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Special Issue on Dogs – Introduction

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Among the relationships that we sustain with animal domesticates, our bond with dogs is likely the most ancient and surely the most versatile. Scientific evidence traces this relation back to sometime in the Upper Palaeolithic (c. 50 to 12 kya); the articles in this special issue offer ample evidence of the diversity of canid-human interactions worldwide. The subject likewise pleads for multi-disciplinary collaboration. Contributors represented here rely upon archaeological, ecological, historic, ethnographic, zoological, and biochemical data to assess their research questions. Readers will find theoretical and empirical approaches designed to clarify how the canid-human relationship co-evolved in different spaces and times.

The list of specific interactions that humans have sustained with canines is lengthy. Which of those were decisive in the evolution of dog domestication remains somewhat blurry, a yet enigmatic part of our and their history. Two contributions in this issue hypothesize about the domestication of dogs from wolves, drawing on archaeological and ethnohistoric evidence from Eurasia (Germonpré)* and from a synthetic view of dingo-human relationships in Australia (Koungoulos)*. Human selection on behavior via reproductive management of dogs (Fig. 1A) could have been an important step early in the domestication process.

Once domestication had initiated, our ancestors profited from canines' social instincts, sensory faculties, hunting skills, and strength, which has been hypothesized to be an important determinant of the mobility of human populations in the past, haulage affecting subsistence, settlement relocation, and the migratory mobility of human communities. Three contributions in this issue analyze evidence for canine transport. A cross-cultural analysis (Lupo)* shows that dogs improve human transport capacity and she explores the circumstances under which canid haulage influenced the spread of modern humans into new environments. Evidence from North America (Welker)* indicates that dogs' assistance with the carrying of human belongings could have reduced the risk of resource shortfalls, mitigating environmental unpredictability. Despite having osteological markers suggesting that hauling took place, the evidence from British Columbia (Prentiss)* does not support the idea that dogs transported salmon from fishing sites. Rather, five other possible roles (e.g., consumers of food waste, hunting aids, sources of products, material wealth, and ritual item) reflect how ecological and social contexts can structure the varied functions that dogs perform in human societies.

In societies dependent on pastoralism and agriculture, dog–human interactions not only persist but also encompass broader elements of human daily life. Facing rapid changes in ecology and society, dogs in pre-contact New Zealand (Greig)* switched from being a source of food to other roles reflecting a wider range of relationships with people. Human settlement and megafaunal extinctions are discussed under this light. In Siberia (Oehler)*, canids collaborate with pastoralists to herd livestock, are allowed to choose who they join to hunt, and take on important roles in the local cosmology. Maya farmers in Belize (Pacheco-Cobos)* recognize that their dogs protect field crops from herbivore assaults, aid in the hunt for wild meat, and guard homesteads and the food and other belongings stored there. The demography of the community dog population and the costs of maintaining Belizean dogs are analyzed from a cultural ecology perspective that also is applied in Nicaragua (Eisenman)*. Mayangna communities living in a Biosphere Reserve own dogs that are associated with a variety of syndromes: decreased body condition score and hypoalbuminemia; lymphocytosis and eosinophilia; segmented neutrophilia; and lymphadenopathy, tick infestation and hyperglobulinemia. Household wealth only weakly predicts dogs' health and potential zoonotic diseases

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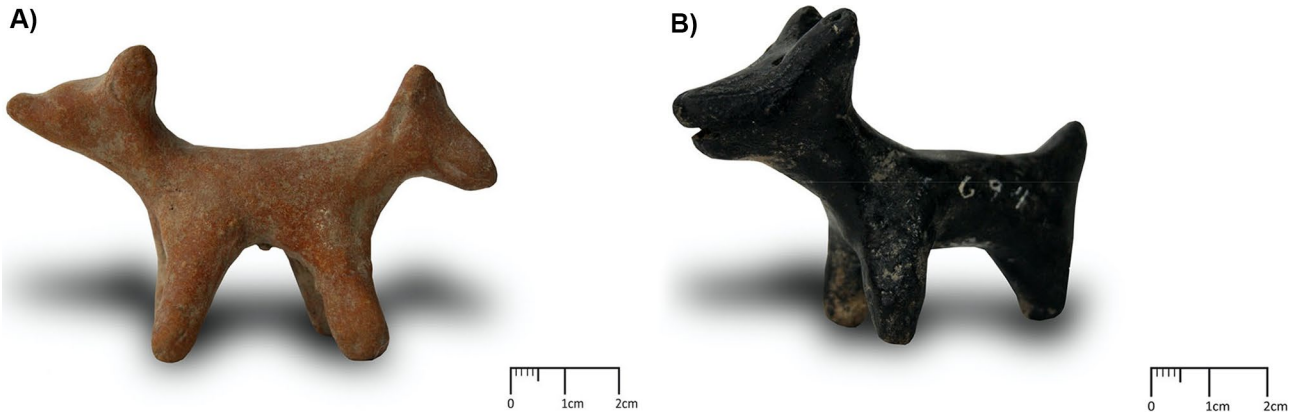

Fig. 1 Ceramics from Classic (300–900 AD) cultures in the Gulf of Mexico (Pérez-Chávez, 2015). **A**) Interpreted as representing the "tied" phase of canine coitus, reflecting the knowledge of dogs' reproduction. **B**) Being covered with *chapopote* (crude oil), this canid may denote the ability to transit the subterranean underworld. *Chapopote* was associated with darkness, and recurrently used in ritual contexts. Images and interpretation courtesy of Thania Pérez-Chávez

remain a public health concern in this setting, illustrating the latent hazards of a close relationship with another mammal.

Our psychological and, in many cases, spiritual bond with canines is an element in several contributions to this special issue. Dogs for instance sometimes are believed to facilitate transitions between the mundane and mystical realms (Fig. 1B). This should not be a surprise, considering that our history with dogs started by sharing our surroundings, later our domiciles, and not to long after we were sharing our graves with them.

The results presented in this special issue fill out understandings of the roles dogs adopt in contemporary, ethnohistorically, and archaeologically documented societies, and they have implications for studies of dog–human co-evolution (domestication, canine functional roles, human dispersal), conservation biology (subsistence hunting impact on wildlife, crop protection in the tropics), dogs' cosmological and ritual importance, and for public health in human settlements. The word frequency map (Fig. 2; Lang, 2021), composed from the titles of the items in our Zotero database on dogs' evolution, behavior, and functions, provides a coarse measure of the topics that have been most prominent in this field of study. After dogs, hunting and domestication dominate. Nonetheless, the papers in this special issue illustrate increasing attention to mobility, transportation, protection, cosmology, and wealth.

The prefactory note from the journal editor probably is as close as we can get at present to a dog's perspective on the topics covered here. And, while we acknowledge that the current papers are decidedly *Homo*centric, we also look forward to the day when our understanding of the co-evolutionary nature of the relationship tells us as much about us as we currently are learning about them.

Fig. 2 Word frequency map built from the titles of 567 papers in our Zotero library on the evolution, behavior and functions of dogs in human communities

References

*Citations with an asterisk appear in this issue

Lang, D. (2021). Wordcloud2: Create Word Cloud by htmlWidget. R package version 0.2.2. https://github.com/lchiffon/wordcloud2

Pérez-Chávez, T. (2015). Representaciones arqueológicas de cánidos albergadas en el Museo de Antropología de Xalapa (Parte II). AMMVEPE (Asociación Mexicana de Médicos Veterinarios Especialistas En Pequeñas Especies), 26 (3 (Mayo-Junio)), 77–83. https://www.imbiomed.com.mx/articulo.php?id=106566

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