

ANCIENT ‘GLOBALISATION’

MUTHUKUMARAN (S.) *The Tropical Turn. Agricultural Innovation in the Ancient Middle East and the Mediterranean*. Pp. xx + 294, ills, maps. Oakland, CA: University of California Press, 2023. Paper, £30, US\$34.95 (Cased, £80, US\$95). ISBN: 978-0-520-39084-3 (978-0-520-39083-6 hbk).

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Until recently, only occasional botanical evidence revealed contacts between the ancient Middle East and the tropical areas far to the East, in South Asia or beyond. The radiological analysis of the mummy of Ramesses II in the late 1970s revealed the presence of pepper seeds in his nose and thorax, employed in the mummification process (R.J. Lichtenberg, A.C. Thuilliez, ‘Sur quelques aspects insolites de la radiologie de Ramsès II’, *Bulletin et Mémoire de la Société d’Anthropologie de Paris* série XIII, vol. 8 [1981], 323–30). Slightly later, the excavation of several tombs at Ukma, in Nubia, dating from the Kerma period (2000–1500 BCE), yielded approximately 100 grains of *Panicum miliaceum*, a type of millet domesticated initially in China and that arrived in Ukma by sea, across the Indian Ocean (W.A. Van Zeist, ‘The Plant Remains’, in: A. Vila [ed.], *Le Cimetière Kermaïque d’Ukma Ouest* [1987], pp. 247–55). Finally, vanilla was consumed at Megiddo during the Middle Bronze Age (1650–1550 BCE) (V. Linares et al., ‘First Evidence for Vanillin in the Old World: Its Use as Mortuary Offering in Middle Bronze Canaan’, *Journal of Archaeological Science: Reports* 25 [2019], 77–84), whereas the analysis of micro-remains and proteins preserved in the dental calculus of individuals who lived during the second millennium BCE in the Southern Levant provides clear evidence for the consumption of soybean, probably banana and turmeric. These analyses push back the earliest evidence of these foods in the Mediterranean by centuries (turmeric) or even millennia (soybean) (A. Scott et al., ‘Exotic Foods Reveal Contact between South Asia and the Near East during the Second Millennium BCE’, *Proceedings of the National Academy of Sciences* 118 [2021], e2014956117). These examples provide solid cumulative proofs of long-distance contacts between South Asia, the Near East and North-Eastern Africa that involved not only plants but also animals and techniques. At the same time, these contacts were not necessarily the outcome of trading initiatives promoted by states and institutions (temples, palaces or others), but may well obey small-scale operations that integrated, in the end, vast areas across Eurasia and the northern Indian Ocean (N. Boivin and D.Q. Fuller, ‘Shell Middens, Ships and Seeds: Exploring Coastal Subsistence, Maritime Trade and the Dispersal of Domesticates in and around the Ancient Arabian Peninsula’, *Journal of World Prehistory* 22 [2009], 113–80).

The book discussed here represents a welcome contribution to this flourishing research area. It provides a thorough discussion and an invaluable systematisation of the evidence accumulated in recent years, focused only on a limited set of plants. While M. omits some of the evidence presented in the previous paragraph, the book raises crucial questions about the contacts that made it possible for plants to circulate from South Asia into the Mediterranean. One of them is that the export of semi-precious stones along land and maritime routes (Afghan lapis lazuli, Eritrean obsidian) paved the way for the later diffusion of the plants discussed. Therefore, the demand for semi-precious stones and plants encouraged the development of small-scale professional networks by the end of the fourth millennium BCE, integrated by sailors, herders, mobile peoples, paddlers and fishers. A second question concerns the role played by institutional actors in the import,

acclimatisation and diffusion of foreign plants. Royal gardens and high-elite leisure habits were prominent settings for this function. Thus, Persian elites contributed to the diffusion of citrons to the Eastern Mediterranean around the mid-fifth century BCE (p. 130), probably in ornamental gardens (p. 143). The famous expedition that Queen Hatshepsut sent to the land of Punt (southern Red Sea) to bring back to Egypt incense trees inspired the decoration of private tombs and temples with scenes that represented 'botanic gardens' planted with exotic flora. However, two centuries earlier new vegetables and fruits were introduced to the Nile Valley during the Hyksos period. The remains of the Hyksos royal palace at Avaris (Tell el-Dab'a) included a garden that may have contributed to the acclimatisation in Egypt of apples, pomegranates, almonds and olive trees. However, M. rightly insists on the risk of considering the existence of 'green revolutions' after A.M. Watson's seminal article 'The Arab Agricultural Revolution and its Diffusion, 700–1100' (*The Journal of Economic History* 34 [1974]). Rather, he emphasises that the diffusion of plants in the ancient and medieval worlds rarely consisted of 'packs' formed by a simultaneous set of species. On the contrary, each plant needed a substantial knowledge of the agricultural techniques, soil qualities and best-suited climatic conditions for successfully adapting to a new environment. At the same time, culinary habits, tastes and cultural values were essential in the more or less swift incorporation of a new plant in a region or a particular social sector – or its failure to do so.

Nevertheless, knowing the diffusion process of the plants discussed in the book still poses many difficulties. As M. convincingly explains, it remains an arduous task to harmonise disparate evidence from different textual, lexicological and archaeological contexts. Identifying a particular term with a precise vegetable is not always easy, a process hampered by the tendency of ancient authors to use the same term to designate a varied group of plants. As for archaeological remains, the contexts in which the samples were found may be inaccurately recorded, particularly in the case of old excavations or the intrusion of recent vestiges in ancient archaeological layers because of the action of rodents, agricultural work or other reasons. Another issue M. highlights is the lack of chronological and contextual correspondence between written and archaeological data, for instance, when archaeological evidence only appears much later than the first written references to a specific plant, and vice versa. Hence, certain attestations of rice cultivation in the Middle East appear around the middle of the first century BCE, but rice is lexically attested from the eleventh century BCE at Kahat (North-Eastern Syria) and the eighth century in Assyria (pp. 111–12). In this case, palaeobotanical vestiges may suggest that the presence of a plant at a given place was occasional, even exceptional, a curiosity that only became common centuries later when contacts between the producing and the consuming areas intensified or when a plant entered the culinary and cultural habits of a particular society definitively. In this respect, M. emphasises that some plants were introduced first for pharmaceutical reasons because of their alleged healing properties until their culinary use prevailed. Finally, there are instances in which a plant was not necessarily introduced from a distant land, but corresponds to a local variety. That seems to be the case with melon. It arrived from South Asia around the middle of the third millennium BCE in Mesopotamia. However, in the case of Egypt, it seems that a possible local wild melon was cultivated since the late fourth millennium (p. 152).

M. provides a thorough and well-argued discussion, supported by solid lexicological and archaeological evidence, about the crop exchange between tropical Asia, the Middle East and the Mediterranean during the Bronze and the Iron Ages. His excellent contribution provides considerable support to current debates about early forms of 'globalisation', in which increasingly sophisticated and more intense exchange networks linked Eurasia and North Africa from the Early Bronze Age, as the diffusion of textiles, weights, metals

or semi-precious stones reveals. As a complete summary of recent palaeobotanical and textual research on plant diffusion, centred on a selected group of case studies, one cannot but congratulate him for this excellent book that should win the favour of historians, archaeologists and a broader public alike.

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THE DIVERSITY OF ANCIENT LANDSCAPES

CRISTILLI (A.), DE LUCA (F.), DI LUCA (G.), GONFLONI (A.) (edd.) *Experiencing the Landscape in Antiquity 2*. (BAR International Series 3107.) Pp. viii + 513, b/w & colour figs, b/w & colour ills, b/w & colour maps. Oxford: BAR Publishing, 2022. Paper, £128. ISBN: 978-1-4073-6009-6.

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The ancient world was home to a diverse range of environments, extending from the extreme heights of the Alps to the arid deserts of North Africa. These landscapes meant different things to different groups, subjected to varied uses and layers of meaning by those who inhabited or traversed them (K. Anschuetz et al., 'An Archaeology of Landscapes: Perspectives and Directions', *Journal of Archaeological Research* 9 [2001], 157–211). They were fluid spaces, changing depending on the weather, season and time of day, and hosted a range of social, economic, political and ritual activities. Any book would struggle to explore the relationships between humans and their lived environments comprehensively across a region as varied and distinct as the Mediterranean, yet this is exactly what the volume presented here accomplishes. The volume contains the proceedings from the Second International Conference on Classical Antiquities, building on the themes and discussions presented in its companion volume, *Experiencing the Landscape in Antiquity I* (Cristilli et al. [2020]). It represents an impressive collection of research by an international group of scholars, each of whom brings their own fresh perspective to the research questions they set out to answer.

Containing 63 contributions, the scope of the volume is ambitious, with a chronological range stretching from the Bronze Age to the Early Medieval period, and a geographical scope covering the entirety of the Mediterranean world and its hinterlands. While rural landscapes are predominantly discussed, urban 'cityscapes' are also given extensive treatment, recognising that these spaces, though not as expansive as the countryside, were also areas layered with meaning that were lived in and experienced. Furthermore, the book's definition of landscape is a broad one, covering those both real and imagined. Literary and artistic landscapes receive attention, exploring how language, emotion and visual markers can serve to create spaces or shed light on how landscapes were viewed or navigated. The goal of the conference in fostering a multidisciplinary approach to the study of ancient landscapes is readily apparent throughout the proceedings, which contain a rich and varied combination of materials and methods. Archaeological, epigraphic, literary and digital methodologies are applied across the contributions, often in concert