palaeontology partook in filming as a Role Model for WISEAtlantic, an organisation that aims to introduce young women to careers in science and engineering: watch the video (tinyurl.com/DrGrey).

In 2013, JFI completed its first UNESCO Periodic Report on the state of conservation of the property. Check the UNESCO website for this report.

Events of 2013

• March Break	4 days of workshops for students; local media coverage
• Centre Opening	face-painting; kite-making and flying; beach visit
• JFI's Educational Talk Series	Every month from May to September
• Artist's Exhibition	Bernard Pelletier, World Heritage Sites
• Adopt-A-Highway Clean-up	Maccan Woods
• Mother's Day Brunch	Local and regional attendees
• Father's Day Lobster Boil	Local and regional attendees
• Canada Day	Participation in Joggins parade
• World Heritage Inscription	First JFI fundraiser (Cocktails in the Carboniferous) Community BBQ and beach sweep
• Kid's Camps	Every Tuesday from July 9 to August 13
• Great Cdn Shoreline Cleanup	Participation by volunteers from the local community and River Hebert Elementary School (Grade 5/6)
• Halloween Party	Children's costume party with Maritime Reptile Zoo! Local and regional attendees
• Holiday Sale	Annual gift shop sale and chowder lunch





VOLUNTEER APPRECIATION LUNCHEON

On October 23, 2013, in conjunction with United Nations Day, we hosted our first Volunteer Appreciation Luncheon at the Joggins Fossil Centre. We had about 25 volunteers in attendance and small tokens of appreciation were distributed and a wonderful lunch catered by the Art of Eating Deli was served.

Photo courtesy of Pam Harrison.



THE 5TH ANNIVERSARY OF UNESCO INSCRIPTION

The 5th anniversary of inscription of the Joggins Fossil Cliffs on the UNESCO World Heritage List was on July 7th. We celebrated this milestone with our inaugural fundraiser on Saturday, July 6th and followed that by a well-attended community BBQ with anniversary cake and a special "beach sweep" on Sunday, July 7th.

The "Cocktail Party in the Carboniferous" fundraiser saw the Centre transformed in to an elegant cocktail party with cocktails, other beverages and hors d'oeuvres. The evening started with a champagne toast on the beach by Brian Skabar, MLA for Cumberland North. The evening continued with the unveiling of the art exhibition by Quebecois artist, Bernard Pelletier, who has created paintings of all of Canada's UNESCO World Heritage Sites commissioned by Parks Canada. The exhibition remained on display all summer with the featured painting of the Joggins Fossil Cliffs.

We also held a silent auction with many local businesses and artisans showing their support by donating items to the auction. Those who donated include: Bogside Gallery, The Lightkeepers Kitchen and Guest House, Edna Boon, Mark Boon, Deanne Fitzpatrick, Dick Groot, Thaddeus Holownia, Robert Lyon, Dr. Andrew MacRae, Susan Tooke, Danny Walker, and the Wild Caraway Restaurant and Café.



Scientific Research and Collections

SCIENTIFIC ADVISORY COMMITTEE (SAC)

The Joggins Fossil Institute's Science Advisory Committee (SAC) is an advisory body to the Executive Director 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, in conjunction with the Chair, 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.

This year, the Science Advisory Committee welcomed new Chair, Dr. Elisabeth Kisters, recognized the contribution of the past Chair, Dr. Scott Swinden, for his dedication to the development of the Institute. The SAC began planning for a Research Associate Program to support ongoing research at the site. Many of the SAC members volunteered to describe their current research on film. These short videos can be accessed through the Joggins Fossil Institute Web Site (jogginsfossilcliffs.net/research/SAC.php). Finally this group of dedicated volunteers contributed to the 5th anniversary events by presenting for the Educational Speaker Series and hosting a community "beach sweep" in search of fossils.

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). New research with an Honour's student at Acadia University will be undertaken to continue work on ostracods at the World Heritage Site. JFI has also retained collaborations with many other institutions, including: University of British Columbia (extinctions; newly published paper in journal *Lethaia*: Smith et al. 2014); University of Bristol, UK (fish taxonomy); and Nova Scotia Museum, Fundy Geological Museum, and University of Toronto (new tetrapod fossil from the Malagash Formation). New collaborations include trace fossil studies with a visiting scientist from CalTech and tube worm (microconchid) studies with a scientist from University of Silesia, Poland.

1 Smith, P.L., Longridge, L.M., Grey, M., Jin Zhang and Bo Liang. 2013. From near extinction to recovery: Late Triassic to Middle Jurassic ammonoid shell geometry. *Lethaia*.

COLLECTIONS

Eleven new 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 approximately 60 specimens. The Working Collection is used for educational experiences and activities in the Gallery and off-site for outreach.

ACQUISITIONS

The on-line database for the Collection held at the Joggins Fossil Centre is maintained by both JFI and the Nova Scotia Museum. The database can be found at: <https://mims.ednet.ns.ca/Joggins/search.aspx>

Taxonomy Category	New Specimens in 2013	Total
Invertebrates	3	71
Paleobotany	4	474
Structural	0	18
Traces	2	107
Vertebrates	2	145
Total	11	815

LOANS

One major loan of fish material was sent to University of Bristol (UK) and another loan of microconchid material was sent to University of Silesia (Poland) for research purposes. Another loan of arthropod material was sent to the Museum of Natural History (Halifax, NS) for display purposes.



WONDERFUL INTERPRETATION

Tripadvisor review (August 20, 2013)

“... If you are interested in geology, biology, or archaeology, this should be on your bucket list. I am not particularly interested in any of those things (this was my hubby’s pick), but I am an avid museum-goer and I know a good exhibit when I see it. The interpretive center that accompanies the site is one of the best I have ever experienced...”

Support

PARTNERSHIPS & SUPPORTERS

***In partnership with
Clean Nova Scotia, the
Joggins Fossil Centre
employed two local
students to help us
create a new pollinator
garden on site.***

Atlantic Geoscience Society
Bay of Fundy Ecosystem Partnership
Canadian Geological Foundation
Canadian National Geoparks Committee
Cape Chignecto Provincial Park
Clean Nova Scotia
Central Nova Tourism Association
Cumberland County Heritage Network
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

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. This year, Dr. Laing Ferguson, a former member of the Joggins Fossil Institute Board and long time supporter of the Institute passed away in Sackville New Brunswick. The Centre will be hosting an exhibit in honour of Laing in 2014.

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

WHO WE SUPPORTED IN 2013-2014

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; Nova Scotia Council on the Family; Nova Scotia Nature Trust; World Heritage Fund; King Edward Lodge; NSCC – Springhill; Holland College Tourism & Culinary Centre; Cumberland YMCA; Sackville Rotary Club.





VOLUNTEERS

We are pleased to have over 50 volunteers who regularly volunteer their time with us. Below is a list of these individuals who enthusiastically donate their time to assist with activities, events and/or sit on our Board of Directors and various committees.

Victoria Allan	Kids Camp Volunteer
Beth Baker	Volunteer
Ronnie Baker	Volunteer
Bob Barnes	Past Board of Directors Member
Laura Bennett	Past Science Advisory Committee Member
Louanne Berry	Kids Camp Volunteer
Edna Boon	Keeper of the Cliffs
Mark Boon	Keeper of the Cliffs
John Calder	Science Advisory Committee Member
Bill Crossman	Emergency Response Committee Member
Charlene Daborn	Kids Camp Volunteer
Denise Dickinson	Kids Camp Volunteer
Bryan Dyck	Kids Camp Volunteer
Bill Fairbanks	Past Board of Directors Member
Zoe Finkel	Science Advisory Committee Member
Jessi Fogan	Kids Camp Volunteer
Martin Gibling	Science Advisory Committee Member
Margo Glennie	Current Board of Directors Member
Sarah Griebel	Volunteer
Diana Hamilton	Science Advisory Committee Member
Jim Hannon	Emergency Response Committee Member
David Harris	Emergency Response Committee Member
Pam Harrison	Volunteer
Andy Hinners	Kids Camp Volunteer
Heather Hoeg	Current Board of Directors Member
Shannon Jones	Kids Camp Volunteer
Rhonda Kelly	Current Board of Directors Member
Elisabeth Kusters	Science Advisory Committee Member
Larry Latta	Past Board of Directors Member
Peter Lelievre	Volunteer
Andrew MacRae	Past Science Advisory Committee Member
Mike McLellan	Current Board of Directors Member
Carolyn Melanson	Past Board of Directors Member
Laurie Melanson	Emergency Response Committee Member
Su Morin	Volunteer
Rob Naylor	Current Board of Directors Member
Peir Pufahl	Science Advisory Committee Member
Don Reid	Keeper of the Cliffs
Gerald Read	Past Board of Directors Member
Rick Rhodes	Kids Camp Volunteer
Deb Skilliter	Science Advisory Committee Member
Darcy Snell	Volunteer
Pat Thompson	Volunteer
Mary Thompson	Volunteer

Statement of Financial Activity

	2013-14	2012-13	Difference
REVENUE			
Federal student funding	6,035	5,812	223
Provincial funding	254,165	258,330	-4,165
Municipal funding (see Note 1)	1,025	25,000	-23,975
Non-government funding (see Note 2)	1,500	10,000	-8,500
Earned Income	213,199	178,636	34,563
Total Revenue	<u>475,924</u>	<u>477,778</u>	-1,854
EXPENSES			
Advertising and promotion	5,478	14,218	-8,740
Board meetings	471	563	-92
Events	3,093	822	2,271
Insurance (see Note 3)	5,650	2,608	3,042
Interest and bank charges	3,173	3,257	-84
Capital purchases	574	1,562	-988
Memberships	377	581	-204
Office	7,639	3,281	4,358
Photocopier	1,497	2,135	-638
Professional fees	5,688	2,500	3,188
Purchases (Gift Shop and Cafe)	46,018	38,992	7,026
Repairs and maintenance	26,650	35,525	-8,875
Salaries and wages (see Notes 3 and 4)	360,895	319,037	41,858
Supplies	2,623	1,710	913
Telephone	9,563	8,772	791
Training	2,963	8,144	-5,181
Travel	7,503	12,009	-4,506
Utilities	36,187	31,889	4,298
Total Expenses	<u>526,042</u>	<u>487,605</u>	38,437
Excess (deficiency) of revenue over expenses	<u>-50,118</u>	<u>-9,827</u>	

Notes:

1. Annual funding from Municipality has not been received for 2013-2014 fiscal year
2. In 2013, Canadian Geological Foundation contributed \$10,000 toward the production of self-guided tour book
3. Productive partnership with development authority ended resulting in increased costs in insurance and benefits
4. First time incentive for F/T staff (4% of salary); staff transition in Operations Management
5. It is estimated that 65% of energy costs could be recovered by non-functional turbine



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