

ArkeoGazte

Revista de Arqueología - Arkeologia aldizkaria



*Monográfico:
Arqueología y medio ambiente,
una historia de una ida y una vuelta*

*Monografikoa:
Arkeologia eta igurumena,
ida eta etorri baten istorioa*

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ARGITARATUA

REVISTA ARKEOGAZTE es una revista científica de ARQUEOLOGÍA, editada por ARKEOGAZTE: ASOCIACIÓN DE JÓVENES INVESTIGADORES EN ARQUEOLOGÍA PREHISTÓRICA E HISTÓRICA con periodicidad anual y en la que los originales recibidos son evaluados por revisores externos mediante el sistema conocido como el de doble ciego. Se compone de las siguientes secciones: MONOGRÁFICO, VARIA, ENTREVISTA, RECENSIONES y publica trabajos originales de investigación en torno a una temática definida, trabajos originales de temática arqueológica libre, notas críticas de trabajos arqueológicos actuales o entrevistas a personalidades científicas de la Arqueología. Los originales se publican en castellano, euskera e inglés. El Consejo de Redacción puede admitir originales remitidos en italiano, portugués, francés, gallego y catalán.

ARKEOGAZTE ALDIZKARIA, ARKEOLOGIA aldizkari zientifikoa da, ARKEOGAZTE: HISTORIAURREKO ETA GARAI HISTORIKOKO ARKEOLOGIA IKERTZAILE GAZTEEN ELKARTEAK argitaratua eta urtean behin kaleratzen dena. Jasotako originalak kanpoko zuzentzaileen bidez ebaluatzen dira bikun itsua deritzon sistemari jarraituz. Aldizkaria hurrengo atalek osatzen dute: MONOGRAFIKOA, VARIA, ELKARRIZKETA, AIPAMENAK, hau da, zehaztutako gai baten inguruko ikerketa lan originalak, edozein gai arkeologikoari buruzko lan originalak, egungo lan arkeologikoen nota kritikoak edo Arkeologiaren munduko pertsona zientifikoei egindako elkarrizketak argitaratuko dira. Originalak gazteleraz, euskaraz eta ingelesez argitaratuko dira. Erredakzio Batzordeak italieraz, portugaldarrez, frantsesez, galizieraz eta katalunieraz idatzitako originalak onar ditzake.

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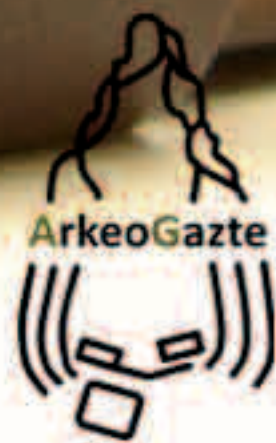
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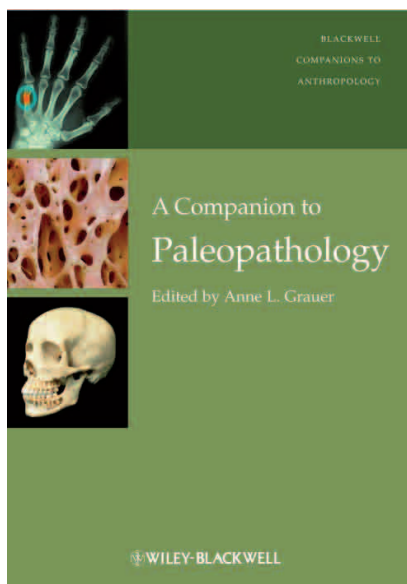


Recensiones

Aipamenak



GRAUER, A. L. (2012): *A Companion to Paleopathology*. Wiley-Blackwell, Oxford.



A Companion to Paleopathology, published in 2012 by Wiley-Blackwell (UK) and edited by Anne L. Grauer, has succeeded in providing an extensive collection of significant works and findings from a multidisciplinary perspective in the field of palaeopathology. The book provides an examination of the newly emerging research and perspectives of bioarchaeologists from different countries, interpretative dispositions and relevant subdisciplines of palaeopathological research. The general topics discussed in this book include the ethics and issues regarding the curation and analysis of human skeletal remains, evolutionary perspectives, and controversies surrounding interpretations and understandings of past and present diseases. Other important focuses discussed include the most recent advancements in methods and techniques and the relationships between humans, animals, the environment and disease. The social significance of disease and the history of human illness is a prominent theme traversing the works included in this volume. Human bones and teeth allow us to glimpse into the historical human condition of health and disease by exami-

ning the intricate systems presented in skeletal evidence and through considerations of the complexity and dangers of indeterminate interpretation. *A Companion to Paleopathology* manages to examine these themes thoroughly while also providing a contemporary discourse on new developments, interpretations and practices in osteological research.

The first part of *A Companion to Paleopathology* is dedicated to current issues in research paradigms and the various anthropological perspectives and approaches to new research in palaeopathology. A. Grauer introduces the volume through a discussion of the ways in which individual perspectives act to shape the scope of a discipline. Every researcher provides their own understanding and interpretation of a research discourse allowing for a complex and multidisciplinary intellectual arena within the discipline. Grauer focuses on the history of palaeopathology and the standardization of palaeopathological data collections, interpretative potentials, methods of inquiry and descriptions of disease.

P. Lambert presents a discussion on the ethical conditions regarding the study of human skeletal remains in bioarchaeological research. Ethical concerns are highly involved in determining the present research environment in which researchers can work, examine and publish findings. Lambert outlines specific legal and ethical concerns, explains situations in which ethical problems arise, provides recent examples of ethical conflict involving human remains and addresses the implications skeletal research may have on past individuals and their living descendants.

M. Zuckerman, B. Turner and G. Armelagos discuss the significance of incorporating evolutionary theory into palaeopathology, suggesting that although it has been frequently addressed as a central theme to the study, it has yet to be integrated on a widespread level. The authors suggest a future adoption of more interdisciplinary

research by reframing methodologies, keeping research limitations forefront, using evolutionary models and providing detailed descriptions of observable pathology in accordance with the known potential for skeletal change in either acute or chronic infections.

M. Buzon focuses on the bioarchaeological approach to palaeopathology and the importance of utilising interdisciplinary specialisations such as medical science, medical, biological and cultural anthropology and archaeological theory. Buzon stresses the use of chronological control, thoroughly recording excavation finds and conditions, maintaining archaeological context, and considering the geographic, environmental and cultural factors relevant to the study of human remains. A bioarchaeological approach can add a deeper interpretative perspective and aid archaeologists in reconstructing or identifying social roles, activity patterns, disease ecology, diet, injury and any evidence of treatment.

J. Gosman focuses on the use of molecular biological approaches to palaeopathological analysis. Gosman explains that this approach is a means of incorporating the essential biological processes, complex developments, and themes and variations in molecular bone change which are primarily not considered in palaeopathological assessments. Incorporating bone science concepts into palaeopathological analysis and interpretation is crucial to the future of the field and progress in research interpretation.

A. Katzenberg's chapter approaches palaeopathology and the relationship between past diet, health and disease from an ecological perspective. Katzenberg advocates for the examination of human health, diet, interaction between plants, humans and animals and the surrounding environment through the use of stable isotope analysis. By reconstructing and understanding past diets we gain insight into the many interactions between humans, the environment they live

in and the relationships they developed with the plants and animals they subsided upon. Although stable isotope analysis has not yet managed to provide information about specific diseases or dietary inadequacy (apart from insufficient protein intake) it has served to provide bioarchaeologists with measurable and statistically significant findings regarding past human diet, migration and environmental conditions as well as the effects of nursing and weaning.

J. Boldsen and G. Milner discuss epidemiological approaches to palaeopathology, suggesting that we examine disease in a population context. Using mortality samples, for example, can aid in estimating how common pathological conditions are in a population in comparison with populations from other time periods, geographic regions, sex, age or socioeconomic conditions. The authors remind us that in palaeopathology we are not concerned just with dead people and describing skeletons but rather with the lives they led before their death and characterizing health and lifestyle conditions in past populations.

M. Spigelman, D. Shin and G. Gal discuss the uses of DNA analyses in researching human skeletal remains. While many conditions may be diagnosed morphologically in gross skeletal analysis, many others cannot. DNA analysis can provide conclusive results on pathogenic organisms remaining in bone (particularly if the individual experienced septicemia). Findings in aDNA studies will not only improve disease diagnosis but will also result in implications in our understanding of human and animal evolution, predicting emerging and reemerging disease, and the future management of diseases.

M. Zimmerman presents a discourse on the analysis and interpretations of research conducted upon mummified remains, explaining the limitations of skeletal analysis and the interpretive pitfalls associated with the palaeopathological analysis of skeletal remains. In mummified re-

mains, a medical and palaeopathological analysis can be performed with greater accuracy, although limitations and biases must also be considered. Zimmerman discusses the various techniques used to examine mummified remains, the processes or applications of these studies in practice, ethics and the limitations of mummy research.

K. Dittmar, A. Araújo and K. Reinhard explain the functions of palaeoparasitology in palaeopathological research. The authors explain the interdisciplinary significance of archaeologically recovered parasite remains and the suggested implications regarding health and sanitary conditions, spatial occupation and use, as well as settlement structure and host-pathogen evolution or change. Palaeoparasitology is important to palaeodemographic health studies as well because the living conditions and evolutionary environment of a population can be examined. Palaeoparasitology can provide extremely valuable information regarding climate changes, health environment and disease transmission.

B. Upex and K. Dobney address concepts of animal-human relations through animal skeletal analysis. The study of non-human skeletal remains may reveal significant information regarding the relationship between humans and animals both functionally and in terms of communicable zoonotic disease aetiology. The authors discuss the impact of domestication on animal and human health, the palaeopathological skeletal analysis provides evidence for the exploitation of animals as food resources (butchering), transportation (riding), as “workers” (traction), animal husbandry (housing and feeding), and evidence of treatment and care indicating cultural attitudes towards animals, evidence of selective breeding and evidence of the climate, environment and proximity and presence of subsistence resources (agriculture).

M. Powell and D. Cook discuss the history of palaeopathology, its progression and future. The

authors discuss the history of the field, including considerations of what is normal or pathological, and the kind of questions we should be asking in future research. It is suggested that we should create an international, online skeletal database in order to immortalize previously documented collections and provide access to the data for researchers throughout the world. The authors conclude that life is not static and that while some diseases disappear, new diseases emerge and many other diseases achieve levels of resistance and evolutionary adaptation. Powell and Cook hope for a future integration of medicine, genetic research and cultural and biological anthropology into the field.

The second part of the book is dedicated to current and emerging methods and techniques of inquiry in palaeopathological research. B. Ragsdale and L. Lehmer discuss the importance of examining bone at the cellular or histological level because of the limited potential skeletal responses to a vast number of diseases. The authors describe the appropriate terminology, suggest researchers learn to ‘see’ the soft tissues no longer present on dry bone, and discuss histological methods and techniques. The promise of a histological approach to palaeopathology is to refine interpretation, provide accurate estimations of age at death, examine taphonomic processes and directly diagnose disease in skeletal or mummified remains.

D. J. Ortner revisits the issue of using appropriate terminology in scientific research, avoiding overdiagnosis and the fundamental importance of proper disease classification. Ortner discusses the basics of palaeopathology such as differentiation between normal and abnormal bone, inflammation, the presence of woven and lamellar bone and other bone expressions. Ortner suggests that researchers focus on providing thorough descriptions with differential diagnoses for similar skeletal lesions in mind and to avoid levels of specificity that are not supported by appropriate evidence.

G. Milner and J. Boldsen discuss the current state of age and sex estimation in the skeletal analysis of archaeologically derived human remains. The authors suggest future methodological pursuits in sex and age estimation proceed by defining new skeletal traits with documentation of age distribution, by developing mathematical approaches to produce unbiased estimates of age and through computer programs facilitating computationally intensive procedures.

S. Mays addresses the relationship between palaeopathology and clinical sciences and calls for a shift away from case studies and towards qualitative research. Mays discusses the rise of stress indicators used in population health assessment explaining that lesions should only be lumped together as stress indicators when accurate diagnosis is impossible. Mays explains that while stress indicators are an important component to modern palaeopathological research, accurate diagnosis should still maintain its status as a primary goal.

P. Mitchell suggests that researchers in palaeopathology integrate historical sources into research assessments suggesting that historical sources can not only directly tell us about past health and disease burdens but can also provide some reliable insight into a disease itself. Mitchell explains that we can use these sources in biological diagnosis and social interpretation to some degree. It would be unfortunate not to make use of the unique evidence found in historical sources in future research.

J. Wanek, C. Papageorgopoulou and F. Rühli discuss the function, potential and limitations of using imaging techniques in palaeopathological research and skeletal diagnostics. The authors discuss, in detail, the various methods, pros, cons, uses and other information of the various relevant imaging techniques. Lastly, the authors express the vast potential imaging techniques can

offer to palaeopathology in diagnosis, documentation and description.

A. Stodder addresses issues faced in palaeopathological data analysis. Some important points discussed are the collection of data and how we record, interact with and analyze the data under study and the ways in which we should be curating and managing comprehensible research data. Stodder makes the important suggestion that palaeopathology should be looking at even the smallest of samples, despite problems inherent to small sample sizes, because many groups existed as small communities or buried their deceased in relative isolation. Not to study these types of samples leaves gaps in the skeletal record and marginalize a large number of smaller past populations and individuals.

The third part of the book focuses on significant diseases and pathologies seen in the skeletal record, addressing the current understandings and controversies as well as the future objectives of research in specific palaeopathological themes. M. Judd and R. Redfern discuss trauma and the current methods, techniques and classifications of trauma in palaeopathology. How studies of trauma have changed over time and how palaeopathologists currently examine trauma are also addressed. Judd and Redfern express the importance of utilizing contextual evidence rather than just skeletal analysis to challenge the limitations and interpretative pitfalls of research in palaeotrauma.

E. Barnes takes a morphogenetic approach to palaeopathology, discussing the history, role and subsequent marginalization of developmental and congenital defects in the human skeleton. Understanding how developmental disorders occur can provide a platform we can use to identify and classify structural disorders of the human skeleton.

T. Kozłowski and H. Witas address metabolic and endocrine diseases and their manifestations on the human skeleton. Metabolic and endocrine diseases are often difficult to study in palaeopathology because these conditions do not always lead to skeletal changes. It is suggested that finding evidence of these diseases is exceedingly important in the reconstruction of past health and living conditions from skeletal remains because “the presence of these conditions provides insight into the synergistic relationship between metabolic disease and infections” (Kozłowski and Witas, pp. 403).

D. Brothwell discusses the uncommon presentation of tumors and tumor like processes in archaeologically derived human remains, explaining that neoplastic disease did indeed exist in the past and that it is unlikely that all forms of it were rare. Cancer research in palaeopathology could provide important insights into geographic, environmental and cultural differences between populations as well as data regarding long-time dimension. Brothwell suggests that palaeo-oncological research could provide a deeper perspective on the history of these conditions in the past, assist in determining the aetiologies of neoplastic diseases and provide the medical history of tumor patterns and prevalence rates and their changes over time.

C. Roberts addresses the contributions bioarchaeology has made to the understanding of tuberculosis in the past and its continuing presence in the modern world. Roberts discusses the pathogenic evolutions of *Mycobacterium bovis* and *Mycobacterium tuberculosis*, transmission of the disease and the implications for our current understanding of the evolutionary relationship of the pathogens causing tuberculosis in humans and their domesticated animals. Studying tuberculosis has the potential to add a significant contribution to the current problem of tuberculosis, in both developed and developing countries as it remains to be classified as a reemerging infection.

N. Lynnerup and J. Boldsen present a dialogue on leprosy, discussing the history of the disease, various perspectives and the associated pathological changes and epidemiological implications. Most importantly, Lynnerup and Boldsen point out the connection between tuberculosis and leprosy and the marginalization of leprosy research in modern studies (as it is a disease only affecting the developing world today). DNA analysis and proto-economics could contribute to understanding the evolutionary relationship between host and pathogen and mapping the emergence of leprosy.

D. Cook and M. Powell approach the topic of treponematoses throughout time, describing the various forms of treponemal disease and their pathological manifestations as well as the current debates regarding the origins, history and evolution of treponemal diseases. Discovering the origins and emergence of these conditions could provide valuable contributions to understanding the current epidemiology, disease aetiology, evolutionary change and even modern disease management. The authors suggest that the genetic history and development of treponemal pathogens is far more complex than currently suggested. The future holds a reclassification of treponemal diseases, releasing the diagnostic criteria from the rigid confines of the currently accepted research paradigm of treponematoses.

D. Weston discusses the broad topic and bane of palaeopathology, the non-specific infectious diseases, and the relevant interpretations of non-specific bone reactions such as periosteal new bone formation. Weston makes the very important observation that despite the vast catalogue of recorded periosteal changes, researchers have marginalized the condition as simply non-specific infection with little attempt to understand, interpret or integrate findings of periosteal reaction into something more meaningful.

T. Waldron discusses the current status of research involving the most common condition in palaeopathology, joint disease. Waldron advocates to analyse degenerative joint disease by distinguishing between proliferative lesions and those erosions that are formative of the pathology. Waldron also provides a dialogue on the impact of movement, occupation and other secondary factors leading to the development of joint diseases. Waldron explains that despite the common appearance of joint disease, the study of these diseases has been limited because of a lack of interest in common pathologies. The author proposes that a group of researchers agree upon a methodology for recording joint disease in order to develop a database that will allow researchers to draw valid conclusions regarding the nature of joint disease.

R. Jurmain, F. Alves Cardoso, C. Henderson, and S. Villotte discuss the contentious topic of attempting to reconstruct human activities, occupational and other mechanical stressors from proposed “markers” found upon human skeletal remains. The authors discuss the history of activities studies, the past and present debates, and standards for describing the appearance of these changes. The authors explain that the origin of activities research is rooted in osteoarthritis studies and present new considerations of activity markers on the human skeleton in the form of enthesal changes, cross sectional geometry and other morphological factors. The authors suggest continuing collaboration between bioarchaeologist and clinical practitioners, the use of new advanced imaging techniques, experimental work on modern animals and even biomolecular methods particularly considering osteoarthritis and enthesal changes.

J. Lukacs discusses the current status of oral health studies in past populations. Lukacs aims to contextualize the research of dental diseases and oral developmental anomalies by providing historical perspectives and organizing themes in

the broad subject of oral palaeopathology. Lukacs suggests that the primary focus of research in dental palaeopathology is to document the prevalence and distribution of dental disease in past populations, leading to a deeper understanding of the history of oral health related to cultural and behavioral changes. Lukacs proceeds by discussing the impact and implications for dental disease following changes in subsistence over time, particularly agriculture.

This comprehensive volume thoroughly provides an in depth examination of the most current topics, methods, debates, techniques and research findings in the field of Palaeopathology. The chapters included discuss the current state of play in palaeopathology, assessing advancements in the discipline, limitations in research and the direction of future studies within the field. A detailed index, allowing the reader to easily navigate the text for specific topics, is also included. The majority of the chapters, however, would certainly have benefited from the use of illustrations and photographs depicting the pathologies or conditions addressed. Despite the high cost of the book, *A Companion to Paleopathology* is a valuable resource for both researchers and students of the discipline.

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