The Nova Scotian Institute of Science (NSIS) is one of the oldest learned societies in Canada. It was founded in 1862 and followed from the Halifax Literary and Scientific Society and the Halifax Mechanics Institute. It was incorporated by an Act of the Legislature in 1890. The Institute has since been a meeting place for those interested in science in Nova Scotia.

Early areas of inquiry included geology, minerals, botany, zoology, meteorology and physical geography. The Institute’s founders included doctors, professors, lawyers, engineers, amateur naturalists and military men who were interested in the natural world and in the new areas of scientific study that were emerging in the mid to late 19th century. They were also eager to find new ways to harness the economic potential of natural resources.

Early members include Rev. David Honeyman, geologist & first curator of the Provincial Museum (pictured at right); Edwin Gilpin, Commissioner of Mines for NS; and Dr. Henry How, Professor of Chemistry at Kings College, to name a few.

Since those early years, the Maritimes and Nova Scotia have produced a plethora of prominent scientists and key discoveries. These range from Abraham Gesner, inventor of kerosene, to Willard S. Boyle, who shared the 2009 Nobel Prize in Physics for his invention of the charge-coupled device.

The Nova Scotian Institute of Science celebrated its 150th anniversary in 2012. The Institute:

- Provides a forum to learn about and discuss scientific matters through public lectures and discussions, its peer-reviewed publication The Proceedings of the Nova Scotian Institute of Science and its website
- Draws attention to issues of concern to the scientific community, such as education, government policies and ethical considerations
- Promotes research and education in science by running a Mentorship Program and an annual Science Writing Competition for university students, as well as by giving financial support to Regional Science Fairs
- Presents current and historical material on its website

We invite you to:

- Attend the free NSIS public lecture held at 7:30pm on the first Monday of each month between October and April (see over)
- Read an issue of the Proceedings of the Nova Scotian Institute of Science for current research on topics of relevance to Nova Scotia: http://ojs.library.dal.ca/nxis
- Browse articles in the historical online archive of the Proceedings of the NSIS: http://tinyurl.com/dalspace-nsis-proc
- Write an article for the peer reviewed Proceedings of the NSIS
- Visit the NSIS Virtual Hall of Fame to learn more about influential Nova Scotia scientists: http://nsis.chebucto.org/nxis-hall-of-fame/
- Submit an article to the annual NSIS Student Science Writing Competition
- Explore our mentorship program, a great opportunity for future science leaders to shape their careers
- Become a member of the Institute

For further information, visit the NSIS website: www.nsis.chebucto.org or contact the President of the NSIS: Dr. Patrick Ryall
Patrick.Ryall@dal.ca

People and the Earth

From the beginning, people have been affected by the Earth, and people have been changing the Earth. There are natural events such as earthquakes, and there are phenomena, such as sea-level rise, which are happening through a combination of natural and human causes. The gases that we emit change the climate with impacts on water, soil productivity and food. How can we change our behaviour to correct these problems and how can we make well-informed decisions when support for the necessary research is being cut? Please join us for a new lecture season that will address these questions and more.

Photo: Atlantic Climate Adaptation Solutions
http://atlanticadaptation.ca/sea-level-rise-flooding
http://hdl.handle.net/10222/13613

Promoting Science in Nova Scotia since 1862
Earthquake Hazard in Atlantic Canada: Of Concern or Not?
October 6, 2014
Alan Ruffman
President, Geomarine Associates
Canada’s most tragic earthquake occurred in 1929 about 265 km south of the Burin Peninsula of Newfoundland. Alan will outline his research into historic seismicity and lay out the case for a newly-defined seismic zone off southwestern NS. He will also discuss a widely-reported earthquake of 1882 which may have been a low-level meteorite “airburst”.

Changing Sea Levels in Atlantic Canada - Past, Present, and Future
November 3, 2014
Dr. John Shaw
Geological Survey of Canada - Atlantic Natural Resources Canada (BiO)
Changing sea levels in Atlantic Canada since the end of the last ice age, which may be recorded in the legend of Glooscap, drowned the large islands on the continental shelf and created Prince Edward Island. Dr. Shaw will discuss current impacts on coasts and discuss predictions of sea-level change. Note: This lecture takes place at the Irving Centre, Wolfville, N. S.

A New Wave of Exploration of the Arctic Ocean
December 1, 2014
Dr. David C. Mosher
Geological Survey of Canada - Atlantic Natural Resources Canada (BiO)
The past decade has witnessed unprecedented geophysical data acquisition in some of the remotest areas of the Arctic, due in part to reduced ice cover. As a consequence we have experienced a rapid evolution in our understanding of the geology of the Arctic, ranging from its tectonic creation, to its sedimentary history and its modern geomorphology.

Methane from Northern Permafrost – A Cause for Concern?
January 5, 2015
Dr. Rachel Chang
Dalhousie University
Large areas of northern regions are covered by permafrost. As the Arctic warms, the permafrost will degrade and lead to increased emissions of greenhouse gases such as methane. Recently, global atmospheric methane concentrations have begun to increase again after being stable for a decade, and the Arctic is one of the possible sources. Dr. Chang will outline results from her Arctic research and discuss different potential causes that could be contributing to this increase.

Water for Our Changing Planet - Lessons from the Past Century and the Face of our Future
February 2, 2015
Dr. Shannon Sterling
Dalhousie University
Water determines the potential for life and how our planet functions. Dr. Sterling will show how water flows and is stored through the global water cycle, and how these flows interact with the atmosphere and plant systems. Drawing upon water crisis case studies, she will illustrate how we alter the global water cycle through human development and climate change. Finally, she will explore the implications of these changes for our future planet.

The Future of Nuclear Science and Technology Research in Canada
March 2, 2015
Speaker: AECL scientist
Atomic Energy of Canada Limited
Following its establishment in 1952, AECL developed the CANDU reactor. The goal of AECL is to ensure that “Canadians and the world receive energy, health, environmental and economic benefits from nuclear science and technology - with confidence that nuclear safety and security are assured”. What lies ahead in nuclear research as we look to the coming decades? Join us to learn about future prospects in Canadian nuclear science and technology research.

Lessons Learned from the War on Science
March 30, 2015
Dr. Thomas J. Duck
Dalhousie University
Science in the public interest in Canada has been under attack since the Conservative Party won a federal majority in 2011. Programs crucial to the health and safety of Canadians have been eliminated, scientists have been muzzled, science library collections have been destroyed, and decades of progress in environmental law and regulation have been upended. Dr. Duck will review the evidence for this “War on Science”, describe the early warning signs, explore its consequences, and discuss what we have learned with a view to the future.

Crop Responses to Multiple Components of Climate Change
May 4, 2015
Dr. Mirwais Gaderi
Mount Saint Vincent University
Plants respond differently to multiple environmental factors than to a single factor. Dr. Gaderi will discuss the single and interactive effects on plants of three components of climate change – carbon dioxide, temperature and drought. A comprehensive study of these factors will lead to a better understanding of how crops react to rapid climate change - research that is essential to safeguard our future food production.

Special Events
Public Lecture in the Annapolis Valley
November 3, 2014 - 7:30pm
Changing Sea Levels in Atlantic Canada
Speaker: Dr. John Shaw
Location: KC Irving Centre, Wolfville, NS
This lecture is presented in partnership with the K. C. Irving Environmental Science Centre, Acadia University.

NSIS Annual General Meeting & Banquet
May 4, 2015
Location: TBA
NSIS members and guests share a meal and enjoy the final lecture of the season.

Benefits of NSIS Membership
Membership in the Institute is open to anyone with an interest in science. As a member of NSIS you will:
• Receive advance access to new issues of the Proceedings of the Nova Scotian Institute of Science, an online publication featuring a range of articles of relevance to Nova Scotia.
• Be informed about forthcoming meetings and special events through e-mail bulletins and mailings.
• Enjoy the opportunity of meeting scientists, educators and others whose interests cover a wide range of scientific topics.
• Receive a waiver of page charges, if your scholarly work is published in the Proceedings.

Membership fees:
Regular member: $30/yr
Student member: $10/yr
Life member: $300

Name: _______________________
Address: _______________________
Phone: _______________________
E-mail: _______________________

Membership fees enclosed: $________
If you wish, you can make a voluntary donation to promote the activities of NSIS (tax receipt will be issued): $________

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