What can 10,000 dinosaur bones in a bauxite lens tell us?

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Bauxite (Al_20_3*nH_20) is assumed to be a product of tropical weathering of aluminium-rich igneous rocks.[1] Consequently, when Bauxite is found within sedimentary rocks it is interpreted as a 'paleosol'. For example, in the western valleys of Montana, U.S.A., and between the Columbia River Basalts of eastern Washington, northern Oregon, and western Idaho, U.S.A., a mid Tertiary red clay up to 15 meters thick is interpreted as a tropical soil called a laterite. The laterites become almost pure bauxite westward near the west coast of Oregon and Washington. David Alt, professor of geology at the University of Montana, describes the bauxites and the uniformitarian puzzle it presents:

> *'It forms as an extreme type of laterite soil that apparently develops only in truly equatorial climates where the temperature is always blistering hot and it rains almost constantly, places like the lower Amazon basin …. Bauxites don't form outside the tropics today and it is hard to imagine what could have happened between 25 and 15 million years ago to establish such a climate so far north.'*[2]

Alt goes on to say that laterites and bauxites also outcrop far north in Asia and Europe, and that plate tectonics is of no help because the paleolatitude at that time was nearly the same as today. It is hard to imagine that Montana, Washington or Oregon had a tropical or equatorial climate so far north in the mid Tertiary within the uniformitarian paradigm. The bauxite is also hard to explain for creationists who place the post-Flood boundary below the Mesozoic. Not only is the climate wrong, as for the uniformitarians, but there is not enough time.

Uniformitarian scientists base their interpretation on present deep weathering in the tropics, but this is not good enough to explain laterites and bauxites so far north. This suggests that bauxites and laterites can originate in other ways. A strong hint that there is another mechanism, related to flowing water, is provided by the occurrence of 10,000 dinosaur — and other tetrapod — bones in a bauxite lens in northwestern Romania (Figure l).[3] The bauxite is classified as Early Cretaceous within the uniformitarian timescale in rocks most creationists would consider Flood rocks (Figure 2). The bauxite is sandwiched between marine limestones in what are considered crevasse fillings on an ancient karst of late Jurassic age. This lens of bauxite is one of several hundred lenses mined in the area. The bones occur in one lens approximately 35 m long, 25 m wide and 3 m high. Although disarticulated, the bones are in good condition. They are of similar size and come predominantly from ornithopod dinosaurs with rare pterosaur, ankylosaur and theropod bones. Bird bones have also been claimed but are disputed. 'Freshwater' ostracods and charophyte algae, but not other expected freshwater fauna, are also found in the bauxite. Astonishingly, the bones are especially concentrated within a 0.6 m thick band forming a dinosaur bone conglomerate in places.[4]

Most significantly, the longer bones are **current-aligned** and the similar bone size indicates considerable current winnowing (Figure 3). It is considered an unusual sedimentary setting and the fauna suggest a unique ecological succession as well.[5] The bones are slightly abraded with rounding of the edges, suggesting extensive tumbling during transport, but delicate hollow pterosaur bones are surprisingly well preserved. The rarity of theropods, the meat-eating part of the ecological chain, is considered extraordinary for a natural

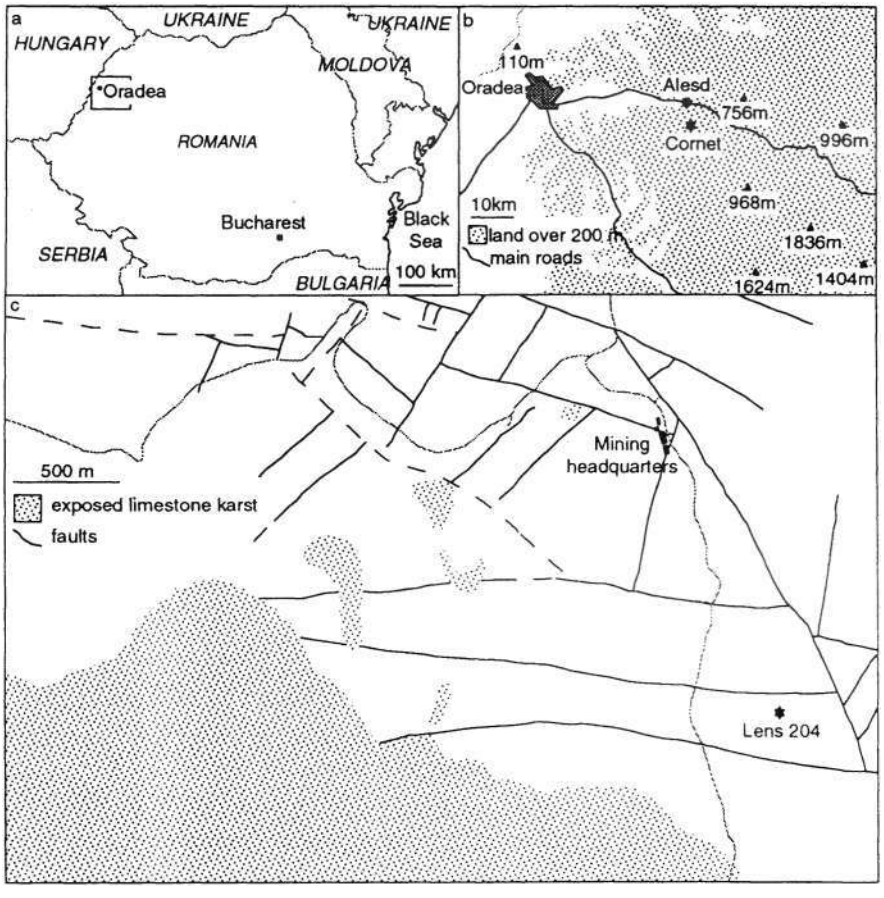

Figure 1. *Location of bauxite lens (lens 204) northwestern Romania containing 10,000 dinosaur bones (from Benton* et al.*).*[3]

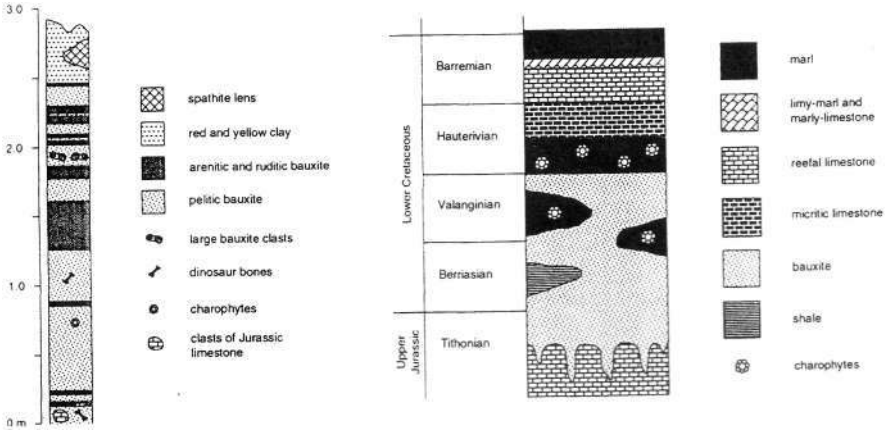

Figure 2. *Stratigraphy of the Upper Jurassic and Lower Cretaceous of the Cornet area (right) and sedimentary log recorded in the fossiliferous zone of lens 204 (left) (from Benton* et al.*).*[3]

burial site. Despite the many odd features of these bones within a bauxite lens, the investigators gave it the usual uniformitarian spin, suggesting uplift, subaerial karstification of the marine limestone, subaerial tropical weathering for millions of years, followed by a thin 'lacustrine' limestone formation, and finally being resubmerged in the sea for more marine limestone deposition. However, they are forced to conclude that the bones and bauxite are **transported by water,** and after rejecting two explanations, state that the bauxite with the bones was supposedly washed into deep fissures or caves in the limestone.

Little of this uniformitarian interpretation makes sense. How can bauxite remain so pure, as to be mined, when washed into fissures or caves? How can the dinosaur bones be so little weathered, when the bauxite is assumed to be a product of extreme tropical weathering? A 'subaerial paleosol' sandwiched between marine limestones seems like a bit of a stretch. The unique fauna with few carnivores also is unnatural. It all points to a mechanism for forming bauxites in flowing water.

Although creationists need to explain the formation of laterites and bauxites, it is quite possible that the unique physical, chemical, and catastrophic effects of the Flood are up to the task. I speculate that a unique chemical effect caused rapid underwater karstification of the limestone, followed by a chemical reaction that formed bauxite that contained reworked and pulverised dinosaur remains, ending with a return to marine limestone deposition. The Flood has the potential to explain a transported bauxite crammed with bones, while the uniformitarian theory seems hard pressed to come up with an adequate explanation.

References

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4. Benton *et al.*, Ref. 3, p. 277.
5. Benton *et al.*, Ref. 3, p. 276.

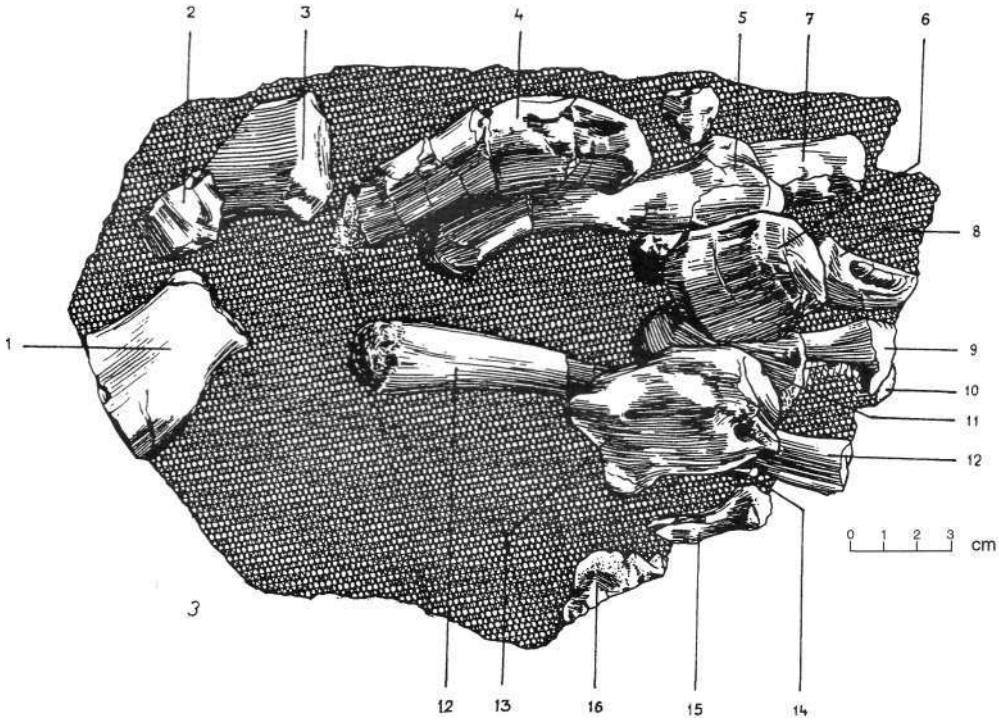

Figure 3. *Drawing of a block of bone-bearing bauxite from the middle of lens 204, showing the close packing of specimens and some apparent current alignment. These are all elements of an ornithopod dinosaur. Numbered elements are; 1. vertebral spine; 2. caudal vertebrae; 3. presacral centrum; 4. metapodial; 5. metatarsal II; 6. caudal centrum; 7. fragment; 8. terminal phalanx; 9, 10. fragments; 11. cervical centrum; 12. tibia; 13. phalanx; 14-16. fragments (From Benton* et al.*).*[3]