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## Meroitic Graves with Roman Games: Elites Moving the Borders of Play\*

By ALEX DE VOOGT, VINCENT FRANCIGNY and PIETER BAAS

**Summary:** In 1963 two sets of gaming materials were excavated from a Meroitic necropolis in Sedeinga, Sudan. Comparative analysis of the unpublished archaeological descriptions shows that these are likely examples of the Roman game of *Duodecim Scripta*. Carbon dating and epigraphic evidence dates these games to the first centuries CE while wood analysis shows the use of African blackwood or *Dalbergia melanoxylon* as the main material for the game board and pieces. The presence of Roman games in elite Meroitic graves points at an introduction of this game into the Meroitic world. In the history of Roman games this find is a rare example of *Duodecim Scripta* in which wooden board and playing pieces together with cubic dice are found preserved in a grave context.

### Introduction

In 1963, an Italian archaeological team under the leadership of MICHAELA SCHIFF GIORGINI excavated a group of elite graves on the site of Sedeinga in northern Sudan. Although in search of the necropolis of Egyptian nobles associated with the nearby temple of the queen Tiye dating to the New Kingdom (1550–1069 BCE), they instead uncovered burials dating from the Meroitic period (350 BCE–350 CE) and excavated a rich set of grave goods that are still on display in the National Museums of Khartoum and in the University Museum of Pisa.

Among the grave goods were gaming materials of which a set of three cubic dice and a few ivory and wooden game pieces were published in subsequent articles.<sup>1</sup> The complete documentation of the excavation, apart from articles and chapters, remained unpublished and unknown. It was not until

\* We wish to thank BERTIE-JOAN VAN HEUVEN (Naturalis Leiden) for sectioning and photographing the recalcitrant wood fragment. We also wish to thank EDDA BRESCIANI and FLORA SILVANO for accessing the archival materials at the University Museum in Pisa. We are particularly grateful to JENNIFER STEFFEY for her artwork and to IRVING FINKEL and MICHAEL DEE for their valuable advice in the preparation of this article.

<sup>1</sup> E.g., J. LECLANT: "Fouilles et travaux en Égypte et au Soudan, 1964–1965." In: *Orientalia* 35 (1966), pp. 161–165; J. LECLANT: "Les verreries de la nécropole méroïtique de l'Ouest à Sedeinga (Nubie soudanaise)." In: K. MICHALOWSKI (ed.): *Nubia, récentes recherches*. Varsovie 1975, pp. 85–95.

2009 that excavations were resumed at Sedeinga<sup>2</sup> and in 2013 that permission was granted as part of a project funded by the White-Levy Program to enter the archives of this excavation in Pisa, Italy, and start publishing its material in full. It was then discovered that there had been two sets of gaming pieces, one in glass and one in ivory and wood, each attributed to a different grave. One came with a gaming board of which wooden fragments and a large set of ivory squares had also been preserved. Both games were accompanied by cubic dice, one with a set of two and one with a set of three.

The complete count of playing squares and gaming pieces points to the Roman game of *Ludus Duodecim Scriptorum*, also referred to as *Duodecim Scripta*. It is the furthest south that this game has ever been attested, one of few with complete sets of gaming pieces, the only known example with a set of associated pieces made of glass, one of few examples where a wooden inlaid board has been (partly) preserved as well as one of few found outside of the borders of the Roman Empire. Almost fifty years after its discovery, the two *Duodecim Scripta* games from the Meroitic Kingdom show an interplay of two empires and a transmission of board games not previously recognized in the literature.

### The burial site at Sedeinga

Sedeinga is located on the left bank of the Nile in Sudanese Nubia, between the second and third cataracts. European travelers first described it in the early nineteenth century as the place where the ruins of a New Kingdom sanctuary built by Amenhotep III could be seen.<sup>3</sup> In 1963, the Franco-Italian mission working on the nearby site of Soleb, came to Sedeinga to begin excavations on the necropolis situated to the west of the Tiye temple. The presence of a group of nine tombs (named the West Cemetery) on the top of a small hill dominating the site caught the attention of the archaeologists. Unfortunately, no Egyptian burial associated with the temple was found there, but only Kushite tombs. The structures, dedicated to the burial of the local elite, were indeed built a few centuries later, during the early Kushite phase, known as the Napatan period (ninth to fourth centuries BCE), and reused during the late Kushite phase, or Meroitic period (fourth century

<sup>2</sup> C. RILLY/V. FRANCIGNY: "Excavations at Sedeinga. A new start." In: *Sudan & Nubia* 14 (2010), pp. 62–68.

<sup>3</sup> F. CAILLIAUD: *Voyage à Méroé et au Fleuve Blanc au delà du Fâzoql et dans le midi du royaume de Sennar, à Syouah et dans cinq autres oasis, fait dans les années 1819, 1820, 1821 et 1822*. Paris 1826, p. 369.

BCE up to the fourth century CE). Two graves, WT3 and WT8, contained gaming materials.

WT3 has the ruins of two pyramids built with mud bricks on top of a double-chambered tomb. The first pyramid is Napatan and corresponds to the primary use of the grave. When a restoration of the older monument seemed already impossible, Meroites added the second pyramid while the older burial chamber was still being reused at the time. This second pyramid was placed to the east of the older one, on top of the stairs that give access to the grave. It is of a much smaller size and corresponds to the last reuse of the substructure, as it sealed the access to the funerary chambers.<sup>4</sup> Archaeologists working on the site in the early 1960s partly misunderstood the material and the structures. This is why in the available literature<sup>5</sup> the West Cemetery is referred to as an exclusively Meroitic site.

Heavily plundered during late antiquity, WT3 still contained the remains of two inhumations placed in the antechamber during the Meroitic period. The oldest of the two was a woman buried in a wooden coffin, still wearing gold and silver seal rings with Meroitic iconography (i. e., a cow associated with a sun disc) and Hellenistic images of a bearded satyr or Silenus face; such material can be dated to the first to third centuries CE. According to the field records dating to December 1964, there were 32 fragmentary or complete ivory square pieces, 27 fragmentary or complete circular game pieces,<sup>6</sup> at least 3 in wood and 14 in ivory, as well as 3 ivory cubic dice. The entire set was associated with wood fragments together with ivory and wooden inlays that could possibly belong to a board or a game box.

WT8 was found with a single pyramidal monument, even though the grave was also reused during the Meroitic period. The pyramid was perhaps in a good enough condition at the time, and still used as a funerary marker. Similar to WT3, the substructure was a double-chambered tomb, but with remains of only one burial of a man in the second room. Despite the fact that the grave was also heavily plundered, there was a deposit of a game in the second room, along a wall made of mud bricks that separated the offerings from a bench carved into the bedrock on which the deceased was

<sup>4</sup> For a discussion of reused Meroitic graves, see A.J. DE VOOGT/V. FRANCIGNY: "Opening a grave in antiquity: Formation and interpretation in the Kingdom of Meroe." In: *Journal of African Archaeology* 10,1 (2012), pp. 59–70.

<sup>5</sup> E. g. M. SCHIFF GIORGINI: "Première campagne de fouilles à Sedeinga, 1963–1964." In: *Kush* 13 (1965), pp. 112–130; M. SCHIFF GIORGINI: "Sedeinga 1964–1965." In: *Kush* 14 (1966), pp. 244–261; J. LECLANT 1966; J. LECLANT: "Fouilles et travaux en Égypte et au Soudan, 1969–1970." In: *Orientalia* 40 (1971), pp. 252–255, Fig. 49–64.

<sup>6</sup> Only 24 only are mentioned in LECLANT 1966, p. 163 and in SCHIFF GIORGINI 1966, p. 251.

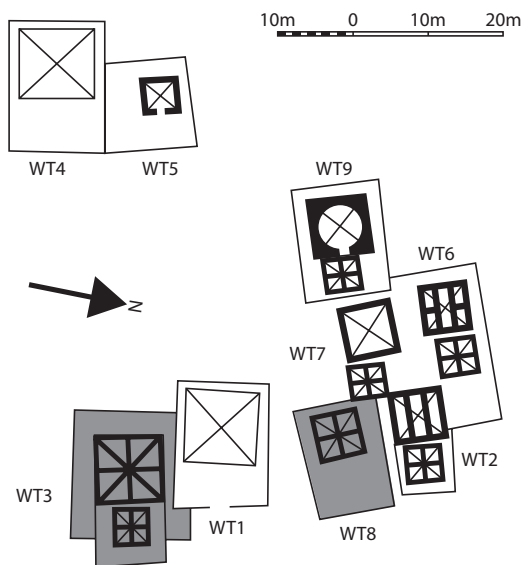


Fig. 1: Drawing of the Sedeinga burial site featuring WT3 and WT8

originally placed. Two ivory cubic dice and 28 circular game pieces made of glass were found (15 black and 13 white). Unfortunately, water had entered the chamber many times during the rainy seasons, and perishable material such as wood was not well-preserved. Instead, scattered throughout the two chambers, including the location of the game deposit, there were over three thousand glass fragments recovered, corresponding to an exceptional collection of thirty decorated containers of various shapes, typical of the Roman period. Finally, two glass flutes bearing a Greek inscription were found in the same deposit.

### The material and dating of the game

The number of grave goods in the Sedeinga elite cemetery provides a rich archaeological context for dating its material. The Greek inscriptions on glass flutes were dated to the second half of the third century CE, providing a *terminus ante quem* for the game set.<sup>7</sup>

<sup>7</sup> M.-D. NENNA: "Le gobelet peint de Sedeinga." In M. BAUD (ed.): *Méroé. Un empire sur le Nil*. Paris 2012, p. 128.

## Carbon dating

The game pieces and game board may have been of an earlier date and radio-carbon dates were obtained using wood fragments of the game board. The calibrated date and the probability density function is best summarized as follows: 150 BCE–49 CE (95% probability) or 87 BCE–5 CE (68% probability), calibrated against IntCal13 using OxCal version 4.2.<sup>8</sup> This dates the board to the Roman period. The wood is dated to the period in which it stopped growing while the board may have been made many years after. Also, this board was not necessarily made from the outermost ring, which means that the tree itself may have been older than the ring that was dated in this sample. The date is, therefore, to be regarded as a *terminus post quem* for the burial event.

## The identity of the wood

A small wood fragment was available for microscopic identification. The wood sample was hard and of high density but desintegrated easily when softened in boiling water, prior to sectioning. Therefore, part of it was plastic-embedded for rotary microtome thin sectioning, while another part was sectioned, clamped between elder pith on a sliding microtome. Most potentially diagnostic features for hardwood identification could be observed, and coded for computer-assisted wood identification using the InsideWood database<sup>9</sup>: vessels diffuse, perforations simple, intervessel pits vestured, alternate and 7–8 microns in diameter, vessel-ray pits with distinct borders, average tangential vessel diameter 50–100 microns, gum deposits in vessels common; fibers with minute simple pits, non-septate and very thick-walled; axial parenchyma diffuse in aggregates, scanty paratracheal to vasicentric and aliform as well as in narrow discontinuous bands, and in narrow seemingly marginal bands, rays 1–2(–3)-seriate, entirely composed of procumbent cells; prismatic crystals abundant in chambered axial parenchyma strands, more rarely also in ray cells; rays irregularly storied.

<sup>8</sup> Laboratory code: OxA-30026. See C. BRONK RAMSEY: “Radiocarbon calibration and analysis of stratigraphy: The OxCal program.” In: *Radiocarbon* 37,2 (1995), pp. 425–430; C. BRONK RAMSEY/S. LEE: “Recent and Planned Developments of the Program OxCal.” *Radiocarbon* 55,2–3 (2013), pp. 720–730; P.J. REIMER et al.: “IntCal13 and Marine13 radiocarbon age calibration curves 0–50,000 years cal BP.” In: *Radiocarbon* 55,4 (2013), pp. 1869–1887.

<sup>9</sup> IAWA COMMITTEE: “IAWA List of Microscopic features for Hardwood Identification.” In: *IAWA Bulletin n.s.* 10 (1989), pp. 219–332; InsideWood: 2004-onwards; E. A. WHEELER: “InsideWood—a web resource for hardwood anatomy.” In: *IAWA Journal* 32 (2011), pp. 199–212.

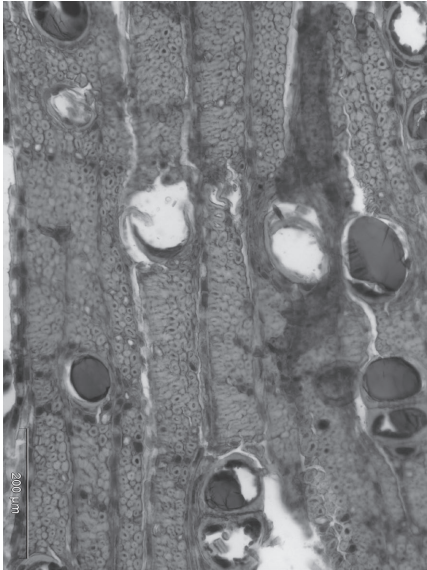


Fig. 2: Transverse wood section at x50 magnification diagnostic of African blackwood (*Dalbergia melanoxylon*)

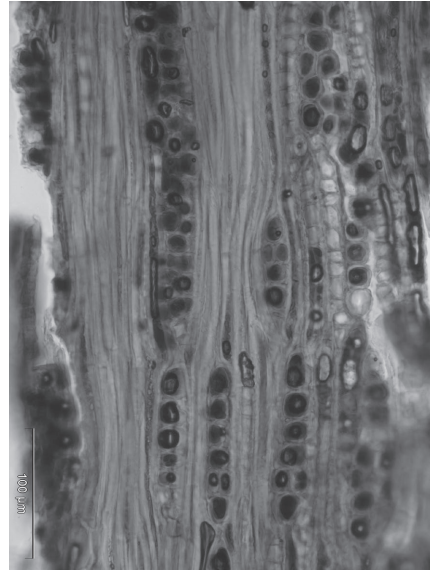


Fig. 3: Tangential longitudinal wood section at x50 magnification diagnostic of African blackwood (*Dalbergia melanoxylon*)

A search of this combination of features in Insidewood yields *Dalbergia melanoxylon* and allowing for minor anatomical mismatches a small number of other *Dalbergia* species from unlikely provenance (Madagascar or South America). In InsideWood and the PROTA Timber handbook<sup>10</sup> *Dalbergia melanoxylon* is also coded with a storied structure of rays, axial parenchyma and vessel elements, a feature at most present irregularly in our sample. However, in the illustrations of various samples posted on Insidewood and in a slide of the Oxford Reference collection, duplicated in the Naturalis slide collection in Leiden, a storied structure can be absent from or unclear in *Dalbergia melanoxylon*. Macroscopically the archaeological sample also seems a good match with African blackwood. Its dark color is caused by dark cell contents of virtually all cells/elements.

*Dalbergia melanoxylon*, African blackwood, African grenadillo, African ebony, ébénier du Sénégal or mpingo occurs throughout tropical Africa and its wood is favored for clarinet making and African wood carving for the

<sup>10</sup> D. LOUPPE/A.A. OTENG-AMOAKA/M. BRINK: *Plant Resources of Tropical Africa 7(1). Timbers 1*. Weikersheim 2008, p. 203.

tourist industry. It has been used since time immemorial as a luxury wood. LEMMENS cites its use by ancient Egyptians for artefacts and furniture such as thrones and beds.<sup>11</sup> Its use for making gaming boards in the past is an addition to the long list of applications African blackwood still has today.<sup>12</sup>

### The identification of the game

The games discovered in the necropolis of Sedeinga date to the late Meroitic period and this is further confirmed by the presence of cubic dice, which became common in the Roman period in Egypt and Sudan. The ivory squares as well as the ivory and wooden game pieces could relate to a number of different games, even games that have not been described in the archaeological literature. Most alternatives would be problematic in terms of chronology, such as the rare game of Thirty-three or the game of Twenty.<sup>13</sup> The count of playing pieces and cubic dice also make other games less likely if not highly improbable. The excavators of the 1960s photographed the squares after arranging them into a checkerboard configuration (see Fig. 4). Both chess and checkers post-date the Meroitic period by several centuries.<sup>14</sup> Although their inspiration was not based on games from antiquity, the identification of a particular game is only accomplished if either the game board is intact and/or if there are identifying decorations or game-specific playing pieces. Both the number of playing pieces and playing squares in the presence of sets of cubic dice point at the game of *Duodecim Scripta*, a Roman game that has been attested elsewhere in Egypt and Nubia.

Hundreds of *Duodecim Scripta* boards have been found in the archaeological record.<sup>15</sup> Most of these are found on stone or marble surfaces. They are

<sup>11</sup> LEMMENS in LOUPPE et al. 2008, pp. 202–203.

<sup>12</sup> LOUPPE et al. 2008, p. 203.

<sup>13</sup> For an overview see W. CRIST/A.-E. DUNN-VATURI/A.J. DE VOOGT: *Ancient Egyptians at Play: Board games across borders*. London 2016.

<sup>14</sup> Chess was introduced in Egypt around the seventh century CE and checkers was introduced to Africa after the fifteenth century CE and probably as late as the nineteenth century, see A.J. DE VOOGT: *A question of excellence: a century of African masters*. Trenton 2005.

<sup>15</sup> E.g., H. LAMER: “Lusoria tabula.” In: A.F. PAULY/G. WISSOWA (eds.): *Paulys Real-Encyclopädie der classischen Altertumswissenschaft*. Stuttgart 1927 (XIII,26), pp. 1900–2029; R.G. AUSTIN: “Roman board games.” I. In: *Greece & Rome* 4,10 (1934), pp. 24–34; R.C. BELL/C.M. ROUECHÉ: “Graeco-Roman pavement signs and game boards: a British Museum working typology.” In: I.L. FINKEL (ed.): *Ancient board games in perspective*. London 2007, pp. 106–109; U. SCHÄDLER: “XII Scripta, Alea, Tabula: new evidence for the Roman history of ‘backgammon’.” In A.J. DE VOOGT (ed.): *New Approaches to Board Games Research: Asian origins and future perspective*. Leiden 1995, pp. 73–98; N. PUR-



often found without lines but with circles, squares, vertical bars, leaves, crosses and crescents.<sup>16</sup> The *Duodecim Scripta* game is most commonly attested as a series of six letters (36 total). These letters may form words and result in so-called hexagrams, poetry that often refers to the location or the occasion of play.

The games have been attested on pavements, theatre steps, public squares and inns.<sup>17</sup> ANITA RIECHE notes that a remarkable number was used to cover the graves in the catacombs of Rome.<sup>18</sup> The uniform size of the plaques as the possible Christian allusion of death with the end of a game is suggested as an explanation of this particular presence.

Wooden game boards are thought to have been common but few have survived. Some have games present on either side of the board, such as *Ludus Latruculorum* on one side and *Duodecim Scripta* on the other as the rare example from Vimose, Denmark, indicates.<sup>19</sup> Depictions of people at play suggest that players kept these boards on their knees between them. The images clearly show the ridge around the board, the pieces and dice.<sup>20</sup> A complete wooden *Duodecim Scripta* board from Qustul, Nubia, is possibly the best-preserved wooden game board and dates to the fourth century CE.<sup>21</sup> Its square playing fields are characteristic. This find was also associated with

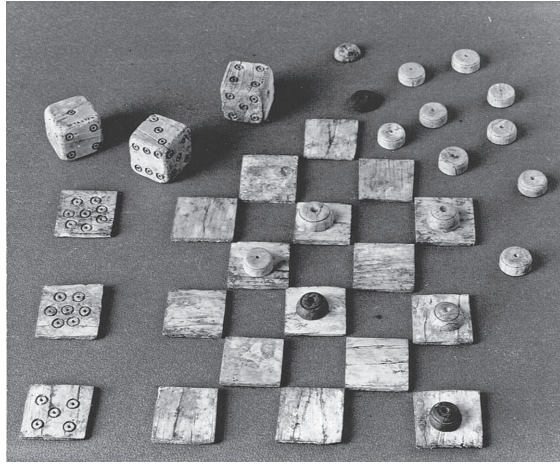


Fig. 4: Photograph from the 1963 archival records of gaming materials organized as a checkerboard with pieces

CELL: "Inscribing imperial Roman gaming-boards." In I. L. FINKEL (ed.): *Ancient board games in perspective*. London 2007, pp. 98–99.

<sup>16</sup> H. J. R. MURRAY: *A history of board games other than chess*. Oxford 1951, p. 30.

<sup>17</sup> SCHÄDLER 1995.

<sup>18</sup> A. RIECHE: *Römische Kinder- und Gesellschaftsspiele*. Stuttgart 1984, pp. 18, 23.

<sup>19</sup> T. KRÜGER: *Das Brett- und Würfelspiel der Spätlatènezeit und römischen Kaiserzeit im freien Germanien*. Hildesheim 1982 (Neue Ausgrabungen und Forschungen in Niedersachsen 15).

<sup>20</sup> SCHÄDLER 1995; RIECHE 1984, p. 19.

<sup>21</sup> W. B. EMERY / L. P. KIRWAN: *Mission Archéologique de Nubie 1929–1934. The Royal Tombs of Ballana and Qustul*. Vols. I and II. Cairo 1938, p. 345.

cubic dice and game pieces but it was discovered in a grave built under a tumulus dating from the so-called post-Meroitic period, much later in date compare to the examples from Sedeinga.

Playing pieces from bone, wood and glass are common in the Roman archaeological record, all of which have color or markings that distinguish each player's set.<sup>22</sup> In these records, twelve playing pieces for each

player as well as two dice or fifteen playing pieces each with three dice, have been recorded, depending on the variant that was being played. The latter also referred to as *Alea*, which translates as 'dice'.<sup>23</sup>

The game of Sedeinga that was found in the funerary chamber of WT3 reveals a set of three dice together with 27 game pieces. Some of the pieces are African blackwood and others white ivory. The accompanying 32 square ivory board fragments make an immediate parallel with the wooden *Duodecim Scripta* game board from Qustul that also shows square playing fields in white as part of a wooden board (see Figs. 5 and 6.) The three decorated



Fig. 5: Two ivory cubic dice from tomb WT3, Sedeinga

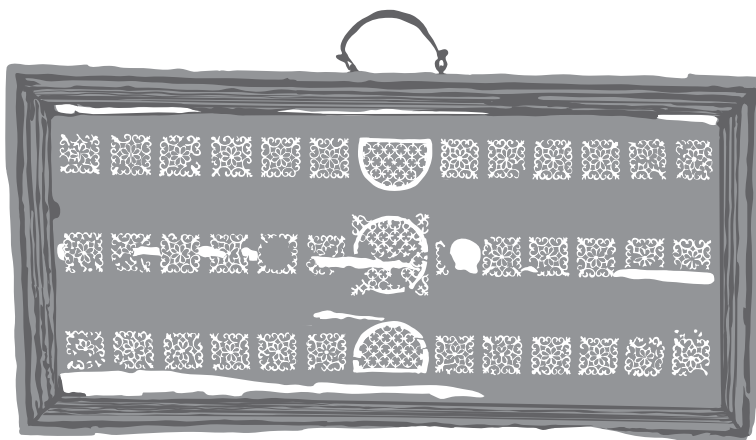


Fig. 6: Drawing of the Qustul *Duodecim Scripta* board by Jennifer Steffey after a photograph from EMERY/KIRWAN (1938, pl. 87)

<sup>22</sup> RIECHE 1984, pp. 20, 61, 73.

<sup>23</sup> SCHÄDLER 1995.

pieces, as shown on the left of Figure 4, are likely placements in the center of the board where the Qustul example also features decorative squares.

The second game found in the funerary chamber of WT8 shows another set of game pieces, this time in glass and split in 15 black and 13 white. Two ivory cubic dice are associated with this set. Again the number of playing pieces may match the game of *Duodecim Scripta*. All dice found in Sedeinga have numbers on opposite sides that add up to seven as is common for Roman dice.<sup>24</sup>

The number of pieces, dice and playing squares, all point to the presence of a *Duodecim Scripta* game in both graves. The partial preservation of the wood in one funerary chamber confirms the presence of a wooden game board while the glass game pieces in the second grave make an almost perfect number for a *Duodecim Scripta* gaming set.

### The provenance of the game

The grave goods in WT3 and WT8 consisted, at least partly, of imported goods. The blue glassware has Greek inscriptions that firmly places it in a Mediterranean context rather than in a local Meroitic production. The game board and pieces do not immediately indicate a Mediterranean import. The ‘surrogate ebony’ wood and the elephant ivory are sourced in sub-Saharan Africa and commonly traded through ancient Sudan. Also the glass pieces are not described as particular and glass production is believed to have taken place in the Meroitic Kingdom itself. The decoration of the game pieces is minimal and does not hint at a foreign style nor do the plain ivory inlays suggest a particular craftsmanship exclusively available outside of the Meroitic Kingdom.

The game itself is Roman. It is a common game found at the borders of the Roman empire as well as in its center with game boards on the *Forum Romanum* as well as in the far corners of the empire such as Ephesus<sup>25</sup> and places in Roman Britain, for instance. Few examples of Roman games occur across its borders. A discovery in Denmark suggests a *Duodecim Scripta* board well across the border from the Roman Empire in Germania, but this seems to be the only documented example so far. THOMAS KRÜGER remarks that letters that make up the playing fields are understandably less common in this region as, in general, the players would not have understood Latin.<sup>26</sup>

<sup>24</sup> See also: A. J. DE VOOGT/J. W. EERKENS/R. SHERMAN-PRESSER: “Production bias in cultural evolution: An examination of cubic dice variation in experimental and archaeological contexts.” In: *Journal of Anthropological Archaeology* 40 (2015), pp.151–159.

<sup>25</sup> SCHÄDLER 1995.

<sup>26</sup> KRÜGER 1982, p. 163.

## Elites moving the borders of play

The presence of two *Duodecim Scripta* games in elite graves inside the Meroitic Kingdom suggests that this game had become part of the Meroitic world, at least in the northern province of the kingdom. The objects were sufficiently significant to become part of an individual's meaningful affects.

In one of the graves there is an association with a female individual. In the *Ars Armatoria*, Ovid instructs a man wishing to play games with a young woman.<sup>27</sup> He mentions a series of dice and board games but not the game of *Duodecim Scripta*. The Sedeinga find suggests that, at least in the Meroitic Kingdom, women may have participated in such a game. Without representations of players in the visual arts of people playing *Duodecim Scripta* outside of the Roman Empire, this find is a rare example of a grave context that assists in identifying the possible players group.

Contrary to other prestige objects such as glass flutes and vessels, gaming materials suggest a playing practice and not just a physical import of objects (DE VOOGT/DUNN-VATURI/EERKENS 2013), even though this latter possibility cannot be entirely ruled out.<sup>28</sup> The evidence at Sedeinga provides a first glimpse of playing activities in the Meroitic Kingdom where the elite was familiar with a board game traveling from and played by the Romans, alternately commercial partners and enemies.

The popularity of the game in Nubia remained as the fourth century CE find at Qustul clearly indicates. In the period in which the Roman Empire disintegrates several Roman games are no longer attested in the archaeological record. Unlike, for instance, *Latrunculi* and other Roman board games, *Duodecim Scripta* continued and is recognized as the predecessor of one of today's games—now referred to as *Backgammon* or *Trictrac*.

<sup>27</sup> *Ars Armatoria* II 198–208, see A. RIECHE: “Römische Spiele in Schrift- und Sachquelle.” In: *Der Altsprachliche Unterricht* 29,3 (1986), pp. 40–55.

<sup>28</sup> A. J. DE VOOGT/A.-E. DUNN-VATURI/J. W. EERKENS: “Cultural transmission in the Ancient Near East: Twenty squares and fifty-eight holes.” In: *Journal of Archaeological Science* 40 (2013), pp. 1715–1730.