



A Carboniferous Cabinet of Wonders: an example of how the collaboration of art and Earth Sciences can inspire conservation

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The Joggins Fossil Cliffs (Nova Scotia, Canada) is a UNESCO World Heritage Site representing the Late Carboniferous time period (ca. 310-325 mya). The site was formative for Charles Lyell in constructing his geological principles. It is still the best place in the world to view fossils from the Carboniferous 'Coal Age', a time when much of the coal that we use today was formed. The Joggins Fossil Institute is a not-for-profit, charitable organization that co-manages the site with the Province of Nova Scotia. Its mission is to conduct research and educate the public about Earth Sciences through interpretation (e.g., exhibits and tours of the site) and a fossil collection.

Fossils are the only direct evidence of how biodiversity has changed over deep time; they are the texts and artifacts that we 'read' in order to understand the development of the earth and that can help humans decipher the deeper histories that produced us. At the Joggins Fossil Institute we primarily present the scientific history of the Carboniferous Period through the use of fossils, but we are also interested in the cultural history of coal production and usage, which is an essential part of the region's economic history. However, this industry has also contributed to climate change and the emergence of a new geological age called the Anthropocene. We encourage our visitors to connect palaeontology and coal energy consumption, and ask them to consider how different values (economic and scientific) are attributed to both coal and fossils; such questions lead directly to discussions about conservation issues.

The Joggins Fossil Institute has partnered with the Faculty of Arts at nearby Mount Allison University to create an exhibit that will interrogate these questions. The medium of display that we have chosen is the "cabinet of wonders" or "cabinet of curiosity," which has a rich tradition in western cultures going back to the Renaissance. A venerable intersection of art and science, the cabinet of wonders is the cultural ancestor of contemporary museums and interpretive centers like Joggins itself. The tradition of these cabinets is to combine scientific information with aesthetic presentation to inspire "wonder" in the visitor that will lead to ethical reconsiderations.

Our cabinet of wonder explores the relationships between fossils, energy, extinction, and, our ecological future. The exhibit will include fossils from the Institute's collection, paintings and archival material from Mount Allison University, and artifacts from the local mining culture of northern Nova Scotia. The exhibit will be placed in the Institute's gold LEED-certified building, an award-winning structure that exemplifies the transition from using the dirty energy of coal that was once mined here to "green" alternatives. Using both scientific knowledge and artistic representation, the cabinet articulates the intricate connections between the development of life in the Carboniferous Age, the use of coal as an energy resource, and the ways in which human behavior can affect the environment. The objective is to open up a discussion on our ecological future that respects our artistic, technological and ecological past.