



February 23rd, 2021
5:00-7:00pm (GMT+1)

Cultivating Earth Science Literacy through Geoheritage Education Initiatives in the Keweenaw

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The rich geodiversity of the Keweenaw Peninsula is prominently expressed along shorelines, peninsulas, islands, harbors, and other unique landscape features resultant of the Midcontinent Rift system (MCR). The rifting event resulted in a 3000-km long feature comprised of interbedded basalts and sedimentary rocks at the heart of the North American continent, the largest known native copper deposit on Earth, and the formation of the Lake Superior basin. These publicly accessible geosites teach us about Earth's dynamic processes and are central to place-based education and research initiatives that broaden community Earth science and Great Lakes literacy. Further, geosites foster deeper understanding and acknowledgement of the dynamic and interconnected geologic and human stories that serve as the foundation of the Keweenaw's past, present, and future.

Our education efforts focus on communicating Earth systems processes and their significance within local communities. Examples include a) a deeper understanding of rift geology, b) dynamics and impacts of shoreline migration, c) fluctuating lake levels, d) increased storm intensity and frequency, and e) issues stemming from legacy mining such as impacts on public health, fisheries, and community subsistence uses. Education is fundamental to cultivating resilient communities that are better prepared to make informed decisions on issues impacting their place and community.



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Using the Great Kingston Earthquake of 1907 to redefine absence heritage and increase awareness

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The concept of absence heritage in its current form is described as aspects of any form of history, tangible or intangible, that has been removed, omitted or obliterated so that it does not form part of one's memory or context of an event, place or ideology. This definition is limited in that it does not consider aspects of history that have been removed through natural disasters, ordinary wear and tear or even war.

Geoheritage provides an avenue for commemoration, study and preservation of both the natural and the built environment. It also serves to provide the stories and experience that can help in awareness raising of natural disasters and associated hazards.

The Great Kingston Earthquake of 1907 provides an example of a situation where the current definition of absence heritage does not cover. The fact that Jamaica exists in a seismically active zone also suggests the idea of heritage at risk.

The historic city of Kingston has various evidence of the post-earthquake architecture which vary in some cases significantly from the pre-earthquake structures. Also, there are structures that were never rebuilt post-quake. There is currently no signage related to these and similar structures and the general public is not connected with the narrative. This absence reduces the impact of such a disaster except for those who are in the know.

This presentation seeks to describe the pre- versus the post-earthquake built environment of Kingston as one example where an extended definition of absence heritage would improve the narrative and in so doing apply geoheritage principles to increase awareness.