

Biogeochemical Approaches To Paleodietary Analysis

First ever book to focus directly on the physical remains of past inhabitants of Southeast Asia. The articles in this volume provide examples of different approaches currently being developed on Prehistoric collective burials of southern Europe, mostly focusing on case studies, but also including contributions of a more methodological scope.

An introduction to the multidisciplinary field of hominin paleoecology for advanced undergraduate students and beginning graduate students, Early Hominin Paleoecology offers an up-to-date review of the relevant literature, exploring new research and synthesizing old and new ideas. Recent advances in the field and the laboratory are not only improving our understanding of human evolution but are also transforming it. Given the increasing specialization of the individual fields of study in hominin paleontology, communicating research results and data is difficult, especially to a broad audience of graduate students, advanced undergraduates, and the interested public. Early Hominin Paleoecology provides a good working knowledge of the subject while also presenting a solid grounding in the sundry ways this knowledge has been constructed. The book is divided into three sections—climate and environment (with a particular focus on the latter), adaptation and behavior, and modern analogs and models—and features contributors from various fields of study, including archaeology, primatology, paleoclimatology, sedimentology, and geochemistry. Early Hominin Paleoecology is an accessible entrée into this fascinating and ever-evolving field and

will be essential to any student interested in pursuing research in human paleoecology. This book synthesizes in-depth bioarchaeological research into diet, subsistence regimes, and nutrition—and corresponding insights into adaptation, suffering, and resilience—among indigenous north-coastal Peruvian communities from early agricultural through European colonial periods. The Spanish invasion and colonization of Andean South America left millions dead, landscapes transformed, and traditional ways of life annihilated. However, the nature and magnitude of these changes were far from uniform. By the time the Spanish arrived, over four millennia of complex societies had emerged and fallen, and in the 16th century, the region was home to the largest and most expansive indigenous empire in the western hemisphere. Decades of Andean archaeological and ethnohistorical research have explored the incredible sophistication of regional agropastoral traditions, the importance of food and feasting as mechanisms of control, and the significance of maritime economies in the consolidation of complex polities. Bioarchaeology is particularly useful in studying these processes. Beyond identifying what resources were available and how they were prepared, bioarchaeological methods provide unique opportunities and humanized perspectives to reconstruct what individuals actually ate, and whether their diets changed within their own lifespans.

This book is a contribution to the International Year of Planet Earth arising from the 33rd International Geological Congress, held in Oslo, Norway during August 2008. The first section of the book considers aspects of geochemical processes which led to the development

of the solid Earth as it is today. The second portion of the book shows how the rapidly-evolving analytical tools and approaches presently used by geochemists may be used to solve emerging environmental and other societal problems. This unique collection of reviews, with contributions from a range of internationally distinguished scientists, will be invaluable reading for advanced students and others interested in the central role geochemistry in the earth sciences.

Volumes I-III

Health and Disease in Byzantine Crete (7th–12th centuries AD)

Paintings, Textiles, Fossils, Wood, Stones, Metals, and Glass

Food Legumes

Maize Cobs and Cultures: History of Zea mays L.

Isotopic Investigations of Pastoralism in Prehistory

Methods in Recovery, Analysis, and Identification

Questions concerning mobility and migration as well as subsistence strategies of past societies have always been of major importance in archaeological research. The West Eurasian steppes in the Eneolithic, the Early Bronze and the Iron Age were largely inhabited by cultural communities believed to show an elevated level of spatial mobility, often linked to their subsistence economy. In this volume, questions concerning the mobility and potential migration as well as the diet and economy of the West Eurasian steppes communities during the 4th, the 3rd and the 1st Millennia BC are approached by applying isotope analysis, specifically $^{87}\text{Sr}/^{86}\text{Sr}$, ^{18}O ,

Online Library Biogeochemical Approaches To Paleodietary Analysis

^{15}N and ^{13}C analyses. Adapting a combination of different isotopic systems to a study area of vast spatial and chronological dimension allowed a wide variety of questions to be answered and establishes the beginning of a database of biogeochemical data for the West Eurasian steppes. Besides the characterisation of mobility and subsistence patterns of the archaeological communities under discussion, attempts to identify possible Early Bronze Age migrations from the steppes to the steppe-like plains in parts of Eastern Europe were made, alongside an evaluation of the applicability of isotope analysis to this context.

Before the 1970s, most information concerning the conservation and restoration of paintings, wood, and archaeological artefacts were focused on the history of the artefacts, previous attempts of conservation, and the future use of these artefacts. The technical methods of how the restoration and conservation were made were dealt with only very briefly. Today, sophisticated methods of scientific analysis such as DNA are common place, and this encourages conservators and scientists to work together to work out the development of new methods for analysis and conservation of artefacts. This book focuses on the chemicals used for conservation and restoration of various artefacts in artwork and archaeology, as well as special applications of these materials. Also the methods used, both methods for cleaning, conservation and restoration, as well as methods for the analysis of the state of the respective artefacts. Topics include oil paintings, paper conservation, textiles and dyes for them, archaeological wood, fossils, stones, metals and metallic coins, and glasses, including church windows.

Online Library Biogeochemical Approaches To Paleodietary Analysis

This volume reprints 20 chapters from the editors' comprehensive *Histories of Maize* (2006) that are relevant to Mesoamerican specialists and students. New findings and interpretations from the past three years have been included. *Histories of Maize* is the most comprehensive reference source on the botanical, genetic, archaeological, and anthropological aspects of ancient maize published. Included in this abridged volume are new introductory and concluding chapters and updated material on isotopic research. State of the art research on maize chronology, molecular biology, and stable carbon isotope research on ancient human diets have provided additional lines of evidence on the changing role of maize through time and space and its spread throughout the Americas. The multidisciplinary evidence from the social and biological sciences presented in this volume have generated a much more complex picture of the economic, political, and religious significance of maize. The two volumes of *The Archaeology of Medieval Europe* together comprise the first complete account of Medieval Archaeology across the continent. This groundbreaking set will enable readers to track the development of different cultures and regions over the 800 years that formed the Europe we have today. In addition to revealing the process of Europeanisation, within its shared intellectual and technical inheritance, the complete work provides an opportunity for demonstrating the differences that were inevitably present across the continent - from Iceland to Sicily and Portugal to Finland.

The first comprehensive analysis of a strategically located ceremonial center on the island of Puerto Rico. The prehistoric civic-ceremonial center of Tibes is located on

the southern coast of Puerto Rico, just north of the modern coastal city of Ponce. Protected on two sides by a river, and on the other two sides by hills, this approximately 10.5-acre site remains as fertile and productive today as when first occupied over 2,000 years ago. Such a rich region would have been a choice location for native peoples because of the diversity in all resources, from land, air, and sea--and also symbolically crucial as a liminal space within the landscape. It may have been regarded as a space charged with numen or cosmic energy where different parts of the cosmos (natural vs. supernatural, or world of the living vs. world of the dead) overlap. Archaeological evidence reveals a long occupation, about 1,000 years, possibly followed by an extensive period of sporadic ceremonial use after the site itself was practically abandoned. In this volume, nineteen Caribbeanists, across a wide academic spectrum, examine the geophysical, paleoethnobotanical, faunal, lithics, base rock, osteology, bone chemistry and nutrition, social landscape, and ceremonial constructs employed at Tibes. These scholars provide a concise, well-presented, comprehensive analysis of the evidence for local level changes in household economy, internal organization, accessibility to economic, religious, and symbolic resources related to the development and internal operation of socially stratified societies in the Caribbean.

Analytical Techniques

People, Power, and Ritual at the Center of the Cosmos

A Consumer's Guide to Archaeological Science

Prehistoric Mobility and Diet in the West Eurasian Steppes 3500 to 300 BC

Online Library Biogeochemical Approaches To Paleodietary Analysis

Vol I:Principles, Methods and Approaches Vol II:Primate Evolution and Human Origins Vol III:Phylogeny of Hominids

A Companion to Biological Anthropology

Chemicals and Methods for Conservation and Restoration

The biology of people in the past is a rapidly expanding field of historical study. Our capacity to understand the biology of historical populations is experiencing remarkable developments on both theoretical and analytical fronts. Human Biology and History weaves together the fields of biology, archaeology, and anthropology in an exchange o

An extensive overview of the rapidly growing field of biologicalanthropology; chapters are written by leading scholars who havethemselves played a major role in shaping the direction and scopeof the discipline. Extensive overview of the rapidly growing field of biologicalanthropology Larsen has created a who's who of biologicalanthropology, with contributions from the leadingauthorities in the field Contributing authors have played a major role in shaping thedirection and scope of the topics they write about Offers discussions of current issues, controversies, and futuredirections within the area Presents coverage of the many recent innovations anddiscoveries that are transforming the subject Building on the success of their previous book, White and Folkens'

The Human Bone Manual is intended for use outside the laboratory and classroom, by professional forensic scientists, anthropologists and researchers. The compact volume includes all the key information needed for identification purposes, including hundreds of photographs designed to show a maximum amount of anatomical information. Features more than 500 color photographs and illustrations in a portable format; most in 1:1 ratio Provides multiple views of every bone in the human body Includes tips on identifying any human bone or tooth Incorporates up-to-date references for further study

Commingled human remains are encountered in situations ranging from prehistoric ossuaries to recent mass fatality incidents. Commingled Human Remains: Methods in Recovery, Analysis, and Identification brings together tools from diverse sources within the forensic science community to offer a set of comprehensive approaches to resolving issues associated with commingled remains. This edition focuses on forensic situations, although some examples from prehistoric contexts are also addressed. Commingling of bones and other body parts is a major obstacle to individual identification that must be addressed before other forensic determinations or research can proceed. Regardless of the cause for the commingling (transportation disaster, terrorist attack, natural disaster, genocide, etc.) it is critical that the proper experts are involved

and that the proper techniques are employed to achieve the greatest success in making identifications. Resolution of commingling nearly always requires consideration of multiple lines of evidence that cross the disciplinary lines of modern forensic science. The use of archaeology, DNA, and forensic anthropology are several areas that are critical in this process and these are core topics presented in this book. Even a relatively "simple mass fatality event can become very complicated once body fragmentation and commingling occur. Expectations associated with all phases of the process from recovery of remains to their final identification and release to next of kin must be managed appropriately. A powerful resource for those working in the forensic sciences who need to plan for and/or address the complex challenges associated with commingled and fragmentary human remains. Written by an international group of the foremost forensic scientists presenting their research and candid experiences of dealing with commingled human remains, offering recommendations and providing "lessons learned" which can be invaluable to others who find themselves facing similar challenges Contains chapters on remains recovery, laboratory analysis, case studies, and broader topics such as mass fatality management and ethical considerations. Illuminating the world of archaeology. Archaeology conveys the excitement of archaeological discovery and explains how

archaeologists think as they scientifically find, analyze, and interpret evidence. The main objective of this text is to provide an introduction to the broad and fascinating world of archaeology from the scientific perspective. Discussions on the theoretical aspects of archaeology, as well as the practical applications of what is learned about the past, have been updated and expanded upon in this fourth edition. Learning Goals Upon completing this book, readers will be able to: Discuss the theoretical aspects of archaeology. Apply what has been learned about the past. Identify the various perspectives archaeologists have.

Laser Ablation ICP-MS in Archaeological Research

Handbook of Paleoanthropology

Pioneers and Prospects

Advances in Forensic Human Identification

Dietary Reconstruction from Stable Isotope Analysis

Archaeodiet in the Greek World

Bioarchaeology of Southeast Asia

The dramatic increase in all things food in popular and academic fields during the last two decades has generated a diverse and dynamic set of approaches for understanding the complex relationships and interactions that determine how people eat and how diet affects culture. These volumes offer a comprehensive reference for students and

established scholars interested in food and nutrition research in Nutritional and Biological Anthropology, Archaeology, Socio-Cultural and Linguistic Anthropology, Food Studies and Applied Public Health.

This indispensable resource provides an illustrated introduction to and overview of the archaeological study of food and foodways today.

Daily life and living conditions in the Byzantine world are relatively underexplored subjects, often neglected in comparison with more visible aspects of Byzantine culture, such as works of art. The book is among the few publications on Greek Byzantine populations and helps pioneer a new approach to the subject, opening a window on health status and dietary patterns through the lens of bioarchaeological research. Drawing on a diversity of disciplines (biology, chemistry, archaeology and history), the author focuses on the complex interaction between physiology, culture and the environment in Byzantine populations from Crete in the 7th to 12th centuries. The systematic analysis and interpretation of the mortality profiles, the observed pathological conditions, and of the chemical data, all set in the cultural context of the era, brings new evidence to bear on the reconstruction of living conditions in Byzantine Crete. Individual chapters look at the demographic profiles and mortality patterns of adult and non-adult populations, and study dietary habits and breastfeeding and weaning patterns. In addition, this book provides an indispensable body of primary data for future research in these fields, and so furthers an

interdisciplinary approach in tracing the health of the past populations.

Describes the work carried out by the joint German-Saudi Dosariyah Archaeological Research Project (DARP) between 2010 and 2014 at Dosariyah, located in the Eastern Province of Saudi Arabia.

This new MDPI book should be of interest to a wide range of readers. Students of a variety of faculties, employees of the food industry, producers of functional food, farmers, and nutritionists will certainly be interested. The book provides new information on legumes, their nutritional value, the content of biologically active compounds, and changes in the activity of these compounds as a result of the application of various technological processes. The book will not only increase the knowledge of readers but also potentially motivate them to change their diets by including legumes on the menu. According to nutritionists' recommendations, such a change has a positive effect on health.

Histories of Maize in Mesoamerica

Frontiers in Geochemistry

Commingled Human Remains

Dosariyah: An Arabian Neolithic Coastal Community in the Central Gulf

Research Methods for Anthropological Studies of Food and Nutrition

Proceedings of the XVII UISPP World Congress (1–7 September 2014, Burgos, Spain)

Volume 14/Session A25b

An Isotopic Approach

Many archaeologists, as primarily social scientists, do not have a background in the natural sciences. This can pose a problem because they need to obtain chemical and physical analyses on samples to perform their research. This manual is an essential source of information for those students without a background in science, but also a comprehensive overview that those with some understanding of archaeological science will find useful. The manual provides readers with the knowledge to use archaeological science methods to the best advantage. It describes and explains the analytical techniques in a manner that the average archaeologist can understand, and outlines clearly the requirements, benefits, and limitations of each possible method of analysis, so that the researcher can make informed choices. The work includes specific information about a variety of dating techniques, provenance studies, isotope analysis as well as the analysis of organic (lipid and

protein) residues and ancient DNA. Case studies illustrating applications of these approaches to most types of archaeological materials are presented and the instruments used to perform the analyses are described. Available destructive and non-destructive approaches are presented to help archaeologists select the most effective technique for gaining the target information from the sample. Readers will reach for this manual whenever they need to decide how to best analyze a sample, and how the analysis is performed. A classic in its field, *Human Osteology* has been used by students and professionals through nearly two decades. Now revised and updated for a third edition, the book continues to build on its foundation of detailed photographs and practical real-world application of science. New information, expanded coverage of existing chapters, and additional supportive photographs keep this book current and valuable for both classroom and field work. Osteologists, archaeologists, anatomists, forensic scientists and paleontologists will all find practical information on

accurately identifying, recovering, and analyzing and reporting on human skeletal remains and on making correct deductions from those remains. From the world renowned and bestselling team of osteologist Tim D. White, Michael T. Black and photographer Pieter A. Folkens Includes hundreds of exceptional photographs in exquisite detail showing the maximum amount of anatomical information Features updated and expanded coverage including forensic damage to bone and updated case study examples Presents life sized images of skeletal parts for ease of study and reference

This 3-volume handbook brings together contributions by the world's leading specialists that reflect the broad spectrum of modern palaeoanthropology, thus presenting an indispensable resource for professionals and students alike. Vol. 1 reviews principles, methods, and approaches, recounting recent advances and state-of-the-art knowledge in phylogenetic analysis, palaeoecology and evolutionary theory and philosophy. Vol. 2 examines primate origins, evolution, behaviour, and adaptive variety, emphasizing integration of

fossil data with contemporary knowledge of the behaviour and ecology of living primates in natural environments. Vol. 3 deals with fossil and molecular evidence for the evolution of *Homo sapiens* and its fossil relatives.

Biogeochemical Approaches to Paleodietary Analysis
Springer
Science & Business Media

Paleoethnobotany, the study of archaeological plant remains, is poised at the intersection of the study of the past and concerns of the present, including agricultural decision making, biodiversity, and global environmental change, and has much to offer to archaeology, anthropology, and the interdisciplinary study of human relationships with the natural world. *Method and Theory in Paleoethnobotany* demonstrates those connections and highlights the increasing relevance of the study of past human-plant interactions for understanding the present and future. A diverse and highly regarded group of scholars reference a broad array of literature from around the world as they cover their areas of expertise in the practice and theory of

paleoethnobotany—starch grain analysis, stable isotope analysis, ancient DNA, digital data management, and ecological and postprocessual theory. The only comprehensive edited volume focusing on method and theory to appear in the last twenty-five years, *Method and Theory in Paleoethnobotany* addresses the new areas of inquiry that have become central to contemporary archaeological debates, as well as the current state of theoretical, methodological, and empirical work in paleoethnobotany.

Physicochemical and Nutritional Properties

Early Hominin Paleoecology

An Encyclopedia

Understanding movement, pattern, and process on Earth through isotope mapping

Paleonutrition

The Routledge Handbook of the Bioarchaeology of Climate and Environmental Change

As forensic human identification receives increased global attention, practitioners, policy makers, and

Online Library Biogeochemical Approaches To Paleodietary Analysis

students need an appropriate resource that describes current methods and modalities that have shaped today ' s policies and protocols. A supplemental follow-up to *Forensic Human Identification: An Introduction*, *Advances in Forensic Human Identification* covers advances in the most well-known scientific techniques and discusses new and developing subjects and modalities of human identification. A collection of contributions from worldwide experts, the book embraces a broad context and looks at several issues beyond physical identification of human remains or offenders. The book examines online, sexual, and biometric identities and discusses problems associated with investigative practice, such as the developing use of the Internet as a distribution and communication medium for criminal activities. It also explores miscarriages of justice that can result from flawed applications or interpretations of forensic evidence. Finally, it looks at the future of forensic science in the United Kingdom in light of financial challenges and the closure of the Forensic Science Service. Where appropriate, case studies illustrate the use of techniques and the associated problems described in the text. A supplemental CD includes images in full color. This volume provides an important contribution to the ongoing practitioner and academic debates surrounding the application of forensic technologies. The insight presented is destined to springboard further inquiry into enhanced techniques and underlies the need for more research into the appropriate use of identification techniques to solve the mysteries of the unknown.

An Indispensable Resource on Advanced Methods of Analysis of Human Skeletal and Dental Remains in Archaeological and Forensic Contexts Now in its third edition, *Biological Anthropology of the Human Skeleton* has become a key reference for bioarchaeologists, human osteologists, and paleopathologists throughout the world. It builds upon basic skills to provide the foundation for advanced scientific analyses of human skeletal remains in cultural, archaeological, and theoretical contexts. This new edition features updated coverage of topics including histomorphometry, dental morphology, stable isotope methods, and

Online Library Biogeochemical Approaches To Paleodietary Analysis

ancient DNA, as well as a number of new chapters on paleopathology. It also covers bioarchaeological ethics, taphonomy and the nature of archaeological assemblages, biomechanical analyses of archaeological human skeletons, and more. Fully updated and revised with new material written by leading researchers in the field Includes many case studies to demonstrate application of methods of analysis Offers valuable information on contexts, methods, applications, promises, and pitfalls Covering the latest advanced methods and techniques for analyzing skeletal and dental remains from archaeological discoveries, *Biological Anthropology of the Human Skeleton* is a trusted text for advanced undergraduates, graduate students, and professionals in human osteology, bioarchaeology, and paleopathology.

This volume brings together for the first time a collection of papers that specifically describe laser ablation, methods for data quantification, and applications to archaeological questions.

This volume reports on the ways in which humans engaged in their material and biotic environments at Çatalhöyük, using a wide range of archaeological evidence. This volume also summarizes work on the skeletal remains recovered from the site, as well as analytical research on isotopes and aDNA.

Stable isotope ratio variation in natural systems reflects the dynamics of Earth systems processes and imparts isotope labels to Earth materials. Carbon isotope ratios of atmospheric CO₂ record exchange of carbon between the biosphere and the atmosphere; the incredible journeys of migrating monarchs is documented by hydrogen isotopes in their wings; and water carries an isotopic record of its source and history as it traverses the atmosphere and land surface. Through these and many other examples, improved understanding of spatio-temporal isotopic variation in Earth systems is leading to innovative new approaches to scientific problem-solving. This volume provides a comprehensive overview of the theory, methods, and applications that are enabling new disciplinary and cross-disciplinary advances through the study of "isoscapes": isotopic landscapes. "This impressive new volume shows scientists deciphering and using the natural isotope

Online Library Biogeochemical Approaches To Paleodietary Analysis

landscapes that subtly adorn our spaceship Earth.", Brian Fry, Coastal Ecology Institute, Louisiana State University, USA "An excellent timely must read and must-have reference book for anybody interested or engaged in applying stable isotope signatures to questions in e.g. Anthropology, Biogeochemistry, Ecology, or Forensic Science regarding chronological and spatial movement, changes, or distribution relating to animals, humans, plants, or water.", Wolfram Meier-Augenstein, Centre for Anatomy & Human Identification, University of Dundee, UK "Natural resources are being affected by global change, but exactly where, how, and at what pace? Isoscapes provide new and remarkably precise answers.", John Hayes, Woods Hole Oceanographic Institution, USA "This exciting volume is shaping a new landscape in environmental sciences that is utilizing the remarkable advances in isotope research to enhance and extend the capabilities of the field.", Dan Yakir, Weizmann Institute of Science, Israel

The Global History of Paleopathology

Reports from the 2009-2017 Seasons

Human Biology and History

Twelfth to Sixteenth Centuries

Human Osteology

Nutritional Anthropology and Archaeological Methods

Current Approaches to Collective Burials in the Late European Prehistory

Biocultural and archaeological research on food, past and present, often relies on very specific, precise, methods for data collection and analysis. These are presented here in a broad-based review. Individual chapters provide opportunities to think through the adoption of methods by reviewing the history of their use along with a discussion of research conducted using those methods. A case study

from the author's own work is included in each chapter to illustrate why the methods were adopted in that particular case along with abundant additional resources to further develop and explore those methods.

Occasional Wiener Laboratory Series 2 The analysis of stable isotope ratios of carbon and nitrogen in bone collagen provides a powerful tool for reconstructing past diets, since it provides the only direct evidence of the foods that were actually consumed. The chapters that comprise this volume describe the application of this methodology to the archaeology of Greece, a country whose archaeobotanical remains have been isotopically studied more extensively than any other place in the world. The archaeological issues that can be addressed using stable isotope methods include the importance of fishing; the possible early introduction of millet; the nature of childrearing including weaning age and weaning foods; temporal shifts in protein consumption; differential access to certain foods associated with social status as well as gender and age; and cultural differences in dietary patterns. Additionally, diet is strongly correlated with health or stress markers in the teeth and bones. Knowing what people ate has vital implications for our understanding of past environments and economies, subsistence strategies, and nutrition.

The first comprehensive global history of the discipline of paleopathology This book is an introductory manual that explains the basic concepts of chemistry behind scientific analytical techniques and that reviews their application to archaeology. It explains key terminology, outlines the procedures to be followed

in order to produce good data, and describes the function of the basic instrumentation required to carry out those procedures. The manual contains chapters on the basic chemistry and physics necessary to understand the techniques used in analytical chemistry, with more detailed chapters on Atomic Absorption, Inductively Coupled Plasma Emission Spectroscopy, Neutron Activation Analysis, X-ray Fluorescence, Electron Microscopy, Infra-red and Raman Spectroscopy, and Mass Spectrometry. Each chapter describes the operation of the instruments, some hints on the practicalities, and a review of the application of the technique to archaeology, including some case studies. With guides to further reading on the topic, it is an essential tool for practitioners, researchers and advanced students alike.

Paleonutrition is the analysis of prehistoric human diets and the interpretation of dietary intake in relation to health and nutrition. As a field of study, it addresses prehistoric diets in order to determine the biological and cultural implications for individuals as well as for entire populations, placing archaeological interpretations into an anthropological context. Throughout history, and long before written records, human culture has been constantly in flux. The study of paleonutrition provides valuable insights into shifts and changes in human history, whatever their causes. This is the most comprehensive and up-to-date book on the topic. Intended for students and professionals, it describes the nature of paleonutrition studies, reviews the history of paleonutrition research, discusses methodological issues in the reconstruction of prehistoric diets, presents

Online Library Biogeochemical Approaches To Paleodietary Analysis

theoretical frameworks frequently used in paleonutrition research, and showcases examples in which paleonutritional analyses have been successfully conducted on prehistoric individuals, groups, and populations. It offers an integrative approach to understanding state-of-the-art anthropological dietary, health, and nutritional assessments. The most recent and innovative methods used to reconstruct prehistoric diets are discussed, along with the major ways in which paleonutrition data are recovered, analyzed, and interpreted. Paleonutrition includes five contemporary case studies that provide useful models of how to conduct paleonutrition research. Topics range from ancient diets in medieval Nubia to children's health in the prehistoric American Southwest to honey use by an ethnographic group of East African foragers. As well as providing interesting examples of applying paleonutrition techniques, these case studies illustrate the mutually beneficial linkages between ethnography and archaeology.

Peopling the Landscape of Çatalhöyük

Biogeochemical Approaches to Paleodietary Analysis

The Science of the Human Past

Method and Theory in Paleoethnobotany

Biological Anthropology of the Human Skeleton

Kennewick Man

Food Research

This handbook examines human responses to climatic and environmental changes

past, and their impacts on disease patterns, nutritional status, migration, and interpersonal violence. Bioarchaeology—the study of archaeological human skeletons—provides direct evidence of the human experience of past climate and environmental changes and serves as an important complement to paleoclimate, historical, and archaeological approaches to changes we may expect with global warming. Comprising 27 chapters from experts across a broad range of time periods and geographical regions, this book addresses hypotheses about how climate and environmental changes impact human health and well-being, factors that promote resilience, and circumstances that make migration or interpersonal violence a more likely outcome. The volume highlights the potential relevance of bioarchaeological analysis to contemporary challenges by organizing the chapters into a framework outlined by the United Nation's Sustainable Development Goals for 2030. Planning for a warmer world requires knowledge about humans as biological organisms with a connection to Earth's ecosystems balanced by an appreciation of how historical socio-cultural circumstances, socioeconomic inequality, degrees of urbanization, community mobility, and social institutions play a role in shaping long-term outcomes for human communities. Containing a wealth of nuanced perspectives about human-environmental relations, this book is key reading for students of environmental archaeology, bioarchaeology, and the history of disease. By providing a longer view of contem

challenges, it may also interest readers in public health, public policy, and planning. Our perceptions and conceptions regarding the roles and importance of maize to economies is largely a product of scientific research on the plant itself, developed most part out of botanical research, and its recent role as one of the most important economic staples in the world. Anthropological research in the early part of the 20th century based largely upon the historical particularistic approach of the Boasian tradition provided the first evidence that challenged the assumptions about the importance of maize to sociocultural developments for scholars of prehistory. Subsequent ethnobotanic and archaeological studies showed that the role of maize among Native American cultures was much more complex than just as a food staple. In *Maize Cultures*, John Staller provides a survey of the ethnohistory and the scientific, botanical, and biological research of maize, complemented by reviews on the ethnobotanic, interdisciplinary and multidisciplinary methodologies.

The study of human diet brings together researchers from diverse backgrounds ranging from modern human nutrition and biochemistry to the geochemistry of fossilized bones and teeth. The contributions to this volume grow out of the Fourth Advanced Seminar on Paleodiet and provide a forum for scholars with common interests to discuss the latest advances and interpretations and chart future directions for paleodietary research. Applications of radioactive and stable isotopes have revolutionized our understanding

the Earth and near-earth surface processes. The utility of the isotopes are ever-increasing and our sole focus is to bring out the applications of these isotopes and chronometers to a wider audience so that they can be used as powerful tools for environmental problems. New developments in this field remain mostly in peer-reviewed journal articles and hence our goal is to synthesize these findings for easy reference by students, faculty, regulators in governmental and non-governmental agencies, and environmental companies. While this volume maintains its rigor in terms of its depth of knowledge and quantitative information, it contains the breadth needed for wide application to problems and applications in the environmental sciences. This volume presents a synthesis of newer and older applications of isotopes pertaining to the environmental problems in a place that is readily accessible to readers. This book not only has the depth and rigor that is needed for academia, but it has the breadth and case studies to illustrate the use of the isotopes in a wide variety of environments (atmosphere, oceans, lakes, rivers, streams, terrestrial environments, and sub-surface environments) and serves a broad audience, from students and researchers, regulators in federal, state and local governments, and environmental companies.

Pastoralists were a vital economic and social force in ancient societies around the world, transforming landscapes poorly suited for agriculture into spaces of vast production potential while simultaneously connecting mobile and sedentary communities alike.

across considerable distances. Drawing from the rich archaeological records of Africa, and Europe, *Isotopic Investigations of Pastoralism in Prehistory* brings together the latest studies employing heavy and light stable isotopic analyses of humans and animals to investigate pastoralist diets, movement, and animal management strategies. The contributions presented in this volume highlight new methodological developments while simultaneously drawing attention to the diverse environmental factors that contribute to isotopic variation in human, plant, and animal tissues. Particular attention is paid to how pastoralist decisions regarding animal pasturing and mobility can be teased out of complex isotopic datasets, and also to the challenges in extracting information on the scales of human mobility in pastoralist landscapes. This volume will appeal to scholars in archaeology, anthropology, and ecology, as well as those with interests in animal management.

The Archaeology of Medieval Europe, Vol. 2

The Human Bone Manual

Isoscapes

Analytical Chemistry in Archaeology

Bioarchaeological Perspectives on Adaptive Transitions

Multidisciplinary Approaches

Archaeology of Food

Online Library Biogeochemical Approaches To Paleodietary Analysis

Almost from the day of its accidental discovery along the banks of the Columbia River in Washington State in July 1996, the ancient skeleton of Kennewick Man has garnered significant attention from scientific and Native American communities as well as public media outlets. This volume represents a collaboration among physical and forensic anthropologists, archaeologists, geologists, and geochemists, among others, and presents the results of the scientific study of this remarkable find. Scholars address a range of topics, from basic aspects of osteological analysis to advanced research focused on Kennewick Man ' s origins and his relationships to other populations. Interdisciplinary studies, comprehensive data collection and preservation, and applications of technology are all critical to telling Kennewick Man ' s story. *Kennewick Man: The Scientific Investigation of an Ancient American Skeleton* is written for a discerning professional audience, yet the absorbing story of the remains, their discovery, their curation history, and the extensive amount of detail that skilled scientists have been able to glean from them will appeal to interested and informed general readers. These bones lay silent for nearly nine thousand years, but now, with the aid of dedicated researchers, they can speak about the life of one of the earliest human occupants of North America.

Archaeology

Tibes

The Scientific Investigation of an Ancient American Skeleton

Online Library Biogeochemical Approaches To Paleodietary Analysis

Diet, Nutrition, and Foodways on the North Coast of Peru
Contribution of Geochemistry to the Study of the Earth
Handbook of Environmental Isotope Geochemistry