

MISCELLANEOUS

Fossil Legends of the First Americans

By Adrienne Mayor. 2005 Princeton University Press, Princeton, New Jersey, USA. 446 pages. illustrated.

The lure of fossils is not a recent venture. For centuries, by accident or pursuit, "sports of nature" as they once were called have fascinated our cultures. Yet, while fossils rose from "sports" to conceptions of the organic past, this was essentially a western perspective, shaped by culture and scientific advancements. It is a little surprise, however, that the North American aboriginals or First Nations people were also drawn to these pieces of the past. The reasons varied, to be sure, but hidden to us were concepts of evolution and a sense of deep time. It is a great fortune that author Adrienne Mayor has investigated and recorded this diversity of cultures, much of it based on the oral, not written, tradition, and to some extent existing in various artifacts.

Mayor's first foray into fossil lore and history was *The First Fossils Hunters, Paleontology in Greek and Roman Times* (2000) which examined Greek and Roman period and place with respect to fossils. Of course these cultures are rich in textual artifacts and documentation, and were in essence at the root of western civilization. Mayor's recent study, *Fossil Legends of the First Americans*, is somewhat more of a challenge. As part of paleontological lore, aboriginal communities certainly had contact with fossils but to what extent? Lacking written tradition, painted in broad strokes, and compounded by our interpretation of their awareness, what were their concepts of "deep time", extinction, or even a notion of evolution?

Mayor argues that aboriginals had more than a cursory view of fossils, and in many respects, and with a much finer, multi-colored strokes particular to specific groups, their views are much richer than anyone expected. By reviewing cultures from south to north, each North American culture ebbed and flowed territorially, originating or modifying concepts of their surroundings and to some degree of the fossil bones and stones encountered. Some Navajos in the southwest United States, for example, believe that it is horrific to disturb buried bones. "The Navajos envisioned a series of past worlds that were destroyed before this world" says Mayor, each with good and evil monsters. By digging them up, the fear emerges of bringing these past monsters to our world. The large fossils found in the Navajo territory bespeak of life of great size in the form of petrified logs from the Petrified Forest National Park in Arizona, and of other possibilities in the rich, paleontological nest that they could have come across. This is more than mere tales of monsters.

Fossils were not always considered dire by those who came across them. "Rock medicine of the Crows and their traditional enemies, the Sioux, often included unusual fossils, especially ammonites and baculites"

(page 268). They believed that these fossils carried with them mystical powers. In Alberta, medicine pouches of the Blackfeet often carried "buffalo-calling stones", which are the segmented portions of a Cretaceous baculite that look the shape, in cross section, of a buffalo. Aboriginals even attach some significance to the aesthetics of fossil-bearing rock, in one case a point made of Pennsylvanian-age rock containing the ornate designs of the single-celled marine fusulinids from Kansas.

Throughout Mayor's work she references the revered paleontologist the late George Gaylord Simpson (1902-1984). Like the few earlier records of ethnology and paleontology, Simpson is often taken to task for his forays into the history of fossil collecting in North America. His definition of "discovery" was much narrower than Mayor's. He believed that "merely seeing a fossil bone or picking up an idle curiosity is hardly discovery" (1943, page 26). Therefore, Simpson gave little weight to beliefs and customs of First Nations people with regard to fossils in his reviews. He knew that there was contact with fossils, as in the case with the abundant fossils from the "Big Bone Lick" of the Ohio Valley, popular in the lore of American history as well as paleontology, but that's about it. Despite the fact that Simpson's views were reflective of 1940s American culture, Mayor's stance is that the discoveries "were not scientific in the modern sense, of course, but there is something akin to scientific inquiry in these activities" (page 29-30). Many of the aboriginal oral traditions were handed down from one generation to another, thus becoming a permanent record in their culture. This is one of the requisites of scientific tradition.

The 19th century American expansionism included vast paleontological initiatives like those seeded by Joseph Leidy (1823-1891), O. C. Marsh (1831-1899), and E. D. Cope (1840-1897). Ethnological initiatives also followed, but for some reason, cultural interpretation and fossils never met. Even when aboriginals were hired as scouts for the paleontologists, the "paleontologists ... [left] folklore to the ethnologists, so the ethnologists left paleontological topics out of their conversations with Native Americans" (page 195). As such, paleontological/ethnological information gathered today, some if recorded for the first time by Mayor, is tainted with over a 150 years of invading culture. A number of these aboriginal cultures have substituted their original, monstrous, interpretations of fossils with post-1840s terminology like "dinosaurs".

Where Mayor falls short, however, is in the extent of parallelism between aboriginal and western views of fossils and their meaning. There are a lot of "may have[s]", "could appear[s]" between the two views of scientific and cultural interpretation, and thus some of the interpretations seem somewhat forced. For example, an Assiniboine tale has "a great river monster" succumbing to a "violent death by the impact of a

“thunder stone”, a black projectile that came whistling out of the west” at great speed and sound, “*a scenario that seems akin to the modern theory of an asteroid impact 65 million years ago*” (page 289; emphasis added). The implied connection is not tenable. Likely an interpretation of a meteor, the connection between the extinction of a group of species by an extraterrestrial object is a contemporary idea.

Fossil Legends of North American should have been written a century ago when contact with the First Nations people was still fresh. But the exploration of the cultural/science intertwining is still a relatively recent phenomenon. In this case, only a few other recent titles address fossils in a cultural context (see Cohen 2002; and to a lesser extent Semonin 2000). Still, if it were not for Mayor's effort, from document-

ing the oral traditions, the searching of archives, museums and journals, we would be left with a culturally insensitive, simpleton view of rich and diverse cultures and their varied, unique surroundings.

Literature Cited

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A Field Guide to Gold, Gemstones & Mineral Sites of British Columbia, Sites Within a Day's Drive of Vancouver

By Rick Hudson, 2006. Volume 2 Revised Edition. Harbour Publishing Co. Ltd., P.O. Box 219, Madeira Park, British Columbia V0N 2H0 Canada. 368 pages \$26.95 Paper.

Rick Hudson has succeeded in expressing his passion for mineral collecting through his field guide book. On a second level he also tries to promote a sense of adventure by teasing the reader to go out and explore or prospect for nature's buried treasures.

The author structured the book so the reader can easily cross-reference required information in the lengthy location lists. A “How to use this Book” and a “Quick Reference Guide” helps to quickly locate items of interest throughout the book.

The book cover illustrates the hobby of mineral collecting as a family activity. Hudson educates the reader from first principles on how to become a rockhound. To accomplish this, he describes how to prepare yourself by choosing proper clothing, safety gear, collecting tools and maps. He warns the future mineral collector about natural hazards they may encounter such as rattlesnakes, grizzly bears and ticks. Ethics, access rights and mineral rights are also discussed to keep the collector within acceptable collecting practices and to

avoid unintentional trespassing.

Mineral collecting is attractive to many people because as you find an interesting mineral specimen, you want to learn how nature created it and or its geological history. The author has included short geological descriptions partitioned by collecting areas as well as mining histories of local economic importance within the collecting area.

Colour plates illustrate the minerals found in some of the collecting sites and detailed occurrence maps are included in all the collecting area sections throughout the book. The colour plates represent minerals that are possible to find in the collecting sites. Government mineral index files were included in the locality information along with detailed road log descriptions.

The author has made a successful merger of personal knowledge and technical data to compile an informative volume which can provide years of enjoyment for many future rockhounds and their families and friends.

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