

Book Review

Exhibit Review: *Darwin the Geologist*, The Sedgwick Museum of Earth Sciences, University of Cambridge, Cambridge, England. Opened July 2009, Permanent. Curator: Francis Neary. Supported by the Heritage Lottery Fund.

Opened in 1904 in memory of the geologist Adam Sedgwick, and containing the collections Sedgwick and John Woodward had previously accumulated, the Sedgwick Museum of Earth Sciences houses a vast collection of geological and paleontological specimens, including some collected by Darwin himself during the voyage of the HMS *Beagle*. The Sedgwick acts as a fitting locale, then, for an exhibit exploring Darwin and his geological work. *Darwin the Geologist*, a permanent exhibit opened in July 2009 to coincide with Cambridge's Darwin anniversary celebrations, evolved from a temporary exhibit at the museum that had been titled *Charles Darwin – Becoming a Geologist* and had been on display from September 2008 to June 2009.

Darwin the Geologist tells the story of Darwin's career as a geologist, displaying not only some of the 1,500 of Darwin's actual specimens that the Sedgwick holds, but also books, geological tools, maps, and even a pistol carried by Darwin on the *Beagle*. The exhibit is an exploration of the development of Darwin's ideas about the Earth and how they related to the development of his theory of evolution by natural selection. Darwin is more commonly labeled as a naturalist, or biologist, because of his work on evolution, but as Sandra Herbert has convincingly shown in *Charles Darwin, Geologist* (Cornell University Press, 2005), he was a self-proclaimed geologist and pursued his interests in geology in many ways from the *Beagle* voyage (1831–1836) leading up to the publication of *On the Origin of Species* in 1859. Geology, as an exhibit label attests, dominated Darwin's early scientific career, and his "reputation as a scientist was built on his training as a geologist."

Situated among the beautiful and tall glass and wooden display cases, *Darwin the Geologist* fills one end of the museum's two-winged gallery, replacing what used to be displays about the Holocene epoch. The exhibit displays are organized chronologically, beginning with Darwin's childhood fascination with collecting and into his education at

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Edinburgh, where Darwin was introduced to geology, and Cambridge, where Darwin met John Stevens Henslow and gained collecting and field-work experience on a geological field excursion to Wales with Adam Sedgwick. More displays are devoted to the *Beagle* voyage, as this afforded Darwin more opportunities to practice geology and to think about the forces that created the landscapes he visited. We learn about a raised coastline at São Tiago in the Cape Verde Islands and the numerous fossils Darwin discovered, including the famous *Megatherium*; of the geology of the Andes and the formation of igneous rocks at the Galapagos Islands; and the growth of coral reefs in the Pacific. We learn about Syms Covington, Darwin's assistant during and after the voyage, and the many specialists to whom Darwin farmed out his geological specimens for identification: William Miller for minerals, Robert Brown for fossil plants, Alcide D'Orbigny for fossil shells, Richard Owen for fossil mammals, and William Clift for the fossil teeth of *Megatherium*. We are shown how Darwin became a member and later secretary of the Geological Society of London as a result of his geological work on the *Beagle*.

A label reflecting on Archibald Geikie's centenary celebration lecture in Cambridge (1909) about Darwin's geology—"Since 1909 Darwin's theory of evolution has played an increasingly important role in our understanding of life on Earth, while his geological theories have been largely forgotten"—segues between Darwin's own life and work and labels showing how more recent scientists have used Darwin's collections and ideas in their geological work. For example, geologist Lyall Anderson studies rocks from the *Beagle* collection to consider Darwin's collecting practices. Darwin received some specimens as gifts from other geologists, such as Andrew Smith. Through studying the rocks themselves, Anderson has been able to conclude that Darwin included in his collection specimens he did not collect himself. Similar research by Sally Gibson has helped to understand Darwin's geological route on the island of Santiago in the Galapagos. While the *Beagle* collection is of importance to scientists, the specimens can help to answer questions important to historians of science as well. *Darwin the Geologist* stresses this point. Anderson is quoted in a label: "From a personal point of view I think my biggest surprise was that Darwin didn't collect everything himself. Maybe that's a misconception that the Darwin Industry has kept running." While Darwin is surely an important figure, lesser-known figures in the work brought Darwin his scientific fame.

Smaller displays between the larger glass cases emphasize other aspects of Darwin's geology. From the influences of Alexander von Humboldt

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and Charles Lyell to the letter of introduction inviting Darwin to join the *Beagle*, these displays flesh out the story and provide contextual information. Several consider various practices associated with geology, such as how to collect appropriate specimens, the use of field notebooks, and the analysis and interpretation of specimens, and how this work for Darwin resulted in various publications. Some of the smaller displays discuss Darwin's "scientific failure" in theorizing how the Parallel Roads of Glen Roy in Scotland were formed, how geology figured into *On the Origin of Species*, and how Darwin continued to study geological topics after the publication of *Origin*, most notably with earthworms and the formation of soil, the subject of his last book. Also included in the exhibit are a recreation of Darwin's cabin on the *Beagle* and an interactive globe showing the places where Darwin collected particular specimens. A touch-screen allows visitors to go behind the scenes of the exhibit, which is essentially a collection of the posts from the blog that accompanies *Darwin the Geologist* and is accessible at <http://darwinthegeologist.org/>.

The exhibit does a fine job of placing Darwin's work in the context of geological questions at the time. It does not address the "Genesis and geology" dispute in the nineteenth century beyond one label stating that "Heated debate and controversy over science and religion captured the public imagination," nor is there a label stressing the importance of correspondence to scientific practice. These minor quibbles aside, *Darwin the Geologist* offers a wealth of interesting material in both the objects on display and the accompanying labels, and it does it in a rather small space. It is a well-organized exhibit, and includes a wonderful artistic tribute to Darwin. While a life-size bronze of a young Darwin, by Cambridge alum and zoologist-turned-artist Anthony Smith, now adorns a garden in Christ's College at Cambridge, a bronze bust also by Smith oversees *Darwin the Geologist* as if to suggest that Darwin himself is either the epitome of humankind (for Darwin is situated at the most recent end of the geological and paleontological timescale that is the Sedgwick Museum) or a typical specimen of humankind. The former runs the risk of claims of hagiography. The latter is more likely, as the exhibit suggests that scientific discovery follows from curiosity, and *Darwin the Geologist* surely expresses throughout to its visitors the act of scientific discovery. If nothing else, the statues help to emphasize that for much of the work that made Darwin a reputable scientist, he was an energetic young man eager to explore the world around him, not always the long-bearded sage of Downe.

Michael D. Barton
Montana State University