

RADIOCARBON Announces the Publication of the Following:

**Radiocarbon After Four Decades:
An Interdisciplinary Perspective**

Editors: R. E. Taylor, Austin Long and R. S. Kra
Special Hardcover Edition Published by Radiocarbon and
Springer-Verlag, New York
\$89.00 List Price; \$66.25 for Subscribers to RADIOCARBON

Radiocarbon After Four Decades: An Interdisciplinary Perspective commemorates the 40th anniversary of radiocarbon dating and documents the major contributions of ^{14}C dating to archaeology, biomedical research, earth sciences, environmental studies, hydrology, studies of the natural carbon cycle, oceanography and palynology.

All of the 64 authors played major roles in the development of ^{14}C dating. The 35 chapters provide a solid foundation in the essential topics of ^{14}C dating and include: The Natural Carbon Cycle; Instrumentation and Sample Preparation; Hydrology; Old World Archaeology; New World Archaeology; Earth Sciences; Environmental Sciences; Biomedical Applications; and Historical Perspectives.

Radiocarbon After Four Decades: An Interdisciplinary Perspective serves as a synthesis of past, present and future research in the field. It is offered outside of our regular issues; *RADIOCARBON* subscribers receive a 25% discount off the \$89.00 list price and pay only \$66.25.

Proceedings of the 14th International Radiocarbon Conference
Tucson, Arizona, 20–24 May 1991
Volume 34, No. 3, 1992 @ \$65.00

This Conference Proceedings documents state-of-the-art research in ^{14}C dating and cosmogenic isotopes. It contains papers on recent developments in Sample Preparation and Measurement Techniques, Applied Isotope Geochemistry, Global ^{14}C Production and Variation, Paleoclimatology and Archaeological Applications; Workshop Reports are included. 665 pages. The Proceedings issue is part of the 1992 subscription.

FORTHCOMING . . .

LSC 92: Proceedings of the International Conference on Advances in Liquid Scintillation Spectrometry, 14–18 September 1992, Vienna, Austria. Volume editors: John E. Noakes, Franz Schönhofer and Henry A. Polach.

Applications of Radiocarbon Dating in the Former Soviet Union. Special editor: Jaan-Mati Punning, Tallinn, Estonia. *RADIOCARBON*, Vol. 35, No. 3, 1993.

Late Quaternary Chronology and Paleoclimates of the Eastern Mediterranean. In association with Plenum Publishing Corporation, Interdisciplinary Contributions to Archaeology Series. Volume editors: Ofer Bar-Yosef and Renee Kra.

^{14}C Dynamics in Soils. Special editors: Peter Becker-Heidmann, D. D. Harkness, Eldor Paul and S. E. Trumbore. *RADIOCARBON*, Vol. 36, 1994.



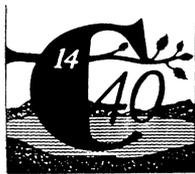
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New-Calibration 1993 (Vol. 35, No. 1, 1993)	\$ 40.00
Proceedings of the 14th International Radiocarbon Conference (Vol. 34, No. 3, 1992)	\$ 65.00
Proceedings of the International Workshop on Intercomparison of ¹⁴ C Laboratories (Vol. 32, No. 3, 1990)	\$ 40.00
Proceedings of the 13th International Radiocarbon Conference (Vol. 31, No. 3, 1989)	\$ 60.00
Proceedings of the 12th International Radiocarbon Conference (Vol. 28, Nos. 2A & 2B, 1986 – available separately at \$30.00 each)	\$ 60.00
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RADIOCARBON AFTER FOUR DECADES: AN INTERDISCIPLINARY PERSPECTIVE

Special Hardcover Edition

Edited by **R. E. Taylor**, *University of California, Riverside*,
A. Long and R. S. Kra, both of *The University of Arizona, Tucson*

Here, for the first time, are collected accounts of significant achievements and assessments of historical and scientific importance. **Radiocarbon After Four Decades: An Interdisciplinary Perspective** commemorates the 40th anniversary of radiocarbon dating and documents the major contributions of ^{14}C dating to archaeology, biomedical research, earth sciences, environmental studies, hydrology, studies of the natural carbon cycle, oceanography and palynology.

All of the 64 authors were instrumental in the establishment of – or major contributors to – ^{14}C dating as a revolutionary scientific tool. The 35 chapters provide a solid foundation in the essential topics of ^{14}C dating and include: The Natural Carbon Cycle; Instrumentation and Sample Preparation; Hydrology; Old World Archaeology; New World Archaeology; Earth Sciences; Environmental Sciences; Biomedical Applications; and Historical Perspectives.

Radiocarbon After Four Decades: An Interdisciplinary Perspective serves as a synthesis of past, present and future research in the vastly interdisciplinary field of radiocarbon dating.

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RADIOCARBON

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Back issues and price lists may be obtained from the office of *RADIOCARBON*.

All correspondence and manuscripts should be addressed to the Managing Editor, *RADIOCARBON*, Department of Geosciences, The University of Arizona, 4717 East Ft. Lowell Road, Tucson, AZ 85712 USA. Tel: (602) 881-0857; Fax: (602) 881-0554. Please note our BITNET address: C14@ARIZVMS and INTERNET address: rkra@spider.aml.arizona.edu.

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Citations. A number of radiocarbon dates appear in publications without laboratory citation or reference to published date lists. We ask that laboratories remind submitters and users of radiocarbon dates to include proper citation (laboratory number and date-list citation) in all publications in which radiocarbon dates appear.

Radiocarbon Measurements: Comprehensive Index, 1950–1965. This index covers all published ¹⁴C measurements through Volume 7 of *RADIOCARBON*, and incorporates revisions made by all laboratories. It is available at \$25.00 per copy.

List of laboratories. Our comprehensive list of laboratories is available upon request. We are expanding the list to include additional laboratories and scientific agencies with whom we have established contacts. The editors welcome information on these or other scientific organizations. We ask all laboratory directors to provide their current telephone, telex, fax numbers and E-mail addresses. Changes in names or addresses, additions or deletions should be reported to the Managing Editor.

NOTICE TO READERS AND CONTRIBUTORS

The purpose of *RADIOCARBON* is to publish technical and interpretative articles on all aspects of ^{14}C and other cosmogenic isotopes, as well as lists of ^{14}C dates produced by various laboratories. In addition, we present regional compilations of published and unpublished dates along with interpretative text. Besides the triennial Proceedings of Radiocarbon Conferences, we publish Proceedings of conferences in related fields. Organizers interested in such arrangements should contact the Managing Editor for information.

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 regarding the results of investigations that have appeared on our pages. These sections also include short technical notes to disseminate information concerning innovative sample preparation procedures. Laboratories may also seek assistance in technical aspects of radiocarbon dating. Book reviews are encouraged.

Manuscripts. Papers may be submitted on floppy diskettes and as printed copy. When submitting a manuscript, include three printed copies, double-spaced. When the final copy is prepared after review, please provide a floppy diskette along with one printed 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 $3\frac{1}{2}$ " (720 k or 1.44 mb) or $5\frac{1}{4}$ " (360 k or 1.2 mb). Papers should follow the recommendations in INSTRUCTIONS TO AUTHORS (*Radiocarbon*, 1992, vol. 34, no. 1, p. 177–185). Offprints are available upon request. Our deadlines for submitting manuscripts are:

<i>For</i>	<i>Date</i>
Vol. 35, No. 3, 1993	May 1, 1993
Vol. 36, No. 1, 1994	September 1, 1993
Vol. 36, No. 2, 1994	January 1, 1994

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 BP, 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, vol. 195, no. 4845, p. 984), is regarded as the best value presently available. Published dates in years BP can be converted to this basis by multiplying them by 1.03.

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

Measuring $\delta^{14}\text{C}$. 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 of the 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. Thus, for the present, we continue the editorial policy of using Δ notations for samples not corrected for age.