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Cita:

Jorge de Torres Rodríguez y Valeria L. Franco Salvi (2024).
Entanglements, ontologies, and grinding stones at the medieval site of Handoga (Djibouti). *World Archaeology*, -, 1-16.

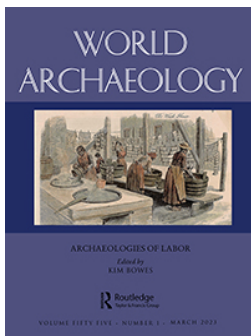
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To cite this article: Jorge de Torres Rodríguez & Valeria Franco Salvi (30 Sep 2024): Entanglements, ontologies, and grinding stones at the medieval site of Handoga (Djibouti), World Archaeology, DOI: [10.1080/00438243.2024.2407323](https://doi.org/10.1080/00438243.2024.2407323)

To link to this article: <https://doi.org/10.1080/00438243.2024.2407323>



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Published online: 30 Sep 2024.



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Entanglements, ontologies, and grinding stones at the medieval site of Handoga (Djibouti)

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ABSTRACT


This paper analyses the role and meaning of grinding artefacts in Handoga (Djibouti), a medieval town that flourished between the 13th and 16th centuries in a territory previously occupied by nomadic communities. The technical-morphological and morphological-functional studies conducted on the sample suggest that the management of tools related to agriculture followed an approach characterized by minimal care through the different stages of the objects' lives. This situation, contradictory to what could be expected in a town that had been sedentary for centuries, has been used to reflect on the interrelations between these objects and their users, following Hodder's concept of entanglement. The analyses conducted on Handoga's tools point that contrary to what could be expected, some processes such as sedentarization, which are usually conceived as univocal or inevitable can be negotiated or even rejected, and the material-human interactions built around them can also be untangled, if desired.

KEYWORDS

Horn of Africa; medieval archaeology; sedentarización; entanglement; grinding stones

1. Introduction

From modest simple concave and discoidal stones used by ancient hunter-gatherers, grinding has persisted and adapted to the cultivation-induced grain processing of sedentary societies. Today, as we traverse different landscapes, we encounter flour mills disrupting cultivated fields with their metallic and industrial semblance, seemingly incongruent with their original stone counterparts, yet ultimately aligned in achieving the same outcome. This evolution from ancient hand-held stones to contemporary industrial mills marks a transformative journey in the history of grinding technology, reflecting technological advancements and the dynamic relationship between human communities and historical developments through time. The identification of incongruities between these archaic stones and contemporary infrastructure is noteworthy, accentuating an unforeseen developmental trajectory. Spontaneity serves as a lens through which to comprehend these changes, elucidating the unintended consequences of human agency (Giddens 1995) and the manifold complexities that transcend our intentional endeavours. This phenomenon symbolizes our circumscribed autonomy in the context of technological advancement. In essence, it is highly improbable that the foresight of

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early hunter-gatherers could have encompassed the transformation of the first rudimentary grind stone artefacts into the intricate industrial facilities prevalent in the present era.

In this context, we direct our attention towards 'things' created by human beings, specifically referring to grinding stones. This clarification arises from the fact that, under the term 'thing', we also encompass intangible elements such as concepts and institutions, following Hodder's perspective (2018). We do this through the case study of Handoga, a medieval town close to the border between Djibouti and Ethiopia which evolved from a previous nomadic settlement and acted as a trade hub for more than four centuries, to be utterly abandoned by the end of the 16th century. In this historical context, the lithic artefacts under examination served as consolidation points for pre-existing ideas and technologies, such as the practice of polishing stones and flaking, which date back millennia to the era of hunter-gatherers. The implementation of these artefacts had varied implications for the processing, digestion, seasoning, storage, and more efficient utilization of available food and raw materials. Grinding artefacts, encompassing aspects like agriculture, storage, nutrition, and sustenance, played a pivotal role in the lives of Handoga's inhabitants, creating different human-thing relations of dependence and dependency. Initially, these inhabitants depended on grinding artefacts (Human-Thing 'HT' relations). However, these artefacts, in turn, were subject to various factors such as the availability of raw materials, processes of sedentarization, and the presence of grains and produce (Thing-Thing 'TT'). Additionally, the creation and utilization of these artefacts were closely linked to individuals (Thing-Human 'TH'), and humans were mutually dependent on each other for food processing (Human-Human 'HH') (Hodder 2018).

We propose to initiate a reconsideration of the world of objects by positioning them as active participants alongside humans, thereby transcending perspectives that have imposed dualisms since the Renaissance in the Western context, which hinder our interpretations (Tilley 1999). According to Hodder (2012), multiple relationships, conceptions, and ontologies exist among the beings that constitute the lifeworld, giving rise to 'entanglements' or chains of interdependency. Hodder further explores these dynamics, emphasizing the complex entanglements that emerge from the interactions between humans and their material culture (Hodder 2011). Among these interdependencies, we are interested in delving into the entanglements that arose among the inhabitants of Handoga and their grinding artefacts.

Between the 13th and the 16th centuries, the eastern part of the Horn of Africa went through a series of deep transformations that reshaped the political, social, economic, and identity parameters of the communities who inhabited it. These changes included the arrival and consolidation of Islam, the emergence of permanent settlements in nomadic territories, the expansion of international trade, and the increasing influence of states over the region (De Torres Rodríguez et al. 2022). Of all these changes, the emergence of permanent settlements probably implied the most radical modification in terms of territory management, economy, material culture, and identity. The existence of permanent settlements was not only alien to the existing nomadic perception of the world: it also challenged the parameters of social and political equality that characterized these groups. Furthermore, it constructed a new environment and material culture rooted in agrarian practices, one that had to be shared with the nomadic communities co-inhabiting the territory. This sedentarization process came to an abrupt end by the late 16th century, as most permanent settlements were abandoned and the majority of the population reverted to the nomadic lifestyle traditionally associated with the Somali and Afar peoples.

Despite its relevance, the study of sedentarization and the emergence of agricultural landscapes has been surprisingly understudied, from the most basic analysis of material culture to how this process modified the perception of reality for the communities who underwent it. This lack of

attention includes one of the most iconic expressions of agriculture, grinding artefacts, which are omnipresent in Handoga but have never been analysed before. Their contemplation prompts inquiries regarding the prevalence of grinding objects, indicative of intensive use, in an environment where agricultural pursuits were not widespread. Does this foreshadow an unexpected outcome of human endeavour? Are these intricacies that captivated the inhabitants? How were these objects disentangled from their contextual settings and eventually abandoned despite their utility?

To address these queries, an initial step involved executing an archaeological analysis encompassing techno-morphological, morphological-functional, and contextual evaluations (Aschero 1975, 1983; Babot 1999b, 2004, 2007). This comprehensive approach aimed to delineate patterns in the manufacture, raw material procurement, technological strategies, utilization, abandonment, repurposing, and discard of these artefacts. After acquiring this dataset, we initiated the recognition of the various contexts in which these objects participated, elucidating their roles and the manifold entanglements integrated during this pivotal period. The integration of grinding technology, involving shared knowledge, repeated practices, and specialized equipment, tackles challenges associated with substance alteration. The grinding stones, initially presumed to have been for the daily sustenance of households, are now found embedded in wall blocks or left in extramural areas. This study aims to analyse the persons interacting with these artefacts, understand why they were used, and explore how they were integrated into daily life. By analysing the mills, we connect with scenes from the past, transporting us to the daily life of those who adopted new productive practices.

2. The town of Handoga and the compound C-6000

The medieval site of Handoga is situated to the west of Djibouti, about 13 km from the border with Ethiopia and 10 km to the west of the town of Dikhil (Figure 1). It is located in a semidesert plain but close (around 1 km) to the wadi Chekheiti, which was likely the water source for the medieval inhabitants of the settlement. The site consists of a large



Figure 1. Location of Handoga in the Horn of Africa.

concentration of structures roughly organized on a north-south axis of 600 by 300 meters in width, for a total extension of about 16 ha. Most of the structures are circular or oval and appear scattered but grouped in clusters, often in what look like compounds or walled courtyards. Although no clear urban layout has been established, the graveyard of the site has been identified to the south, and two mosques have been located on the northernmost side of the town. Many of the empty spaces located throughout the site could correspond to squares, junctions of streets, or other public spaces. Handoga is strategically situated at a crossroads of caravan routes that connect the coast of the Red Sea with the interior of the Horn of Africa (Cauliez and Gutherz 2020, 191), and during the medieval period was likely a key gathering point for caravans and nomads who crossed the territory. It is not clear if the town was under the control of the Sultanates of Ifat and Barr Sa'd al-Dīn, which ruled over large parts of the Horn between the 13th and 16th centuries.

Excavations in Handoga have been intermittently conducted since the 1970s (Ferry, Grau, and Bouvier 1981; Grau 1982; Gutherz, Pène, and Omar Ismaël 2007, 18–22). However, it was not until 2021 that a long-term study of the site was launched, which included comprehensive mapping of the settlement and the excavation of several compounds in different parts of the town. Preliminary interpretations of Handoga suggest that it was founded in the 12th century as an aggregation centre, where nomads gathered to participate in various activities – social, political, religious, etc.— as well as serving as a caravan stop benefiting from water availability and the presence of a recurrent population of nomads. By the 13th century, the camp became permanent, and Handoga evolved into a town. The site retained a clear nomadic influence, evident in its urban layout, which differs radically from towns found in other nearby areas such as Ethiopia or central Somaliland (De Torres Rodriguez et al. 2023, 231–232). In the 16th century, following a trend observed throughout the region (De Torres Rodriguez et al. 2022, 272–273) the site seems to have been peacefully abandoned for unknown reasons, remaining uninhabited thereafter.

The compound C-6000 (Figure 2) is the first one to be excavated on the northern side of Handoga, an area that has been historically left aside by previous research. It consists of two structures linked by several stone walls and fences defining a larger central space, which seems to have been an area dedicated to the preparation of food and other domestic activities. As happened in other parts of Handoga, the excavation of C-6000 has shown evidence of two well-defined archaeological phases, the older one defined by houses made of perishable materials while the second one consisted of stone structures with the upper part likely built with wattle and daub. Radiocarbon dates from C-6000 are under process but the chronology of the two phases can be established through parallels with other dated contexts: the oldest one between the 12th and the 13th centuries while the second one -where all but one of the grinding stones were recovered- likely dates between the 14th and the 15th centuries. The material collected at C-6000 is very similar to that recovered from other compounds, houses, and test pits excavated in Handoga throughout the years, with two remarkable exceptions: a sample of exceptionally well-preserved charred fruits, seeds, and wood fragments currently under study, and a significant sample of 88 fragments of grinding stone stones of different types, materials, and shapes, which so far constitute the most comprehensive sample of these artefacts collected in medieval Muslim sites. Still an often overlooked and understudied material despite its importance (Shoemaker and Davies 2019; Shoemaker, Davies, and Moore 2017), grinding stones are a key element in understanding some fundamental processes within Handoga's historical context, such as the ways sedentarization influenced the adoption of new materiality among the medieval nomadic communities of the region.

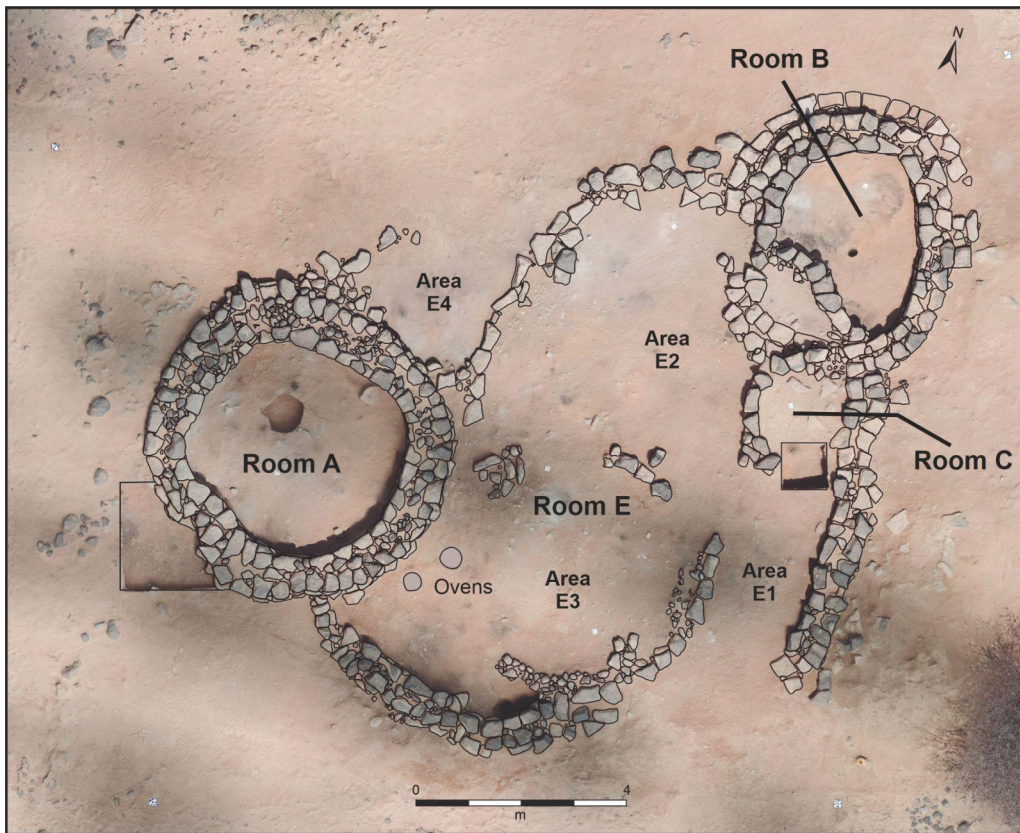


Figure 2. Compound C-600 with main rooms and areas.

3. Grinding stones

A total of 88 grinding stones were recovered from the C-6000 compound (Table 1 and Figure 3). The majority of these tools (62.5%) were documented within collapse levels, while another 30.7% were collected from various deposits corresponding to occupation or abandonment floors during the excavation process. The artefacts were unevenly distributed within the different spaces of the compound, with 47% of them recovered in Room A (identified as the main room), 11.36% in Room B (defined as a store room), and 34% in Room E, the central space which was used for productive activities including the preparation of food. The percentage of handstones and grinding

Table 1. Distribution of artifacts by room or archaeological level.

	total	%	Handstones	%	Passive artifacts	%
Room A	42	47.72	14	42.42	28	51
Room B	10	11.36	8	24.24	2	3.5
Room E	30	34.1	11	33.33	19	34.5
Other spaces	6	6.82	0	0	6	11
	88	100	33	99.99	55	100
Collapse levels	55	62.5	18	54.54	37	67.27
Occupation floors	27	30.7	15	45.45	12	21.82
Other layers	6	6.8	0	0	6	10.9
	88	100	33	99.99	55	99.99

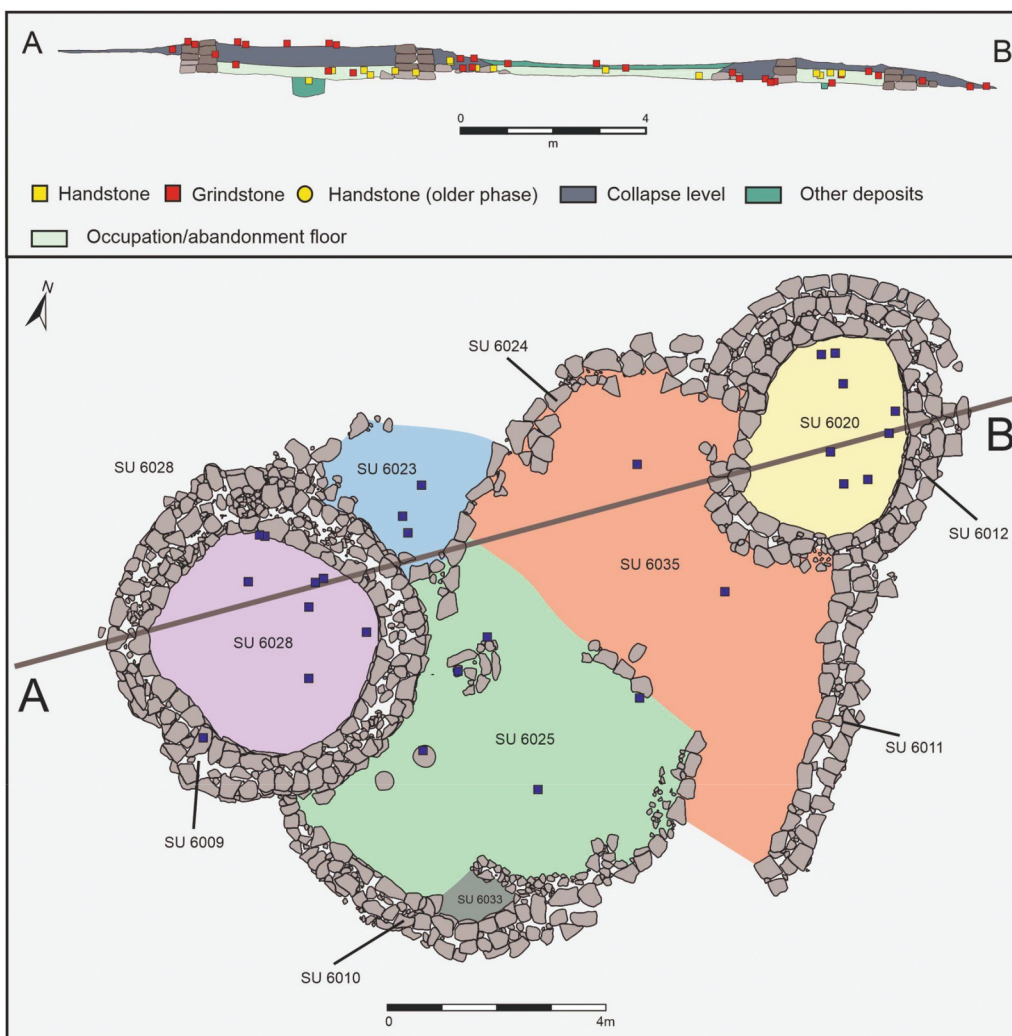


Figure 3. Top: profile of C-6000 showing the disposition of stone artifacts in the different layers. Bottom: spatial distribution of stone artifacts in the different occupation levels of C-6000.

stones in Rooms A and E coincides with the percentage of total artefacts found at the compound, while in Room B a disproportionate number of handstones have been found: while this room holds just 11% of the artefacts, it gathers the 24% of the handstones found in the compound. As aforementioned, 62.5% of the artefacts appeared in the different collapse levels of the compound, while 30.7% were collected from various deposits corresponding to occupation or abandonment floors. There are some clear differences in the distribution of handstones and grinding stones: while the former appears evenly distributed in collapse levels (54.54%) and deposits (45.45%), grinding stones are concentrated at collapse levels (67.27%), with just 21.82% of them documented at occupation levels. Five stratigraphic units corresponding to occupation or abandonment floors (SU 6020, SU 6023, SU 6025, SU 6028, and 6035) contain 42.42% percent of the handstones - but just the 14.54% of the grinding artefacts. All the artefacts but one were collected from structures

belonging to the latest archaeological phase of the compound, dated between the 14th and 16th centuries and associated with stone structures. This situation may be partially explained by the fact that many of the older structures - corresponding to a period when houses were made of perishable materials - were not excavated during the 2023 campaign. However, it could also suggest that the changes observed in the architecture of Handoga by the end of the 13th century may correlate with other aspects of Handoga's material culture. Many of the grinding stones were highly fragmented, preventing comprehensive study due to their small size. Consequently, a subset of the better contextualized and preserved 49 pieces, consisting of 32 handstones and 17 passive artefacts, was selected for closer examination

Two different types of analysis were conducted on the fragments (Table 2), following the methodologies established by Aschero (1975, 1983) and Babot (1999b, 1999a, 2004, 2006, 2007). A technical-morphological study aimed to understand the process of production of tools and to detect the strategies related to selecting and preparing the raw materials. A second, morphological-functional study has focussed on the morphological variability at the active areas of the tools, which are considered the results of functional criteria and therefore could express use techniques (Aschero 1975).

The grinding stones collected at C-6000 (Figures 4 and 5) were crafted from vesicular-textured basalt, deemed suitable for dry grinding or processing dehydrated and floury products, as the cleaning of vesicles is relatively straightforward. Instruments manufactured on such textured structures do not necessitate maintenance to sustain surface roughness, enabling uninterrupted use over an extended period (Adams 1999). The primary base for the grinding stones was nodule-type, with discoidal-oblate or cylinder-prolate shapes being the norm. The nodules were obtained as individual aggregates from secondary sources and selected due to their general shape and surface quality. The provenance of these objects is most likely a rocky outcrop located just 500 metres southwest of the site (Figure 6), which was also the origin of the basalt blocks used for the construction of Handoga's buildings (Grau 1982, 16). The making of the pieces was extremely simple and consisted just of a general shaping of the tool, including some sporadic knapping to remove parts of the nodule and coarse or fine pecking which is usually concentrated on the cavity area. In general, the preparation of the tools is minimal and sometimes non-existent, suggesting an expedited approach (Nelson 1991) to their selection and management.

Of the 17 passive artefacts analysed, 15 were fragmented and two were found complete, a proportion which can be extrapolated to the whole sample of grinding stones in the compound. Significantly, none of these artefacts appeared in the occupation or abandonment levels documented during the excavation: all of them were found in upper, collapse levels. Despite their fragmentation, more than 60% weigh between 2 and 5 kg, with the remaining 40% weighing under 2 kg. Following Babot's (1999b) criteria, 12 of them have been classified as portable, while the other five would be difficult to move from their emplacements. The morphological analysis did not show a clear trend, with similar percentages of triaxial laminar and ellipsoidal (35%), discoidal/oblate (35%), or undefined (30%) types which could be the result of the high level of object fragmentation in this sample. The types of action or motor habits (Adams 1999) exhibit a clear preference for sliding pressure in linear movements (88%) and semi-circular or circular translation motion (12%), with percussion actions notably absent. The active surface area does not exceed 495 cm², indicating a constrained capacity for grinding a substantial quantity of material. On average, the measurement of all surfaces of the grinding stones totals 373 cm².

Table 2. Summary of technical-morphological and morphological-functional characteristics of the artifacts from C-6000.

Condition		Portability			Grinding tools		Shape of the artefact		Types of action			
Fragmented	whole	mobile	Less transportable	Triaxial	Laminar	Ellipsoidal	Discoidal	Oval	Unidentified	Straight-line sliding pressure	Circular sliding pressure	
16	1	13	4			6		6	5	15	2	

Condition		Active Artifacts						Types of action				Raw Material			
Fragmented	Whole	Discoidal	Cylindrical	Spherical	Ellipsoidal	Curvilinear Semi-circular	Rectilinear	Circular	Percussion	Vertical	Back and Forth	Random	Basalt	Quartzite	Granite
20	12	12	8	5	7	5	17	2	3	1	1	2	24	2	6



Figure 4. Handstones (upper rows) and one of the few grinding stones (bottom) found at C-6000.



Figure 5. Large grinding stone found during a survey in Handoga.

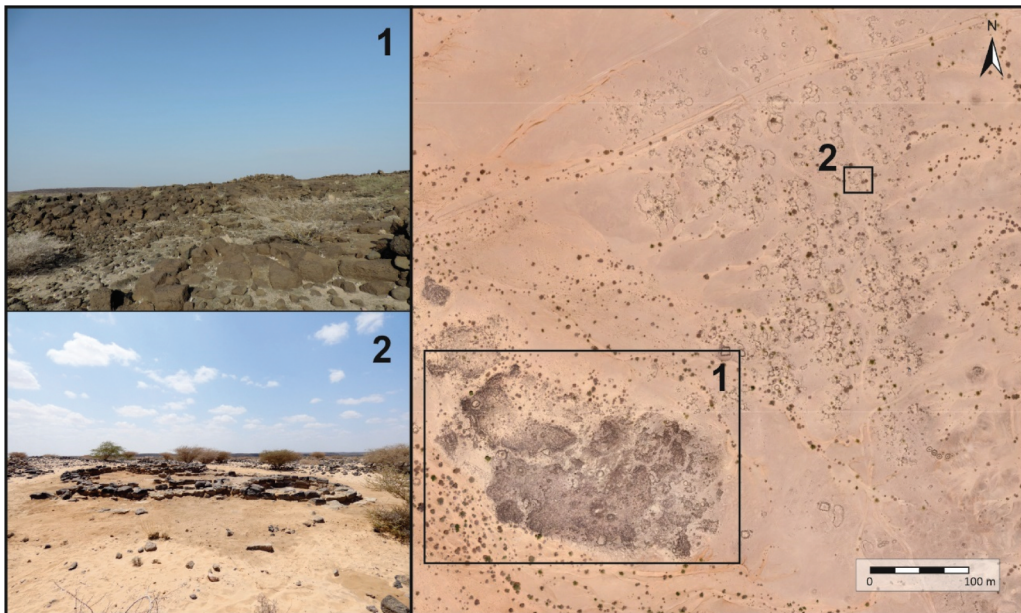


Figure 6. 1. Outcrop where the material for grinding stones was likely collected 2. Compound C-6000.

The analysis of the passive artefacts documented at C-6000 suggests a very *expedient* (Nelson 1991) approach to selecting, preparing, using, maintaining, and discarding these pieces. A strategy was implemented, which involved minimizing effort in instrument production by utilizing readily available raw materials in the area. Consequently, sophisticated techniques were not developed to maximize the efficiency and lifespan of these tools within this context. It is worth emphasizing that the artefacts are fragmented and devoid of utility. Given their portability, it is likely that whole artefacts were taken with them upon the abandonment of the dwelling for later use in another settlement, as has been widely documented in ethnographic contexts (Robbins 1973).

The second group consists of a set of 32 hand stones, which unlike the grinding stones were collected elsewhere, from the deposits identified as occupation-abandonment levels to the upper collapse strata. Most of the handstones (65%) were found broken, although the proportion of whole pieces (35%) is significantly higher than that of the grinding stones (12%). The fact that whole hand stones are scarce indicates that these artefacts were not stored, suggesting that they were left in situ while still in use and subsequently discarded upon reaching the end of their functional life. This disposal practice resulted in a 'destroyed' state for many handstones, reflecting a notable absence of maintenance and limited precautions taken to prolong their lifespan. Out of the 32 hand stones analysed, 16% showed evidence of maintenance, 42% had been used without any maintenance, and the other 42% were found in a destroyed state. It is evident from the sample that, similar to what occurred with the grinding stones, hand stones were not maintained, and precautions were rarely taken to extend their lifespan. However, it is recognizable that they were utilized to the maximum extent possible, as indicated not only by their state of destruction but also by the fact that hand stones exhibited two active faces, suggesting a deliberate effort to maximize the overall utility of these artefacts. Regarding their weight, around 40% of the hand stones weighed less than 0.5 kg, the remaining being between 0.5 and 1 kg of weight. This consistency in the weight of the hand stones suggests suitability for single-handed manipulation and the grinding of small quantities of grains. Notably, individuals utilizing these active artefacts did not require significant strength, making them accessible to any resident in the house.

As happens with the grinding stones, most of the hand stones were made of locally available materials, especially basalt which can be found just half a kilometre away from the site. However, unlike grinding stones, other materials were used in addition to basalt: granite handstones represent 19.4% of the sample, and one quartzite example was also documented. This larger variety suggests a relatively larger effort in the search for appropriate raw materials, which were all of good quality. There is no discernible standardization or uniformity in the general features of the production of Handoga's hand stones. This points to a domestic-scale crafting process without the involvement of specialized individuals supplying these artefacts to the residents of the location. Discoidal or oblate forms prevail, followed by cylindrical, triaxial laminar, and equiaxial equant shapes. This diversity in crafting methods and forms reinforces the idea of domestic production of these artefacts within the studied archaeological contexts.

Finally, the ways of use of the different stones are more varied than in the case of the grinding stones, although sliding pressure with a rectilinear movement is still predominant (53%), followed by sliding pressure with circular (6.25%), semi-circular or curved translation (15.6%). Other less common techniques include downward or swinging pressure, striking, and random movements.

4. Discussion

The results of the analyses conducted on the stone tools from Handoga show a series of common patterns that define a relationship with these tools which can only be described as minimally 'curated' (Bamforth 1986). This relationship is characterized by low craftsmanship, maintenance, and wear management, significant variations in form, size, and raw material, and lack of standardization. In Handoga, this lack of curation can be perceived along all the stages of the objects' life, starting from the extremely local acquisition of raw materials to the lack of maintenance which leads to the destruction of the objects. The absence of standardization among the pieces implies that specialists were not involved in the manufacturing process. This suggests that the production of these objects occurred within domestic contexts, a notion consistent with the limited active surface

area. This further underscores the restricted grinding capacity and reinforces the idea that these artefacts were primarily used within household settings.

The only (if minimal) difference detected within the sample comes from the distinction between grinding stones and hand stones, where some differences can be appreciated in the selection of materials. Vesicular basalt is the only material chosen for grinding stones, directly related to the better behaviour of these materials for grinding activities. In hand stones, denser and smoother materials are preferred, and in this case, a higher variability is accepted. This difference is also found in specific regions of Cameroon and Mali (Alonso Martínez 2014), with the active parts usually being of a harder material than the passive ones, as happens in Handoga (De Torres Rodríguez et al. 2023). The distinction between these two types of artefacts is also perceived in the objects' lives: while handstones can be found everywhere, grinding stones are only found in collapse levels, in contexts closely related to the final stages of Handoga's life. The reasons for this difference are not clear but point to rational criteria for the discarding of the artefacts. Beyond these slight differences, the sample shows a high level of consistency.

The overview of the stone artefacts recovered from Handoga and briefly presented here shows a somewhat unexpected panorama concerning agrarian practices in the settlement. The size and the characteristics of Handoga initially led us to think of agriculture as one of the main economic activities at the site, even considering the semi-desert environment around the medieval town. Handoga was then conceived as an agrarian town surrounded by nomads in a similar way as suggested for other regions of the medieval Muslim Horn of Africa (De Torres Rodríguez et al. 2022). Although no archaeobotanical data had ever been studied at the site, it was accepted that agricultural practices could include species such as sorghum or millet, two types of crops that are widespread in the drier areas of the Horn of Africa. The abundance of grinding stones and other artefacts, which were considered indirect evidence of agriculture, reinforced this idea of agricultural settlements surrounded by nomadic, pastoralist groups.

This was likely the case, but the lack of attention and care paid to a type of artefact that was commonly used at the site (if we consider the amount of them found at C-6000) requires some further rethinking about how agrarian practices were incorporated within the materiality and the identity of the Handoga population. The analyses conducted on the artefacts from C-6000 show that despite being an important element within the domestic material culture, and therefore used until broken and even taken away once Handoga was abandoned, grinding stones were not specifically valued nor cared for, unlike what could be expected in agrarian societies. This fact suggests that maybe the role of agriculture was not as central as expected, or that it had a lower prestige than other economic activities related to nomadic lifestyle, such as pastoralism or trade.

Certainly, attaining a comprehensive understanding of the primary products processed using the C-6000 artefacts remains challenging. The versatility of grinding stones is extensively documented through ethnographic studies conducted worldwide, demonstrating their utility across a broad spectrum of materials (Shoemaker and Davies 2019), with crops potentially constituting a significant component. This encompassed a diverse range, from processing animal bones to extracting salt, utilizing minerals like iron or calcite for different purposes, preparing clay or temper for pottery-making, incorporating pigments into artistic endeavours, and even employing frankincense resins for ceremonial or medicinal applications, among numerous other products (Babot 1999a; Baudais and Lundström-Baudais 2002; Burçin et al. 2003).

The evidence is supported by interviews conducted with Afar families who currently use similar artefacts for grinding sorghum, sharing commonalities in shape, raw material, pressure methods, size, and other aspects (De Torres Rodríguez et al. 2023). Notably, these families also opt for

materials like wood or metal over stone for their mortar and manos. This divergence may partly account for the absence of such artefacts in the archaeological record. The morphological and functional traits, coupled with insights gleaned from interviews with these long-standing local families, suggest that these artefacts were primarily employed for grinding grains intended for domestic consumption

5. Grinding stones, humans and Handoga

In many ways, the story of the grinding stones from Handoga is the story of Handoga itself, and by extension, the story of the community who inhabited the site. From a previous settlement made of perishable materials, Handoga grew opportunistically due to its strategic position along trade routes and the availability of water. At some point during the 14th century, the town became a proper town made of stone. But unlike many settlements in other parts of the Muslim territories of the Horn of Africa, Handoga never lost a nomadic identity visible in the design of its houses, the organization of the urban layout, the types of its funerary structures, and its trading activities. The materiality of the whole settlement reflects a strong contradiction between the physical impositions of sedentarization -buildings, objects- and the struggle to keep a nomadic lifestyle, which was still predominant in the region.

The grinding stones studied at the C-6000 reflect this contradiction: they are widely used and were essential for the daily life of the Handoga population, yet they are also neglected objects and, to some extent, treated with a lack of attention. This attitude fits well with identity parameters studied among the Somali and Afar populations described in the 19th century (Paulitschke 1896), who considered occupations such as farmers or metalworkers as inferior, in contrast with the exalted and revered nomadic life (Lewis 1999). This situation did not change during Handoga's life: the supposed rejection observed in grinding artefacts as a relevant object in the identity of the town inhabitants remained consistent throughout the four centuries of this site's existence. All the aspects related to grinding technology -shared knowledge, repeated practices, specialized equipment- which could be expected to evolve into an integral part of the identity of Handoga's people never took place. From this perspective, aligned with Hodder's approach, we are not simply confronted with a network of interactions in the style of Latour (2005, 2007), but rather with a complex web of dependencies among HT, TT, TH, and HH. Humans found themselves deeply entrenched in maintaining these interconnections, where material things and human relationships intricately intertwine. In this trajectory, despite the constructed dependencies in Handoga, a paradigmatic scenario unfolded; the artefacts never evolved towards intensified use, nor do we observe a refinement in their technology and aesthetics over time.

How is it conceivable that a heightened reliance on these objects, which are pivotal for daily sustenance in other regions, failed to materialize? Typically, there is a trend towards escalating utilization of items, resulting in a greater output of material culture, enhanced differentiation, and complexity (Hodder 2016). Nevertheless, it seems that within this community, interdependencies with other objects and relationships held greater sway, ultimately sidelining mills from the narrative. In this context, the grinding artefacts from Handoga challenge Ian Hodder's notion of entanglement, when conceived as inexorable and leading to ever-increasing complex networks of relationships. They reveal that these relationships between these objects and their users were superficial, hinting at a fragile connection to their material world that could be easily disrupted. This scenario is underscored by a stronger affinity for nomadic life, which prioritized a diverse array of material practices where grinding had only

a marginal use. As historical contexts shifted, these weak ties to grinding practices were cut, leading to their abandonment. This pattern suggests that the entanglements associated with the inhabitants' previous nomadic lifestyle were more profound and lasting than those arising from sedentarization and agriculture.

The urban process which consolidated around the 14th century throughout the Horn collapsed two hundred years later under a combination of trade route disruption, massive migrations, and military clashes (De Torres Rodríguez et al. 2022). The easy and fluid way in which four centuries of permanent settlements were discarded should lead us to reflect on how misleading it is to consider processes such as sedentarization or urbanization as univocal, inevitable, or even desired. When Handoga was abandoned by the end of the 16th century, the materiality attached to urban life (and the practices, the experiences, and the shared and accumulated knowledge built during centuries by this community) was also abandoned. The disentanglement was not only absolute but coherent with how sedentary materiality was managed during the settlement's life. Handoga, its material culture, and sedentary life were left behind, becoming just an episode in the rich, complex, and fluid nomads' history.

Acknowledgments

The research presented in this paper has been funded by the European Union through the European Union Research and Innovation Framework Programme, Horizon 2020, through the European Research Council (ERC StG 853390-StateHorn), and by the Galician Innovation Agency (GAIN) through their opportunities and predoctoral grants schemes. The authors thank the Djiboutian national and local authorities for their support during the fieldwork. We extend our heartfelt thanks to the StateHorn team, especially to Manuel Antonio Franco for his exceptional work in topography and graphics, and to Carolina Cornax, Mario Llorente, and Jorge Rouco for their invaluable contributions. The authors would also thank the editors and reviewers comments and suggestions, which have substantially improved the manuscript.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The work was supported by the Axencia Galega de Innovación and by the European Research Council [ERC StG 2019853390].

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