

Oblivious to the obvious: dragons lived with American Indians

A review of
*Fossil Legends of the First
Americans*

by Adrienne Mayor
Princeton University Press,
Princeton, NJ, 2005

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Professor Adrienne Mayor has an intriguing expertise. She has chosen to specialize in dragon lore. As such, her works are refreshing attempts to bridge the gap between, or find the common ground between, empirical and historical science. Since empirical scientists typically dismiss anecdotal evidence *prior* to investigating it, one might suspect her investigations, which rely heavily on anecdote, to fall on deaf academic ears. However, it seems she is finding an audience, since she was a chief consultant for a dragon exhibit at the Indianapolis Children's Museum that opened in 2008.

Already an expert on ancient Greek encounters with fossils, Mayor took up the task of gathering fossil-related data from old written accounts, as well as living testimony, from a wide range of North American Indian tribes. The thoroughness of her research was erudite and commendable, even if *Fossil Legends* could have made its points with fewer words.

She collected and compared stories from Sioux, Iroquois, Navajo, Algonquin, Delaware, Yaqui, Hopi, Ute, Pawnee, Kiowa, Osage, Lakota, Crow, and other Indians, even including those formerly occupying Mexico. She seemed to be mostly interested in two questions. First, how were oral traditions of large and fearsome monsters on earth, in sea and sky

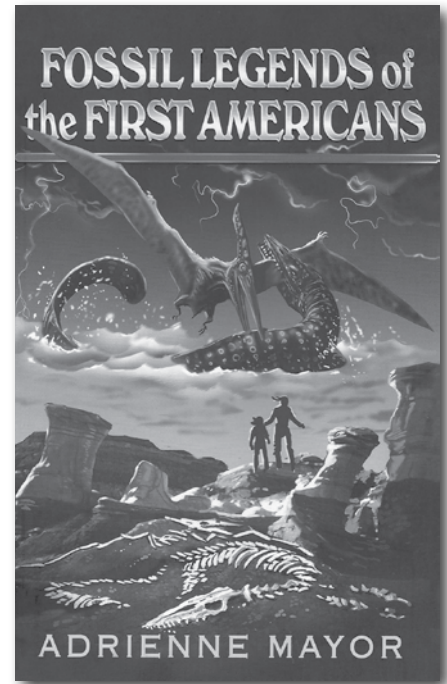
borne from fossilized bones? Second, what interactions, uses, beliefs and attitudes did Natives have toward North American fossils?

The first question is the subject of most of this review. If it seems that it is begging the question, that's because it is. It presumes the very premise at the outset. It asks "How did Natives convert fossils to dragon legends", instead of the more fundamental question, "Did Natives convert fossils to dragon legends?"

Through the entire course of 331 pages that relay accounts and pontificate on their meanings, the concept that fossils gave rise to dragon legends was presumed throughout. This detracted from an otherwise interesting topic. Nowhere was a rigorous case made to defend it. Following are some examples of the author having presumed, rather than argued for (let alone against) her hypothesis.

Examples of presumption

The Onondagas retained a story of the Great Mosquito monster, with "talons as long as arrows and the monstrous beak was lined with sharp teeth" (p. 47). Doubting tribesmen were simply shown giant tracks in rocks near the salt lake at Onondaga, currently New York. Mayor then adds interpretation. "The site of the monster's death, in a salt lake bed, and its physical description suggest that the legend might have been related to conflated observations of various fossils" (p. 48). What fossils? How would they have been obtained? How would they have been reconstructed to compose anatomical and behavioral details that this and so many other accounts contain? What would have been the motive for the first one to have made up a story, and what would



have convinced the remainder in the tribe to have incorporated this story into their sacred lore, rather than reject it as a lie?

Another ancient legend from the Tlaxcaltecas of Mexico, related that their people migrated from the northwest and conquered a race of giant men. These were "dwelling in rock caves and armed with great clubs and wooden swords ... The giants had a horrible appearance but lived on acorns and grasses." The Catholic priest *José de Acosta* recorded fifty years after the Spanish Conquest of Mexico (in the 16th century) that the Indians he interviewed said these giants "pulled down trees as if they had been stalks of lettuces" (p. 76). Mayor then submitted, "These details suggest that some aspects of the legendary giant-ogres may have originated in ancestral memories of Columbian mammoths and may have been later confirmed by discoveries of fossils" (p. 76). But nowhere does she support her implication that the ancient Tlaxcalas could not discern a human from an elephant.

Similarly, one Yaqui legend tells of a brave tribe member who decided to hunt down the terrible giant bird that sometimes flew off with people for its dinner. Interestingly, perhaps every

North American tribe has a very similar tale. This giant bird lived on a particular rocky hillside. Mayor suggested that “The heaps of bones and a pit dug in the hillside, and the evidence of the great bird’s bones in a region now known to be fossiliferous, make this a significant paleontological legend.” The author did not build a case that the giant bird was invented by Natives by looking at bones, let alone defending that case against the argument that so many legends with such similar details from a huge array of ancient sources could not have emerged from the scant and disarticulated bones and bone fragments that lie on the earth’s surface. Rather, the author asserted her case, an *ipse dixit* fallacy.

Significantly, recent research into the Maoris, natives of New Zealand, confirmed their oral legend of a giant terrorizing bird. Scofield and colleagues published in the *Journal of Vertebrate Paleontology* that skeletal remains of a Haast’s Eagle, collected from a swamp deposit in the 1870s, showed that it had a 3-m-long wingspan, weighed 18 kg, had 12-cm-long claws, and flew at 80 km per hour.¹ This evidence refutes the fossil legend hypothesis. The news release accompanying the technical publication noted, “It is also an example of how the oral traditions of ancient peoples and scientific research can sometimes reach the same conclusion.”² If the birds were alive in New Zealand, finally done in by certain fed-up but brave warriors, then why not give North American Indians the benefit of taking their stories as something closer to face value? Of course we cannot fault Mayor on this particular account, since the confirmation of Haast’s Eagle was published four years after her book, *Fossil Legends*.

Mayor likewise attributed a legend of a Burrowing Horned Monster (p. 122), a water monster that “grew so huge” (p. 29), a Pawnee giant raptor called *Hu-huk* (p. 189), a Yuki story of giant lizards that “were so huge that they shook the earth” (p. 208), Sioux legends of thunderbirds (p. 239), and many other legends to Natives who inferred whole bodies and invented

detailed stories from what few fossils were visible from the surface.

False legends?

There are more reasons to doubt Mayor’s fossil legend hypothesis. For example, it accuses the Natives who transmitted or transmit dragon legends of lying. They testify that their ancestors interacted with these creatures, but Mayor insists that they did not.

But the oral traditions included intriguing details. For example, there were various water monsters,

some with horns, some without. There were both giant birds and giant flying reptiles that terrorized men. Certain flying reptiles had black stripes encircling their necks, other forms were solid brown, and some of these emitted a light, which the Indians associated with lightning.³ Some accounts relayed details of personal encounters with dragons, including specific reactions of those involved and whether or not they survived the encounter. Habitat details were also included. Thunderbirds lived on cliff faces, and water monsters preferred

Table 1. Names of various dragons in North American Indian Legends.⁴⁻⁶

Name	Meaning/ Description	Tribe
(primarily aquatic)		
Meskag-kwedemos	swamp creature	Abenaki
Uk tena	horned water monster	Cherokee
Himnimtsooke	giant water dragon	Achumawi
Mihu	water monster	Cheyenne
Hiintebiit	water monster	Arapaho
Tieholtsoodi	water monster	Navajo
Bax’an	terrible water monster	Dakota Sioux
(primarily terrestrial)		
Unktehi	water monster/ dragon/ dinosaur	Sioux
Bulukse’e	large meat-eater	Crow
Uktena	great serpent	Cherokee/Creek
Yietso	big gray monster	Navajo/ Hopi
Aziwugum	giant lizard	Innu
Daktu	giant reptile	Cherokee
Ro-qua-ho	giant reptile	Iroquois
(primarily airborne)		
Tlanuhwa	thunderbird	Cherokee
Kah-yah-tak-ne-t’ke-tah keh	“place where the Great Mosquito monster lies	Tuscarora
Izpuzteque	flying reptile	Aztec
Tistilal	thunderbird	Quileute (WA, USA)
Sua’dogagay	snake with wings	Crow
tse Nalyehe	cliff monster	Navajo/ Hopi

certain deep pools or specific river bends. Specific names, transliterated from various Native languages, most often accompany these legends, as well as the names of the heroes who slew the terrible dragons. Perhaps those in a perpetual craze to find out how dinosaurs became extinct ought to look into dragon legends, rather than just fossils. Some of these names have been compiled in table 1.

Mayor does not address how Indians, who universally believed that earth was itself alive and that tampering with it was bad, were able to reconstruct fossils. But her hypothesis implies that all Native Americans were able not only to construct whole body shapes from disarticulated bones or bone fragments, but concocted details of soft anatomy, habit, and habitat from just those pieces exposed on the surface.

She remarked, “I was amused to notice how much the Delaware vision of the ‘greatest monster that terrorized all other creatures,’ written in 1887–1905, resembles today’s popular images of the greatest dinosaur of all, ‘the king tyrant lizard’” (p. 49). And legends of giant birds match what is now known of Haast’s Eagle, flying reptiles resemble today’s images of pterosaurs, and some water monsters, though less precisely described by Natives due to occlusion by water, perhaps resemble today’s images of mososaurs. What is the likelihood that Natives got these details correct, given the fact that they did not engage in the painstaking fossil reconstructions that paleontologists do?

What we think we know of these presumably extinct creatures came from paleontologists in dozens of laboratories spending millions of hours grinding surrounding rock away from fossil bone—using handheld die grinders—and that only occurred after levers, winches, straps, trucks or in some cases helicopters were used to remove the raw rocks. After all that, the bones and fragments had to be pieced together. Surely Natives did not have this kind of time and equipment.

Fossils are sacred to Indians

Nor did they have the desire. In fact, Mayor made it plain that “in the Indian worldview, the land and all the things that compose it, including fossils, are hallowed” (p. 298). She quoted several Indians who spoke clearly against these fundamental paleontological tasks, including Wovoka, a Paiute holy man. He said in about 1890, “You ask me to plow the ground! Shall I take a knife and tear my Mother’s bosom? Then when I die, she will not take me to her bosom to rest. You ask me to dig for stones! Shall I dig under her skin for her bones?”

The earth was sacred to them, and with only a few exceptions authorized by a dream or vision, Indians did not violate it by rooting around in the earth’s crust. Nor did their worldview value scientific exploration.⁷ Mayor gave repeated examples of some Natives having referred to certain exposed fossils to corroborate their legends, but this is quite different from using them to construct legends.

Fortunately, the appendix on Fossil Frauds did provide Mayor’s reason for insisting on the fossil legend hypothesis. It gives reasons why man-made artifacts depicting dinosaurs, or man and dinosaurs, were supposedly faked. The chief reason comes from “misunderstandings of the fossilization process and geological time” (p. 332). Indeed, the standard geologic column diagram was featured prominently on page xvi, right after the table of contents.

Conclusion

Why must Mayor’s thesis insist that dragon legends from North American Indians were lies? It is because “no human beings ever saw a living dinosaur, unless they could magically travel back in time more than 65 million years ago” (p. 337).

Why is it that accounts of monster encounters, though they include many of the same details across a wide spectrum of peoples, must be taken

as fictional? It is because “the odds are nil. The abyss of time between the extinction of dinosaurs and the appearance of the first humans is stupendous” (p. 339). Her claim is logical, given the premise of deep time. But the widespread, consistent and detailed dragon legends from North America alone viciously challenge that very premise.

References

1. Scofield, R.P. and Ashwell, K.W.S., Rapid somatic expansion causes the brain to lag behind: the case of the brain and behavior of New Zealand’s Haast’s eagle (*Harpagornis moorei*), *Journal of Vertebrate Paleontology* 29:3, 2009.
2. Extinct, giant eagle was a fearsome predator, *SVP & Paleo News*, <vertpaleo.org>, 14 September 2009.
3. Records of bioluminescent flying reptiles are widespread. Several detailed sightings up to the late 19th century in England were recorded in Cooper, B., *After the Flood: The Early Post-Flood History of Europe Traced Back to Noah*, New Wine Press, West Sussex, England, 1995. See also Whitcomb, J.D., Reports of Living Pterosaurs in the Southwest Pacific, *Creation Research Society Quarterly* 45(3):200–212, 2009.
4. Mayor, A., *Fossil Legends of the First Americans*, Princeton University Press, Princeton, NJ, 2005.
5. Taylor, C.F. (Ed.), *Native American Myths and Legends*, Smithmark, New York, 1994.
6. Interestingly, many Native descriptions match anatomical and habitat details provided by ancient European and Eastern accounts. For example, water monsters were “Merefisch” in Anglo-Saxon, and perhaps the most feared of them was Leviathan in Hebrew. Likewise, Anglo-Saxons used “Ligdraca” for fiery flying dragon, and Isaiah used “nahash saraph” for the same.
7. Snow, E., Christianity: a cause of modern science? *Acts & Facts* 27(4), 1998; <www.icr.org/article/christianity-cause-modernscience/>.