The University of Georgia

Center for Applied Isotope Studies

RADIOCARBON ANALYSIS REPORT

February 4, 2013

James Jordan
Antioch University New England
40 Avon St
Keen, NH 03431

Dear Mr. Jordan

Enclosed please find the results of ^{14}C Radiocarbon analyses and Stable Isotope Ratio $\delta^{13}C$ analyses for the samples received by our laboratory on January 11, 2013.

UGAMS#	Sample ID	Material	$\delta^{13}C$,‰	^{14}C age, years BP	±	pMC	±
13097	12-AN-01-340	peat	-27.3	4710	25	55.64	0.18
13098	12-AN-01-460	peat	-27.2	6580	30	44.07	0.15
13099	12-AN-01-540	peat	-28.3	8470	30	34.83	0.12
13100	12-AN-01-610	leaf	-26.6	7180	30	40.91	0.15
13101	12-AN-08-117	peat	-24.3	80	35	99.00	0.41

The peat samples were treated with 5% HCl at the temperature 80°C for 1 hour, then it were washed and with deionized water on the fiberglass filter and dried at 60°C.

For accelerator mass spectrometry analysis the cleaned sample was combusted at 900°C in evacuated / sealed ampoules in the presence of CuO. The resulting carbon dioxide was cryogenically purified from the other reaction products and catalytically converted to graphite using the method of Vogel *et al*. (1984) Nuclear Instruments and Methods in Physics Research B5, 289-293. Graphite $^{14}C/^{13}C$ ratios were measured using the CAIS 0.5 MeV accelerator mass spectrometer. The sample ratios were compared to the ratio measured from the Oxalic Acid I (NBS SRM 4990). The sample $^{13}C/^{12}C$ ratios were measured separately using a stable isotope ratio mass spectrometer and expressed as $\delta^{13}C$ with respect to PDB, with an error of less than 0.1‰.

The quoted uncalibrated dates have been given in radiocarbon years before 1950 (years BP), using the ^{14}C half-life of 5568 years. The error is quoted as one standard deviation and reflects both statistical and experimental errors. The date has been corrected for isotope fractionation.

If the dates are to be published, please quote the UGAMS numbers, as it identifies our laboratory as having produced the dates.

Sincerely,

Dr. Alexander Cherkinsky