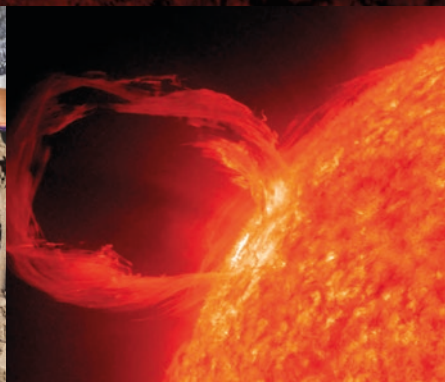


Radiocarbon

An International Journal of Cosmogenic Isotope Research

VOLUME 67 • NUMBER 3 • 2025

14



Editor

A.J.T. Jull

CAMBRIDGE
UNIVERSITY PRESS

Radiocarbon

An International Journal of Cosmogenic Isotope Research

EDITOR

A. J. T. Jull · University of Arizona

MANAGING EDITOR

Kimberley Tanner Elliott · University of Arizona

ASSOCIATE EDITORS

Edouard Bard · Collège de France
Nancy Beavan · ESR, New Zealand
Warren Beck · University of Arizona
Ravi Bhushan · PRL, Gujarat, India
Elisabetta Boaretto · Weizmann Institute
Christopher Bronk Ramsey · Oxford University
George S. Burr · University of Arizona
Lucio Calcagnile · University of Salento, Lecce, Italy
Alexander Cherkinsky · University of Georgia
Owen K. Davis · University of Arizona
Ellen R. M. Druffel · University of California-Irvine
Pieter Grootes · Christian-Albrechts University
Carla S. Hadden · University of Georgia
Irka Hajdas · ETH Zurich
Derek Hamilton · University of Glasgow
Christine Hatté · LSCE, Gif-sur-Yvette
Gregory Hodgins · University of Arizona
Quan Hua · ANSTO, Australia
Yaroslav Kuzmin · Russian Academy of Sciences
Steven W. Leavitt · University of Arizona

Susanne Lindauer · CEZA, Mannheim
Kita Macario · UFF, Rio de Janeiro
Ann P. McNichol · WHOI, USA
Mihály Molnár · Lab. of Envir. Studies, Hungary
Toshio Nakamura · Nagoya University
Jesper Olsen · Aarhus AMS Center
Charlotte Pearson · University of Arizona
Pavel Povinec · Comenius University, Slovakia
Gianluca Quarta · University of Salento, Lecce, Italy
Andrzej Rakowski · Silesian Univ. of Tech., Gliwice
Paula J. Reimer · Queen's University Belfast
E. Marian Scott · University of Glasgow
Corina Solis · UNAM, Mexico City
John R. Southon · University of California-Irvine
Johannes van der Plicht · Groningen University
Ryan Venturelli, Colorado School of Mines
Rachel Wood · Oxford University, UK
Antoine Zazzo · Mus. Nat. d'Histoire naturelle
Weijian Zhou · Inst. of Earth Environ., Chinese Acad. of Sci.

Radiocarbon (ISSN 0033-8222) is published six times per year by Cambridge University Press, One Liberty Plaza 20th Floor New York, NY 10006. © 2025 by the Arizona Board of Regents on behalf of the University of Arizona. All rights reserved.

Editorial Office

Communications should be addressed to the Managing Editor, *Radiocarbon*, Department of Geosciences, The University of Arizona, 1040 E. 4th St., Rm. 208, Tucson, AZ 85721 USA. Tel.: +1 (520) 621-0641; Email: kimelliott@arizona.edu. Contributors should consult the Instructions for Contributors, which is available on the journal's Web site: cambridge.org/rdc.

Subscriptions

Annual subscription rates for Volume 67, 2025: Institutional rate is (print and electronic) \$767 in the USA, Canada, and Mexico, £495 + VAT elsewhere. Institutional rate (electronic only) \$402 in the USA, Canada, and Mexico, £287 + VAT elsewhere. Individual rate is (print and electronic) \$252 in the USA, Canada, and Mexico, £162 + VAT elsewhere. Individual rate (electronic only) \$139 in the USA, Canada, and Mexico, £91 + VAT elsewhere. Please direct subscription inquiries and requests for back issues to Customer Services at Cambridge University Press, email: subscriptions_newyork@cambridge.org (USA, Canada, and Mexico) or journals@cambridge.org (outside of USA, Canada, and Mexico).

Advertising

To advertise in the journal email advertising@cambridge.org or telephone +1 (212) 337 5062 in the USA, Canada, or Mexico; email ad_sales@cambridge.org or telephone +44 (0)1223 325898 in the rest of the world.

Abstracting and indexing

Radiocarbon is indexed and/or abstracted by the following sources: *Anthropological Index*; *Anthropological Literature*; *Art and Archaeology Technical Abstracts*; *Bibliography and Index of Geology* (GeoRef); *British Archaeological Bibliography*; *Chemical Abstracts*; *Chemistry Citation Index*; *Current Advances in Ecological and Environmental Sciences*; *Current Contents* (ISI); FRANCIS (Institut de l'Information Scientifique et Technique – CNRS); *Geographical Abstracts*; *Geological Abstracts*; *Oceanographic Literature Review*; *Science Citation Index*; *Social Sciences Citation Index*.

List of laboratories

Our current list of laboratories is at www.radiocarbon.org. Listings are self-reported. We ask all directors to provide their lab code designation, telephone and fax numbers, and email addresses. Changes should be reported to the managing editor. Labs are arranged in alphabetical order by country, and we include a list of current and past lab codes.

Permissions

No part of this publication may be reproduced, in any form or by any means, electronic, photocopying or otherwise, without permission in writing from Cambridge University Press. Policies, request forms and contacts are available at: <http://journals.cambridge.org/action/rightsAndPermissions>. Permission to copy (for users in the USA) is available from Copyright Clearance Center: <http://www.copyright.com>, email: info@copyright.com.

Postmaster: Send address changes to *Radiocarbon*, Cambridge University Press, One Liberty Plaza, New York, NY 10006, USA.

Radiocarbon

Vol 67, Nr 3, 2025

CONTENTS

OBITUARIES

Michael Francis Barbetti (1945–2019): In memoriam <i>Quan Hua and Colin V. Murray-Wallace</i>	441
Colin Renfrew—A titan of archaeology <i>Yaroslav Kuzmin</i>	445

RESEARCH ARTICLES

Status report of the Heidelberg Radiocarbon Laboratory: Precision and application in Mauritanian cold-water corals over the last 30,000 years <i>E. Beisel, S. Therre, C. Wienberg, R. Friedrich and N. Frank</i>	450
The earliest Holocene wanderers through the Gobi Desert evidenced by the radiocarbon chronology of the lakeshore settlement near the Tsakhiurtyn Hondi, Mongolia <i>P. Bobrowski, M. Jórdeczka, M. Masojć, B. Gunchinsuren, T. Goslar, R. Sikora, P. Muntowski, D. Odsuren, M. Szmit, D. Bazargur, G. Michalec and J. Szykulski</i>	461
Towards online ramped oxidation (ORO)-AMS for thermal dissection and serial radiocarbon analysis of complex organic matter <i>Marco A. Bolandini, Daniele De Maria, Negar Haghipour Lukas Wacker, Jordon D. Hemingway, Timothy I. Eglinton and Lisa Bröder</i>	471
New and old coral radiocarbon records revisited for the subtropical and tropical Atlantic Ocean <i>Kristine L. DeLong, K. Halimeda Kilbourne, Thomas P. Guilderson, Amy J. Wagner, Niall Slowey, Kylie Palmer and Irka Hajdas</i>	487
Absolute dating of Bronze Age urn burials in the central Balkans: Cemeteries of copper-producing societies in eastern Serbia <i>Mario Gavranović, Lyndelle C. Webster, Aleksandar Kapuran, Lukas Waltenberger, Irene M. Petschko, Marina Dević and Nicole Mittermair</i>	513
Physiological reactions in plants visualized by ^{14}C : The impact of sea spray on radiocarbon analyses of terrestrial plants in coastal regions quantified by a greenhouse study <i>Andrea Göhring, C. Matthias Hüls, Stefan Hölzl, Christoph Mayr, Harald Strauss and Christian Hamann</i>	539
Laser spectroscopy: A potential versatile solution for radiocarbon analyses <i>Zuguang Guan, Yan Zhou, Qiang Ling, Luca Varricchio, Amelia Detti, Saverio Bartalini and Daru Chen</i>	565

Quantification of excess carbon-14 specific activity in soil and sediments in the vicinity of a nuclear power plant by batch combustion and liquid scintillation counting method <i>Arya Krishnan K, Bharath S, Rajveer Sharma, Pankaj Kumar, Sundeeep Chopra, Reshmi T R, Sudheesh M and Karunakara N</i>	578
Reservoir effects from shells of Tell Abraq, Sharjah Emirate, UAE <i>Susanne Lindauer, Marc Händel and Peter Magee</i>	600
Twigs date the second Holocene transgression in southwestern Norway <i>Svein V. Nielsen and Martin Hinz</i>	613
Discrepancies between radiocarbon dates and dated finds among Phoenician tombs in Sicily <i>Dalit Regev, Elisabetta Boaretto and Ilan Gronau</i>	630
Investigating classical χ^2 test methods for high-precision calibration of radiocarbon measurements <i>Andrea Scifo and Michael Dee</i>	646
CASE STUDIES	
The last 40,000 years of a floodplain area (Tisza, Hungary) comparative case study of ^{14}C and OSL methods <i>Titanilla G. Kertész, Katalin Hubay, Botond Buró, A. J. Timothy Jull, Andrea Mindszenty, György Sipos, Tamás Bartyik and Mihály Molnár</i>	656
^{14}C age of recent natural earthworm biospheroids— implications for paleosol dating <i>Titanilla G. Kertész, Virág Gergely, Botond Buró, István Futó, A. J. Timothy Jull and Mihály Molnár</i>	679
DATE LIST	
^{14}C dates funded within the contract archaeological excavations conducted along the S7 roadway on the section between Moczydło and Kraków (Lesser Poland) between 2016 and 2022 <i>Natalia Piotrowska, Ewa Dreczko, Iga Fabiszak, Mirosław Furmanek, Izabela Gomułka, Agata Hahuszko, Paweł Jarosz, Anna Józefowska-Domańska, Lidia Kamyszek, Igor Kołoszuk, Anna Lasota-Kuś, Mirosław Masojć, Danuta Minta-Tworzowska, Tomasz Murzyński, Fatima Pawełczyk, Jerzy Piekalski, Marcin M. Przybyła, Marta Rychtarska, Agata Sady-Bugajska, Anita Szczepanek, Alicja Ustrzycka, Leszek Żygadło and Tomasz J. Chmielewski</i>	695