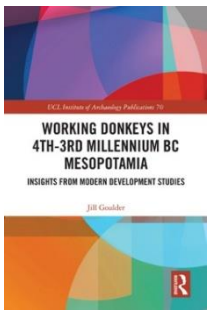
BOOK REVIEWS

Goulder, Jill. *Working Donkeys in 4th-3rd Millennium BC Mesopotamia: insights from modern development studies*. Institute of Archaeology UCL Series 70. Abingdon: Routledge, 2020; 200 pages, 38 B/W illustrations, hbk, £120; IBSN 978-0-367-42204-2.



'Donkey blindness' is a common affliction of archaeologists and historians alike, one that has obscured the profound contributions and multifaceted uses of donkeys (*Equus asinus*) in past and present societies. Jill Goulder's book opens our eyes to these invisible equids, through an innovative study of working donkeys in the 4th-3rd Millennium BC in Mesopotamia. Her work is informed by a qualitative survey of modern working donkeys from almost 400 official and NGO reports from around the world, with an emphasis on sub-Saharan Africa. This unique approach allows Goulder to circumvent the patchy archaeological, textual, and artistic renderings of donkeys from this period, while highlighting oft-neglected contributions of women, the poor, and working donkeys to everyday life in ancient Mesopotamia.

The book is as workmanlike as donkeys in its format and clearly written text, which is divided into eight chapters. Explicitly focused on working-animal usage, the author documents the failure of archaeology to move beyond a limited understanding of working animals, which stem from an outdated conception of 'ox-ploughing' and its economic impact on Neolithization. This is compounded by a lack of ethnoarchaeology on working animals, though the author could consider reindeer ethnoarchaeology and some horse related experimental archaeology as another means to study donkey-human engagements. Donkeys are aligned here with working cattle and oxen, rather than other equids, because their uses are more similar and overlap.

Goulder argues that the study of 4th-3rd millennium BC Mesopotamia has been hampered by a 'top-down' view with an over-focus on urbanization and the role of ox-ploughing in driving it. Archaeologists have had paid greater attention to working male cattle in making possible the accumulation of surplus agricultural goods that support emergent political economies and urbanization. The author brings forth the use of donkeys in short-distance transport on farms and in villages, which is important because "archaeological models of surplus-provision rarely address the practicalities of dealing with the major increase in bulk for transfer from the hinterland to newly urbanised nodes" (154). New modes of short-distance transport were likely key for urbanisation to flourish. Donkeys facilitated the intensification of trade in the 4th and 3rd millennium BC; the arrival of domesticated donkeys coincides with "archaeological evidence of a marked increase in outposts and waystations" (174). Pack donkeys enabled greater flexibility of movement, and movement at greater distances. The author deftly considers the practical realities of providing fodder in urban environments and for long-distance donkey caravans, which is under-considered archaeologically.

Donkey invisibility extends to the archaeological record, where donkeys are often absent from faunal inventories where they were present in textual and artistic renderings. The author attributes this to consistent cross-cultural taboos against eating working donkeys in antiquity

and the present, so they rarely appear in kitchen middens, and to the challenges of identifying donkey remains versus other equids, such as onagers (*Equus hemionus*) which were commonly hunted and hybridized with donkeys in ancient Mesopotamia. I would point out that there are a number of novel ways to distinguish donkeys from other equids. Along with ancient DNA (aDNA), there is geomorphic morphometrics (GMM),[1] cross-sectional geometry,[2] and zooarchaeology by mass spectrometry (ZooMS).[3] Goulder discusses how stall or pen-feeding is known from the 3rd millennium BC in Mesopotamia, but archaeological stabling can be difficult to find, and discussions of the practicalities of foddering working animals are exceedingly limited. She notes as donkeys are commonly tethered, stakes, poles and tethering holes in rocks to tie donkeys and concentrations of dung are good archaeological indicators of husbandry at a wide variety of sites, including those along caravan routes.

The section on donkey behavior and physiology is especially rich. Rather than thinking of donkeys as smaller, less cooperative horses, Goulder leads us to appreciate that donkeys are supremely adapted to the arid environments within which they evolved, as well as able to cooperate with humans in ways that are different from horses. For example, they live in smaller sociable groups, have more efficient conformation for rough terrain, possess surprising speed, will freeze and face danger, have greater patience and stoicism, follow in-line, learn routes easily, and can herd and carry loads unaccompanied by humans. In comparison to horses and cattle, they have later onset for breeding (generally after 4 years) and typically foal every other year, but their ability to survive and work with less quality food and less access to water is greater, as is their lifespan, even though there is more limited use of their carcass products. Donkeys are also cheaper to maintain overall and per load, with greater heat tolerance, and can carry a greater absolute load.

Goulder beautifully highlights the central role of person-to-person dissemination of domesticated donkeys, and of donkey management and training, which is rarely considered in the spread of domesticated animals, but readily apparent in the modern literature. In the 4th and 3rd millennium BC in Mesopotamia and nearby regions, donkeys were adopted for local use in regions that already had working cattle. The dispersion of domesticated donkeys is more similar to cattle rather than horses. Local transport use of donkeys is crucial, but archaeologists have instead focused on boats for movement of goods in ancient Mesopotamia.

Throughout the book, Goulder's micro-scale focus is on the "basic logistical matters of breeding, supply, training, grazing and foddering, the impact of working animals on local economies through processes such as labour adjustments, hiring and lending, and the central contribution of short-distance transportation work" (20). With this focus, this book makes several significant contributions: 1) the insight from modern studies that show that donkeys, even when used for plowing, spend the majority of their time in household or farm transportation tasks in short-distance transport; 2) the acknowledgement in modern studies that donkeys afford women, commoners, and the poor a significant reduction in household

[1] Pierre Clavel, Jean Dumoncel, Clio Der Sarkissian, Andaine Seguin-Orlandoa et al., "Assessing the predictive taxonomic power of the bony labyrinth 3D shape in horses, donkeys and their F1-hybrids," *Journal of Archaeological Science* 131 (July 2021): 105383.

[2] L. Shackleford, F. Marshall, J. Peters, "Identification Donkey Domestication Through Changes in Cross-Sectional Geometry of Long Bones," *Journal of Archaeological Science* 40:12 (2013): 4170-4179.

[3] Michael Buckley, "Zooarchaeology by Mass Spectrometry (ZooMS) Collagen Fingerprinting for the Species Identification of Archaeological Bone Fragments," In *Zooarchaeology in Practice: Case Studies in Methodology and Interpretation in Archaeofaunal Analysis*, eds. Christina M. Glovas and Michelle J. LeFebvre, 227-247. Cham: Springer, 2018.

labour, such as collecting firewood and water, thereby increasing health and economic independence; and 3) the recognition that communal ownership and lending or hiring of donkeys (and cattle) is well known in ethnographic and modern cases, but is under-considered for archaeological and historical studies.

I would have appreciated a systematic synthesis of archaeological finds in 4th to 3rd millennium BC in Mesopotamia, including a list of the relative abundance of donkeys in faunal assemblages and their contexts, along with maps illustrating their presence in the focal period by site. Theoretically, there is a lack of engagement with the recent 'animal turn' and 'multispecies archaeology'. A view to the archaeology of everyday life also would be helpful here (review in Robin 2020[4]), as would more comparison with later archaeological and historic periods with working donkeys in considering how to discover invisible donkeys and the ordinary women, farmers or disenfranchised people who work with them. Though not the fault of the author, in the eBook version that I reviewed due to the difficulty of obtaining a copy of the hardback book in the US, had quite tiny images and tables too small to read (the paperback is forthcoming). These issues in no way diminish the importance of this text as an absolute must-read for all scholars of human-equid relations. It is also an invaluable resource for scholars of human-animal-environment interactions who would benefit greatly by following Goulder's lead in considering the practicalities of on-the-ground management of working animals and their importance to the daily lives of ordinary people through time.

References

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[4] Cynthia Robin, "Archaeology of Everyday Life," *Annual Review of Anthropology* 49 (2020): 373-390.