



RADIOCARBON

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Tucson, Arizona, 20–24 May 1991

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B VAN VLIET-LANOE (France), The genesis and age of the argillic horizon in Weichselian loess of North Western Europe.

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NOTICE TO READERS AND CONTRIBUTORS

Since its inception, the basic purpose of *RADIOCARBON* has been the publication of compilations of ^{14}C dates produced by various laboratories. These lists are extremely useful for the dissemination of basic ^{14}C information.

In recent years, *RADIOCARBON* has also been publishing technical and interpretative articles on all aspects of ^{14}C . We would like to encourage this type of publication on a regular basis. In addition, we will be publishing compilations of published and unpublished dates along with interpretative text for these dates on a regional basis. Authors who would like to compose such an article for his/her area of interest should contact the Managing Editor for information.

Other sections recently added to our regular issues include NOTES AND COMMENTS, LETTERS TO THE EDITOR, RADIOCARBON UPDATES and ANNOUNCEMENTS. Authors are invited to extend discussions or raise pertinent questions to the results of scientific investigations that have appeared on our pages. These sections include short, technical notes to relay information concerning innovative sample preparation procedures. Laboratories may also seek assistance in technical aspects of radiocarbon dating. Book reviews are also encouraged as are advertisements.

Manuscripts. Papers may now be submitted on both floppy diskettes and hard copy. When submitting a manuscript, include three hard copies, double-spaced. When the final copy is prepared after review, please provide a floppy diskette along with one hard copy. We will accept, in order of preference, WordPerfect 5.1 or 5.0, Microsoft Word, Wordstar or any IBM word-processing software program. ASCII files, MS DOS and CPM formatted diskettes are also acceptable. The diskettes should be either 3½" (720 k or 1.44 megabytes) or 5¼" (360 k or 1.2 megabytes). Radiocarbon papers should follow the recommendations in INSTRUCTIONS TO AUTHORS (R, 1990, v. 32, no. 1, p. 115–118). Offprints are available upon request. Our deadline schedule for submitting manuscripts is:

<i>For</i>	<i>Date</i>
Vol. 34, No. 2, 1992	January 1, 1992
Vol. 34, No. 3, 1992	Proceedings
Vol. 35, No. 1, 1993	September 1, 1992

Half-life of ^{14}C . In accordance with the decision of the Fifth Radiocarbon Dating Conference, Cambridge, England, 1962, all dates published in this volume (as in previous volumes) are based on the Libby value, 5568 yr, for the half-life. This decision was reaffirmed at the 11th International Radiocarbon Conference in Seattle, Washington, 1982. Because of various uncertainties, when ^{14}C measurements are expressed as dates in years B.P., the accuracy of the dates is limited, and refinements that take some but not all uncertainties into account may be misleading. The mean of three recent determinations of the half-life, 5730 ± 40 yr, (*Nature*, 1962, v. 195, no. 4845, p. 984), is regarded as the best value presently available. Published dates in years B.P. can be converted to this basis by multiplying them by 1.03.

A.D./B.C. Dates. In accordance with the decision of the Ninth International Radiocarbon Conference, Los Angeles and San Diego, California, 1976, the designation of A.D./B.C., obtained by subtracting A.D. 1950 from conventional B.P. determinations is discontinued in *RADIOCARBON*. Authors or submitters may include calendar estimates as a comment, and report these estimates as cal. A.D./B.C., citing the specific calibration curve used to obtain the estimate. Calibrated dates will now be reported as "cal. B.P." or "cal. A.D./B.C." according to the consensus of the Twelfth International Radiocarbon Conference, Trondheim, Norway, 1985.

Measuring of $\delta^{14}\text{C}$. In Volume 3, 1961, we endorsed the notation Δ (Lamont VIII, 1961) for geochemical measurements of ^{14}C activity, corrected for isotopic fractionation in samples and in the NBS oxalic-acid standard. The value of $\delta^{14}\text{C}$ that entered the calculation of Δ was defined by reference to Lamont VI, 1959, and was corrected for age. This fact has been lost sight of, by editors as well as by authors, and recent papers have used $\delta^{14}\text{C}$ as the observed deviation from the standard. At the New Zealand Radiocarbon Dating Conference it was recommended to use $\delta^{14}\text{C}$ only for age-corrected samples. Without an age correction, the value should then be reported as percent of modern relative to 0.95 NBS oxalic acid (Proceedings 8th Conference on Radiocarbon Dating, Wellington, New Zealand, 1972). The Ninth International Radiocarbon Conference, Los Angeles and San Diego, California, 1976, recommended that the reference standard, 0.95 NBS oxalic acid activity, be normalized to $\delta^{13}\text{C} = -19\text{‰}$.

In several fields, however, age corrections are not possible. $\delta^{14}\text{C}$ and Δ , uncorrected for age, have been used extensively in oceanography, and are an integral part of models and theories. For the present, therefore, we continue the editorial policy of using Δ notations for samples not corrected for age.

A SPECIAL ISSUE IS FORTHCOMING

Dear Colleague,

The paper by Tans, Fung and Takahashi (1990) "Observational Constraints on the Global Atmospheric CO₂ Budget" *Science* 247: 1431, raised considerable interest in the possibility that an anthropogenically induced stimulation of carbon storage in soils has occurred. No other reservoir appears to be capable of storing the so-called "missing sink" carbon. If so, then it is essential not only that the cause for this stimulation be found, but also that models be developed which would permit the evolution of its storage capacity to be predicted.

One set of parameters in any such model is the ratio of turnover of carbon in various soil pools. Radiocarbon measurements offer an important constraint in their regard. Of course, even though the wide spectrum of turnover times and the separate contributions of natural and bomb-testing radiocarbon complicate the use of this constraint for the longer time-constant pools, it is all we have. Presumably, this renewed interest in the soil reservoir will lead to a host of new soil measurements. The availability of AMS facilities for radiocarbon measurements makes the task much easier in the sense that a variety of fractions can now be analyzed in any given soil sample.

In expectation of this renaissance, it is appropriate that a summary of existing measurements on contemporary soil organics be made available. Thus, we propose that an issue of *RADIOCARBON* be devoted to a listing of radiocarbon measurements on contemporary soil organics and to commentary on the interpretation of such measurements. To do this, we need the help of all those who have made such measurements. So please copy and fill out the form on the reverse side of this page and send it to Renee.

Cheers,

Wally Broecker
Renee Kra

(over)

Name:

Address:

Tel:

Fax:

E-mail:

I will submit a list of radiocarbon measurements (published and/or unpublished) on soils

I am interested in doing a short paper on the interpretation of such results

I would like to contribute data on the following topics (please explain in some detail, attaching a separate sheet of paper, if necessary):

The following people should also be contacted:

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