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APGO Education Foundation Releases Beamer Memorial GeoHike on GeoscienceINFO.com

September 30, 2024, Toronto, Ontario: The APGO Education Foundation ("APGOEF") and the School of Environmental and Earth Sciences at McMaster University are pleased to announce the release of the Beamer Memorial GeoHike, located on the north side of the Niagara peninsula, in the Niagara Geopark and the Beamer Memorial Conservation Area (see Figure 1). This virtual tour which follows the Bruce Trail features 5 stops that highlight the local geology and ecology. To see this as well as all our GeoHikes, visit our GeoHikes page.



Figure 1. Map of the Niagara Peninsula, showing location of Beamer Memorial GeoHike (yellow marker).

Beamer Memorial is a well-known location for bird watchers to view the annual hawk migration as they pass by the Great Lakes from March to May. The local geology has a profound effect on these spectacular birds of prey, as the vertical cliffs of the Niagara Escarpment deflect air currents upwards, creating the much-needed updrafts that these hawks use to glide during their travels. As you move through the GeoHike, you will encounter fossiliferous dolostone bounders (see Figure 2) that are full of crinoid ossicles¹, and a solitary granite boulder that was likely moved here from northern Canada by the last glacial advance (see Figure 3). This GeoHike takes you through the Carolinian Forest of Canada and highlights the importance of its protected status. The GeoHike goes over some karsted limestone, formed over long time periods by slightly acidic rainwater. Taking about 30 minutes, the Beamer Memorial GeoHike is a short and delightful adventure located right in the Niagara Geopark.

¹ Crinoids attached themselves to the seafloor with a long stock made up of stacks of calcareous rings called ossicles.



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Figure 2. Fossiliferous dolostone boulder showing Figure 3. A granite boulder, likely a glacial erratic, a segment of a crinoid stem, at the Beamer Memorial GeoHike.

at the Beamer Memorial GeoHike.

The Beamer Memorial GeoHike was developed by the GeoscienceINFO team led by Manager Dr. Deana Schwarz, P.Geo., and the School of Environmental and Earth Sciences at McMaster University, led by Dr. Carolyn Eyles and Dr. Daniel Dick. It is part of a growing series of geoscience-based hiking tours released across Ontario that aims to enhance public knowledge of geoscience using a hands-on and virtually accessible approach. We plan to release more GeoHikes in fall 2024 and subsequent years, throughout Ontario.

GeoHikes are 1-3-hour non-intensive hiking tours on maintained trails in Ontario that highlight local geology and describe their geological and environmental significance. GeoHikes can be used as guides while walking the trail in person, or as a virtual alternative at home or in the classroom. Visiting sites in person is a great way to learn but virtual tours are also an exciting way to expand one's knowledge when in-person access is not possible. Through the use of ESRI's innovative ArcGIS-StoryMap[™] application and the integrated features, GeoHikes provide the user with an immersive experience. GeoHikes typically include:

- 360-degree photos and/or drone videos to provide a detailed overview of each site.
- LiDAR-based virtual 3D models that show locations of key features such as fossils, important structures and other geological features at the buildings or rock outcrops.
- Slide bars to show multiple images or overlays of important features or geologic information.
- Descriptions of geological features.
- Audio descriptions of written content.



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About the APGO Education Foundation

The APGO Education Foundation ("APGOEF) is a registered charitable organization under the Canada Notfor-profit Corporations Act, registration number 84604 5052 RR0001.

The purpose of the charity is to advance the education of the public in the area of geoscience by:

- Holding lectures, presentations, and conferences on geoscience both in person and virtually to introduce geoscience to high school and university students as well as enhance the knowledge of the general public.
- Providing scholarships to post-secondary students for the study of geoscience in the final year of a Bachelor of Science (B.Sc.) degree program.
- Providing bursaries to immigrants to Canada who are internationally trained geoscientists and have demonstrated financial need for completion of licensure procedures for registration as professional geoscientists (P.Geo.s) in Ontario.

APGOEF provides funding to support innovative geoscience education projects working with university geoscience departments, community groups and not-for-profit organizations across Ontario. Please see our website at https://apgoef.ca.

GeoscienceINFO.com an innovative one-stop spot for the public for information about the earth beneath their feet. This new website provides interesting information on all facets of geoscience. A particularly exciting feature of GeoscienceINFO.com is the highlighting of virtual fieldtrips in different areas in Ontario. This enables viewers to experience and learn about the geology of an area while traversing it digitally in ESRI ArcGIS OnlineTM and StoryMapsTM. Information on the latest discoveries and news in the world of geoscience is featured on the website, on our blog Beneath Your Feet: A Geoscience Blog, as well as on our social media.

If you like our work, please consider making a tax-deductible donation to support our programs. **To Donate -** https://www.canadahelps.org/en/charities/apgo-education-foundation

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