

TALLIES, TOKENS & COUNTERS

From the Mediterranean to India

EDITED BY
Anna Maria D'Onofrio



Università degli Studi di Napoli
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TALLIES, TOKENS & COUNTERS

From the Mediterranean to India

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Cover illustration

Pottery discs from the Athenian Agora Excavations (photo American School of Classical Studies at Athens: Agora Excavations), and Chalcolithic and Iron Age counters of various shapes from Gotihawa (IsIAO Archaeological Mission in Nepal).

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TOKENS, POTTERY DISCS, AND OTHER ADMINISTRATIVE DEVICES: TWO CASE STUDIES BETWEEN NUBIA AND ETHIOPIA

ANDREA MANZO

Mahal Teglinos, near the town of Kassala, in Southeastern Sudan, and Bieta Giyorgis, near Aksum, in Northern Ethiopia, were investigated by Archaeological Expeditions of the University of Naples "L'Orientale" (Fig. 5.2). Both sites gave important data for the study of the rise of hierarchical societies in Northeastern Africa. An important part of these data consisted of administrative devices such as tokens, sealings, and seals.

Mahal Teglinos

In 1980 the University of Naples "L'Orientale" started the Gash Delta Archaeological Project, a program of archaeological research in the region under the direction of Rodolfo Fattovich (Fattovich 1991). From 1980 to 1984 a systematic survey of the Gash delta and surrounding areas took place, and a chronological and cultural sequence of the area was elaborated (Fattovich 1990). From the mid-third millennium BC to the mid-second millennium BC the Gash Group, a culture characterized by an adaptive system based on domesticated animals and agriculture, was recorded in the area (Fattovich 1991 a, 1996; Fattovich, Sadr and Vitagliano 1988–1989). The Gash Group was characterized by a *settlement pattern* with a five level hierarchy in terms of site dimensions, and this suggested a possible social hierachisation of that culture (Sadr 1986, 1988, 1991).

Since 1981 and systematically from 1984 to 1995 excavations were conducted at Mahal Teglinos, one of the largest Gash Group sites (Fattovich 1993; Fattovich, Manzo and Usai 1994). The site measures ca. 480 x 250 m with an area of about 10 ha. It is completely surrounded by the granitic outcrops forming the Jebel Taka. The frequentation of the site started at least in the fourth millennium BC and continued for 3000 years, perhaps with some discontinuities. The most extensive and intensive phase of use is dated to the third – second millennia BC, when the site was used by the Gash Group (2700–1400 BC) and by the Jebel Mokram Group (1400–700 BC).

In the mid-third millennium BC a settlement with perishable structures and perhaps mud-brick structures characterized the northern part of the central sector of the site. Some burials with tightly contracted bodies discovered South of this area can be ascribed to the same phase. From the end of the third millennium BC – early second millennium BC a large cemetery with monolithic

stelae associated with burials containing bodies characterized by different postures extended to the central sector of the site. North of this cemetery there was a settlement area which progressively extended also to the cemetery around 1500 BC. This settlement was characterized by large round structures and, to the West, by squared mud-brick structures. At that time the cemetery was moved to the Western sector of the site and was characterized by burials with extended bodies laid on the back or side and grave goods consisting of elaborate personal ornaments and pottery.

Several administrative devices were discovered in assemblages dating from all the phases of the Gash Group culture. These sealings, seals, and tokens confirmed the social hierarchy suggested by the settlement pattern (Fattovich 1991 a).

The Gash Group seals are made of clay; they are characterized by a conical shape and geometric patterns to be impressed in the sealing clay (Fattovich 1991 a: 66–69, Fig. 1, Pl. I, Pl. II a-d) (Pl. 5.1, a–b). They are similar to seals discovered in Lower Nubian C- Group assemblages (2400–1400 BC) (Säve-Söderbergh 1967–1968: Pl. XLI; 1989: 109, Fig. 30, Pl. 45 n° 401/56/1), Upper Nubian Kerma assemblages (2400–1400 BC) (Bonnet 1986; 1997: 98–99, Fig. 3; Bonnet (ed.) 1990: 152, n° 22; 172, n° 104; 174, n° 109; Gratien 1985: 379), and in Eritrean sites about which very little is known in the Asmara region (Tringali 2001: Fig. 3). Some seals were also discovered in later Jebel Mokram Group assemblages (ca. 1400–800 BC), but, although always characterized by geometric patterns, their type is different from the ones of the Gash Group; these flat oval seals (Pl. 5.1, c) recall some scaraboids discovered at the Upper Nubian site of Kerma (Reisner 1923: Pl. 40, 1).

The clay tokens were classified according to their shape (Fattovich 1991 b: 71, Pl. II, g-m):

- a) cones (Pl. 5.2, a, 1);
- b) cones with concave base (Pl. 5.2, a, 2);
- c) hemispheric tokens with concave base (Pl. 5.2, b, 1);
- d) discs (Pl. 5.2, b, 2);
- e) cones with possible zoomorphic termination (Pl. 5.2, c).

In the context of the protohistorical archaeology of Sudan and Nubia, these tokens are unique from the typological point of view, perhaps also because of the scarce interest devoted to this class of materials.

A clay sealing possibly used to seal a leather bag was discovered in an Early Gash Group assemblage (Fattovich 1991 a) (Pl. 5.3, a-b), and this confirms that at Mahal Teglinos the access to some goods was controlled from the third millennium BC.

A fine clay flat fragment with two series of almost parallel vertical lines separated by a horizontal line discovered in a Late Gash Group assemblage (1700–1400 BC) (Pl. 5.3, c) might be related to administrative activities and represent a kind of notation. Similar clay tablets were discovered at Kerma in an administrative building dating from the first half of the second millennium BC (Gratien 1993: 29, 28, d).

The distribution of the administrative devices was studied, revealing a concentration in the settlement areas (Fig. 5.1).

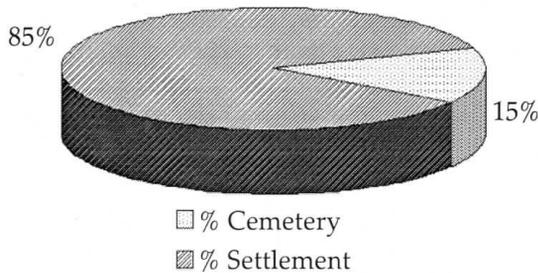


Fig. 5.1 – Frequency of administrative devices in the Gash Group (2700–1400 BC) settlement and cemetery areas at Mahal Teglinos.

The diachronic distribution of the administrative devices was studied in terms of their concentration (Fig. 5.3) and typological variety (Fig. 5.4)¹. The results suggest that at Mahal Teglinos more intense and complex administrative activities took place in Middle (ca. 2300–2100 BC) and Late Gash Group times (ca. 1700–1400 BC). These trends can be compared with the presence of exotic ceramic materials, suggesting more intense external relationships in Early (ca. 2700–2300 BC) and Late Gash Group (ca. 1700–1400 BC) times (Manzo 1997). Thus, the intensity and complexity of the administrative activities seem to be unrelated to the involvement of Mahal Teglinos in the trade network.

A synchronic study of the distribution of the administrative devices was attempted only for the Late Gash Group (ca. 1700–1400 BC), because this was the only phase for which more extensive excavations were conducted in almost all the sectors of the site. The administrative devices seem to concentrate in excavation units BSKP-BSKQ, and BSQB-C-G-H, in the settlement area in the central-eastern sector of the site (Fig. 5.5). In excavation unit BSQB-C-G-H traces of large round clay structures, huts or possibly enclosures, were discovered. A lower concentration was found in the central sector of the site, where Late Gash Group squared mud-brick structures were discovered, and a systematic surface collection revealed a concentration of imported ceramics (Manzo 1993). Thus, at least in Late Gash Group times, the areas where the administrative activities were performed do not overlap the areas related to the presence of imported ceramic materials.

At Mahal Teglinos pottery discs were also discovered in assemblages dating from 2300 BC; they consist of disc-shaped body sherds (Pl. 6.1). These discs

¹ The study of distribution of devices was conducted comparing the general average presence of these objects in the assemblages (in the graphs this is represented by the zero line) with their actual occurrence in each assemblage. For a complete list of the devices see Fattovich 1991 b.

have been interpreted as stoppers for small ceramic bottles, because their use as stoppers was recorded in some Nubian contexts (Gratien et Olive 1981: 81, Pl. VI a). Nevertheless it is worth noting that small bottles or flasks are very rare in the Gash Group ceramic production (Capuano, Manzo, and Perlingieri 1992, 1994). Thus a possible interpretation as *polissoirs* was suggested, but on their surfaces and edges there are no traces of use. When there is a hole in the middle of the disc, they might have been weights used in the production of textiles. However some might have been used as tokens, as their diachronic distribution is similar to that of the other types of tokens (Fig. 5.6).

In Western Africa, similar discs were used in more recent times as weights in the gold trade (Posnasky 1973). 13 pottery discs were weighed to verify if such an interpretation could be suggested also for the pottery discs from Mahal Teglinos. Their weights seem to cluster around four values (Fig. 5.7). These values were compared with the Egyptian weight units for gold known from the stone weights discovered in the Middle Kingdom fortresses in the Second Cataract area and with their range of variability (Cour-Martý 1990) (Fig. 5.8). In this way a certain correspondence between the weight of the pottery discs from Mahal Teglinos and the values of the Egyptian Middle Kingdom weights was established. Thus these pottery discs might have been used as weights, but the sample is still too small and further data are needed to confirm this.

Whether they were weights or tokens, the presence of these pottery discs fits well in the rise of hierarchical societies in Southeastern Sudan in the third–second millennia BC (Fattovich 1991 b, 1996). The links between the hierarchical societies of Southeastern Sudan and the Nubian states is confirmed by the typological similarities of the seals. Moreover, if the hypothesis of the use of the pottery discs as weights is correct, links with the Egyptian gold trade might be suggested.

Bieta Giyorgis

The Bieta Giyorgis hill, near Aksum, has been investigated by an Archaeological Expedition of the "L'Orientale" in collaboration with Boston University since 1993 (Bard *et al.* 2003). At Bieta Giyorgis extensive excavations were conducted in a monumental necropolis, Ona Enda Aboi Zewge, and in a settlement site with palatial residential areas and workshops (Fattovich 1997). The earliest phase of the cemetery and of the settlement areas dates to the fourth century BC and can be ascribed to the earliest Aksumite archaeological phase, which was unknown before the Italian-American researches at Bieta Giyorgis (Fattovich and Bard 2001). Ona Nagast and Ona Enda Aboi Zewge, and the rest of the Bieta Giyorgis hill were inhabited up to the end of the Aksumite culture (ca. AD 800), and later on in Medieval times. Thus, Bieta Giyorgis provided an unique chance to conduct an archaeological study of all the phases of the kingdom of Aksum, a state extending at its height from the Middle Nile to the Red Sea, from the Ethiopian to the Yemeni highlands, and the main trade partner of the Roman and Byzantine empires in the Red Sea (see Conti Rossini 1928: 109–214; Phillipson 1998: 67–70).

The first traces of a hierarchical society and administration in the Aksum region have been discovered at Bieta Giyorgis. Among these traces, there is an interesting bronze stamp seal from an *élite* tomb dating to the third – first century BC (Fattovich and Bard 1997: 67) (Pl. 6.2, a).

In the later phases, the kingdom of Aksum produced inscriptions in Greek and Ancient Ethiopic, which could be written both in Ethiopian and in South-Arabian characters (see e.g. Bernard, Drewes and Schneider 1991: 241–250, 363–370, n° 185, 185 bis, 270, 270 bis). Aksumite sites also yielded possible administrative documents such as the schist tablets listing goods from Matara and Safra in Eritrea (Bernard, Drewes and Schneider 1991: 221–233, n° 181–183). Nevertheless, other finds from Bieta Giyorgis suggest that in the phases characterized by the production of these texts administrative activities could also involve more archaic systems.

Excavation unit ON XVI-XVII, located at Ona Nagast, not far from some monumental structures dating to the fourth century BC but still in use in the first centuries AD, yielded 37 pottery discs consisting of disc-shaped body sherds, all with similar dimensions (Fattovich and Bard 2003: 26) (Pl. 6.2, b). A fragmentary flat clay tablet with a face divided into three sectors by incised lines and 'v' shaped marks inside the sectors was associated with these discs (Fattovich and Bard 2003: 26, Fig. 2) (Pl. 6.2, c). All these elements might point to the use of a simplified system of accounting. The sector where these devices were discovered is not far from the palatial area, and might be interpreted as an open-air area, and they were associated with a large amount of animal bones, fragments of local, and imported pottery. The fact that this area was related to the nearby monumental structures and, thus, to the *élite* activities is confirmed also by the discovery in the same area of several coins and, among them, of a South Arabian one. A radiometric dating, whose results were also confirmed by the cross-dating based on the imported materials, and by the types of Aksumite ceramics discovered there, suggests for these administrative devices a dating to the first -third centuries AD.

Thus, these devices suggest that at Ona Nagast an archaic accounting and administrative system was used in literate phases. This was also the case in a first century AD Meroitic palatial storeroom at Jebel Barkal, where the clay sealings were kept to record the quantities of goods (Vincentelli 2001). This coexistence of written documents and archaic administrative systems suggests that at both Aksum and Meroe at least some officials were not using writing in their everyday activities and/or that writing was mostly used for celebrative and religious aims.

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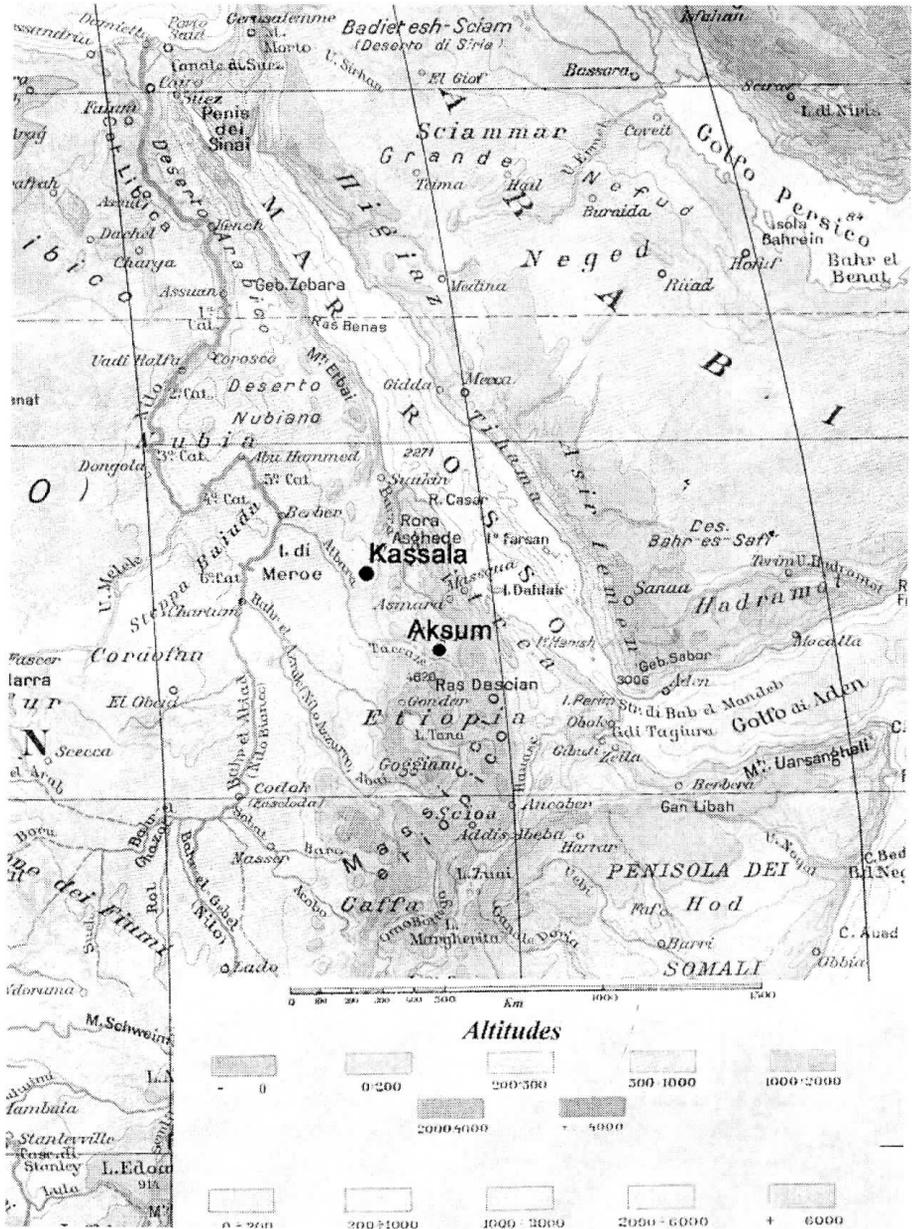


Fig. 5.2 – Location of Mahal Teglinos and Bieta Giyorgis.

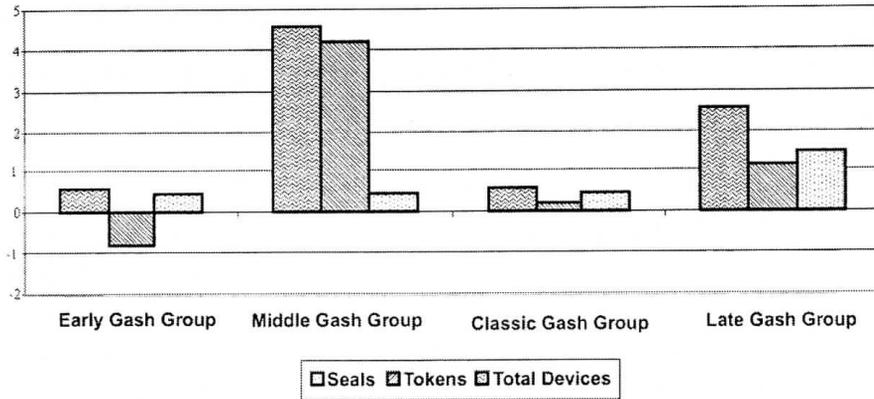


Fig. 5.3 – Distribution of seals, tokens and general distribution of the administrative devices in the different phases of the Gash Group (2700–1400 BC). The real number of the collected materials was compared with the theoretical value calculated if we assume an homogenous distribution of the materials in the phases.

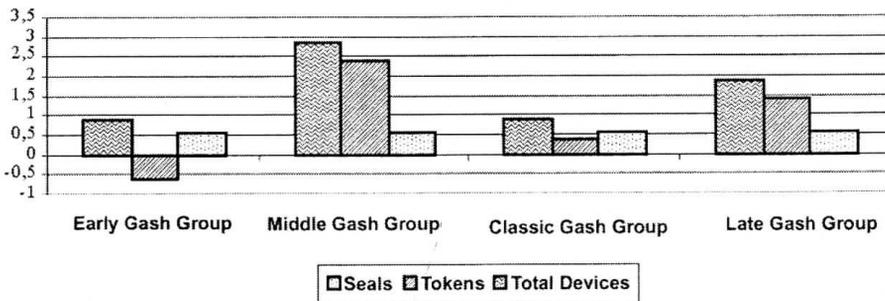


Fig. 5.4 – Distribution of the types of seals, tokens and general distribution of the administrative devices in the different phases of the Gash Group (2700–1400 BC). The real number of the classes of collected materials was compared with the theoretical value calculated if we assume an homogenous distribution of the types of materials in the phases.

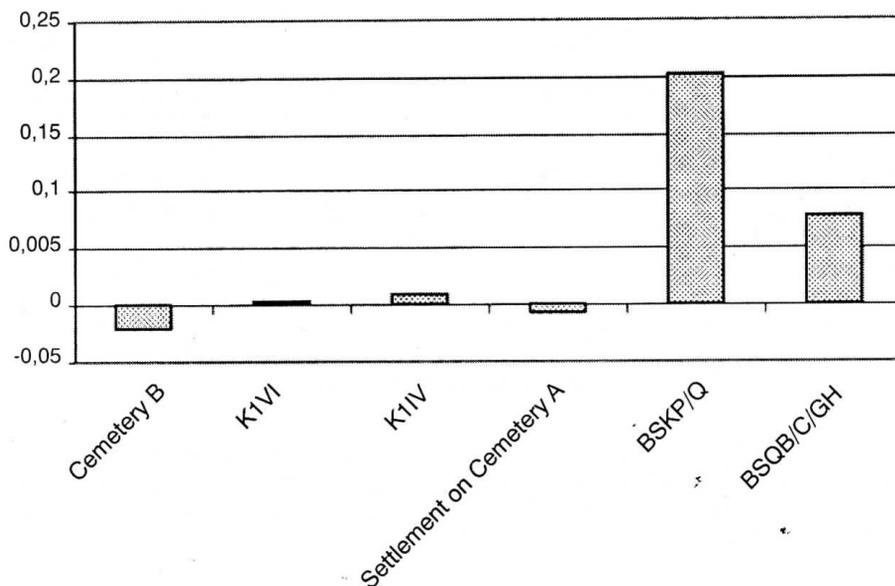


Fig. 5.5 – Distribution of administrative devices in the assemblages of the Late Gash Group (1700–1400 BC). The real number of the collected materials was compared with the theoretical value calculated if we assume an homogenous distribution of the materials in the assemblages.

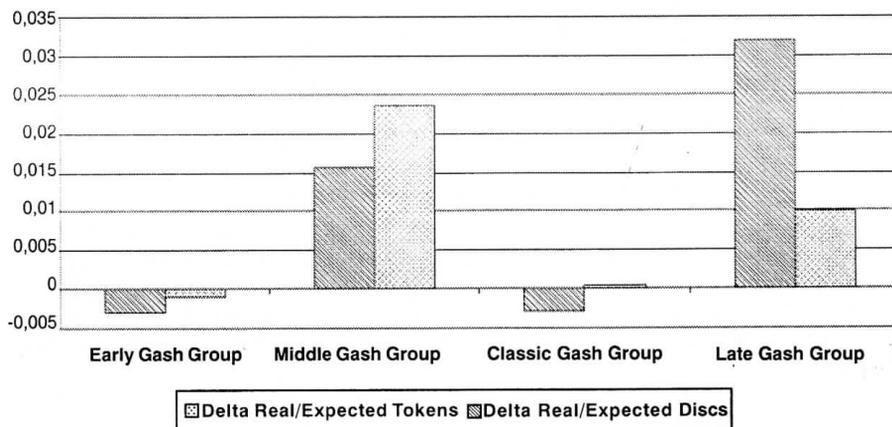


Fig. 5.6 – Distribution of tokens and of disc-shaped body sherds in the different phases of the Gash Group (2700–1400 BC). The real number of the collected materials was compared with the theoretical value calculated if we assume an homogenous distribution of the materials in the phases.

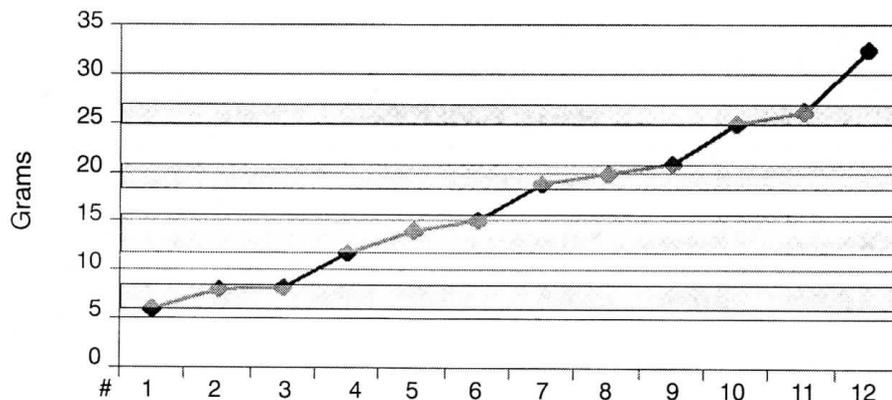


Fig. 5.7 – Weight of the disc-shaped body sherds from different Gash Group (2700–1400 BC) assemblages at Mahal Teglinos.

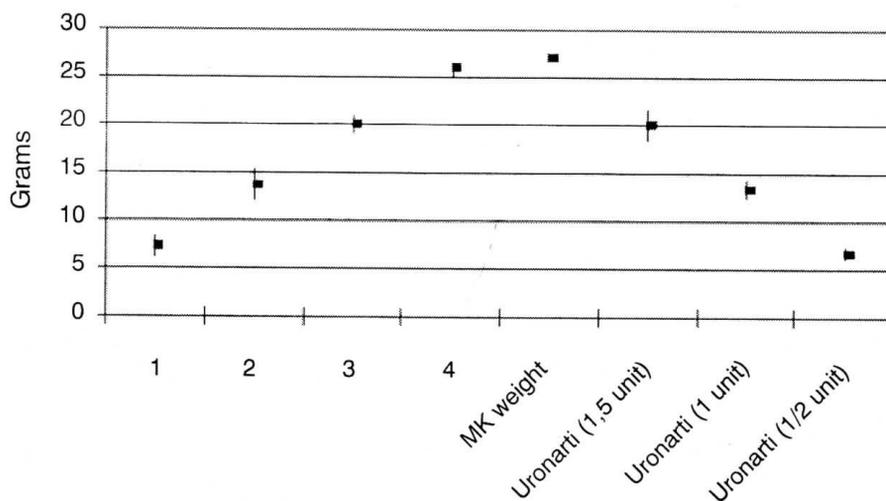
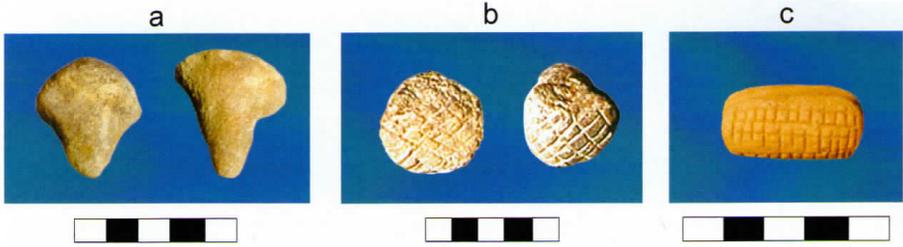


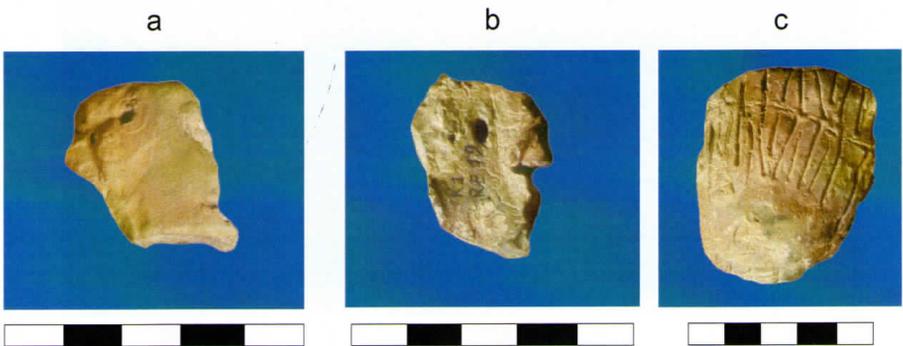
Fig. 5.8 – Comparison between the weight of the disc-shaped body sherds from different Gash Group (2700–1400 BC) assemblages at Mahal Teglinos and the Egyptian unit of weight for gold.



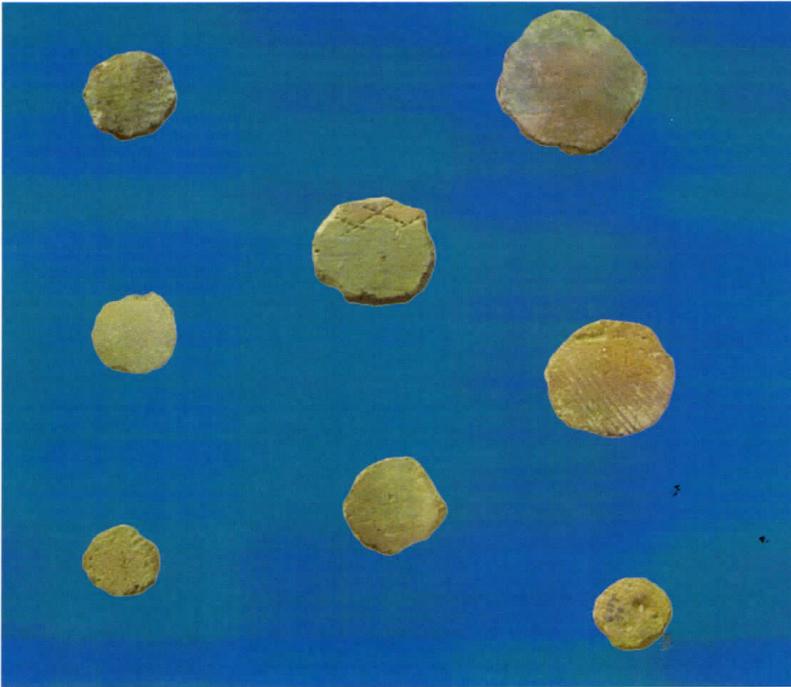
Pl. 5.1 – a, b. Mahal Teglinos. Seals from Gash Group (2700–1400 BC) assemblages; c. Jebel Abu Gamal 1. Seal from a Jebel Mokram Group (1400–700 BC) assemblage.



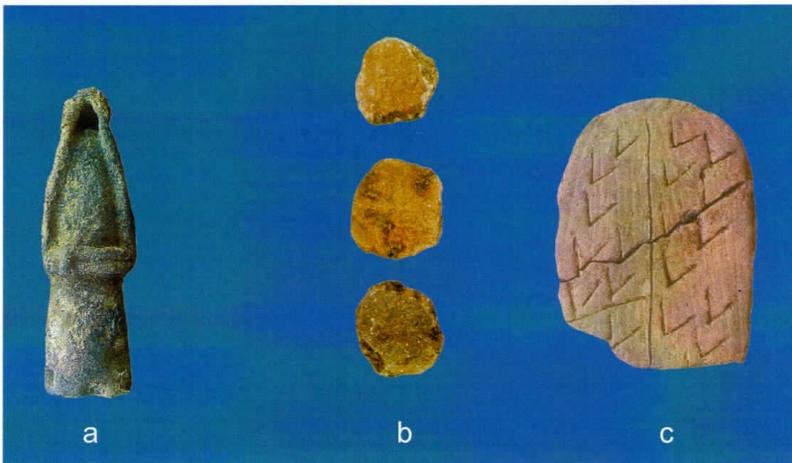
Pl. 5.2 – Mahal Teglinos. Tokens from Gash Group assemblages. a, 1. Cone; a, 2. Cone with concave base; b, 1. Emispheric token with concave base; b, 2. Disc; c. Cone with possible zoomorphic termination.



Pl. 5.3 – Mahal Teglinos. a, b. *Recto* and *verso* of a sealing from an Early Gash Group (2700–2400 BC) assemblage; c. Fine clay flat fragment with two series of parallel lines separated by an horizontal line discovered in a Late Gash Group (1700–1400 BC) assemblage, possibly to be identified with a kind of notation.



Pl. 6.1 – Mahal Teglinos. Disc-shaped body sherds from different Gash Group (2700–1400 BC) assemblages.



Pl. 6.2 – Bieta Giyorgis. Administrative devices from Aksumite assemblages. a. Bronze stamp seal from a Proto-Aksumite (ca. 300–50 BC) assemblage; b. disc-shaped body sherds from first–third centuries AD assemblages; c. A clay tablet with impressed ‘v’ shaped notches, possible a simplified system of accounting from a first–third centuries AD assemblage.