REPORT ON CHEMICAL ANALYSIS AND FURTHER DATING OF DINOSAUR BONES AND DINOSAUR PETROGLYPTHS

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ABSTRACT

Much of the material in this report was presented at the 1990 ICC poster sessions. Our radiocarbon dates of dinosaur bones and the other information in this report should be alarming to the evolutionary community and should be given serious study considering our preliminary results.

INTRODUCTION

The hypothesis that blackened dinosaur bones may be the result of absorption by the bones of decaying flesh of the dinosaur itself was suggested by members of two teams excavating an Acrocanthosaurus skeleton in August of 1984, near Glen Rose, Texas. The blackened bones were found covered by up to three feet of clay and imbedded in limestone. A sandstone stratum was above the clay stratum. The two teams consisted of members from the Creation Evidences Museum (CEM) of Glen Rose, Texas and the Creation Research Science Education Foundation (CRSEF) of Columbus, Ohio. The location was approximately three miles upstream from the Paluxy River footprint site, on the Parker Ranch. We are particularly indebted to G. Detwiler, Robbi and Bill Roberson all of CRSEF for their persistence in bringing the details of the Acrocanthosaurus excavation to our attention. Thanks also to Carl Baugh and Don Patton of CEM for their valuable assistance.

In 1986, James Hall of Liberty University, Lynchburg, Virginia, proposed independently that his black Allosaurus bones may have similarly been carbonized, later confirmed by two other labs. Hugh Miller confirmed the Acrocanthosaurus bones were carbonized when the chemical firm by whom he was employed had the scrapings from the bones analyzed for carbon in 1989.

CHEMICAL AND METALLOGRAPHIC ANALYSIS OF THE BONES

After learning that the Texas dinosaur bone surfaces contained 3.5% carbon, CRSEF member Hugh Miller, and Lionel Dahmer surveyed the contents of a large dinosaur bone storage room of a major U.S. museum and estimated that about 80% of the bones ranged from dark gray to black in color. We were fortunate to obtain eight bone samples from this museum along with documentation of genus, location, and collector. Analysis of the surface scrapings from these bones are given in Table I. The scrapings ranged from 1.9% to 7.4% carbon.

The carbon values were obtained on scrapings after the bone fragments were first ultrasonically cleaned with methanol, 10% acetic acid, and water. The purpose of cleaning with methanol and dilute acetic acid is to remove surficial preservatives and carbonates respectively. Several final washings with Milli Q high purity water is, of course, necessary to remove residual methanol or acetic acid before drying and sampling for carbon determination. Cleaned bone surfaces were then scraped with a serrated knife and the powder was analyzed in a Leco high temperature induction furnace or in a Carlo-Erba elemental analyzer.

Metallographic studies of an Acrocanthosaurus bone fragment indicated that the surface cracks and pores of the bone fragments contained dark material which could have contributed to the carbon already in the bones. Pores in other bones contained light colored material although the surfaces were indeed black and carbonized, e.g. sample No. 10, Table I. Some of the bone fragments were very brittle and could be broken by pressure which might be attributed to carbon embrittlement.

Thanks to Roy Holt and others, we were able to obtain some information that some dinosaur bones contain carbonaceous materials such as collagen and noncollagen amino acids. These 1988 discoveries show that the idea that there is nothing left of the original bone material is not always correct. That is, the idea that fossil formation always involves a faithful atom by atom replacement of the original anatomy by silicate and carbonate is not always valid. From a conventional point of view, it is amazing that these organic materials are still existent 145 million years after the dinosaur's demise. Perhaps the reason they contain carbon compounds is that they are millions of years younger than previously thought. Analysis of the bones for 30

elements revealed no differences from modern bones with the exception of uranium and fluoride which are well known to be extremely mobile in ground water. Whether this specific data will be presented in book form or in technical journals remains to be decided, we were told. On the same note, Tony Raines has published some notes confirming the above communication (see *Maps Digest*, "Collection and Preservation of Large Vertebrates Including Dinosaurs," Vol. 13:6, Summer 1990).

RADIOCARBON AND LASER MASS SPECTROMETER ANALYSIS DATING

Carbonized bone, wood, and charcoal wood samples were dated by various Paluxy teams as noted in Figure 3 of the "The Paluxy Footprints Revisited" (specimens 1-8). Since then Acrocanthosaurus crushed bone fragment gases collected from sample 6 (Table 3 of Paluxy Footprints paper) and scrapings from another bone fragment were radiocarbon dated at an AMS lab (see Table II, this paper). Note that the scrapings which would most certainly have been more free of contamination by young carbon were actually about 2,000 radiocarbon years younger than the crushed bone sample date. This suggests older carbon may have contaminated the bones instead of younger as many have suspected of our studies.

Two other samples from Table I of this paper were dated by conventional radiocarbon dating systems and were found to be relatively young compared to the Acrocanthosaurus. It was felt there was no need to date these on the much more expensive, but accurate, AMS because of the younger dates. A lack of funds has prevented radiocarbon dating of our other dinosaur bone samples. The AMS costs $500 per analysis. Contributions (both large and small) would be appreciated towards this vital project.

A second piece of carbonized wood was radiocarbon dated at no younger than 37,420 ± 6120-3430 years before present using the conventional technique. A photo of this sample appeared in Figure 1 of our Paluxy paper and was very close in age to specimen 8 in Table 3. Both were 3-4 meters back from the river under the top Cretaceous strata and imbedded in the very compacted intermediate clay stratum some 100 meters apart.

It has always been the aim of this project to find a second dating technique that might enable the team to falsify or confirm the radiocarbon dates. Potassium-argon was considered and ruled out. It wasn't until our communication with Dr. D. Kouznetsov and Mr. A. Ivenov, M.S. (a laser mass spectromitrist), that such a system became available. They first analyzed bone fragments of the Acrocanthosaurus and obtained a quick 22 element analysis and a rough estimate of its age between 30,000 and 100,000 years. The ratio indices between C, N, O, P, and C1 were used to calculate the above approximate age. Significantly, their carbon value on an entirely different fragment was 3.4% which agreed very closely with the two other samples of 3.3 and 3.5% carbon at two other labs. They are currently completing an in depth report on all the other dinosaur specimens which shows them to lie between 20,000 and 40,000 B.P. Most assuredly another paper will be published regarding these matters. In any science, when a team of scientists is able to confirm one set of data by an entirely different technique, the chance of both being correct is better. From these dating systems alone it can be concluded that both dinosaurs and the sedimentary rocks in which they are deposited are of the same age. Therefore, the rocks must be the same age as the fossils, and the fossils must be the same age of the rocks.

PETROGLYPTH OF THE HAVA SUPAI CANYON

Note that the two specimens in Table I of this report were collected by Charles W. Gilmore. Gilmore was a scientist of national repute in the 1920's, being Curator of Vertebrate Paleontolotgy at the U.S. National Museum. He was also a member of the Doheny scientific expedition in October, 1924 to the Hava Supai Canyon in Northern Arizona, to investigate a petroglypth of an apparent Diplodocus dinosaur on a canyon wall. With the help of Bert Thomas, a book by author A. Hyatt Verill and by a chance discovery at the Oakland, California museum, Lionel Dahmer obtained the report. Dr. Robert Whitelaw (one of the "Paluxy River Footprints Revisited" authors) visited the Smithsonian and found the original notes of Dr. Gilmore from the expedition. There in the original notes were the drawings of animals he saw, including Diplodocus. The Drawing of Diplodocus add additional evidence that man and dinosaurs once coexisted. Anyone desiring the Doheny expedition report (38 pages) or the supplement report to the "Paluxy Footprints Revisited" for research, may obtain it through the CRSEF, P.O. Box 292, Columbus, Ohio, 43216, for a contribution (allow several weeks).

The hypothesis of dinosaur and human coexistence has not been conclusively proved. In fact, much more work has to be done. From the chemical analyses of dinosaur bones, the radiocarbon dates that have been obtained, dinosaur petroglypths, and human like impressions found with dinosaur footprints, it is apparent the hypothesis is far from being disproved. The work on these particular subjects in the past has not been the best (ours is not an exception), but it is being improved. The creationist community must pool its efforts and resources to investigate these very important findings. Let us work together to find the answers.

FUTURE RESEARCH

Some of our plans include radiocarbon dating of more dinosaur bones; dating of blackened mammalian bones (including carbon analysis of surface scrappings); dating of Eurasian dinosaur and mammalian bones and carbonized wood; excavation for mammalian bones with dinosaur bones (we need possible localities for such bone sites); core sampling for carbonized wood in ancient strata; excavation for a "good human-like track way along Paluxy" and at other locations. We need between $30,000 and $100,000 to begin to accomplish these goals. Foundations have been a big help to date; any help from our readers would be appreciated. Our research is geared towards showing the young age of the earth and the probability of dinosaur and human coexistence.

Table I. Analyses of Dinosaur Bone Surface Scrapings for Carbon

#	GENUS	LOCATION	COLLECTOR	%CARBON
1.	Acrocanthosaurus	Glen Rose, TX	Baugh	3.28
2.	Allosaurus	Grand Junction, CO	Hall	2.70
3.	Diplodocus	Albany Co., WY	Gilmore	2.54
4.	Barosaurus	Uintah Co., UT	Douglass	2.29
5.	Camarasaurus	Johnson Co., WY	Utterback	5.13
6.	Stegosaurus	Albany Co., WY	Wortman	6.92
7.	Camarasaurus	Carbon Co., WY	Gilmore	7.43
8.	Apatosaurus	Carbon Co., WY	Wortman	3.23
9.	Camarasaurus	Johnson Co., WY	Utterback	4.32
10.	Unidentified	Wyoming	Unknown	1.90

Table II. Radiocarbon Dating of Dinosaur Bones and Carbon Analysis of Clay and Rock Samples.

Specimen	Location	Radiocarbon Dates/ Lab (a) years B.P.	% Carbon
Acrocanthosaurus #1 in above table #6 in Table 3, Paluxy Footprint paper	Parker Ranch Glen Rose, TX	23,760 ± 270 USA bone scrappings	3.5 3.4 3.3
Acrocanthosaurus #1 in above table #6 in Table 3, Paluxy Footprint paper	Parker Ranch Glen Rose, TX	25,750 ± 280 Overseas crushed bone	3.5 3.4 3.3
Allosaurus #2 in above table	Grand Junction, CO	16,120 ± 220 USA	2.7
Unidentified dinosaur bone fragment, #10 in above table	Wyoming according to museum curator	9,890 ± 60	1.9
Clay from bone stratum, #6, Table 3, Paluxy Footprints Paper	Parker Ranch, Glen Rose, TX		0.5 (b)
Clay from 30 cm above bone stratum, #6, Table 3, Paluxy Footprints Paper	Parker Ranch, Glen Rose, TX		0.1 (b)
Rock from Allosaurus, #2 in above table	Grand Junction, CO		2.0 (b)

(a) Our reports on radiocarbon dating are extant. A future paper will contain these report sources, however we must protect our sources at this early stage of research.

(b) Note that there was very little migration of carbon into the clay from the remains of the dinosaur skeleton. A higher percentage of carbon was found in the rock containing the Allosaurus. More research will be needed to establish all of the migration parameters and other factors to give a reasonable interpretation. However, since the bones had a higher percentage

of carbon in them than the surrounding rock or clay, the hypothesis is that the carbon came from the dinosaur and did not migrate into the area. Instead, these results show the carbon is migrating away from the area.