

'Unfossilized' Alaskan dinosaur bones?

Recently, I have been barraged with a number of inquiries about the dinosaur bones I collected from the North Slope of Alaska in 1994.¹ The literature reported that the preservation of the bones was 'remarkable'.^{2,3} This led many, including myself, to believe that the bones were 'unfossilized'. Many (but not all) of the bones we collected were very lightweight, which seemed to confirm this hypothesis. It was our hope, because of the 'remarkable' preservation, that these bones might contain some ancient organic molecules. To date, our tests have not been able to confirm the 'unfossilized' hypothesis. Twenty of the bone samples were analyzed in Russia for collagen. Only four showed positive results. We became suspicious of these results when we were not able to confirm them with tests made by other labs. One report from a reputable laboratory in the United States told us the samples they tested were 'extremely degraded'. Some of the bones have also been tested for DNA. The results were inconclusive. From our results thus far, the bones should *not* be referred to as 'unfossilized'.

The Bureau of Land Management reports⁴ that the Alaskan bones are fossilized, but all of their pore spaces have not been filled in with rock, making many of them lightweight. They also report that no DNA had been discovered in the bones, but because of their condition, they might be good candidates for it. Until further testing can prove otherwise, the Alaskan dinosaur bones should be referred to as 'fossilized'.

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References

1. Davis, B., Liston, M. and Whitmore, J., *The Great Alaskan Dinosaur Adventure*, Master

Books, Green Forest, AR, 1998. This book is an adventure story of our trip and not a scientific report of the bones.

2. Davies, K.L., Duck-bill dinosaurs (Hadrosauridae, Ornithischia) from the North Slope of Alaska, *J. Paleontology* **61**(1):198–200, 1987.
3. Brouwers, E.M., Clemens, W.A., Spicer, R.A., Ager, T.A., Carter, L.D. and Sliter, W.V., Dinosaurs on the North Slope of Alaska: high latitude, latest Cretaceous environments, *Science* **237**:1608–1610, 1987.
4. See <www.ak.blm.gov/ak930/akdino.html>.

Dinosaur eggs and the post-Flood boundary

Andrew Sibley has suggested the possibility that pregnant female dinosaurs could have postponed laying their eggs until days/weeks into the Genesis Flood, by which time the embryos would have been well-developed.¹ He cites the Komodo monitor as an example of a reptile that can breed during the heat of the summer, but can withhold laying its eggs until cooler months, such as September. He also points out that if eggs are withheld for too long they develop a second shell, suffocating the embryo. This may serve as a parallel to dinosaurs, whose eggs on rare occasions have been found with double shells. According to Sibley, dinosaurs would have withheld their eggs until suitable times during the Flood when they could walk out on freshly exposed land and lay their eggs—eggs that would be close to maturity. This they could do repeatedly, accounting for eggs at different stratigraphic levels. More recently, Walter R. Barnhart has likewise hypothesized that 'embryo development may have been already well underway when some dinosaur eggs were deposited'.²

One of the first creationists to suggest that dinosaur eggs may have reached near maturity within the uteruses of females is Leonard Brand, who wrote:

'One hypothesis for interpreting

these [dinosaur nests and eggs, some of which contain embryos] in a catastrophic framework suggests that perhaps female dinosaurs retained their eggs within their bodies until the eggs were almost ready to hatch, as some modern reptiles do (Goin *et al.* 1978). When the season for egg-laying arrived, they would search for a place to build a nest. The land surface during the flood was not all underwater all the time (as evidenced by the numerous animal tracks on mudflat environments), so the dinosaurs built nests on an exposed surface and laid their eggs. The next inflow of sediments catastrophically buried the nests (nests of eggs would be well-preserved only by rapid burial). ... This could happen repeatedly, resulting in several levels of nests in the same geographic area. This story certainly should not be taken as a final answer, but it is a hypothesis to be tested.³

We have ample means for 'testing' the hypothesis that female dinosaurs may have held their eggs almost to maturity before depositing them on newly-exposed Flood sediments, even though the testing cannot be accomplished with live dinosaurs naturally. The reference to Goin *et al.* in Brand's quotation above is probably to either or both of the following two passages:

'Usually the young of amphibians hatch after the eggs have been laid and the animals are said to be oviparous. Rarely, however, the eggs are retained in the body of the female while they pass through their embryonic development and the young are "born alive." If the developing embryo in the mother's body is nourished entirely by food stored in the yolk of the egg, the animal is ovoviviparous.'⁴

'Most reptiles are oviparous. Some lizards and snakes are ovoviviparous, with the eggs hatching either in the oviduct or just after they are laid. ... Eggs of some colubrid snakes, examined at