CHAPTER 11

COLLAR AND NECKLACE DESIGNS AT AMARNA: A PRELIMINARY STUDY OF FAIENCE PENDANTS

by

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11.1 Introduction

This article was compiled from material originally prepared for a statistical analysis of faience jewellery found during the earlier work at Amama, in particular, collar and necklace pendants. It became evident, as the work progressed, that much of the faience jewellery from the site was never properly published. In addition, any article on the subject would have to include much of its own reference material. As a consequence, it was decided to publish an introduction to the subject prior to any detailed analysis. The chapter falls into three main parts. The first is a general description of collar and necklace designs and their possible role in Egyptian society. The second part is an introduction to the recording methods used at the site, along with the four areas of the city used for the analysis. This is followed by three short studies of distribution patterns and their possible interpretation.

The site of El-Amama was excavated between the years 1921–36 by the Egypt Exploration Society. More than half the excavations have been published in the City of Akhenaten volumes. The excavation reports show that faience jewellery was a common find in all areas of the city. It was found in such quantities that a number of recording systems, including several corpora, were devised for it. Despite the volume of material available for study, however, little interest appears to have been taken in the subject. This may be due partly to the greater interest taken in jewellery made from precious metals, and partly due to the recording systems, which frequently failed to record useful information about the finds.

The recent work at Amama has provided an excellent opportunity to examine faience jewellery at the site. This has been supplemented by the study of material from earlier excavations at Amama, now preserved in museums. Particular attention has been paid to faience pendants. At Amama, the majority of pendants have been found as individual pieces or, more occasionally, small groups, so that the original jewellery arrangement is lost. An examination of the individual pendants and the few surviving jewellery arrangements suggests that most faience pendants fall into one of two categories. The first has a single bead attached at the top for stringing; the second has an additional bead attached at the base for a second string. These groupings appear significant when compared with surviving multiple-row collars and necklaces which use pendants and which were produced during the later New Kingdom (this survey does not include a number of larger pendants whose function is uncertain, see Chapter 2). Collars, which usually have two or more rows of pendants, use only pendants with beads attached at top and bottom. By contrast, lengths of jewellery usually identified as necklaces are composed of one or more rows of beads with a single row of pendants which have only one bead attached for suspension.

It appears that specific designs were selected for the attachment of either one or two beads, and so were presumably intended for necklaces or collars. To illustrate this, the most common pendants from the Workmen's Village excavations have been listed (Table 11.1, p. 344) together with the number of suspension beads attached, and where they are similar to those occurring in surviving collars or necklace lengths. It can be seen from this table that the majority of pendant designs with one bead attached occur in necklaces. The evidence to show that designs with two beads attached occur only in collars is less definite, due to the smaller number of complete pendants found, though pieces preserved in museum collections tend to confirm this pattern.

With this information, it is possible to make use of the records of the earlier excavators in an attempt to study the distribution and possible original appearance of such jewellery at the site.

11.2 Surviving necklace and collar designs

Necklaces

Six incomplete strings of jewellery which are thought to have been necklaces have been found at Amarna. The most common design is a single thread holding a row of beads, with pendants placed at regular intervals along it. Usually all the pendants are of the same design and were produced from the same mould. Five examples of this type have been found (Figure 11.1). Three lengths use the ?poppy seed-head pendant, one uses the heraldic "lily" or southern plant. One variant of this type (g) uses two different pendants, the ?poppy seed-head and small "drop" form. The only necklace already published (d) has three rows of beads held in position by multiple bead spacers, from which a fourth row of beads and pendants has been strung. Three pieces found close together as a surface find at Kom el-Nana in 1987 (f) may be part of a similar necklace to (d), using the small "drop" pendant instead of Bes figurines. In some cases, the necklace lengths may have been re-strung from separate pieces found in the same area. The exact appearance of some of these designs may be open to question. The remarkably similar appearance of most of the arrangements does, however, suggest that the general appearance of the designs is correct.

As none of the necklaces found is complete, it is difficult to estimate their original length. The longest example (a) is about 63 cm. It is equally uncertain whether pendants were placed only at the front of the necklace, or extended all the way round.

While pendants with one suspension bead are classified here as "necklace pendants", there is some evidence to show that they were occasionally also used as part of other jewellery arrangements. Burials from the time of the New Kingdom are known where pendants were found near the wrist, implying that bracelets may have contained pendants (e.g. Brunton and Engelbach 1927: burial nos. 209 and 249, Pl. XV). In addition, the funerary chaplet of Queen Meryet-Amun appears to have contained pendants (Winlock 1932: 13–15, Fig. 2). Penannular earrings are also known with pendants attached (Aldred 1971: 143, Pl. 68, middle row centre).

It is possible that the strings of pendants illustrated here are from bracelets, though the surviving length of four of the five examples appears too long for this purpose, unless they were wound several times around the wrist.

Collars

Faience collars are composed of two or more rows of pendants and beads, which are attached to a pair of terminals. The terminals serve as attachment points for the threads of the collar and the two cords used to tie the collar around the neck. Three main types of collar are known from the later Eighteenth Dynasty (Figure 11.2).

The most traditional design of collar, the wesekh-collar, is constructed from several rows of (usually) tubular beads with an outer row of "drop"-shaped pendants (Figure 11.2c).It is possible that multiple-cylinder pendants (corpus nos. D10a and D10b) were sometimes used instead of tubular beads. The collar terminals are either semi-circular or shaped to resemble falcon heads. While both multiple-cylinder and drop-shaped collar pendants occur at Amarna, no terminals for this type of collar are known to have been found. It is possible to suggest, on the basis of depictions of collars on Eighteenth and Nineteenth Dynasty statuary and sarcopbagi, that both types of pendant could have been used as part of otherwise "plant-form" collars (Figure 11.2d here).

The most common type of collar, to judge from the pendants found at Amarna, was composed mainly of pendants imitating plant forms (Figure 11.2b). The terminals of surviving collars of this design are usually triangular, representing lotus flowers, or rectangular, decorated with plant designs or spirals. Collar terminals have been found in the Central City and North and South Suburbs at Amarna. Two plant-form collars were found in the North Suburb (COA II: 18, 44, Pl. XXXVI.1, 2).

Two collars of similar design found on the body of Tutankhamun featured a wide band of small ring beads with an outer row of drop pendants. The terminals of these collars are semi-circular (Bosse-Griffiths 1975: 118, Pl. XXI). No other collars of this design are known to survive.

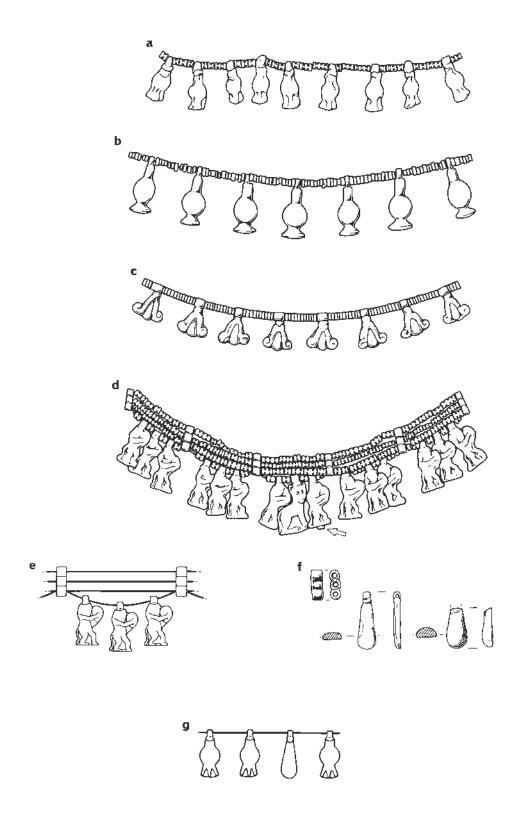


Figure 11.1 (facing page). Details of surviving necklace designs from Amarna. Drawn to approximately actual size.

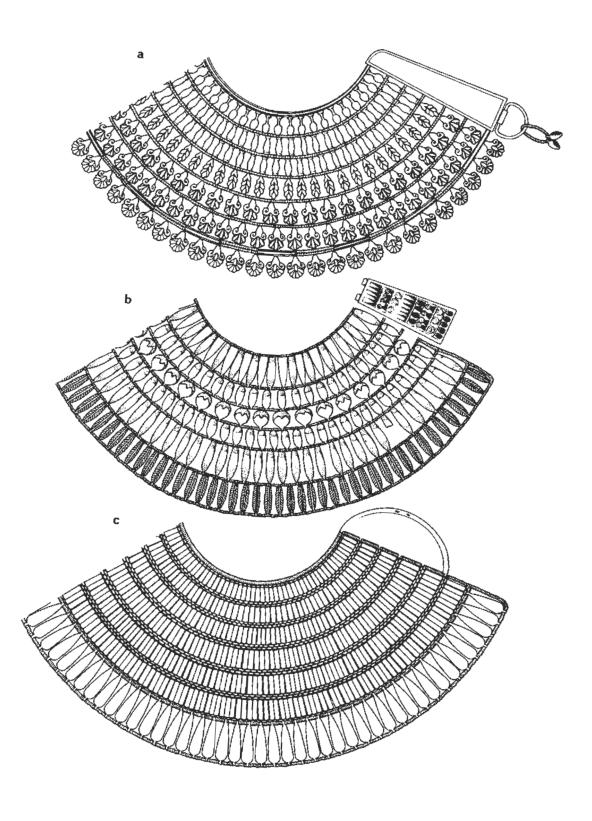
- (a) Excavation no. 30-31/272, from house T35.26. Fifty-nine crudely moulded ?poppy seed-head pendants are attached with cylinder beads (Cy1) to the necklace string. Between the pendants are groups of three segmented beads (S1). This necklace is thought to have been reassembled from pieces found together, so that its exact appearance is uncertain. Drawn from EES photograph 30-31/0.90.
- (b) Excavation no. 28-29/366 from house T35.10. Sixteen blue ?poppy seed-head pendants with red, yellow, and dark blue ring beads (R4) between. Now preserved in the Metropolitan Museum of Art, New York, no. 29.7.4. Drawn from MMA photograph 75008
- (c) Excavation no. 26–27/142 from house U36.47. A well made necklace of nineteen yellow Southern-plant pendants, with red, white, and blue ring beads (R4) between. Now preserved in the Metropolitan Museum of Art, New York, no. 29.7.3. Drawn from MMA photograph 75008. Necklaces (b) and (c) now preserved in the Metropolitan Museum of Art were given by the EES via Mrs John Hubbard in 1929.
- (d) Excavation no. 28–29/328 from house T35.23. Composed of four strings of yellow and red beads (R4). The strings are held together by bead spacers (MCl). From the bottom string are suspended seven groups of three pendants in blue faience. These pendants depict the god Bes beating a tambourine, with the exception of the central pendant which depicts a seated cat. One Bes pendant (arrowed) appears to have a second bead attached at the base. Drawn from EES photograph 28–29/121.
- (e) Simplified diagram of necklace 28-29/328 showing the threading arrangement.
- (f) Surface finds from Kom el-Nana, 1988. Numbers 9209, 9210, and 9221. All in light copper-blue faience.
- (g) Excavation no. 26-27/554. From house U36.12. The illustration is drawn from the EES record card, no other records of the piece are known. The ?poppy seed head pendants are stated to be light blue and yellow, with a small blue drop pendant. A note beside the drawing "idem" presumably indicates the design continued. It is not known whether beads were found between the pendants.

A third type of collar may have existed at the site. One collar survives where the overall design is similar to the plant-form collar, but the pendants depict a range of amulets, such as the nefer-sign and hes-vase, along with composite plant motifs such as the palmette (Figure 11.2a).

It is possible that the distinctions between collar designs were not as well-defined as this section might suggest. Several faience collars found in the tomb of Tutankhamun use amuletic forms, the hes-vase, nefer-sign, and cartouche pendants as part of primarily plant-form collars. Depictions of collars on the sarcophagi and gold mask from the tomb of Tuiya and Yuia also show nefer-signs and palmettes used alongside the more common plant designs (Saleh and Sourouzian 1987: entry 145, and Figure 11.2d here).

11.3 Symbolism and possible use

Most of the jewellery found at Amama comes from private houses, not just the large houses of the clite, but also the smaller dwellings occupied by the common people. Because of this apparent distribution across Egyptian society, any attempt to analyse its significance runs up against several problems. There is little evidence from Amama to show what beliefs the common (probably non-literate) people held, and it is not certain that a symbol would hold the same



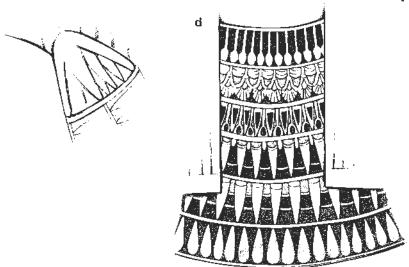


Figure 11.2 (facing page and above). Collar designs of the later New Kingdom, details.

- (a) Amuletic collar, placed on the body of Merit, from the tomb of Kha, Thebes. Redrawn from an illustration based on X-ray photographs of the mummy in Turin Museum. The material from which the collar was made was not identified. (After Donadoni-Roveri 1987: Fig. 321). A unique feature of this design is an outer string with necklace pendants attached.
- (b) Plant-form collar, from the tomb of Tutankhamun, Thebes. Carter excavation no. 53a. Now preserved in the Cairo Museum, exhibit no. 947. Although the order of pendants is known to be correct, the placing of the small ring beads is less certain, particularly where they meet the collar terminal. (After Carter and Mace 1923: Pl. XXXIX and information from the field notes of H. Carter, now preserved in the Griffith Institute, Oxford).
- (c) Wesekh-collar from Thebes, exact provenance unknown. Brooklyn Museum, New York (40.552). (After Brovarski, Doll, and Freed 1982; Pl. 307).
- (d) Part of the inlaid collar design of the gold death-mask of Tuiya, from the tomb of Tuiya and Yuia, Thebes. Cairo Museum JdE 95254. Here, palmettes, nefer-signs and drop pendants are used in an otherwise plant-form collar. The terminals of this collar are triangular, in the shape of lotus flowers. Similar designs are shown on the sarcophagi of Tuiya and Yuia. It has been suggested that the drop-pendant outer border was created by wearing a plant-form collar over a wesekh-collar (Bell 1987: 74).

meaning for a member of the presumably better-educated official class as for the commoner. It is also possible that most faience jewellery was merely a copy of similar arrangements (sometimes in more valuable materials) worn primarily by high officials and the frequenters of the court. If this was the case, then such jewellery may have no significance beyond representing the attempts by the poorer members of Egyptian society to imitate people of a higher status. Despite this essentially negative introduction, it may be possible to consider the symbolism of collars and necklaces as a whole, and perhaps to identify their general role within Egyptian society.

The only type of faience collar which is known, for certain, to have existed at Amama is the "plant-form" collar. This type of collar has been studied by M. Bell. Her work shows that such collars appear to have been wom during festivals and also formed part of the funerary equipment (Bell 1987: 56–7, and in D'Auria, Lacovara, and Roehrig 1988: 133–4). The regular occurrence of plant-form pendants in private houses, where very little material relating directly to funerary use has been found, would seem to imply that at Amama the collars were for use primarily by

the living, rather than the dead. An occasional use for such collars, worn as part of festivals or ritual events, would therefore seem the most likely explanation for their presence at the site.

The plant-form collar has been interpreted as a symbol of rebirth and regeneration (Bell 1987: 57). While the plant-form collar evolved prior to the rule of Akhenaten and the imposition of the Aten religion, and may have had associations with the god Osiris (Bell 1987: 57), it appears to have been fully integrated into the new religion. Ideas of rebirth and regeneration appear to have been as important to the worshippers of the Aten as to the followers of the traditional religion.

The main pendants used as part of "plant-form" collars depict fruit, flowers, and leaves. This can be explained by the fact that such collars imitate garlands made from real plants, although at least one design, the bunch of grapes, could never had been used in such a collar. Some of these designs can be interpreted as representations of plants containing narcotic substances. The mandrake fruit, opium poppy, and lotus flower all contain psychoactive drugs, while the grapes and date may represent fruit used in the production of alcoholic drink. As alcohol was consumed, and perhaps also certain drugs taken, during some festivals (Harer 1984: 100–2) this may reinforce the idea that such collars were intended for festal use. It is difficult to find any indication of the use of the other forms of collar at Amama. The amuletic collar, particularly the form composed entirely of nefer-signs, appears only on women. This may be a misleading impression owing to the small number of representations and examples which have survived.

The necklace pendants found at Amama show a similar range of subject matter to that found in collars. There is, however, an additional group representing figures of deities, particularly Bes, Taweret, and Hathor. These figures are known to have been connected with domestic activities, particularly human fertility and childbirth. Such subjects appear to have been a main concern of the "popular religion" which dealt with the events of daily life and which lay outside the official religion. Necklaces may, at least in part, have been a product of this "lesser tradition". This would explain why they do not occur in the official art of the period.

11.4 The recording systems used at Amarna

The pendant corpus accompanying this article was introduced at the site of Amama between 1928-36. Prior to this time, a number of other systems were used to record faience jewellery.

The first corpus of faience objects from Amarna was published by Petrie, following his excavations at the site in 1891–2 (Petrie 1894: Pls. XIV–XX). The corpus designs were grouped and numbered according to the form represented, so that pendants were not distinguished from ring bezels, beads, and inlays of similar design. Despite this limitation, the Petrie corpus remains the largest published record of faience jewellery and has served as a basic reference for the work of all later excavators at the site.

When the EES began work at Amarna in 1921, under the direction of T.E. Peet, pendants were drawn and numbered as small finds, and identified using the Petrie corpus. When new designs were found, these were recorded by photography, a practice which was continued during all subsequent excavation seasons. During the 1922 season, a new recording system was introduced. Objects were grouped according to function, with pendants classified as "amulets" (COA I: 169-71). Within each group, each piece was given a new (consecutive) number, irrespective of its design. As a result of this "serial numbering" system, the most common design, Bes playing a tambourine, was listed eighteen times, with numbers ranging between A1 and A51. Each new pendant entered in the lists was given a brief written description, but no attempt appears to have been made to identify the design using the Petrie corpus or any other body of illustrations. As a result of this, it is not always possible to identify the exact design of pendant found from the written description. This method of recording was used for the 1922 excavations in the Workmen's Village and the Main City/South Suburb. The excavation of the Main City was continued in 1923-4, under the direction of F.G. Newton and F.Ll. Griffith. At this time, pendants were once again recorded as small finds, either individually drawn and numbered, or entered as part of a "multiple object list", where a written description was sometimes all that was

Gold necklace pendants depicting the goddess Taweret were found amongst the grave goods of Queens of Tuthmosis III (Aldred 1971: 216, Pt. 86). This could show that "popular religion" was effective at all levels of Egyptian society. The term "lesser tradition" would seem more appropriate in this context.

provided. Where the pendants were illustrated, most can be identified using the later corpus. The written descriptions, as with the 1922 season, do not always allow for an accurate identification to be made. As a consequence, about half the houses excavated during this period could not be considered for this analysis. Multiple-object lists were used again during the 1924–5 seasons in the Main City and at the North Palace. This form of recording, which often used inconsistent written descriptions (near identical designs could be given different identifications) without illustrations, means that these areas also could not be used for this analysis.

As the excavations of the North Palace and much of the Main City were never published, it is possible that some form of corpus was envisaged for the final excavation report. Object cards survive from the 1924–5 seasons depicting faience designs not included in the Petric corpus which continue his numbering system. During the first season of work in the North Suburb and Central City in 1926–7, under the direction of H. Frankfort, pendants were once again numbered and drawn as small finds. Most of the pendant drawings from this time can easily be identified

using the later corpus.

The corpus of faience jewellery used in this article appears first during the 1928-9 season, perhaps as a result of Frankfort's experiences during his first season as director at Amarna. When Pendlebury became director of the excavation in 1930-1, he continued to use the same corpus, with additions, until work at the site finished in 1935-6. The corpus was therefore used in the North Suburb, North City, and Central City areas. In the new corpus, faience pendants were classified as "Type IV" and divided into five groups according to their general subject matter (indicated by the letters A-E), after which, designs were given a corpus number. The use of this corpus was described by Mary Chubb in her account of the excavations at this time: "John (Pendlebury) had already pinned across the wall opposite where we sat at the long table, great sheets of diagrams in black ink. There were two showing sections of pottery, inside and out; another for beads, each bead drawn sideways as well as in section, in a bewildering variety of shapes and sizes; one for amulets; and one for ring bezels. Each of these had a type number, subdivided to show variations, printed below it. When a bead or amulet or bezel came up for registration, we looked for its type on the sheet first, and if it were there, simply noted in a special book that a bead of type so-and-so was found in such-and-such a room. That was all - no (object record) card" (Chubb 1954: 78).

While the new corpus was better than some previous attempts to record faience jewellery, it still had drawbacks. Glaze colours were not recorded, and any modifications to the piece, such as the number of suspension beads attached to a pendant, were not included. The list of pendants also includes several forms which do not easily fit into any existing category, so that clothing ornaments, small inlays, and possible votive pieces are also listed here. In addition, pendants B26 and D11, although occurring as finds in the house lists, are described in the corpus only as type "omitted". Pendant designs are also listed in the corpus which do not occur in the house lists. The corpus was first published in City of Akhenaten II along with a conversion list, so that Petrie's corpus illustrations could be referred to (COA II: 116–17). Drawings were included only where new designs had been found. In some cases, the new drawings appear to duplicate forms already in the corpus, unless, as seems less likely, they depict some subtle variation in design. Several of

the later drawings appear to be incorrect and have been redrawn for this article.

The excavation records for the 1928-36 period show that, even after the adoption of the corpus, some new pendant designs were drawn and numbered as small finds but never integrated into the corpus. Most, if not all, new designs were recorded by photographs, although there is no information on the exact provenance of most of the new designs illustrated in this way.

While the corpus published in this article shows the most common pendant designs found at the site, it should be not regarded as comprehensive. A number of different designs were found outside the areas covered by this article. In addition, excavation photographs and museum collections of material from the EES excavations at Amama include a number of new designs for which the provenance is lost.

Necklace pendants

Pendant	Petrie no.	l hook	2 hooks	unknown	collars	curs in necklaces	comments
?poppy seed-head	470-473	75	1	18	3	4	Occurs in 3 collars: 2 from tomb of Tutankhamun (Cairo nos. 944, 946); other: MMA, New York, no. 40.2.5., from Thebes.
Bes with tambourine	288	29	-	20	-	1	Occurs in necklace 28-9/328, from Amarna.
Small "drop"	549-550	23	-	4	-	1	Occurs in necklace no. 26-7/554, from Amama, mixed with ?poppy seed-head pendants. Two small ""drop" pendants with 2 suspension beads attached are displayed with Amama material in the Cairo Museum (no. 12831).
Sonthern plant	461 -46 4	16	-	1	-	1	Occurs in necklace 28-9/142 from Amarna (COA II: 41, Pl. XXVIII.7).
Small Taweret	-	4	-	2	-	-	Occurs in possible necklace in El Sawi 1957: 14, find no. 1525.
				Co	liar pendants		
Lotus petal	518-520	_	5	19	11	**	Occurs in collars from Luxor and Amama.
Palm leaf	544-545		2	18	2	_	Occurs in collars from Luxor and Amarna.
Comflower	485-487	•	3	5	2	_	Occurs in collars from Luxor and Amarna.
Grape bunch	443-445	1	6	13	1	_	Occurs in Amarna collar 29/402 (COA II: 44).
Small mandrake	455	_	4	2	2	_	Occurs in collars from Luxor and Amarna.
Date	450	_	6	4	8	-	Occurs in collars from Luxor and Amarna.
Poppy bud	451	-	6	-	1	-	Occurs in Amarna collar 29/400 (COA II:18).

Table 11.1. The most common pendant designs from the Workmen's Village excavations.

11.5 The pendant corpus of 1928-36

The drawings which accompany this section (Figures 11.3-5) were taken from Petric's *Tell el Amarna* volume of 1894 (Pls. XIV, XVII, XVIII, XIX, and XX) and the additional drawings provided in *City of Akhenaten* II and III (*COA* II: Pl. XLIX; *COA* III: Pl. CXII). The first version of the final faience jewellery corpus was compiled from excavation photographs of 1926-7. This was added to, or more likely replaced by, copies of Petric's drawings in 1929 (EES document 1/11/3: letter from Frankfort to Glanville, 7 February 1929).

The illustrations have not been redrawn as it is felt that the original drawings most clearly show the ambiguities and possible inaccuracies contained within the corpus. Pendant designs which were found in the areas used for this analysis, but never added to the corpus, have been included here with an "X" prefix. Possible votive pieces, larger pendants, clothing ornaments, and beads which were originally included in this part of the corpus have been omitted.

The designs have been grouped according to their usual function; collar and necklace designs, followed by pendant designs whose function is uncertain. The comments accompanying each entry have been limited to problems affecting the accuracy and use of the corpus. Each entry is preceded by its corpus identification, followed by the Petric corpus number. This is followed by a general identification of the design. In some cases, several corpus numbers have been grouped as a single entry (e.g. date pendant C4/D6) where the drawings appear to depict different versions of the same general design. Where only one example of a design has been found, this is noted in the text. After each entry is a series of initials, indicating the areas within which the design was found. MC = Main City, CC = Central City, NS = North Suburb, and NC = North City.

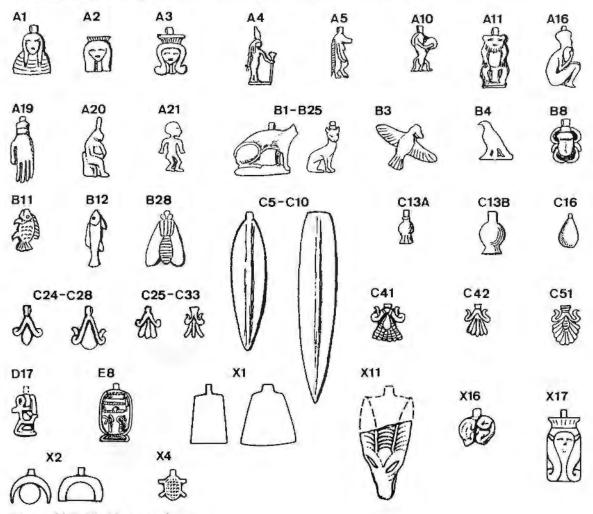


Figure 11.3. Necklace pendants.

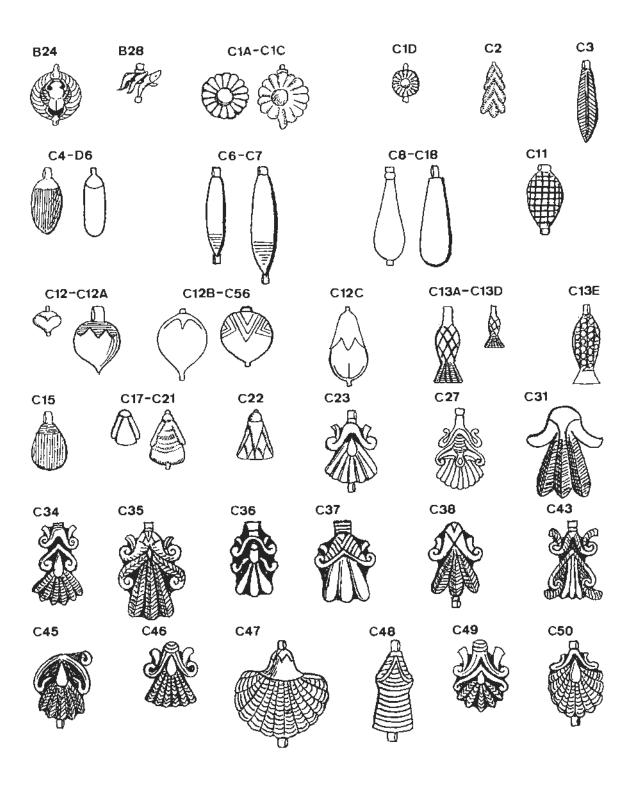


Figure 11.4a. Collar pendants.

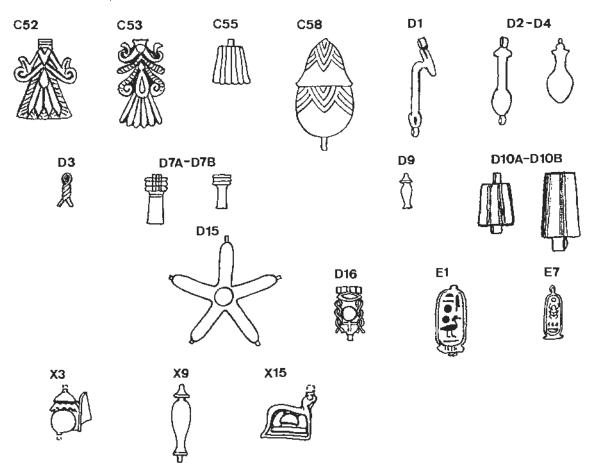


Figure 11.4b. Collar pendants (continued).

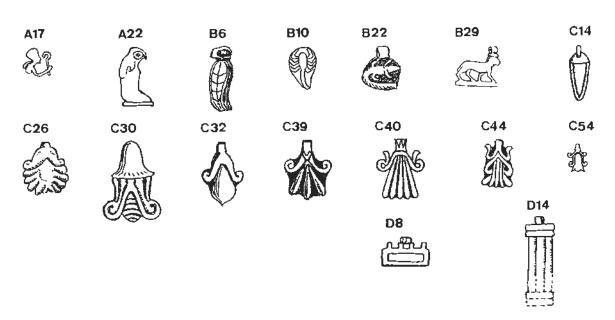


Figure 11.5. Pendants of unknown function.

Pendant list from COA II, III (Corpus type IV)

	Anthropoid bust (necklace).	C1a	Daisy flower (collar).
A1	•	Clb	Rosette. Ear-stud end, not a pendant.
A2	Hathor head (necklace).	Clc	Daisy flower (collar).
A3	Hathor head (necklace).		
A4	Goddess with white crown, wadj-sceptre	C1d	Daisy flower (collar).
	(necklace).	C2	Group of leaves (collar).
A5	Taweret (necklace).	C3	Palm leaf (collar).
A6	Taweret; large form, not a collar/necklace design.	C4	Date (collar).
A7	Tawerer, large form, not a collar/necklace design.	C5	Leaf (necklace).
A8	Taweret, large form, not a collar/necklace design.	C6	Loms petal (collar).
A9	Tawerer, large form, not a collar/necklace design.	C7	Lotus petal (collar).
A10	Hes (necklace).	C8	Large drop (collar).
A11	Bes (necklace).	C9	Group of petals. Inlay, not a pendant.
A12	Bes, large form, not a collar/necklace design.	C10	
A13	Hes, large form, not a collar/necklace design.	CH	Bunch of grapes (collar).
A14	Bes in rectangle, not a pendant.	C12	Mandrake fruit (collar).
A15	Bes, large form, not a collar/necklace design.	C12a	Mandrake fruit (coller).
A16	Seated child (collar/necklace).	C12b	Mandrake fruit (collar).
A17	King holding crook (unknown).	C12c	Poppy bud (collar).
A18	Goddess with sistrum, large form,	C13a	Cornflower (collar).
	not a collar/necklace design.	C13b	?Poppy seed-head (necklace).
A19	Hand (necklace).	C13c	?Poppy seed-head (necklace).
A20	-		Cornflower (collar).
A21	?Dwarf (necklace).	C13e	Composite plant (collar).
A22	Falcon god, seated (unknown).		Lorus bud (unknown).
BI	Seated cat (necklace).	C15	Poppy bud (collar).
B2	Flying duck, large. Inlay, not a pendant.	C16	Small drop (necklace).
B3	Flying duck (necklace).	C17	Poppy flower (collar).
		C18	Large drop (collar).
B4	Falcon (necklace).	C19	Lettuce. ?Votive, not a pendant.
B5	Uraeus, large form, not a collar/necklace design.	C20	Lotus and buds in rectangle.
B6	Uraeus (unknown).	C20	
B7	Scarab. Ring bezel, not a pendant.	C21	?Intay, not a pendant
B8	Scarab (necklace).	C21	Poppy flower (collar).
B9	Frog. Bead, not a pendant.	C22	Lotus flower (collar).
B10	Scorpion (unknown).	Ç23	Palmetic (collar).
B11	Tilapia fish (necklace).	C24	Southern plant/lily (necklace).
	Mullet fish (necklace).	C25	Palmette (necklace).
B13	Tilapia fish. ?Votive, not a pendant.	C26	Palmette (unknown).
B14	Bull head. ?Votive, not a pendant.	C27	Tree of life (collar).
B15	Trussed bull. ?Votive, not a pendant.	C28	Southern plant/lily (necklace).
B16	Trussed bull. ?Votive, not a pendant.	C29	Southern plant/lily. Collar terminal,
B17	Trussed bull. ?Votive, not a pendant.		not a pendant.
B18	Bull leg. ?Votive, not a pendant.	C30	Composite plant (unknown).
B19	Bull within rectangle (unknown).	C31	Palmette (collar).
B20	Bull head. ?Votive, not a pendant.	C32	Composite plant (unknown).
B21	Frog. Bead, not a pendant.	C33	Palmette (necklace).
B22	Crocodile (unknown).	C34	Tree of life (collar).
B23	Crocodile, large form. Unknown function.	C35	Tree of life (coller).
B24	Winged scarab (collar).	C36	Tree of life (collar).
B25	Seated cat (necklace).	C37	Palmette (collar).
B26	Form deleted from corpus.	C38	Palmetic (collar).
B27	Three fish (collar).	C39	Palmette (unknown).
B28	Fly (collar and necklace).	C40	Palmette (unknown).
B29	Standing animal (unknown).	C41	Palmette (necklace).
D27	Dall hand Overing not a pendent	CAS	Palmatie (necklare)

B30 Bull head. ?Votive, not a pendant.

C42 Palmette (necklace).

C43	Tree of life (collar).	D12	Ankh. Pierced for sewing on clothing.	
C44	Tree of life (unknown).		Not a pendant.	
C45	Tree of life (collar).	D13	Leaf. Pierced form, function unknown.	
C46	Palmette (collar).	D14	Papyrus bundle. ?Large form (unknown).	
C47	Palmette (collar).	D15	Star (collar).	
C48	?Palmette (collar).	D16	Hieroglyphs (djet) r neheh (collar).	
C49	Tree of life (collar).	D17	Ankh djet hieroglyphs (necklace).	
C50	Palmette (collar).	D18	Papyrus flower. ?Inlay, not a pendant.	
C51	Palmette (necklace).	E1	Cartouche, Akh-n-iten (collar).	
C52	Palmette (collar).	E2	Double carrouche. Bead, not a pendant.	
C53	Tree of life (collar).	E3	Uraeus and cartouche. Ring bezel,	
C54	Tree of life (unknown).		not a pendant.	
C55	Group of petals (collar).	E 4	Double carrouche. Bead, not a pendant.	
C56	Mandrake fruit (collar).	E5	Double cartouche. Bead, not a pendant.	
C57	Southern plant/lily. Collar terminal,	E6	Wedjat-eye- and nefer-hieroglyphs.	
	not a pendant.		?Bezel, not a pendant.	
C58	Composite plant (collar).	E7	Cartouche. Neb-kheperw-Re (collar).	
C59	Wedge shape (necklace).	E8	Cartouche Imen-hetep; heka-wast.	
D1	Was-sceptre (collar).	E9	Cartouche. Pierced for sewing on clothing.	
D2	Nefer-hieroglyph (collar).		Not a pendant.	
D3	H-hieroglyph (collar).	E10	Cartouche. Large form, not a	
D4	Nefer-hieroglyph (collar).		collar/necklace design.	
D5	Button-seal. Not a pendant.	X1	Wedge-shape (necklace).	
D6	Date (collar).	X2	Moon-disc (necklace).	
D7a	Djed-pillar (collar).	X3	Hieroglyphs Iten (collar).	
D7b	Djed-pillar (collar).	X4	Turde (necklace).	
D8	Men-hieroglyph (unknown).		Hes-vase, large (collar).	
D9	Hes-vase (collar).		?Jackal-hèad (necklace).	
D10a	10a Multiple cylinders (collar).		Hieroglyphs djet (collar).	
D10b Multiple cylinders (collar).		X16	Pair of ears (necklace).	
D11	Form deleted from corpus.	X17	Hathor head (necklace).	

Note: A number of other designs given an "X" prefix have been omitted from this list. These designs are not thought to have been used in necklaces or collars.

Necklace pendants (detailed notes; numbers in brackets are Petrie corpus numbers)

A1 (277)	Anthropoid bust. *CC/NS
A2 (281)	Hathor head, wig with straight side-lappets. *CC/NS
A3 (280)	Halhor head, wig with curled side-lappets. Designs A2 and A3 are similar, and it is possible they were confused. *MC/CC/NS/NC
A4 (283)	Goddess wearing the white crown, carrying a wadj-sceptre. This design was found in two sizes; a small form, as illustrated, and a larger design. Pendant "A4a" was listed in the excavator's notes along with type A4. Possibly the two different sizes were given different designations, but in the published corpus and records only type A4 is listed. *NS/NC
A5 (299)	Tawcret. A number of variants of this design exist, in faience, glass, and stone. The material used for pendants was sometimes recorded by the excavators, but usually omitted from any published lists. *MC/CC/NS/NC

³ I am grateful to Prof J. Keith-Bennett for the identification of this form.

Bes, playing a tambourine. *MC/CC/NS/NC A10 (288)

Bes, front view. *MC/CC/NS A11 (291)

Seated child. In some case, this is a figure of the king. This design varies in both size and detail. The form is also known as a collar pendant (COA I: Pl. XIII.2). A16 (no Petrie number)

Hand. Only one example of this design is recorded, from house T36.77 in the North Suburb. A19 (no Petric number)

A20 (no Petric number)

Scated goddess (?Sekhmet). This pendant was not illustrated with the corpus published in COA II. The illustration provided here is drawn from a contemporary excavation photograph and sketches made from a pendant of this type preserved in the Cairo Museum (in case 55525, amongst material from the 1930–1 season at Amarna). Only one example of this design is recorded, from house U24.24 in the North City.

Standing figure (?dwarf). Only one example of this design is recorded, from house R46.44 in the Main City. This house is currently unpublished. As the results of earlier excavations were not used when the corpus was compiled, it appears that the design was entered into the corpus without any examples being found (see also entries B6 and C41). An alternative explanation is that one or more pendants of this design were found but the find spots were not recorded. A21 (275)

Seated cat. Both of these pendants depict scated cats, with some variation of detail.

Other designs of cat pendant are also known from the earlier work at Amama.

*NS/NC B1/B25 (no Petrie number)

Flying duck. Only one example of this design is recorded from house T36.5 in the North Suburb.

B4 (314) Falcon.

B3 (312)

B28 (336)

Scarab beetle. Most of the pendants depicting the scarab beetle found at Amarna are smaller than the example shown by this illustration.

*MC/NS B8 (335)

Fish, Tilapia species. *MC/CC/NS/NC B11 (331)

Fish, mullet. *MC/CC/NS/NC B12 (332)

Fly. This form shows some variation in both size and detail. It is also found as a collar pendant at Amarna.

C5/C10 (527/525)

Leaf. Two versions of this design are included in the corpus. The main difference appears to be the size of the design, although the outline is also slightly different. It is not known which of these features was regarded as significant. This design is found at Amarna with considerably more shape and size variation than the two illustrations would suggest. One pendant of this type found during the earlier excavations appears mid-way in size between drawings C5 and C10. The excavators' record books also include the term "C5a", although this was not included in the final corpus.

?Poppy seed head, complex"crown". This design has been found at Amama both as a moulded form with a flat rear face and a fully round form, partly shaped by hand. The excavators occasionally noted that pendants of type C13b were "round", but this information was not included in the published reports. Pendant C13b has also been found with two suspension beads attached, for use in a collar, although this practice appears to have been rare. C13b (471)

C13c (472)

?Poppy seed head, simple disc-shape "crown". This form, like C13b, was made as both a moulded design, detailed only on one side, and a three-dimensional form. At Amarna the design occurs in faience, glass, and stone. Forms C13b and C13c can vary in their size and detail. Research carried out on material from the North Suburb suggests that forms C13b and C13c were confused, and that the designs were sometimes identified as cornflower pendants C13a and C13d. Occasionally pendants were listed only as type "C13".

C16 (?no Petrie number)

Small "drop". This illustration appears similar to Petrie designs 549-50. Small drop pendants were a common find during the recent excavations at the Workmen's Village and Main City, and it appears surprising that so few were found during the earlier work. A study of the material from the North Suburb shows that nearly all drop-shaped pendants were classified as type C8/C18 (see the section on collar pendants for further details of this form), irrespective of size. Perhaps only small drop pendants whose shape exactly matched that of the corpus drawing were classified as type C16.
*MC/CC/NS

C24/C28 (462/463)

Southern plant or "lily". The corpus includes two versions of this design, type C24 depicts the most common design, while C28 depicts a version with an enlarged centre and streamers below the outer leaves. There is considerable variation in both the size and general design of this form, which does not seem to be fully represented by these illustrations. Two pendants of type C24 are known to have been found with two suspension beads attached, for use in a collar. *MC/CC/NS/NC

C25/C33 (369/370)

Composite plant/palmette. Both of these drawings depiet a similar form. Although they differ in detail, and appear distinct in Petrie's drawings, it should be noted that both appear to have been drawn from mould designs. Pendants produced from a well-detailed mould can lose detail during the glazing and firing processes. In such cases, the two designs could appear very similar and may have been confused. *CC/NS/NC

C41 (379)

Composite plant/palmette. This design appears very similar to type C23, and it is possible they were confused. Only one example of pendant C41 is recorded, from building C42.24 in the Central City area. This was excavated in 1933, the same year that the corpus was published in COA II. It therefore appears that, as was the case with pendants A21 and B6, a pendant design was entered into the corpus before being found.

C42 (378)

Composite plant/palmette. This design resembles illustrations C25/C33, and appears to be distinguished mainly by an additional leaf or petal added to the centre. It is possible that the three designs were confused. Only one example of this pendant is recorded, from house U35.31.

C51 (387)

Composite plant/palmette.

D17 (no Petrie number)

Hieroglyphs Ankh-Djet. Only one example of this pendant is recorded, from house T36.69 in the North Suburb. A pendant of this design, amongst material from the 1930-1 season at Amarna, is preserved in case 55525 in the Cairo Museum. The original corpus illustration is inaccurate, and has been redrawn from sketches made in the Cairo Museum.
*NS

E8 (no Petrie number)

Cartouche Imen-hetep; heka-wast. There is no find spot recorded for this pendant at Amarna. It is shown in an excavation photograph of 1930-1, and what appears to be the same pendant is preserved in case 55525 in the Cairo Museum, amongst material from the 1930-1 season. Presumably it was found in the North Suburb or North City.

X1/C59 (256)

"Wodge" shape. Two pendants of this design were found in the North Suburb in 1926-7; from houses T36.5 and V37.4. They were not listed in the corpus or published records. The illustrations are redrawn from the excavator's records cards. A similar design was later entered into the corpus as type C59 (COA III: Pl. CXII). There is no entry for pendant C59 in the later records.

X2 (555-6)

Moon-disc. Two versions of this design were found in the North Suburb in 1926-7; (a) from house U37.1 and (b) from T36.3. They were not entered into the corpus or the published finds lists. The accompanying illustrations were re-drawn from the excavators record cards. It is not known how accurate these illustrations are, but they do appear to show two different versions of the same general design. *NS

X4 (no Petrie number)

Turtle. This pendant was found in 1926-7 in house U37.14 in the North Suburb. The material from which the pendant was made is not identified. It may be steatile. The design was not entered into the corpus or the published finds lists. The illustration has been drawn from an excavation photograph.

X11 (no Petrie number)

?Jackal head. Only one example of this design is recorded, from house U36.28 in the North Suburb. When found, this pendant was incomplete and had lost its suspension bead. It was misidentified as part of a gaming piece (COA II: 19, Pl. XXIX.1). The illustration was made from the original piece, now preserved in the Ashmolean Museum, Oxford (no. 1929.810). See chapter 2 for further information on this form.
*NS

X16 (no Petrie number)

Pair of ears. This pendant design was found in an unpublished house in the Main City, Q44.5, excavated in 1923-4. The drawing has been made from an excavation photograph of the time.

X17 (no Petrie number)

Elongated Hathor head. This pendant design was found in an unpublished house in the Main City, Q46.41, excavated in 1923-4. The illustration has been redrawn from the excavation record card.

Collar pendants

B24 (no Petrie number)

Scarab beetle with wings. *CC/NS

B27 (no Petrie number)

Three fish. A pendant of this type is included in material exhibited from the America excavation of 1930-1 in the Catro Museum (case 55525). There are no records of this design being found during the EES work.

B28 (336)

Fly. This design is found as both a necklace and collar pendant. See the entry in the "necklace pendants" section for details.

C1a/C1c (426)

Daisy flower. The drawing of design Cla shows the most common type of daisy pendant found at Amarna. In common with many illustrations in the Petrie corpus, the design is shown without suspension beads. The later drawing, Clc, published in COA II (Pl. XLIX) shows a similar design, though less symmetrical and with one, or possibly originally two suspension beads attached. It is difficult to understand why two pendants of such similar design were included in the corpus. The main difference appears to be the presence or absence of suspension beads. Possibly design Cla depicts an inlay rather than a pendant. The excavation records in COA II include the corpus reference Cl, although this was not included in the list of corpus forms. Presumably it was also a daisy pendant.

Cld (no Petrie number)

Small daisy. *MC/CC

C2 (no Petrie number)

Group of leaves.

C3 (545)

Palm leaf. This design shows some variation in shape and detail. It does, however, seem reasonable to classify all designs as the same type of pendant. *MC/CC/NS/NC

C4/D6 (450)

Date. Two designs of date pendant are listed, showing the main variations in shape. As both designs depict the same fruit and have the same role, it seems more reasonable to classify them as a single design.

*MC/CC/NS/NC

C6/C7 (520/519)

Lotus petal. Two sizes of lotus petal are recognised in the corpus. A study of the material from the earlier EES work now preserved in museums shows a great deal more size variation than the two drawings would suggest. It is surprising that Petrie illustration 518 was not also included in the corpus, as pendants of this size were also found. Pendants with a length mid-way between designs 519 and 520 are also known. It is difficult to see how these entries would have been used; perhaps design C6 for the smaller pendants, C7 for the larger.

C8/C18 (548)

Large drop. The corpus includes two designs of large drop pendant. Pendant C18 is represented by illustration 548 of the Petrie corpus, showing a pendant with one suspension bead visible. The new design, type C8, is narrower with two suspension beads. It is rare for large pendants of this type to have only one suspension bead attached, and the main distinction may have been in the general shape. A general study of the North Suburb shows that in 1928-9, most "drop" pendants were identified as C18, while in 1930-1, most were identified as C8. It seems unlikely that this reflects any real distribution of designs at the site, and most likely shows the preference of the registrar for a particular designation. The situation is further complicated by the use of these terms for the smaller type of drop pendant found in necklaces (see entry C16 in the necklace pendants section).

C11 (445)

Bunch of grapes, At Amarna, this form is known to vary in both size and general *MC/CC/NS/NC

C12/C12a (453)

Mandrake fruit. Both designs are similar, showing the usual appearance of the fruit when glazed with two colours: usually grey or blue-grey at the top with a yellow body. The most common design of mandrake fruit found during recent work at Amama is mid-way in size between these two examples, nearer Petric illustration 455.

*MC/CC/NS/NC

Mandrake fruit. Although these two examples appear very different, they both depict the mandrake fruit with moulded or scribed detail. This method of detailing appears on designs which use only one glaze, usually copper-blue. The two designs depict specific examples found in the North Suburb, and considerable variation in design of such "monochrome" pendants is known at Amarna.

*MC/CC/NS/NC C12b/C56 (no Petrie number) Poppy bud. Only four examples of this design are known to have been found at Amarna. Two in the North Suburb and two in the Central City. The example illustrated for this corpus is now preserved in the Museum of Archaeology and Anthropology of the University of Cambridge. It is glazed copper-blue overall. Like designs C12b/C56, it appears to be a monochrome design where the detail is created by moulding or scribing, rather than by adding an additional colour. *CC/NS C12c (no Petrie number) Cornflower. The corpus contains two examples of cornflower which do not adequately represent the range of sizes and designs of cornflower pendant at Amarna. In common with lotus petal designs C6/C7, all they appear to indicate is large or small designs. These forms may have been confused with necklace pendants C13b and C13c.

*MC/CC/NS/NC C13a/d (486/487) Composite plant. This design was grouped by Petrie with the representations of cornflowers. The original pendant drawn by Petrie appears to be the one displayed in the Petrie Museum at University College, London. This is glazed dark cobalt blue over the body, with the flower petals a light copper blue. It is evident this is not a comflower, but some form of composite design based around a bunch of grapes. Two pendants of this type are recorded in the North Suburb. It seems likely, however, that the excavators misidentified comflower pendants as type C13e. C13e (485) C15 (451) Poppy bud. *MC/CC/NS Poppy flower. Both of these designs depict the open poppy flower. Design C17 depicts the polychrome form, usually with red petals and a grey or blue-grey base. Design C21 has scribed decoration, commonly found on collar pendants which are glazed copper-blue overall. Only one example of design C21 is recorded from the earlier EES work, in house T36.10 in the North Suburb. C17/C21 (468) Lotus flower. Only one example of this design is recorded, from house T36.87 in the North Suburb. A pendant of this type is currently displayed in the Cairo Museum, in case 55525.
*NS C22 (no Petrie number) C23 (381) Composite plant/palmette. *MC/CC/NS Composite plant/tree of life. *CC/NS/NC C27 (no Petrie number) Composite plant/palmette. *CC/NC C31 (368) Composite plant/tree of life. Designs C27 and C34 are similar and may have been C34 (384) confused. *NS/NC Composite plant/tree of life. Only one example of this design is recorded, in house T35.4 in the North Suburb. C35 (375) Composite plant/tree of life. Only one example of this design is recorded, in house T36.43 in the North Suburb. C36 (374) Composite plant/palmette. Only one example of this design is recorded, in house T35.3 in the North Suburb. C37 (373) Composite plant/palmette. There is no record of this pendant being found during the earlier EES work. C38 (372) Composite plant/tree of life. Only one example of this design is recorded, in house T36.83 in the North Suburb. C43 (377) Composite plant/tree of life. The drawing taken from the Petrie corpus shows a broken pendant. As a suspension bead was attached at the base of the design, this was probably a collar pendant. There is no record of this design being found during the earlier EES work. C45 (383)

Composite plant/palmette. Only one example of this design is recorded, in house T35.8 in the North Suburb. Pendant designs C23 and C46 are similar in general appearance, it is possible they could have been confused. C46 (382)

Composite plant/palmette (using papyrus flower). There is no record of this design being found during the earlier EES work. C47 (391)

?Composite plant/palmette. *CC/NC C48 (390)

Composite plant/tree of life. Only one example of this design is recorded, from building R41.6 in the Central City. C49 (389)

Composite plant/palmette, *CC/NS C50 (388)

Composite plant/palmette. C52 (386)

Composite plant/tree of life. There is no record of this design being found during the earlier EES work. C53 (385)

Group of petals. *CC/NS C55 (no Petrie number)

C58 (no Petrie number)

Composite plant. A pendant of this design, from the earlier EES work, is exhibited in the Cairo Museum (amongst exhibit nos. 12648-63). It may be the same pendant shown in the accompanying illustration. The pendant has one suspension bead at the base, and the remains of a second bead at the top, showing that it was a collar

pendant.

D1 (255) Was-sceptre.
*MC/CC/NS/NC

D2/D4 (266)

Nefer-hieroglyph. Two Nefer-pendants are included in the corpus. While these represent the most common shapes for this design, they do not show any great variation in size. Nefer-sign pendants from the earlier work at Amarna can be as small as 10 mm in height (not including the attached suspension bead). Nefer-sign pendants have been found with only one suspension bead attached for use in a

necklace. *MC/CC/NS/NC

D3 (262) H (twisted flax)-hieroglyph.

D7a/D7b (264/265)

Djed-pillar. Although two Djed-pillars are listed in the corpus, unly type D7a was recorded during the earlier excavations. In some cases the term "D7" was used by the excavators. It is possible that form D7b, along with the a/b suffix was deleted

from the corpus. *CC/NS

Hes-vase, small form. *CC/NS/NC D9 (268)

D10a/D10b (358/357)

Multiple cylinders. The corpus includes two multiple-cylinder designs, D10a with three cylinders and D10b with two. However, three designations appear in the excavators notes: D10, D10a, and D10b. All three terms were used during the North Suburb excavations, D10 and D10a in the North City, and only D10 in the Central City. There appears to be no pattern in the use of the term D10, as both two and three cylinder-pendants were found in the Central City.

*MC/CC/NS/NC

D15 (no Petrie number) Star. Only one example of this design is recorded, in house T36.36 in the North

Suburb. *NS

Hieroglyphs (djet) r neheh. *CC/NS D16 (no Petrie number)

Cartouche; Akh-n-iten. *CC/NS E1 (44)

Carrouche; Neb-kheperw-Re. *MC/NS/NC E7 (no Petrie number)

X3 (no Petrie number)

Hieroglyphs Iten. Only one example of this design is recorded, find no. 34-35/52 from the area of the North Harem in the Great Palace (COA III: 45). The accompanying drawing is redrawn from the illustration on the object record card. *CC

Hes-vase, large form. Two examples of this design were found in the North Suburb during the excavations of 1926-7.
*NS X9 (no Petrie number)

Hieroglyphs Djet. This pendant design was found in an unpublished house in the Main City, Q44.4, excavated in 1923-4. X15 (no Petrie number)

A small number of pendant designs normally found with one suspension bead for use in necklaces were also found with an additional suspension bead, for use in a collar. These forms are fully described in the section on necklace pendants.

A16 Scated child.

C13b ?Poppy seed-head, complex "crown".

C13c ?Poppy seed-head, simple "crown".

C16 Small "drop".

C24 Southern plant or "lily".

Pendant design D2-D4, the Nefer-sign, was also found with one suspension bead attached, for use in a necklace.

Pendants whose function is unknown

It has not yet been possible to find examples of these designs in museums. As a consequence, it has not been possible to suggest whether they were made for use in collars or necklaces. While some illustrations show pendants with only one suspension bead attached at the top, it is not clear whether a second suspension bead has been lost from the base, or a second bead was attached at the rear of the design.

Falcon god, seated. Only one example of this design is recorded, from house T33.7a/o in the North Suburb. A22 (no Petrie number)

B6 (321)

Uracus. Four examples of this design are recorded, all from the Central City. Two were found in the Great Palace, one in the Great Aten Temple magazines and one in building Q42.7. The first of these buildings to be excavated, the magazines of the Great Aten Temple, were excavated between 1932-3, the same year that the corpus was first published in COA II, containing entry B6. It appears that, like entries A21 and C41, a design was entered into the corpus before being found.

B10 (333) Scorpion.

Crocodile. Only one example of this design is recorded, from house V36.7 in the North Suburb. B22 (318)

Standing animal. *CC B29 (no Petrie number)

Lotus bud. *NS C14 (no Petrie number)

C26 (no Petrie number) Palmette, *NS

Composite plant. Only one example of this design is recorded, from house T35.5 in the North Suburb. C30 (366)

Composite plant. *NS/NC C32 (367)

C39 (371) Palmette. There is no find spot recorded for this design at Amarna.

C40 (380) Palmette.
*NC/CC

C44 (376) Tree of Life. Only one example of this design is recorded, from house U35.18 in

the North Suburb.

C54 (no Petrie number)

Tree of Life.

D8 (no Petrie number)

Mn-hieroglyphs.

11.6 The accuracy of the earlier records

The four main areas of the city excavated by the EES have been used for this analysis. A number of the larger official buildings have, however, been excluded. Very few pendants were found in the Maru-Aten, North Riverside Palace, and North Administrative Building, while the descriptions of pendants found in the North Palace do not always allow for precise identifications to be made.

The North Suburb and Main City, along with the buildings from the North City, represent mainly residential areas, while the Central City contained primarily official, non-domestic buildings. The areas of the North City and Main City which it was possible to use for this analysis are relatively small, and may not be representative of these areas as a whole. They do, however, provide additional finds records from domestic buildings to compare with the large body of material from the North Suburb.

There has been very little excavation in the city since the close of the earlier EES excavations in 1936, so there is limited information which can be used to assess the quality of the earlier records. During the 1987 fieldwork in the Main City, a small house was excavated (P46.33, see Chapters 1–4), and a total of twenty-two complete or fragmentary pendants were found within a 10-metre square. It should be noted, however, that part of this material may have come from a workshop area producing faience jewellery.

The earlier excavators employed large teams of Egyptian workmen, with only a small number of archaeologists to supervise their work. The area of buildings exposed each season shows that the excavation was, by modern standards, unacceptably fast and must, at times, have been carried out with minimal supervision. In an appeal for funds, dated 1935, Pendlebury stated that, for a cost of 5 pounds, 20 men and 40 children could be employed for 2 days to clear a house (archive document 11.1; lecture notes entitled "Tell-el Amarna, 1934-5").

No use was made of sieving, an essential way of recovering additional material from the excavated soil. Small objects such as faience pendants must frequently have been overlooked. A survey of the contents of spoil heaps from the 1920–2 excavations at the Workmen's Village and 1930–2 work at the North City (Shaw 1988: 27–9, 35–7) shows that they contained a significant amount of jewellery. In addition, a number of finds were lost through theft. Pendlebury estimated that, in 1934–5, between 10 and 20% of finds were stolen from excavations in Egypt (archive document 10.7; EES/CF/2, confidential document, Pendlebury to EES committee 24/9/35). Small pieces of brightly coloured faience may have been particularly subject to loss in this way. Even when finds were recovered, the records may be incomplete. In particular, there are surprisingly few broken or unidentified items of faience jewellery in the early records.

Despite the shortcomings of the earlier work, it is unlikely that such a large area of the city will ever be excavated again. While future small-scale excavations within the city may help in the interpretation of the earlier records, it seems likely that the early work will always remain the basis for any study of artefact distribution and use at the site.

11.7 The areas used in this analysis

The different areas of the city used in this analysis are illustrated in Figure 11.6. In the following section, no attempt has been made to present a comprehensive description of each region. Only the information relevant to this study has been included.

The Main City

The Main City appears to have been a primarily residential area, with buildings ranging in size from large estates to small houses identified as "artisan's" dwellings (Woolley 1922: 64). It may have been the first area of the ancient city to be built (Kemp 1981: 88; AS: 48, Fig. 10, 69–70). The first systematic excavation was carried out by the Deutsche Orient-Gesellschaft at the

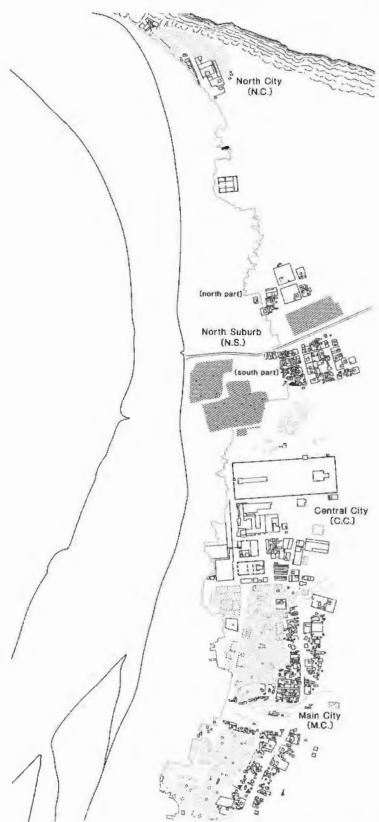


Figure 11.6. Map of the site of el-Amama showing the different areas of the city on which the analysis of pendant distribution is based.

beginning of this century. When the EES began work at Amarna in 1921, excavations in the Main City were continued under the direction of T.E. Peet, and then, in 1922, by C.L. Woolley, the results being published in COA I. Many of the buildings excavated between 1921-2 were small, often described as "unimportant" or "poor" houses by the excavators. A large number were also much denuded. In some cases the ancient buildings had also been damaged by "sebakh" diggers4 or by a water course which crossed the site (COA I: 4). On average, less than one faience pendant was found for each house uncovered. Further work was carried out in the Main City in 1923-4 by F.G. Newton and F.Ll. Griffith. This work remains largely unpublished, and the documentation is incomplete (AS: 30-3 reviews this chapter in the history of excavations at Amarna). It is nevertheless evident that the excavators found between two and three times more pendants in each house than the 1921-2 expeditions, implying that the houses excavated during the later seasons were less disturbed.

In contrast with the small number of pendants found at this site, faience moulds were common. Many of the houses excavated at this time contained moulds. The greatest numbers were found in buildings around the area marked as "Street C" on the published maps (COA I: Pl. 1). Nine moulds were found in house N49.38 and ten in M50.11. Woolley (1922: 64), commenting on the occurrence of such material, recognised the area as an "industrial quarter...a centre of glass and glaze manufacture. There were no factories; the workmen carried on their trade with the simplest of appliances in their own small houses and courtyards". This conclusion was supported by the discovery of a "glaze kiln" in building group M50.14 (COA 1: 19). It is therefore possible that the pendants found in these houses are debris from a manufacturing

industry, rather than from strings of jewellery.

The North Suburb

The North Suburb, like the Main City, was mainly composed of residential buildings. There appears to have been no concentration of a particular size of house (Kemp 1977: 128-9; also Figure 11.14 here), so that it is likely that people from all levels of Egyptian society lived here. The area appears to have been still under construction, or expansion, when the city was

abandoned (Kemp 1977: 136; AS: 47-9).

The first excavation in the North Suburb was carried out in 1926-7, under the direction of H. Frankfort. Work in the same general area was continued between 1928-32 by J.D.S. Pendlebury. Although the work of Frankfort and Pendlebury may have differed in quality, they both seem to have found similar numbers of pendants in the areas they excavated. It would therefore seem to be unnecessary to distinguish between the excavation records of different years when considering the North Suburb, at least for the purposes of this analysis. The North Suburb is the most thoroughly documented and published residential area found at Amama. The results of these excavations were published in COA II.

A number of faience moulds were also found in the North Suburb, mainly for the production of pendants. The moulds were concentrated in squares T33, T35 and T36. It is likely that these were the remains of a manufacturing quarter situated within private houses. The presence of such manufacturing areas undoubtedly had an influence upon the number and type of pendants found at the site. This has been considered separately in the section on the manufacture and general distribution of faience pendants. The records of moulds and pendants found at the site suggest that the North Suburb was relatively undisturbed before the EES began work here, in contrast with the Central City and the Main City. The remains of five necklaces and two near-complete collars were also found in the North Suburb.

The 1928-9 season at the North Suburb was the occasion on which the final faience jewellery corpus (as used in this article) was introduced. During the work in the North Suhurb prior to this time, faience pendants (along with all other faience jewellery) were drawn and numbered as small finds. When COA II was compiled, the earlier drawings of pendants were identified and listed using the new corpus designations. Unfortunately, any designs from the 1926-7 season which

Houses near the cultivation appear to have been more subject to destruction of this kind (Pect 1921: 170). They were also more likely to have been robbed by "treasure hunters" (Griffith 1924: 305).

While recent work on such kilns suggests that their main product may have been frits (Weatherhead and Buckley in AR V: 214-5), it is possible that the kilns may also have been used for faience.

were not already included in the new corpus were omitted. These "new" designs have been introduced into the corpus published in this article as part of the pendant series with an "X" prefix,

The excavation records for 1928–32 list pottery, faience jewellery, and inlays using corpus references. These lists of numbers often occupy more space in the excavator's notebooks than the written descriptions of the areas they excavated. With so many lists to collate, often in barely legible handwriting, it is not surprising that errors were made when copying this information for publication. Comparison of the excavator's field notes for the North Suburb with COA II shows that pendants were often either omitted from the published lists or incorrect corpus numbers were given.

The Central City

The Central City at Amama contained the main concentration of official buildings with a religious and administrative role. The main buildings found in this area were the Great and Small Aten Temples and the Great Palace complex, including the so-called "King's House". Eighteen minor buildings were identified by the excavators as private houses, along with a building complex known as the "Clerk's Houses", although this area may have had another function, such as a series of offices (Kemp 1981: 97; AS: 62).

The Central City area has been subjected to some illicit digging, presumably by local people searching for mud brick for use as fertiliser, or for saleable antiquities. Most of this activity appears to have taken place before Petrie began work in the area. The main buildings affected were the Great Palace, King's House, Records Office area, and parts of the two Aten temples (Kemp in AR III: 95). The first controlled excavations within the Central City were by Petrie, in 1891–2, where he exposed and planned part of the Great Palace, King's House, and the Great Temple. It is likely that he did not always excavate down to floor level in these buildings (Kemp, op.cit.: 95–6), so that part of the archaeological deposit remained for later excavators to recover.

The EES began work at this site in 1926-7 under the direction of H. Frankfort, and excavations continued here between 1931 and 1936 under J.D.S. Pendlebury. The results were published in COA III. The published records show that a considerable number of pendants were found, despite the earlier disturbances. The Great Palace and King's House excavations provide a rare opportunity to compare the records of pendants from a royal building with those from humbler residential areas.⁶ The excavations of Petrie near the Great Palace revealed the remains of "two large glazing works" (Petrie 1894: 25; this volume, p. 221). These have generally been assumed to be the remains of large, probably official, manufacturing areas. It is possible that the Central City, like the North Suburb and probably the Main City, also contained smaller manufacturing areas. Faience moulds appear more widely distributed in the Central City than in the North Suburb. Two concentrations may, however, be significant. The greatest concentration was found in the area of the Records Office and its surroundings. Eleven were found in house O42.1, although they may have come from ruhbish pits within the courtyard (COA III: 113). It is possible that they were from a manufacturing quarter similar to that found in squares T35-6 in the North Suburb, though probably smaller in size. The second grouping of moulds was found in building P43.1, magazines to the south of the Small Aten Temple. If faience production took place here, perhaps this represents the remains of an official manufacturing area.

The number of pendants found in buildings in the Central City is generally similar to that found in the North Suburb. However, the temples in this area produced relatively few pendants. This is probably due to two factors: the lack of debris arising from occupation, and the excavating techniques of the 1930s. Recent work at the Small Aten Temple has shown that the spoil heaps from the earlier excavations contained both pendants and faience moulds.

The excavations of 1931-6 used the faience jewellery corpus virtually unchanged. A small number of new designs were added, although, to judge from the photographic records, a larger number of new designs remained outside the corpus. The published record of the pendants found in the Central City in COA III contains a small number of incorrect corpus entries, but the records are far more accurate than those in volume II.

As stated earlier, for various reasons it was not possible to include Maru-Aten, the North Palace, or other large official buildings in this analysis.

The North City

The excavated area of the North City is bounded on two sides by the remains of large official buildings. To the north was the North Administrative Building, while to the west was the North Riverside Palace. Neither building was completely excavated and they produced relatively few faience pendants. These buildings were not included in this analysis. The remainder of the excavated area was a group of buildings opposite the North Riverside Palace. Due to their position, these buildings have been interpreted as housing for courtiers (Kemp 1989: 276; AS: 43). The buildings were excavated between 1930–2 under the direction of J.D.S. Pendlebury, and the results are due to be published as part of a future COA volume.

The area of the North City used for this analysis consists of twenty-three separate buildings. Aerial photographs taken before the EES work show that a fair degree of disturbance to the site had taken place before excavations started (Kemp: pers. comm.). All of the buildings contained pendants, but no faience moulds were found.

11.8 Manufacturing areas and their possible effect upon the distribution of faience pendants

The records from the earlier work at Amama show that the majority of faience moulds were found within the private housing of the city. Although any further evidence for faience production, such as kilns or firing errors, was rarely noted, it seems reasonable to postulate that large groups of moulds indicate the presence of a faience manufacturing area.

In an attempt to discover what influence, if any, such manufacturing areas might have had upon the distribution of faience pendants, the find spots of moulds and pendants were plotted on to maps of the site. It became apparent that faience moulds were concentrated within specific areas of the city, often within groups of small interconnected houses. This pattern is particularly clear in the case of the North Suburb, and for this reason a detailed study of the area has been included here.

Manufacturing areas in the North Suburb

Most of the moulds found were for the production of faience pendants, perhaps not surprising when it is considered how many were needed for a faience collar or necklace. The main concentration of moulds was found in excavation squares T35/6, particularly in the western half of square T36 (Figure 11.10). It therefore seems likely that this was an industrial quarter, possibly originally extending into square S36, although this area has been lost through modern cultivation. A smaller group of moulds was found in squares T33/4. This area was separated from square T35 by a water course or wadi. It may originally have been one continuous group of houses. The only other group of moulds was found in the vicinity of square V37.

The greatest concentrations of faience jewellery were also found in squares T33/4 and T36/7. In general, buildings which contained large numbers of moulds were connected with buildings which had an unusually large amount of faience jewellery. The distribution pattern of faience pendants is similar, with high numbers of pendants (fifteen or more) occurring in buildings in the proposed manufacturing area (Figure 11.11). The same areas also contained most of the groups of pendants of the same design, along with many of the "necklace" strings identified by the excavators (Figure 11.12).

Such high concentrations of jewellery may be explained in several ways. If faience was being manufactured in this area, then there may have been rubbish heaps nearby which contained malformed and unusable pieces (see Chapter 2 for possible evidence of this practice). While the excavators did not comment upon whether the faience jewellery they found was usable, an examination of pendants from the earlier work shows that firing errors were present. It is also possible that necklaces and collars were assembled in the workshop, and stored prior to marketing. Depictions of jewellery workshops from the New Kingdom appear to show that jewellery was made and assembled in the same general area (Davies 1943: 49, Pl. LIV).

It seems that the North Suburb was divided into two main areas. To the west of the "West Road" is a fairnce manufacturing area perhaps originally extending from square T33 to square T36. To the east is what might be termed a "market area". It is possible that the small numbers of moulds found in squares U36 and V36/7 may indicate that isolated workshops were located

here, although there is no corresponding concentration of faience jewellery to reinforce this idea. If another manufacturing area was present, then the five moulds grouped in the area to the south of square V36 and the beginning of square V37 may be significant. They could be the traces of a

second manufacturing area located in the unexcavated ground to the south.

Manufacturing areas appear to have had a definite effect upon the distribution of faience jewellery. A number of conclusions can be reached which affect the analysis of the distribution of faience pendants. When groups of pendants of the same design are found, they cannot automatically be assumed to be from the same item of jewellery. They may be material from a manufacturing area which was discarded, perhaps over a period of several years. Even when a necklace or collar was found intact, it may have been stored in a manufacturing area and never worn by an occupant of the house. In addition, any work involving the relationship of the number of pendants found in a house to the house size (as a crude indicator of status) appears invalid. The only definite factor affecting the number of pendants found in a building appears to be its proximity to a manufacturing area.

11.9 The frequency of occurrence of collar and necklace pendants

The results from most areas of the city show that collar pendants were found more frequently than necklace pendants (Figure 11.7). The only area where necklace pendants were in the majority was in the Main City. As stated earlier, relatively few pendants were found in this area, as it had been disturbed before the 1921–2 excavations took place. The results may therefore be unreliable. The figures from the North Suburb and North City, which show a similar ratio of collar to necklace pendants, may be more representative for residential areas at Amama. The results of the North City work should, however, be used with caution, as only a small excavated

area was used for this analysis.

The Central City area contained the greatest proportion of collar pendants. This may be partly due to the presence of official buildings which contained a large proportion of collar pendants. If necklaces were worn in daily life, while collars were worn during festival or ritual events, then necklace pendants might be expected in greater numbers in residential areas, while collar pendants should be in the majority in palaces and temples. The results could also show an increased demand for collars in the Central City, where ceremonial occasions were presumably frequent. Overall, the results appear to suggest that collars were more common than necklaces. The actual frequency of collars and necklaces is much more difficult to assess. The longest necklace from Amama (which may have been incomplete) contained 59 pendants (Fig. 11.1) while the largest collar contained 304 (COA II: Pl. XXXVI.1). There is not enough evidence to show whether these figures are representative for most of the collars and necklaces worn at Amama. Most of the collar terminals found at the site suggest that the majority of collars were smaller, with two or three rows of pendants.

Other factors may also have affected the number of pendants which were lost or discarded. Most of the necklaces found at Amama use the same design of pendant throughout, while the largest collar found at the site contains seven different designs (COA II: Pl. XXXVI, 1). It is possible that a house which contained five different collar pendants but only two different necklace pendants could be interpreted as showing the remains of one collar and two necklaces.

Collar pendants were held in place by two suspension beads, one at the top and one at the base, while necklace pendants had only one at the top. As a consequence, broken collar pendants were far more likely to remain within the overall construction than were necklace pendants. In addition, a necklace composed of one row of beads and pendants could easily be repaired and damaged pendants replaced. Collars, however, were constructed so that each row of pendants was connected with any row immediately above or below. To remove a pendant in the centre of a collar, one terminal would have to be detached and half of the collar completely dismantled. It seems likely that collars were worn with broken or missing pendants.

The excavation policy of the earlier teams working at the site may also have affected the number of collar and necklace pendants found. The excavators concentrated upon clearing buildings rather than exposing less productive (in terms of finds) open spaces and thoroughfares. These areas may well have been where most festivals took place and collar pendants were most

likely to have been lost.

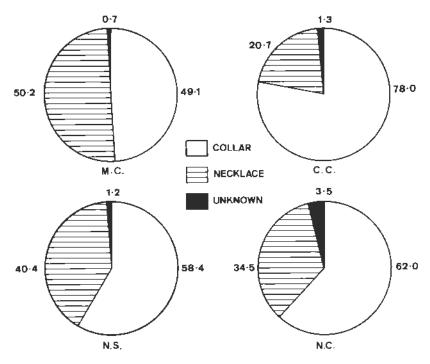


Figure 11.7. The distribution of collar and necklace pendants in the four main areas of the city. Numbers show the groups as a percentage of the total.

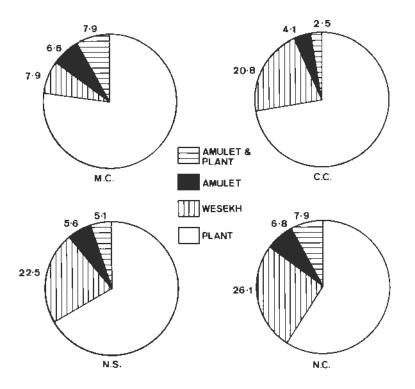


Figure 11.8. The distribution of different collar pendants in the four main areas of the city Numbers show the groups as a percentage of the total.

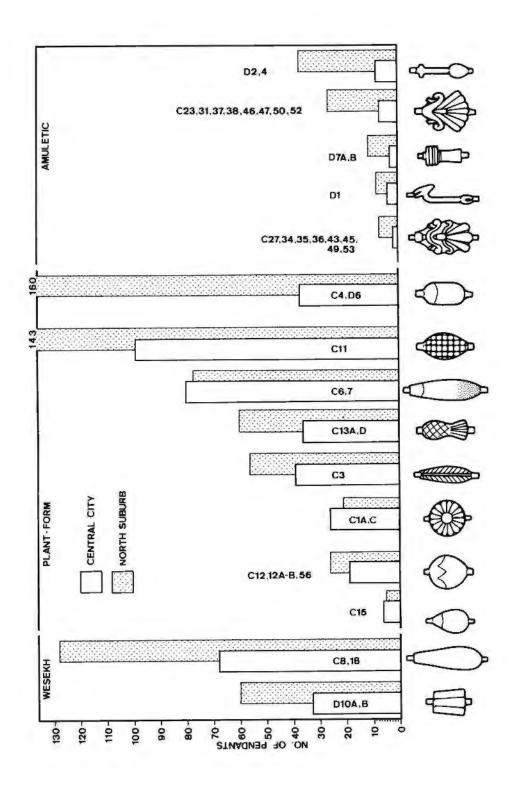


Figure 11.9. The most common designs of collar pendant from the North Suburb and Central City.

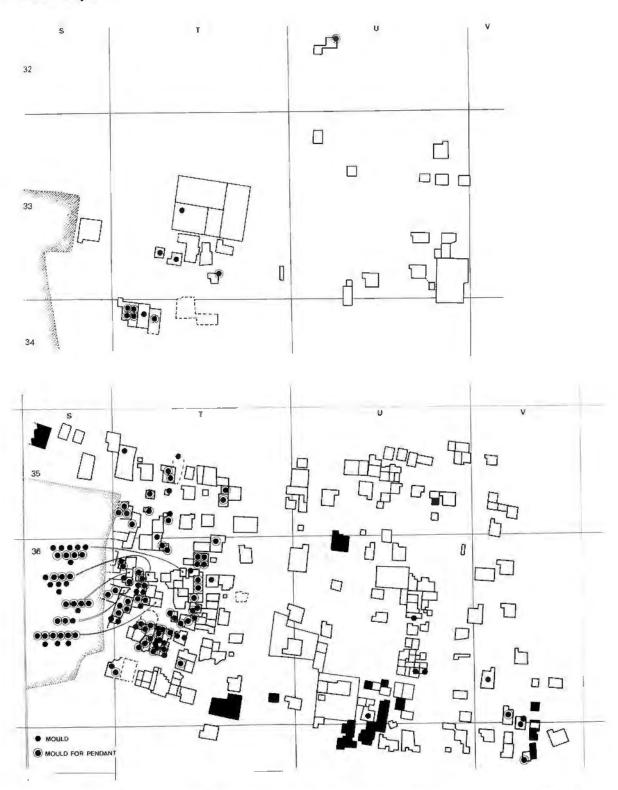


Figure 11.10. The distribution of moulds in the northern and southern parts of the North Suburb (after COA II: Pl. II). Houses shown as solid black are those for which records do not survive. The main grouping of moulds in squares T35 and T36 is believed to indicate a manufacturing quarter. This may originally have extended to include the buildings in squares T33 and T34.

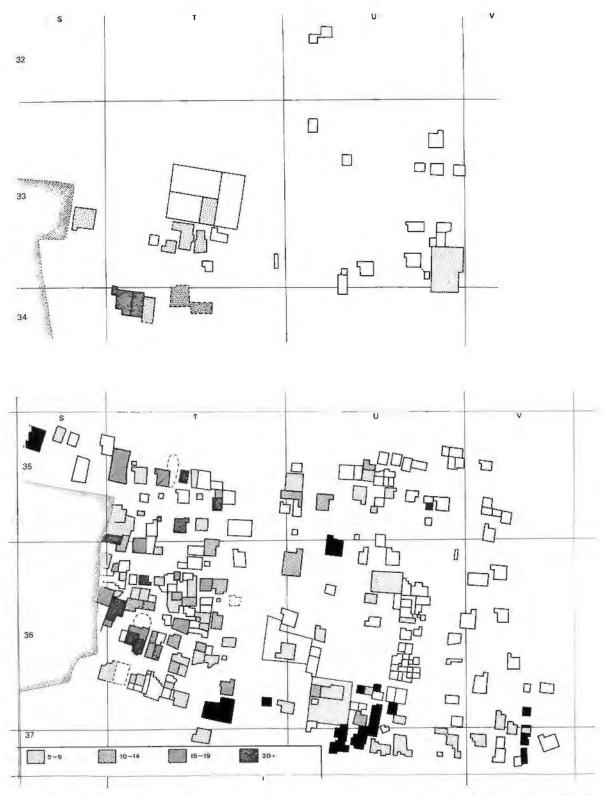


Figure 11.11. The distribution of faience pendants in the northern and southern parts of the North Suburb (compare with Figures 11.10 and 11.12). A similar pattern can be created if all forms of faience jewellery are plotted on to the same map (compare with Figures 11.10 and 11.12).

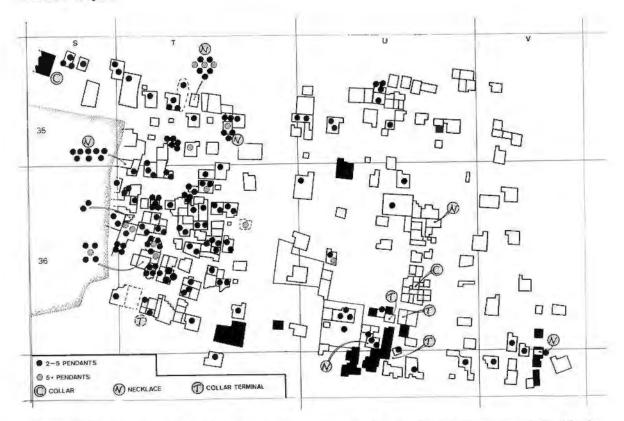


Figure 11.12. Concentrations of pendants of the same design in the southern part of the North Suburb (compare with Figures 11.10 and 11.11). Surviving collars, necklaces, and collar terminals are also indicated.

Due to the number of factors involved, it is difficult to assess the number of collars and necklaces represented by this material. Even if this is possible, there remains the question of time. The material may have been deposited over a number of years. Without information on the exact find spots of the material, this becomes very difficult to assess. It is hoped that some form of statistical analysis will be possible with this material, and any results obtained by this method will be included in a future article.

11.10 Collar designs at Amarna

In the introduction to this article (Section 2) it was stated that three main designs of collar are known from the later New Kingdom: the wesekh, amuletic, and plant-form. In an attempt to gauge how common each of these designs may have been at Amama, the total number of pendants which may have originated from each collar was calculated. The results of this work, from the four analysed areas of the city, are given in Figure 11.8. The diagram shows the possible distribution of each type of collar pendant, along with an additional category for pendants which may have been used in both plant-form and amuletic collars.

The two largest samples used in this analysis are from the North Suburb and the Central City. The results from these areas are therefore likely to be the most reliable. To show which pendant designs may have been used in each type of collar, and to examine the results in more detail, the most common designs of collar pendant from the North Suburb and Central City have been shown (Figure 11.9). The designs have been grouped as wesekh, plant-form, and amuletic pendants. For the purposes of this analysis, a number of related designs have been incorporated under each heading, so that, for example, all the collar pendants depicting palmettes are grouped together.

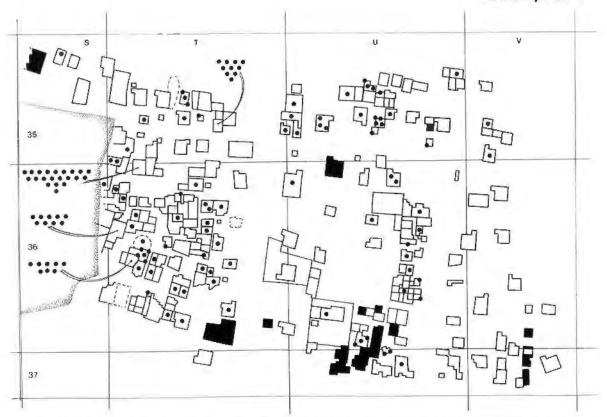


Figure 11.13. The distribution of pendant design C13b (?poppy seed-head) in the southern part of the North Suburb. Five moulds for this design were found in squares T35 and T36, along with one necklace length of 59 pendants in square T35. One necklace length using this design was found in square U36 (Figure 11.1g). Pendants of design C13b may also have been found in squares V36 and V37, although it is difficult to confirm this from the earlier records.

The results of the work shown in Figures 11.8 and 11.9 are likely to be misleading unless several factors relating to the original appearance of the collars and the excavators' recording methods are taken into account.

Wesekh-collars

The usual pattern of wesekh-collars consists of a number of rows of cylindrical beads, with an outer row of drop-shaped pendants. As the beads from the inner rows of such a collar would have been listed using the bead corpus, such pieces have not been considered in this analysis. It is not surprising, for this reason, that large drop forms greatly outnumber the multiple-cylinder pendants which may also have been used in this type of collar. The situation is further complicated by the representations of plant-form collars during the later Eighteenth and Nineteenth Dynasties with rows of cylinder and drop forms (Figures 11.2b and 11.2d here). No wesekh-collars have been found using multiple-cylinder pendants, and it is possible that they were only part of plant-form collars. The figures for large drop pendants used in this analysis are also unreliable, as (see Section 5, entry C16) a common form of necklace pendant, small drop C16, was generally also listed as design C8 or C18.

Plant-form Collars

Pendants depicting plant forms are the most easily identified group, which is also represented by the majority of faience collars surviving from the New Kingdom. All but one of the plantform collars which survive use the lotus-petal design as their outermost row or border, a feature common to most representations of plant-form collars in painting and relief. As one would expect,

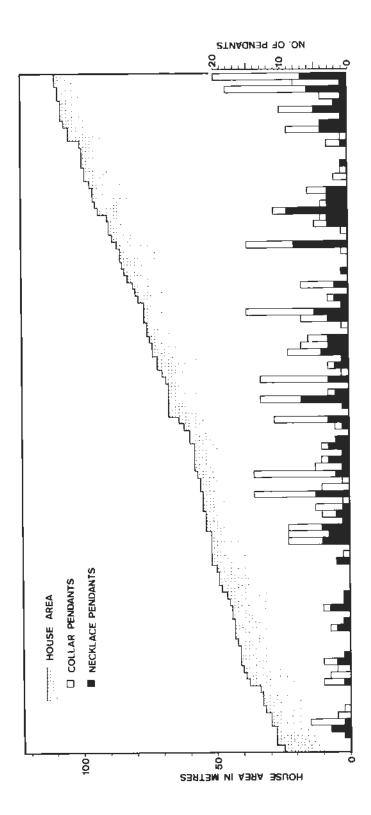


Figure 11.14a. Graph showing, (top) individual house areas from the North Suburb, in ascending order of size, with (below) the number of necklace and collar pendants found in the house.

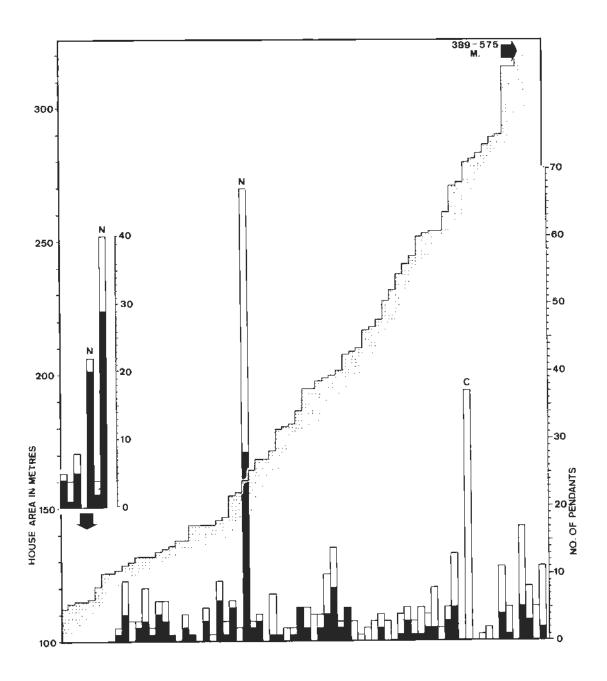


Figure 11.14b. Continuation of Figure 11.14 (a). Note that this graph starts from 100 square metres, not 0. The contents of the first five houses have been placed above the line indicating house size, for clarity. In both Figures 11.14 (a) and (b) it can be seen that the pendants contained within a house bear no relation to the house size. As stated earlier, the only factor which controls the number of pendants found in a house appears to be its proximity to a manufacturing area. The information on house areas used in this diagram was taken mainly from the unpublished MPhil dissertation of P. Crocker (1981, cf. Crocker 1985: 52-65).

lotus-petal designs (C6/C7) were a common find, although outnumbered by grape-bunch pendants in the North Suburb and Central City, and date pendants in the North Suburb. The date pendant was used in more than one row in several plant-form collars (e.g. Aldred 1971: Pl. 125) and this practice may account for the large number of date and grape-bunch pendants at Amama. Several of the plant forms — the poppy-bud (C15), comflower (C13a-d), and bunch of grapes (C11) — occur in one of the two plant-form collars from Amama but not in the other examples, which are all believed to be from Thebes. One design, the daisy flower (C1a-c), does not occur in any surviving collar. The presence or absence of certain designs in surviving collars may not be significant, however, as this may just be due to an accident of preservation.

Amuletic collars

The most common design in this section is the *nefer*-sign (D2/D4). While collars are known composed entirely of *nefer*-signs, this design was also used as a necklace pendant, so the actual number of collar pendants of this type may be considerably lower. *Nefer*-sign pendants occur in plant-form collars from the tomb of Tutankhamun (Cairo Museum nos. 945, 948; Carter inventory nos. 46B, 31U), while palmette designs are shown in representations of plant-form collars from the tomb of Tuiya and Yuia (Figure 11.2d here). It seems possible that, like the pendants identified as originating from *wesekh* collars, pendants from amuletic collars were also used in plant-form collars.

Due to the uncertainties affecting these data, it seems unwise at present to draw anything more than general conclusions. It is evident that plant-form design pendants (and, by inference, plant-form collars) form more than 50% of the total of collar designs at the site, and the figure may be far higher. While wesekh and amuletic collars may have existed at the site, they each account for perhaps as little as 5-7% of the total number of pendants.

11.11 Conclusions

The 1928–36 corpus of faience jewellery appears to have been designed with the sole purpose of recording large numbers of apparently repetitive finds quickly in the field. The main assumption underlying the corpus was expressed by Pendlebury: "As each house is excavated the objects which are found in it are registered on cards which give the number of the house. But it so happens that the bulk of the finds consist of beads, glazed rings, amulets and pendants which were made in moulds and turn up in such vast quantities that it would be a waste of time to register them separately" (Pendlebury 1935: xxvi). While any excavation cannot hope to publish full descriptions and illustrations of every find, some archival record is now considered necessary to allow for future work on the subject. The current policy of the Amama expedition is to make record drawings and describe all finds on record cards. A corpus has been introduced for beads, but they are still fully described and a number may be illustrated in the final report.

Because of the flaws in the earlier pendant corpus, it is not a useful reference for modern excavation reports. Perhaps the most useful corpus is the series of drawings published by Petrie in his excavation report (Petrie 1894: Pls. XIV, XVII–XX). The range of designs includes several common forms which were never incorporated into the later corpus, such as the large lotus petal 518, and the small drop 549–50. While the Petrie corpus does not distinguish between pendants and other forms in faience, the pendant section of the 1928–36 corpus also includes a number of designs which are not pendants.

The recording methods and standards of publication for faience jewellery varied widely between 1922 and 1936. The study and republication of faience jewellery from the earlier work would undoubtedly be a useful exercise. It is hoped, at the very least, to publish the corrected records of faience pendants from the North Suburb and Central City areas in due course.

Despite the limitations of the corpus, certain general distribution patterns are visible at the site, implying that further, more detailed work on the subject may prove fruitful. It is hoped to return to many of the topics approached in this article, notably the distribution of specific designs, manufacturing areas, and the original appearance of collars and necklace designs at Amama. It may also be possible to consider other aspects of the distribution of faience jewellery, such as the possible relationships between the finds from adjacent houses.

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