



ABSTRACT SUBMISSION

Societies of cattle and grain: Traction-related bone deformations and feeding practices of cattle as indicators of political economies in Bronze and Iron Age Anatolia

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Abstract

Cattle were central to the economic, political, cultic, and social life of early societies in Bronze and Iron Anatolia. Textual, artistic, and archaeological evidence demonstrate the significant role of draught cattle in agriculture and transport. The heavy labor these animals endured often caused the development of traction-related pathologies, particularly on their lower limbs. Paleopathology offers the assessment of traction intensification by quantifying the frequency and severity of such deformations, while stable isotope analysis provides additional insights into cattle management, diet, and movement. This research positions cattle as a vital economic asset, closely tied to political power, territorial expansion, and economic growth in early states.

This study focuses on faunal assemblages from five major Bronze and Iron Age Anatolian centers: Hattuša, Sapinuwa, Troy, Klazomenai, and Gordion. Through paleopathological and biochemical analysis, this research connects changing husbandry practices to key political-economic developments, such as the rise of the Hittite and Phrygian kingdoms in central Anatolia. By examining spatial-temporal patterns in traction-related pathologies and feeding practices, shifts in cattle use can be traced, reflecting periods of political complexity and agricultural intensification. These findings demonstrate how the use of draught cattle mirrored broader trends in the political economies of ancient Anatolia.

Keywords

Draught cattle, Bronze and Iron Age Trkiye, Economic intensification, Animal paleopathology, Zooarchaeology

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