The puzzle of the 'mummified' dinosaur

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A 'mummified' duckbill dinosaur was unearthed recently in north-central Montana. It has not been analyzed in depth, but only reported at a meeting of the Society of Vertebrate Paleontology. In a short note in *Science News*[1] the dinosaur has already revealed a major puzzle.

The 7 m long, 2 tonne dinosaur, dubbed Leonardo, is the first 'mummified' dinosaur to be described in 70 years. Although flattened from the weight of the overburden, the fossil includes a three-dimensional, mineralized cast of the right shoulder, throat tissue, and skin. More than 80 percent of its skin is intact. It was lifted out of the ground in a 6.5-tonne sandstone block and it will take experts years to dig out and interpret the find.

While preparing the specimen, a piece of fossilized skin from the side of the dinosaur fell off, revealing the puzzle. Researchers discovered the animal's last meal, which consisted mainly of magnolia and conifers. There were also pollen and spores of ferns and liverworts. Liverworts grow in a moist subtropical environment and cannot survive even a short period of dry weather. But Leonardo is supposedly mummified.

If the dinosaur died in the environment indicated by the associated plant material (which is what uniformitarians assume), how could such desiccation occur in a subtropical moist environment? Experts were interviewed at the meeting. They compared the mystery with finding a long-dead but intact elephant in a steamy tropical jungle.[2,3] The conundrum is difficult to explain and indicates that normal processes of decomposition had to be shut down in just a few days.[2] That is why they suggested the dinosaur was mummified.

But the dinosaur was entombed in sand that hardened to sandstone. Sand, and even sandstone, is quite porous. Water can easily move through sand. This situation adds to the mystery because such porosity would greatly aid the decomposition of the soft tissues. One researcher suggested that: 'It's possible that minerals in the river infiltrated the dinosaur's soft tissues, preserving them after the animal was buried in the riverbed.'[2]

But such a scenario is not likely in today's environment or under uniformitarian conditions in the past. The animal must first be rapidly covered by sand, and within a few days be completely mineralized and preserved by the chemicals circulating through the sand. Few, if any, river sandbars, or any other present day environments, are capable of such a feat.

More likely, after the dinosaur was quickly buried in sand, chemically-charged water moved through the pores of the sand. These chemicals rapidly preserved and petrified the dinosaurs. Water likely would have been under high pressure, indicating rapid deposition of perhaps hundreds of feet of sediment in a short time. In this way, the pressure of the overburden would tend to squeeze out the water and lithify the sand and dinosaur. The observations of this new 'mummified' dinosaur are consistent with the conditions which would have been produced by large-scale sedimentation during the Inundatory stage of the global Flood, as the floodwaters increased on the earth.

References

1. Perkins, S., Dear Mummy—rare fossil reveals common dinosaur's soft tissue, *Science News* **162**:243–244, 2002.
2. Perkins, Ref. 1, p. 244.
3. Wieland, C., The vanishing giant, *Creation* **24**(4):56, 2002 shows how an entire elephant will decompose very quckly in a hot, humid environment.