

THE JOGGINS FOSSIL INSTITUTE

2017 ANNUAL REPORT

FISCAL YEAR | APRIL 1, 2016 - MARCH 31, 2017



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In Memoriam



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.



United Nations
Educational, Scientific and
Cultural Organization



The Joggins Fossil Cliffs
inscribed on the World
Heritage List in 2008

**ROCK.
SOLID.
HISTORY.**

A large, rugged rock formation with a white rectangular box containing text. The rock face is composed of various shades of grey, brown, and tan, showing signs of weathering and fracturing. The text is white and bold, set against the dark, textured background of the rock.

**Where the world-famous
Bay of Fundy exposes a
300-million-year-old story.**



MESSAGE FROM THE STAFF

This year our Board of Directors gave us the unique opportunity to evaluate our organizational structure and allowed us to make recommendations on how we, the staff, envisioned how the Institute should be managed. We were incredibly grateful to work closely with the Human Resources Committee of the Board (including Alan Walter, Elisabeth Kusters, and Rod Tyson) on a self-reflection exercise and to provide our insights on JFI's future. This was a very worthwhile endeavour for us as a team. With the support of our entire Board, JFI's management structure has changed from one of hierarchy to what's termed a "flat management" structure; this means that we now do not have an Executive Director, but instead three Directors of equal status: Director of Operations, Director of Administration, and Director of Science (also known as the Curator of Palaeontology). We were also able to hire an Education and Outreach Manager for the first time – a position most important to the Institute.

This year has proven to be one of our best! Visitor numbers were at an all-time high since we opened in 2008 and our team has never worked together so well. We hope this is just the beginning of more great things to come, including the formation of a new Fundraising Committee, plans for new gallery exhibits, new research, and much more as we enter into our tenth anniversary year celebration in 2018.

Stay connected with us through social media, our website/blogs, and quarterly newsletters.

The Joggins Fossil Institute team,



Melissa Grey



Jordan LeBlanc



Laurie Glenn Norris



Lorna Terrio



BOARD OF DIRECTORS

EXECUTIVE

Don Trenholm

Chair

Mr. Rod Tyson (to October 2016)

Vice-Chair

Resident-Cumberland County

Mr. Alan Walter (to May 2017)

Treasurer

Member at Large

OTHER DIRECTORS

Ms. Heather Hoeg (to May 2017)

Resident- Cumberland County, District 9

Dr. Elisabeth Kusters

Scientific Background and Chair of the Science

Advisory Committee

Ms. Joanne Porter

Resident-Cumberland County

Ms. Laura Reinsborough

Chair of the Fundraising Committee

Member at Large

Doug Wilson (to October 2016)

Member at Large

APPOINTED

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 & non-voting

Municipality of the County of Cumberland

MANAGEMENT TEAM

Dr. Melissa Grey

Director of Science/Curator of Palaeontology

Mr. Jordan LeBlanc

Director of Operations

Ms. Lorna Terrio

Director of Administration

Ms. Laurie Glenn Norris

Education and Outreach Manager



Permanent staff at JFI (L to R): Melissa Grey, Laurie Glenn Norris, Lorna Terrio, and Jordan LeBlanc



2016 seasonal staff at JFI (L to R, back row): Sander Manley, Max Chipman, Sally Faulkner, Rebecca Beardsley, Benjamin Manthorne, and Calvin Pratt; (L to R, front row): Dana Brown, Joyce MacAloney, and Cathy Hoeg; missing: Corey Hanham and Darren Doncaster



**“FOSSILS
FOSSILS
FOSSILS”**

“The perfection of the interpretive center... blends geology, ecology and biology with intellectual discourse surrounding evolution in the 1800s....Beautiful GREEN building; the latest in interpretive display techniques. One-hour and half-day tours are available. We saw the fossil tracks of a 6-foot-long invertebrate as well as the fossil of a 30-foot tall horsetail plant!”

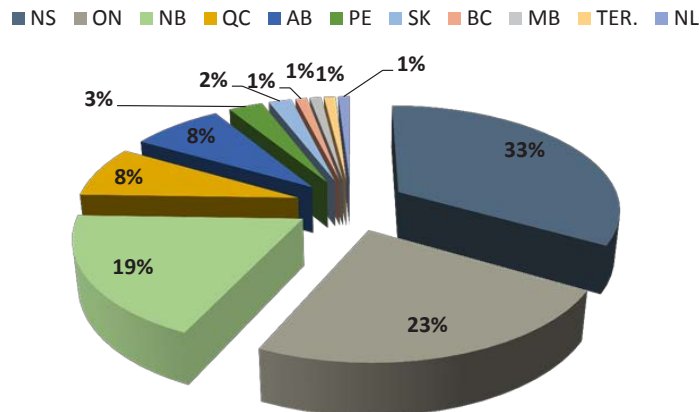
-Nationalparksdiva, Seattle

TripAdvisor (visited September, 2016)

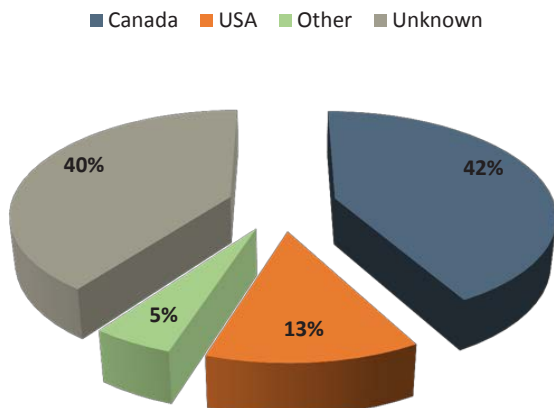
THE NUMBERS

Number of Facebook likes.....	2,499
Number of Twitter followers.....	535
TripAdvisor rating.....	4.5
Average number of website sessions per day.....	135
Total number of website sessions this year.....	49,149
Number of people who paid admission.....	14,959
Estimated visitors to Joggins Fossil Cliffs UNESCO World Heritage Site.....	25,000
Highest weekly sales.....	August 16-22

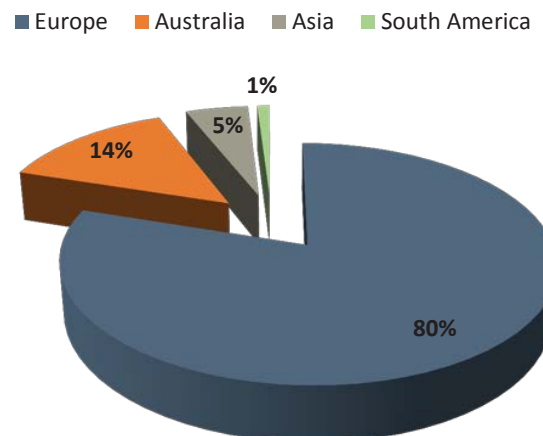
CANADIAN VISITOR PROVINCE OF ORIGIN



VISITOR COUNTRY OF ORIGIN



VISITOR ORIGIN - OTHER



EDUCATION, EXHIBITIONS & OUTREACH

EDUCATION

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.

GROUP TOURS

The Joggins Fossil Centre hosted 13 different school groups, totalling approximately 730 students! Student groups ranged from kindergarten to university, visiting mainly from around the Maritime Provinces. Other tours included special interest groups and senior's educational groups while bus tours accounted for dozens of bookings and hundreds of visitors. Group bookings are split approximately 50/50 between school groups and special interest/tour bus groups.

A typical group tour includes a visit to the Exhibition Gallery and the beach, and may also include a curriculum-oriented activity such as: CSI Joggins (Carboniferous Scene Investigation), Geological Timeline Exploration, or casting and painting of fossils. Popular activities for university-aged groups include creating a stratigraphic log of a portion of the cliffs and fossil quadrat surveys.

WRITE-IN JOGGINS AND FIBRE ARTS FRIENDS

Write-In Joggins is offered seven months a year and provides the opportunity for writers of all ages and stages to come to the Centre to work on their writing in the Multi-purpose room and gain inspiration from the beautiful view of the Cumberland Basin. Writers from Halifax, Springhill and Sackville NB and the local area have attended.

Fibre Arts Friends has proved to be a popular programme for all the crafters in the area. It's offered nine months a year. Participants bring their rug-hooking, knitting, crocheting, stain-glass work, cross-stitch, needle point etc. and have a wonderful time creating together.

EDUCATION, EXHIBITIONS & OUTREACH

SUMMER AND MARCH BREAK CHILDREN'S DAY CAMPS

The Joggins Fossil Institute offered day camps on Tuesdays in July and August. These camps were popular and offered new learning opportunities for local children. Laurie, our Education and Outreach Manager, entertained the children with crafts, scavenger hunts, fossil explorations, games, planting and caring for the Learning Garden, and more. Many thanks also to workshop providers, volunteers and participants for making this year another success!

The Joggins Fossil Institute offered its sixth year of March Break Children's Day camps from March 14-16, 2017. For ages 5-12, the activities spanned a variety of disciplines including the visual arts, writing, rug hooking, drama, history and science. The March Break Children's Day camps were sponsored by the Municipality of the County of Cumberland.

ARTSCAPE: THE ARTIST-IN-RESIDENCE PROGRAMME

The Joggins Fossil Institute initiated its first ever Artist-In-Residence programme in 2016. Sophie Jaillet, a visual artist from Montreal was chosen as the first artist. Her project STILL was jury-selected from eighteen submissions from across Canada and from Ireland, New York and Serbia. Her six week residency will begin in the summer of 2017 and will include workshops and learning/participatory opportunities for visitors of all ages.

ArtScape: The Artist-In-Residence Programme is sponsored by ArtsNS and the Municipality of the County of Cumberland.



*March Break Day Camp Parent:
"Alex looks like he had a blast!! He is currently working on his second rug hooking project!!! Thanks for the opportunity to explore new things!"*



EDUCATION, EXHIBITIONS & OUTREACH

EXHIBITIONS

The Centre's new outdoor grindstone exhibit was unveiled on July 7, 2016 in the company of many community members, as well as the Honourable Bill Casey (Cumberland-Colchester MP) and Keith Hunter (Warden, Municipality of Cumberland County). Funding was generously provided from the Atlantic Geoscience Society. Carter's Sports Cresting sponsored the signage. Many thanks go to local community member, Ronnie Baker, who provided equipment and his time to move the large grindstone from the beach



Guests attending the opening of the grindstone exhibit.



Warden Keith Hunter (left); Don Reid (centre); Bill Casey, MP (right).

New in the Gallery this season was a tribute to Gloria Melanson (nee Reid) who passed away in late 2015 and is likened locally to the famous British fossil finder, Mary Anning. The exhibit highlights some of Gloria's most interesting and scientifically important material, including the world's smallest known tetrapod (animals with 4 legs) trackway.

EDUCATION, EXHIBITIONS & OUTREACH

OUTREACH

CONFERENCES

The Curator of Paleontology presented talks at a number of conferences this past year:

2016 European Geosciences Union, Vienna, Austria: session entitled “Earth Sciences and Art: a fruitful co-operation for the benefit of the planet and its inhabitants” on a new exhibit at the Centre called “A Carboniferous Cabinet of Wonders”. This exhibit and presentation was in collaboration with Dr. Janine Rogers, Mount Allison University.

2016 Canadian Geographers Association, Halifax, NS: invited talk for panel session entitled “UNESCO Designated Sites: World Heritage Sites, Global Geoparks, and Biosphere”. This session was the impetus for the formation of a network of Atlantic UNESCO Sites.

2016 Canadian Paleontology Conference, Cape Breton NS; Curator was the conference co-organizer with Jason Loxton (UCB) and co-author on a presentation.

2017 Atlantic Geosciences Society’s Annual Colloquium, Fredericton, NB: presented in a special session, co-organized with Jason Loxton (UCB), on University/Museum collections in honour of Don Reid ONS.

PRESENTATIONS AND TALKS

The Joggins Fossil Institute delivered presentations to community, school, and professional groups, with attendees totalling approximately 500 people in 2016/17. 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 to which were delivered off-site talks include: Probus Club of Shediac Shores, Road Scholars, and Mount Allison University Introductory Biology classes.

MEDIA AND THE CLIFF NOTES NEWSLETTER

To get the word out about happenings at the Centre, staff have begun to submit articles to the local newspaper (The Citizen-Record) and have been distributing a quarterly newsletter entitled Cliff Notes (past editions found under the “Outreach” tab of the JFI website: <http://jogginsfossilcliffs.net/outreach/cliff-notes/>). Numerous articles and photos, covering events at the Centre, were published in the Citizen-Record and Amherst Daily News during the past year. On-line articles appeared in the local newspapers and The Chronicle-Herald as well as Public Service announcements and interviews on CBC Radio in Nova Scotia and New Brunswick, and Cable 10.

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 recruited two new members: Jason Loxton (Cape Breton University) and Nikole Bingham-Koslowski (Geological Survey of Canada) who will begin their terms in Spring 2017. The bulk of efforts from the SAC in 2016 surrounded the recruitment of two new members, planning for future research, and discussing new exhibit themes.

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 is on-going with both Honour's and Master's students at Acadia and Dalhousie Universities. A new millipede find from the Site was highlighted in local, regional and international media (including National Geographic online: <http://news.nationalgeographic.com/2016/09/fossil-millipedes-discovered-bay-of-fundy-joggins-cliff/>); the Curator is collaborating with a researcher at the Cleveland Museum of Natural History on identifying the species and this should result in a publication in a scientific journal. Three papers on Joggins, co-authored by the Curator of Palaeontology, have been published in journals or submitted for review:

Prokop, J, Pecharová, M., Nel, A., Grey, M., and Hörnschemeyer, T. 2017. "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*. (published online: <http://dx.doi.org/10.1080/14772019.2017.1283364>)

Buhler, P.B. and Grey, M. 2016. "Limulid burrowing traces at the Late Carboniferous Joggins Fossil Cliffs UNESCO World Heritage Site, Nova Scotia, Canada. Ichnos" (published online: <http://dx.doi.org/10.1080/10420940.2016.1244055>)

Lelièvre, P.G. and Grey, M. 2017. "JMorph: Software for performing rapid morphometric measurements on digital images of fossil assemblages" *Computers & Geosciences* 105:120-128 · August 2017. DOI: 10.1016/j.cageo.2017.05.002

SCIENTIFIC RESEARCH & COLLECTIONS

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	# New Specimens in 2016	Total
Invertebrates	3	90
Paleobotany	5	712
Structural	-	19
Traces	-	541
Vertebrates	-	351
Unknown	-	27
Total	8	1740



The on-line database for the Collection held at the Joggins Fossil Centre can be found at:
<http://jogginsfossilcliffs.net/research/collection/>

EVENTS IN 2016/2017

Centre Opening.....	April 22, 2016 Earth Day – Centre opened for the season!
Canada Day.....	July 1, 2016 JFI staff participated in the Joggins Canada Day Parade.
“Grindstone Day”	July 7, 2016 8th anniversary as a UNESCO World Heritage Site and grindstone exhibit opening. Dr. Paul Bogaard presented on the history of Lower Cove grindstone quarrying. Sixty in attendance for day’s events.
Summer Day Camps.....	Tuesdays in July and August, 2016 Activities included organic gardening, speakers from a number of area organizations, games and tons of learning.
Volunteer/Supporter Appreciation Luncheon and Don Reid’s ONS Celebration	October 24, 2016 UN Day! Over 20 volunteers and supporters attended this event in appreciation of their time and efforts. Over 60 people attended afterwards to celebrate Don Reid’s induction into the Order of Nova Scotia.
Hosted EdGeo.....	October 28, 2016 Earth science workshops for Canadian teachers coordinated by the Canadian Geoscience Education Network and, in NS, the Atlantic Geoscience Society.
Halloween Party.....	October 31, 2016 Trick-or-treating at the Centre with jack-o-lantern display.
Holiday Sale.....	November 20, 2016 Local vendors set up tables to sell their wares in the Multipurpose room. Sales in the Gift Shop and Café reached almost \$1,000.
Community Coffee Break and Heritage Day.....	February 20, 2017 Emile Gautreau and Louise Goodwin presented on Mi’Kmaq culture and spirituality. Thirty-two in attendance.
March Break.....	March 14-16, 2017 Children’s day camps

STATEMENT OF FINANCIAL ACTIVITY

	2015-2016	2016-2017
REVENUE		
-Federal Student Funding	\$ 7,129	\$ 7,664
-Provincial Funding	\$258,139	\$257,676
-Municipal Funding	\$850	\$25,000
-Non-Government Funding	\$8,000	\$3,500
-Earned Income	\$ 194,135	\$232,134
Total Revenue	\$468,253	\$525,974
EXPENSES		
-Advertising and Promotion	\$4,100	\$13,957
-Interest on Obligations Under Capital Lease	\$1,178	\$3,019
-Insurance	\$5,386	\$5,413
-Interest and Bank Charges	\$3,796	\$4,656
-Legal Fees	\$1,331	\$31
-Memberships	\$420	\$350
-Miscellaneous	\$1,604	\$3,080
-Office	\$4,601	\$5,697
-Professional Fees	\$5,500	\$6,084
-Project Expense (New Exhibit)	\$8,345	\$ 50,762
-Purchases (Gift Shop and Café)	\$35,520	\$2,263
-Repairs and Maintenance	\$22,883	\$30,141
-Salaries and Wages	\$293,311	\$331,906
-Supplies	\$ 2,929	\$3,020
-Telephone	\$ 11,402	\$7,306
-Training	\$3,797	\$2,407
-Travel	\$257	\$3,075
-Utilities	\$38,017	\$41,826
Total Expenses	\$547,982	\$515,047
Excess (Deficiency) of Revenue Over Expenses	\$14,807	\$10,927

MEMBERSHIPS, PARTNERSHIPS & SUPPORTERS

Association of Nova Scotia Museums.....	Member
Atlantic Geoscience Society.....	Member
Bay of Fundy Ecosystem Partnership.....	Member
Canadian Geological Foundation.....	Supporter
Geological Association of Canada, Paleontology Division.....	Chair
Government of Canada.....	Supporter
Government of Nova Scotia.....	Supporter
Municipality of the County of Cumberland.....	Supporter

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	Dr. Laing Ferguson (1935-2013)
Mrs. Edna Boon	Mrs. Rhonda Kelly
Mr. Mark Boon	Mr. Don Reid, ONS (1922-2016)
Dr. John Calder	Dr. Graham Williams

WHO WE SUPPORTED IN 2016

Adopt-a-Highway; Joggins Volunteer Fire Department; 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

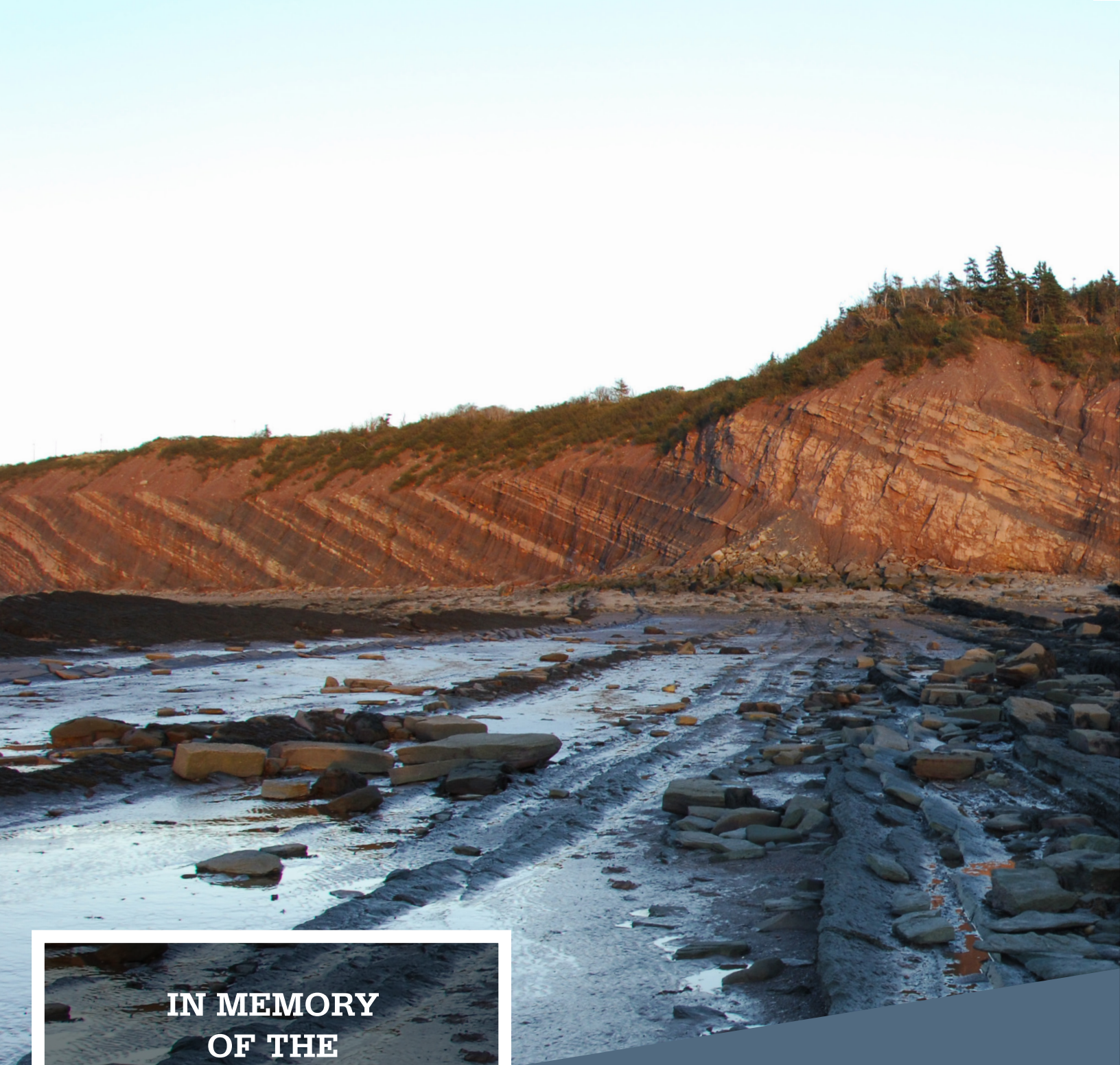


MEMBERSHIPS, PARTNERSHIPS & SUPPORTERS

VOLUNTEERS

The individuals listed below have donated their time enthusiastically to assist with activities, events and/or sit on our Board of Directors, Fundraising and Science Advisory Committees.

Louanne Berry.....	Children's Camp Volunteer
Susan Beaton.....	Children's Camp Volunteer
Dr. Paul Bogaard	Presenter
Dr. Suzie Currie.....	Science Advisory Committee Member
Charlene Daborn.....	Children's Camp Volunteer
Dr. Lynn Dafoe.....	Science Advisory Committee Member
Dale Fawthrop.....	Children's Camp Volunteer
Don Grey.....	Volunteer
Pam Harrison.....	Volunteer
Heather Hoeg	Board of Directors Member
Sara Jewell.....	Children's Camp Volunteer
Dr. Elisabeth Kusters.....	Chair, Science Advisory Committee and Board of Directors Member
Dr. Peter Lelievre.....	Volunteer
Su Morin.....	Volunteer
Dr. Jeff Ollerhead.....	Science Advisory Committee Member
Julie Paquet.....	Science Advisory Committee Member
Joanne Porter.....	Board of Directors Member
Dr. Peir Pufahl.....	Science Advisory Committee Member
Laura Reinsborough.....	Board of Directors Member
Don Trenholm.....	Chair, Board of Directors
Rod Tyson.....	Vice-Chair, Board of Directors
Dr. Grant Wach.....	Science Advisory Committee Member
Alan Walter.....	Treasurer, Board of Directors
Mary Williams.....	Children's Camp Volunteer
Doug Wilson.....	Board of Directors Member



**IN MEMORY
OF THE
KEEPER OF THE CLIFFS,
MR. DON REID, ONS
(1922-2016)**

IN MEMORIAM

The Joggins Fossil Institute mourns the loss of the original Keeper of the Cliffs, Mr. Don Reid ONS, whose collection of fossils forms the foundation of the collection housed here. Don collected fossils and visited the Centre frequently throughout the past eight years, sharing in many cups of coffee and cookies with the staff and visitors. His presence, insights, and that glint in his eyes when he found something new will be greatly missed by all of us at the Institute. His legacy lives on whenever anyone studies and appreciates his fossil finds.



Don with his Order of Nova Scotia award (2016).



Don on the Joggins Fossil Cliffs beach posing by a large tree.



JOGGINS Fossil CLIFFS

UNESCO World Heritage Site