

1. Record Nr.	UNINA9910460190803321
Autore	Taylor R. E (Royal Ervin), <1938-, >
Titolo	Radiocarbon dating : an archaeological perspective // R.E. Taylor and Ofer Bar-Yosef ; foreword by Colin Renfrew
Pubbl/distr/stampa	Abingdon, Oxon : , : Routledge, , 2016
ISBN	1-315-42120-8 1-315-42121-6 1-61132-777-6
Edizione	[Second edition.]
Descrizione fisica	1 online resource (405 p.)
Altri autori (Persone)	Bar-YosefOfer
Disciplina	930.1/0285
Soggetti	Archaeological dating Radiocarbon dating Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	First published 2014 by Left Coast Press, Inc.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; List of Illustrations and Tables; Foreword; Preface; Chapter 1. Basic Elements; 1.1. Fundamentals; 1.2. Assumptions; 1.3. Conventions and Definitions; 1.4. Radiocarbon Cycle; 1.5. Prominent Applications: Scientific and Historic; Chapter 2. Major Anomalies; 2.1. Assumption Anomalies; 2.2. Systemic Elements: Secular Variation Effects; 2.3. Systemic Elements: Reservoir Effects; 2.4. Contamination and Fractionation Effects; 2.5. Recent and Anthropogenic Anomalies; Chapter 3. Sample and Sample Pretreatment; 3.1. Major Issues; 3.2. Standard Samples; 3.3. Nonstandard Samples 3.4. Problematic Samples3.5. Sample Pretreatment Strategies; 3.6. Sample Amounts and Associated Data; 3.7. Concluding Observations; Chapter 4. Measurement of Natural Radiocarbon; 4.1. Radioactivity; 4.2. Radioactivity Measurement Instruments; 4.3. Measuring Natural Radiocarbon; 4.4. Decay/Beta Counting Systems; 4.5. Direct/Ion Counting Systems: Accelerator Mass Spectrometry; 4.6. Radiocarbon Age Calculations; 4.7. Statistical Constraints; Chapter 5. Critical Evaluation of Radiocarbon Data; 5.1. General Principles; 5.2. Sample Provenience Factors; 5.3. Sample Composition Factors 5.4. Statistical and Experimental Factors5.5. Systemic Factors; 5.6.

Radiocarbon Age Estimates: Critical Evaluations; 5.7. Case Study I: Shroud of Turin; 5.8. Concluding Observations; Chapter 6. Radiocarbon Dating in Old World Archaeology; 6.1. Introduction; 6.2. The Demise of the Neanderthals and Early Modern Humans; 6.3. The Colonization of Sahul (New Guinea and Australia); 6.4. The Emergence of Pottery in Hunting and Gathering Societies in East Asia; 6.5. The Origins of Agriculture in Western Asia; 6.6. The Impact of the "8200 cal BP Cold Event" on Prehistoric Societies in the Near East
6.7. Case Study II: Santorini Eruption and Its Archaeological Implications
6.8. Case Study III: King David and the Iron Age Chronological Debate; Chapter 7. Radiocarbon Dating in New World Archaeology; 7.1. Orbe Novo; 7.2. Pre-14c Chronologies; 7.3. Paleoamerican; 7.4. Eastern North America; 7.5. Western North America; 7.6. Case Study IV: Kennewick Skeleton (USA); 7.7. Southwestern United States; 7.8. Mesoamerica; 7.9. South America; 7.10. Case Study V: Monte Verde (Chile); 7.11. Concluding Observations; Chapter 8. Radiocarbon Dating: Origin and Evolution; 8.1. Discovery of Radiocarbon
8.2. Libby at Berkeley: 1927-1941
8.3. Libby at the Manhattan Project: 1941-1945; 8.4. Libby at Chicago: 1945-1954; 8.5. Critical Experiments and Developments: 1946-1948; 8.6. Dating Unknown Age Samples; 8.7. Radiocarbon Dating Comes of Age; 8.8. AMS Origins and Initial Development; 8.9. Arnold and Anderson Post-14c Scientific Careers; 8.10. Continuing Objections; Chapter 9. Radiocarbon Dating: Guide to Bibliographic Sources; 9.1. General Issues; 9.2. Bibliographies; 9.3. Reviews and Summaries; 9.4. The Journal Radiocarbon; 9.5. Databases; 9.6. Conferences; 9.7. Calibration
9.8. Concluding Observations

Sommario/riassunto

This volume is a major revision and expansion of Taylor's seminal book Radiocarbon Dating: An Archaeological Perspective. It covers the major advances and accomplishments of the 14C method in archaeology and analyzes factors that affect the accuracy and precision of 14C-based age estimates. In addition to reviewing the basic principles of the method, it examines 14C dating anomalies and means to resolve them, and considers the critical application of 14C data as a dating isotope with special emphasis on issues in Old and New World archaeology and late Quaternary paleoanthropology. This volume,
