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ZOOARCHAEOLOGY, TRADITIONAL SOCIETIES, BIODIVERSITY, AND CLIMATE CHANGE: INTEGRATING PERSPECTIVES BETWEEN PAST AND FUTURE

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ABSTRACT

The particularities and diversity of the Neotropics provide valuable opportunities for studying human-animal interactions over time and its implications for the zooarchaeological record. The Neotropical Zooarchaeology Working Group (NZWG) of the International Council for Archaeozoology (ICAZ) seeks to connect researchers from different countries interested in studying these issues. This special dossier, entitled “Zooarchaeology, Traditional Societies, Biodiversity, and Climate Change: Integrating Perspectives from the Past to the Future”, shares the theme of the 4th Academic Meeting of the NZWG, and includes fourteen papers and two research notes covering different chronologies, methodologies, geographical areas and socio-cultural contexts related to Neotropical Zooarchaeology. The contributions included encourage the re-evaluation of zooarchaeological approaches, highlighting the potential of Neotropical Zooarchaeology for understanding archaeological, historical and ethnographic contexts, and its importance in the study of human-animal relationships. The dossier highlights the need to transform the way we relate with the natural world, abandoning the perspective of domination, and adopting Amerindian philosophies that reject the separation between nature and culture.

Keywords: Neotropics; Zooarchaeology; Traditional Societies; Biodiversity; Climate Change; Human-Animal Interactions.

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ZOOARQUEOLOGIA, SOCIEDADES TRADICIONAIS, BIODIVERSIDADE E MUDANÇAS CLIMÁTICAS: INTEGRANDO PERSPECTIVAS ENTRE PASSADO E FUTURO

RESUMO

As particularidades e a diversidade dos Neotrópicos proporcionam oportunidades valiosas para o estudo das interações entre humanos e animais ao longo do tempo e suas implicações no registro zooarqueológico. O Grupo de Trabalho de Zooarqueologia Neotropical (NZWG) do Conselho Internacional de Arqueozologia (ICAZ) procura conectar investigadores de diferentes países interessados em estudar estas questões.

Este dossiê especial, intitulado “Zooarqueologia, sociedades tradicionais, biodiversidade e mudanças climáticas: integrando perspectivas entre passado e futuro”, tem o mesmo tema da IV Reunião Acadêmica do NZWG, e inclui quatorze artigos e duas notas de investigação que abrangem diferentes cronologias, metodologias, áreas geográficas e contextos socioculturais relacionados com a Zooarqueologia Neotropical. Os trabalhos incluídos incentivam a reavaliação das abordagens zooarqueológicas, destacando o potencial da Zooarqueologia Neotropical para a compreensão de contextos arqueológicos, históricos e etnográficos, e sua importância no estudo das relações entre humanos e animais. O dossiê destaca a necessidade de transformar nossa relação com o mundo natural, abandonando a perspectiva de dominação, e adotando filosofias ameríndias que rejeitam a separação entre natureza e cultura.

Palavras-chave: Neotrópicos; Zooarqueologia; Sociedades Tradicionais; Biodiversidade; Mudanças Climáticas; Interações Humanos-Animais.

ZOOARQUEOLOGÍA, SOCIEDADES TRADICIONALES, BIODIVERSIDAD Y CAMBIOS CLIMÁTICOS: INTEGRANDO PERSPECTIVAS ENTRE PASADO Y FUTURO

RESUMEN

Las particularidades y diversidad que presentan los Neotrópicos constituyen instancias valiosas para estudiar las interacciones entre humanos y animales a lo largo del tiempo y sus implicaciones en el registro zooarqueológico. El Grupo de Trabajo de Zooarqueología Neotropical (NZWG) del Consejo Internacional de Arqueozoología (ICAZ) procura conectar investigadores de diversos países interesados en estudiar estas temáticas.

Este dossier especial, titulado “Zooarqueología, sociedades tradicionales, biodiversidad y cambios climáticos: integrando perspectivas entre pasado y futuro”, comparte el mismo tema de la IV Reunión Académica del NZWG, e incluye catorce artículos y dos notas de investigación que abarcan diferentes cronologías, metodologías, áreas geográficas y contextos socioculturales relacionados con la Zooarqueología Neotropical. Los trabajos incluidos fomentan la reevaluación de los enfoques zooarqueológicos, destacando el potencial de la Zooarqueología Neotropical para comprender contextos arqueológicos, históricos y etnográficos, y su importancia en el estudio de las relaciones entre humanos y animales.

El dossier resalta la necesidad de transformar nuestra relación con el mundo natural, abandonando la perspectiva de dominación, y adoptando filosofías ameríndias que rechazan la separación entre la naturaleza y la cultura.

Palabras clave: Neotrópicos; Zooarqueología; Sociedades Tradicionales; Biodiversidad; Cambio Climático; Interacciones Humanos-Animales.

Nós não somos donos da terra, nós somos a terra.
Angatu Xukuru Tupinambá (2019)

The Neotropics, a biogeographic region that ranges from central Mexico to southern South America and adjacent islands, shows a series of particularities that are relevant to understanding the diversity and evolution of interactions between humans and animals across time and the consequential proprieties of archaeological record.

The Neotropical Zooarchaeology Working Group (NZWG) of the International Council for Archaeozoology (ICAZ) aims to bring together researchers from different countries interested in studying the zooarchaeological records that provide evidence of these relationships.¹ The general lines of research guiding us include “What are the contributions of zooarchaeology in this biogeographic region on a global scale?” and “What are the implications of considering this context in more specific regional investigations?”

During its thirteen years of existence and four scientific meetings, the NZWG has brought publications with a wide range of topics and case studies on human-animal interactions and properties of the zooarchaeological record across the region, including implications for other regions (FERNÁNDEZ *et al.*, 2014; MONDINI; MUÑOZ; FERNÁNDEZ, 2017; MUÑOZ *et al.*, 2019).

This special dossier collected fourteen unpublished articles and two research notes on topics associated with zooarchaeology, and diverse chronologies, methodologies, geographical, and socio-cultural contexts.

The first six studies and the first research note were presented at the 4th Academic Meeting of the NZWG, which was dedicated to the memory of Luz Segura Gutiérrez, who left us in 2019 and who, while still so young, worked tirelessly to promote zooarchaeology in Peru (Figure 1) (SEGURA GUTIÉRREZ, 2011).

Due to the health emergency resulting from the COVID-19 pandemic, the meeting (originally scheduled for 2020) was held virtually on October 27, 28, and 29, 2021, possible thanks to the support by the Federal Rural University of Pernambuco (UFRPE) under the general organization of Prof. PhD Caroline Borges.

The 4th Academic Meeting of the NZWG gathered researchers from twelve countries, nine of which from Latin America, two from Europe, and one from North America, with fifty-one studies and more than three hundred registered participants (Figures 2 and 3). The presentations were organized into eight sessions: Methodologies and case studies on the exploitation of marine resources of the Atlantic coast and the Caribbean; The relationships between human societies and South American camelids: approaches from time and space; Spatial and temporal diversity in the use of Neotropical fauna; Taphonomy and formation processes of archaeological sites; New perspectives in the study of human-animal interactions; Contributions to the understanding of mortuary contexts associated with animal remains;

¹ INTERNATIONAL COUNCIL FOR ARCHAEOZOOLOGY (ICAZ). Neotropical Zooarchaeology Working Group (NZWG). ICAZ, [S. l.], 2 July 2022. Available at: <https://www.alexandriaarchive.org/icaz/workneotropical>. Accessed on: 5 Sept. 2023.

Transformed nature: artifacts made from animal raw materials; and Multiple aspects of human-animal interaction in the Amazon.²

An important part of the contributions came from Brazilian colleagues, especially those working in the Amazon. Thus, studies on human-animal relationships in the Neotropics reached for the first time a broad dialogue between Spanish - and Portuguese - speaking researchers. Also, most presentations were made by researchers in training, a relevant aspect that makes the identity of the NZWG. The latter highlights the importance of holding scientific meetings and events in different countries of the Neotropics, as the NZWG has been doing since its foundation.

Moreover, the relative importance of contributions from/about Brazil correlates with the significant increase in researchers in the last decade, the result of massive investments in education, research, and training of professionals in the country in previous years. Many studies in the dossier involve archaeologists and zooarchaeologists who trained outside Brazil and returned to further local research and training. We hope that both the meeting and the publications will stimulate the creation of links and networks among students and young researchers to support them in continuing their journey in zooarchaeology.

The meeting shared its theme with this dossier: “Zooarchaeology, traditional societies, biodiversity and climate change: integrating perspectives between past and future” and sought to reflect the diversity of studies being carried out in our region, highlighting those conducted with traditional populations (especially Indigenous peoples) to understand features of present and past biodiversity and climate change to rethink the interactions between humans, animals, and environments in a long-term perspective.

The current system of capitalist production and its numerous and multiple actors have caused profound environmental imbalances, leading to the current climate change and the rapid destruction of biodiversity. Moreover, faced with changes in the environment the great capacity for human adaptation has redefined the relationships between humans and the environment, including human-animal relationships (BORGES; CARNEIRO, 2020; MONDINI; MUÑOZ, 2021). Thus, we must transform our relationship with the natural world and other animals from a non-dominant perspective, without placing ourselves above and at the heart of everything and, as proposed by different indigenous thinkers, abandoning the modern ontology that separates nature and culture, and subjects and objects of domination (ANGATU XUKURU TUPINAMBÁ, 2019; KOPENAWA; ALBERT, 2015; KRENAK, 2019).

Similarly, zooarchaeological approaches and practices must be rethought. The aim of zooarchaeology has never been purely to consider the relationship between humans and animals in archaeological sites in terms of nutrients and species list. Animals have always been much more than that, so this discipline cannot be reduced to species identification and biomolecular methods. We must broaden its approaches to as many subjects as possible and from an archaeological, historical, and ethnographic perspectives.

² REUNIÃO ACADÊMICA DO NZWG-ICAZ, 4. 2021, Recife. *Resumos* [...]. Recife: Editora da Universidade Federal Rural de Pernambuco (UFRPE), 2021. Available at: https://drive.google.com/file/d/1K2-ZLE0o9n6D4vy2_2CogMESj45y23vd/view. Accessed on: 5 Sept. 2023.

The dossier is an effort in this sense. All studies and research notes address diverse topics from very different perspectives and exemplify that thinking human-animal relationships from multiple research angles broadens and enriches our knowledge. Thus, the intrinsic richness of the Neotropics acquires an explanatory potential that we can trace in the guiding questions and in the several types of evidence we use to understand them.

Regarding the contributions that integrate the dossier, Le Neün and collaborators offer an innovative study of the geometric morphometrics in camelid phalanges from the Telamarchay site, Peru, to document the domestication processes in this ancient site. Cañete Mastrángelo and colleagues discuss zooarchaeological expectations derived from the ethology and ecology of Patagonian otariids in the late Holocene, generating a broad framework for the discussion of the relationships between humans and these marine mammals. Pérez Iglesias and colleagues address feeding at sites of early Spanish-Amerindian interaction in northeastern Cuba and their connection with colonization processes, integrating Cuba into discussions of zooarchaeology of the Neotropics. Diana Carvajal Contreras offers an ethnoarchaeological study of a fishing community in the Colombian Caribbean, showing the importance of this approach for the zooarchaeological analysis of past fishing communities.

Felipe Vander Velden analyzes Indigenous artifacts related to herd animals introduced by Europeans in Brazil. The author aims to understand the relationship between Indigenous peoples and these exotic animals combining archeological, anthropological, historical, zoological, and iconographic perspectives. Leão and colleagues are also interested in the livestock introduced by Europeans, thinking of a past-present relationship of these animals in Amazonia and dialoguing with historical, ethnographic, and archeological perspectives. Araujo Mendes Azulay and colleagues also work in the Amazonian space between the perspectives of past-present continuities, ruptures, and transformations in the Aracu (*Anostomidae*) fishing techniques from an ethnozooarchaeological perspective. Closing the papers for the Amazon, Neres and colleagues develop a contemporary ethnography on affectivity, agency, burial, and mortuary rites of family animals in the municipality of Santarém, Pará.

Studies in this volume that were not presented at the 4th Academic Meeting of the NZWG include one by Diego Pavei and colleagues, who reviewed the literature on the zooarchaeological record of *Tayassuids* in Brazil and describe a case study focusing on these animals recovered from an archaeological site on the Atlantic coast of southern Brazil. Ferrasso and colleagues also offer a zooarchaeological study of vertebrate remains from a shell-mound site on the coast of Rio Grande do Sul, Brazil, relating the exploration strategies of coastal environments to the geomorphological formation of lagoon complexes.

Regarding the approach of new tools to study human-animal relationships, Souza and colleagues proposed a taxonomic classification of zoomorphic representations in rock art in Brazil. In another study, Alves and colleagues show the validity and interest of using taphonomic studies and taxonomic identification of mollusks to discuss formation processes and chronology in coastal sites. Fossile and colleagues propose an archaeological faunal databank of Brazil by compiling published studies as an integrative tool between zooarchaeological and faunal conservation studies. The last study, presented by Leles and colleagues, is a novel proposal based on molecular biology, aimed at identifying archaeological fauna in contexts affected by destructive processes, which is tested by the study of materials recovered in a shell-mound heavily impacted by urbanization.

The two research notes include the contribution of Santander and collaborators, who describe the first results of taphonomic actualistic studies developed in the Puna

de Atacama, northern Chile, focusing on the observation and recording of carcasses, and the contribution of de Souza Patusco, who reviews bird studies from Brazilian archaeological sites to promote ornithoarchaeology in Brazil.

Finally, we consider this dossier as a significant point for the Zooarchaeology of the Neotropics as it shows the maturation of discussions, studies, and proposals in several countries from north to south of this biogeographic region, showing the potential and possibilities of studying the relationship between humans and animals in this area.

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Figure 1. Luz Segura Gutiérrez, in 2009, during her master's thesis at the Muséum national d'Histoire naturelle (MNHN, Paris).



Foto: Caroline Borges.

Figure 2. Visual identity of the 4th Academic Meeting of the NZWG.

Fonte: Caroline Borges e Jaime de Lima Guimarães Júnior.

Figure 3. Last session of the 4th Academic Meeting of the NZWG.

Fonte: Screenshot by Caroline Borges.

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