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Darden Hood
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February 17, 2014

Dr. Didier Jegaden
1404 Creek Circle
Edmond, OK 73013
USA

RE: Radiocarbon Dating Result For Sample Sensitive Fossil

Dear Dr. Jegaden:

Enclosed is the radiocarbon dating result for one sample recently sent to us. It provided plenty of carbon for an accurate measurement and the analysis proceeded normally. The report sheet contains the method used, material type, and applied pretreatments and, where applicable, the two-sigma calendar calibration range.

All results (excluding some inappropriate material types) which are less than about 42,000 years BP and more than about ~250 BP include a calendar calibration page (also digitally available in Windows metafile (.wmf) format upon request). Calibration is calculated using the newest (2009) calibration database with references quoted on the bottom of the page. Multiple probability ranges may appear in some cases, due to short-term variations in the atmospheric ^{14}C contents at certain time periods. Examining the calibration graph will help you understand this phenomenon. Don't hesitate to contact us if you have questions about calibration.

We analyzed this sample on a sole priority basis. No students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analysis. We analyzed it with the combined attention of our entire professional staff.

The cost of the analysis was charged to the DISCOVER card provided. Thank you. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,



Darden Hood

Digital signature on file



REPORT OF RADIOCARBON DATING ANALYSES

Dr. Didier Jegaden

Report Date: 2/17/2014

Material Received: 2/4/2014

Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 372163 SAMPLE : Sensitive Fossil ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (carbonate): acid etch 2 SIGMA CALIBRATION : Cal BC 41420 to 40240 (Cal BP 43370 to 42190)	38160 +/- 440 BP	-10.2 o/oo	38400 +/- 440 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "**". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-10.2;lab. mult=1)

Laboratory number: Beta-372163

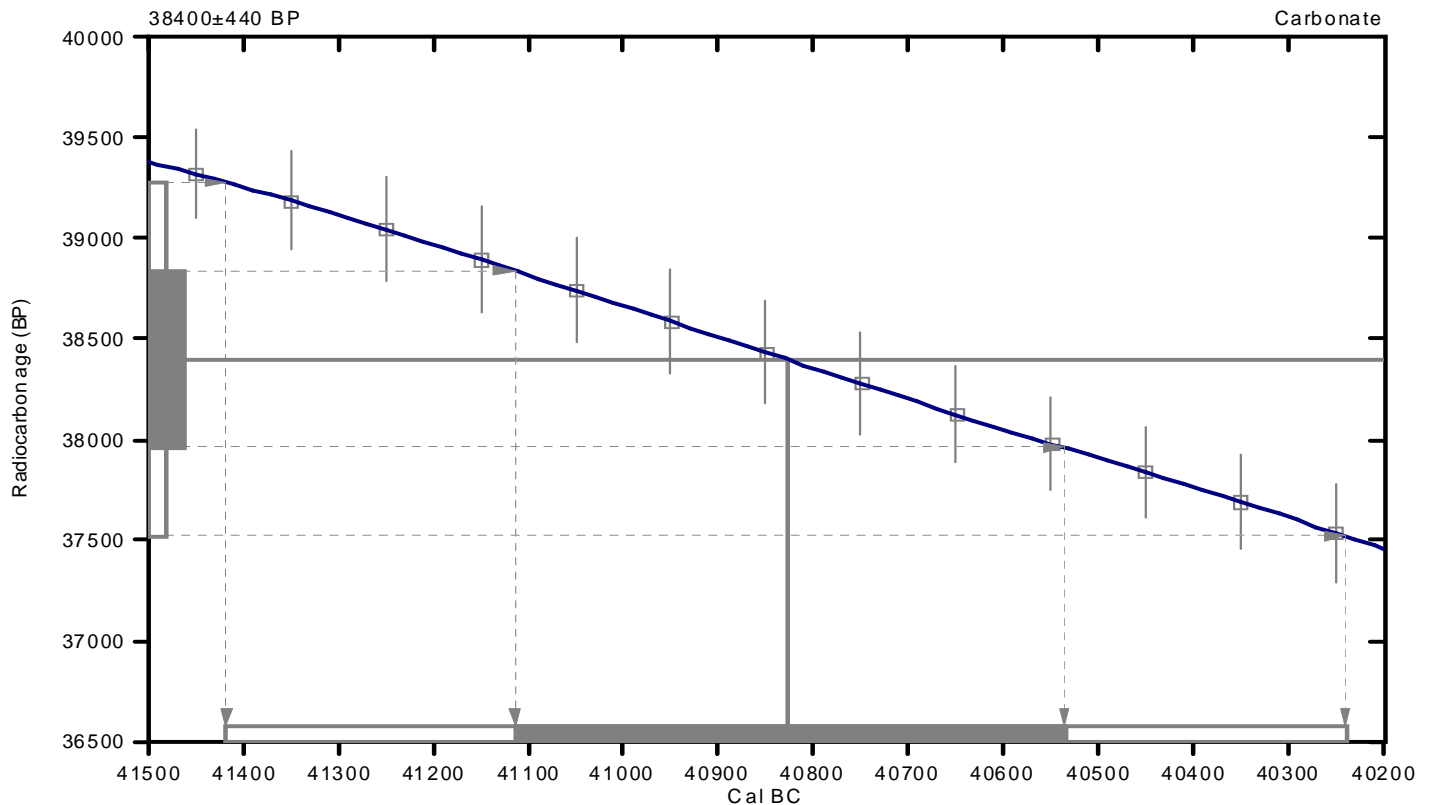
Conventional radiocarbon age: 38400±440 BP

**2 Sigma calibrated result: Cal BC 41420 to 40240 (Cal BP 43370 to 42190)
(95% probability)**

Intercept data

Intercept of radiocarbon age
with calibration curve: Cal BC 40830 (Cal BP 42780)

**1 Sigma calibrated result: Cal BC 41110 to 40540 (Cal BP 43060 to 42490)
(68% probability)**



References:

Database used

INTCAL09

References to INTCAL09 database

Heaton, et al., 2009, Radiocarbon 51(4):1151-1164, Reimer, et al., 2009, Radiocarbon 51(4):1111-1150, Stuiver, et al., 1993, Radiocarbon 35(1):1-244, Oeschger, et al., 1975, Tellus 27:168-192

Mathematics used for calibration scenario

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2):317-322

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