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## VORWORT DER REDAKTION

Der 27. RCRF-Kongress fand vom 19. bis zum 26. September 2010 im Nationalmuseum in Belgrad statt.  
Thema des Kongresses war: „LATE ROMAN AND EARLY BYZANTINE POTTERY: the end or continuity of Roman production?“.

Von den anlässlich des Kongresses präsentierten Postern und Vorträgen wurden folgende nicht publiziert:

- M. BERGAMINI,  
P. COMODI & I. FAGA            Scoppieto: La produzione di vasi a pareti sottili
- D. BERNAL CASASOLA, M. LARA  
MEDINA & J. VARGAS GIRÓN    Roman clay fishing weights in Hispania. Recent research on typology and chronology
- A. BIERNACKI & E. KLENINA    Red slip ware from *Novae (Moesia Secunda)*: 4<sup>th</sup>–5<sup>th</sup> local production and imports
- M. CASALINI                        Circolazione ceramica a Roma tra l'età delle invasioni e la riconquista bizantina. Nuovi dati dai contesti delle pendici nord orientali del Palatino
- Sv. CONRAD                         Pottery of the second half of the 3<sup>rd</sup> century from *Romuliana*
- T. CVJETIČANIN                    Late Roman pottery in Diocese Dacia: overview, problems and phenomena
- M. DASZKIEWICZ & H. HAMEL    Roman pottery from Baalbek (Lebanon): provenance studies by laboratory analysis
- J. DAVIDOVIĆ                      Late Roman burnished pottery from Srem
- E. DOKSANALTI                    The late Roman pottery from “the Late Roman House” in Knidos and the Knidian late Roman pottery
- D. DOBREVA                        Late Roman amphorae on the Lower Danube: trade and continuity of the Roman production
- D. DOBREVA & G. FURLAN       Progetto Aquileia: *Fondi ex Cossar*. Commercio e consumo ad Aquileia. Analisi delle anfore tardoantiche alla luce di alcuni contesti
- KR. DOMZALSKI                    Late Roman light-coloured ware: tradition and innovation
- P. DYCZEK                         Remarks on the so called legionary pottery
- A. JANKOWIAK & F. TEICHNER    A household inventory of a *Mirobrigensis celticus*
- G. KABAKCHIEVA                 Spätromische Keramik in den Provinzen *Dacia Ripensis* und *Moesia Secunda*
- T. KOWAL & J. RECLAW          Scientific Investigations – Program EU – Central Europe: The Danube Limes project
- J. KRAJSEK                         Late Roman pottery from *Municipium Claudium Celeia*
- J. LEIDWANGER                    Economic crisis and non market exchange: fabric diversity in the Late Roman 1 cargo amphoras from the 7<sup>th</sup> century shipwreck at Yassiada (Turkey)
- T. LELEKOVIĆ                      Pottery from the necropoleis of *Mursa* (1<sup>st</sup>–4<sup>th</sup> centuries)
- B. LIESEN                         First century fine ware production at Xanten (Germany)
- R. PALMA                         La ceramica dipinta di Schedia (Egitto)
- D. PARASCHIV,  
G. NUTU & M. IACOB            La ceramique romaine d'*Argamum (Moesia Inferior)*
- S. PETKOVIĆ                        Late Roman pottery from tower 19 of the later fortification of *Romuliana*
- P. PUPPO                         Ceramiche comuni di VI–VII sec. d.C. nella Sicilia occidentale: produzioni regionali ed importazioni dall'Africa settentrionale
- D. RADICEVIĆ                      Early Byzantine pottery from Liška Čava, near Guča (Western Serbia)
- D. RATKOVIĆ                      The territory of Serbia in Roman times
- CHR. SCHAUER                    Pottery of the late Roman and early Byzantine periods in Olympia

- G. SCHNEIDER & M. DASZKIEWICZ In-situ chemical analysis of pottery using a portable X-ray spectrometer
- A. STAROVIĆ & R. ARSIĆ Cherniakhovo-type ceramic vessels from NW Serbia and the question of inhabitants of the central Balkans in the late 4<sup>th</sup> century AD
- M. TEKOCAK Roman pottery in the Aksehir Museum
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- M. VUJOVIĆ & E. CVIJETIĆ *Mortaria* from Komini-*Municipium S.* (Montenegro)
- Y. WAKSMAN “Byzantine White Ware I”: from Late Roman to Early Byzantine Pottery in Istanbul/Constantinople
- I. ŽIŽEK Late Roman pottery in Roman graves in *Poetovio*

Bei der Korrektur und Durchsicht der Artikel stand mir das *editorial committee* zur Seite. Ganz besonders danke ich Philip Kenrick für die zuverlässige Unterstützung und Dieter Imhäuser (ars) für die gute und freundschaftliche Zusammenarbeit bei Satz und Layout.

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Susanne Biegert



Mohamed Kenawi

**BEHEIRA SURVEY: ROMAN POTTERY FROM THE WESTERN DELTA OF EGYPT****Surface pottery analysis – Kilns**

The Beheira Survey project started at the end of 2007 and ended in October 2010. The survey has documented 66 archaeological sites in six districts in the Western Delta of Egypt (fig. 1).<sup>1</sup> Among the sites surveyed there are 25 settlements where we did not find any architectural surface remains. Thus, the dates of these sites are based on the surface pottery collection. The intention of the Beheira Survey at the beginning was to collect all surface materials. Later it was found that this would be impossible for some sites because of the huge quantity of pottery fragments and long halfa grass. In order to not apply two different methods to the same region, it was decided to create at each site a single 20 × 20 m square, to locate this square by GPS, and to collect all the surface materials in it, counting and drawing the diagnostic pottery fragments. The reason for choosing the 20 × 20 m size was to give the best view of the materials at each site. The 20 × 20 m square is large enough to give a clear view of the materials on the site and can be compared with the other 20 × 20 m squares at other sites. Each 20 × 20 m area was located on the map to prevent any future mistakes and to allow others to continue the survey or to start an excavation on a systematic basis. In addition, horizontal grids/lines were created on each site with a distance of 10 m between them in order to be able to note all materials and/or hidden structures. We walked along these grid lines and any important evidence was collected, such as coins or glass. It is mentioned in the database if such extra materials were collected or not.

The following sites presented pottery fragments in a huge quantity without the presence of surface structures: Kom al-Debba (BS 14), Kom Wasit (BS 18), Kom Abu Ismail (BS 23), Abu al-Guduor (BS 24), Kom Abu Afrita (BS 25), Kom al-Bakara (BS 27), Kom Shimoli (BS 28), Kom Hamrit (BS 29), Abu Ali (BS 31), Kom Kamha (BS 32), Kom Abu Homar (BS 38), Kom Ahmer III (BS 39), Kom al-Mahar (BS 43), Rekawyia (BS 45), Ramadanyia (BS 46), Kom Konas (BS 47), Kom al-Medina (BS 49), Abu Agora (BS 51), Guzz (BS 52), Khatimi (BS 54), Ghasoli (BS 56), Kom al-Shoka (BS 57), Ashrin (BS 58), Kom al-Ahmer II (BS 59), and Shikh Saied Ahmed (BS 62).

**Kom Wasit (BS 18)**

Latitude: N31°10.496'; longitude: E30°27.351'; altitude: 6 m.

This site presents a very large quantity of pottery fragments spread over most of its surface (fig. 2). The condition of the fragments was notably poor because of the presence of salt in the soil. The date range of the pottery goes back to the Hellenistic period and does not extend beyond the 1<sup>st</sup> century AD. Many fragments of imported amphorae were found, especially from the Aegean. The surface pottery confirms the fact that for one reason or another life stopped there in the 1<sup>st</sup> century AD and moved to another area, probably Kom al-Ahmer I, which is situated 2 km south of Kom Wasit. Later materials have not been found at this site, while the presence of earlier, late dynastic, materials can be confirmed only by a systematic excavation, although the salty nature of the soil at the site will not help and may prevent complete recovery of the remains.

The most likely suggestion for the total abandonment of the site is the high level of Lake Edkou. Water may have affected life on the site in one way or another. It is certain that the site had a direct connection with the lake, as it was lying on the lake or there was a canal connecting the site to the lake, which suggests the possibility of a harbor here. It could be that the risk of a high water level, or the soil itself was affected badly by the salty ground water. Salty water affects the soil and causes bad damage to the mud brick structures, as it can be seen today on the remains of the mud brick structures. My impression of Kom Wasit is that it was totally covered by water, although this looks impossible because of its 6 m height. Such an abandonment must have been taken place by the beginning of the 1<sup>st</sup> century AD, a date suggested by the absence of pottery after this time.

**Kom al-Ahmer III (BS 39)**

Latitude: N30°55.940'; longitude: E30°26.666'; altitude: 5 m. The Kom lies 57 km SE of Alexandria, 2 km NE of Kom Umm al-Laban, 3 km west of Abu Homar, and 15 km NW of Naukratis.

The site lies 80 m south of Masraf Jabars and 360 m north of al-Furniyah canal, the two ancient canals in this area. It was visited for one day in July 2009. Unfortunately, the site was much reduced; the difference between the level of the mound and the pottery shards in the surrounding fields sug-

<sup>1</sup> KENAWI 2010, 177–193.

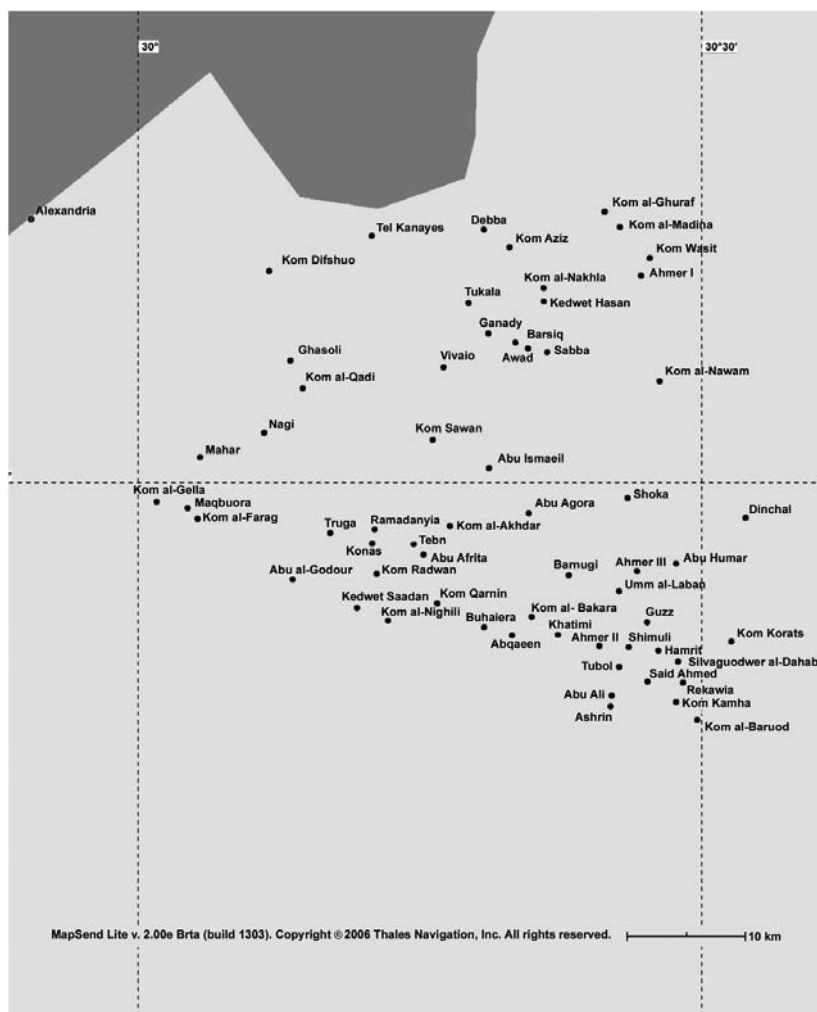
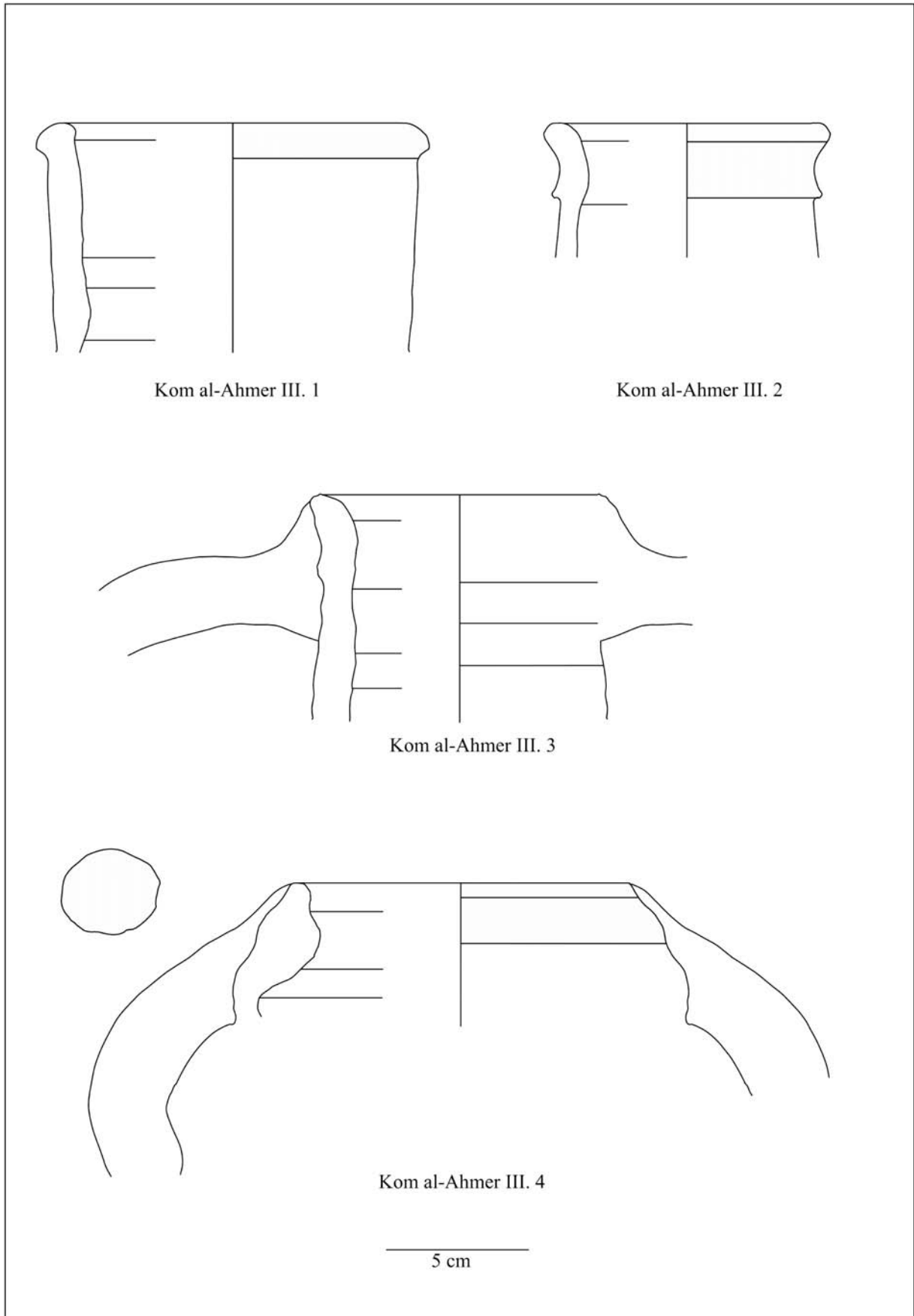


Fig. 1. The surveyed sites 2008–2010.



Fig. 2. Kom Wasit 2009. Pottery sherds cover most of the surface.



**Fig. 3.** Kom al-Ahmer III. Surface pottery collection.

gests that its original extent was much larger. The remaining part of the site still contains much important evidence for the original village/town. We found thousands of pottery fragments, glass, and a notable quantity of high-quality faience, around the cut section of the mound, all dated to the Hellenistic and early Roman periods (figs. 3–4). On the northern part of the mound lies a granite grindstone. On the leveled part to the south, remains of walls of mud brick were found.

### Pottery

The materials found at Kom al-Ahmer III are various and rich in date and quality. Fragments of Hellenistic glass and high-quality faience were found. Late Hellenistic fine wares and early Roman amphorae were collected. An Italian black ware (Ceramica Campana A) was found too. We found five handles of “Pseudo-Cos en cloche” (Agora M54), a late derivation of the Koan bifid-handle amphorae,<sup>2</sup> it is dated between the 1<sup>st</sup> and the 2<sup>nd</sup> centuries AD. This type is common in the Aegean and eastern Mediterranean. Its fabric is Cilician.<sup>3</sup> On the basis of the found pottery fragments, the site is dated between the 4<sup>th</sup> century BC and the 6<sup>th</sup> century AD.

The location of the Kom between two ancient canals and the high-quality materials found suggest the existence of huge commercial site here. The site was, and still is, connected via al-Furniyyah canal with Kom Umm al-Laban, al-Barnugi, and Kedwet al-Dahab. Probably, the site was connected to Naukratis and Dinshal too. The Italian black glazed ware is rarely found in the Western Delta, although other examples are found frequently in the famous commercial site of Naukratis.

### Kom al-Debba (BS 14)

Latitude: N31°11.880'; longitude: E30°18.439'; altitude: 6 m.

The Kom lies 35 km east of Alexandria, 19 km west of Rosetta branch, 13 km west of Kom al-Ahmer I, and 6 km north of Kom Tukala. Pottery fragments were collected from a 20 × 20 m area in the southern mound. Imported Cypriot red slip ware was found beside tons of local utilitarian pottery. We found some interesting imported amphora shards like a Tripolitania 1 rim dated to the 1<sup>st</sup> century AD. According to the pottery, the site dates between the 2<sup>nd</sup> century BC and the 7<sup>th</sup> century AD. Seventeen types were identified and categorized as a first step of a pottery database for the survey (fig. 5).

### Kilns

Two kilns were located in the Western Delta of Egypt, at Kedwet Hasan (BS 12) and Kedwet al-Dahab (BS 35).

### Kedwet Hasan

Latitude: N31°08.502'; longitude: E30°21.507'.

The site lies 436 m SW of Kom al-Nakhla (BS 11) and it is a secondary site. Originally, both sites formed one huge

village/town. The secondary site was discovered and located during the survey of Kom al-Nakhla and the surrounding fields. The site is small 160 × 50 m and was cut from all sides by the Sabakheen<sup>4</sup>. It was identified a kiln because of the wasters, kiln waste, melted clay lining and blackened kiln (fig. 6). It is attributed to amphorae production because of the huge quantity of amphorae fragments that were found.

The collected amphora fragments belong to the form AE2, a well known type that was produced in the Mariout area between the beginning of the 1<sup>st</sup> century BC and the end of the 1<sup>st</sup> century AD.<sup>5</sup> The kiln discovered at Kedwet Hasan is dated to the first half of the 1<sup>st</sup> century AD. Excavation is required for a better date of the area and to understand the type of kiln. AE2 is a typical amphora for wine trade and its capacity is 28 liters (fig. 7).<sup>6</sup>

The location of the site on the main route between various commercial locations documented, like Kom al-Ahmer I (BS 19) and Schedia, suggests a vital commercial activity for the ancient settlement. The ancient site composed of Kom al-Nakhla and Kedwet Hasan was probably the main supplying area for the well known site of Bisintawi.

We noted, during our second visit to the site, that the local farmers have removed a great part of the southern area of the site. Probably, the site will disappear in the next few years.

### Kedwet al-Dahab (BS 35)

Latitude: N30°51.601'; longitude: E30°29.854'; altitude: 2 m.

The second site where a kiln was located is Kedwet al-Dahab (BS 35), The Kom lies 65 km SE of Alexandria, 500 m SE of Kom Firin and on al-Furniyyah canal.

From 1980 to 1983 the site was subject to an intensive survey, followed by excavation of the central part by William D. E. Coulson and Nancy C. Wilkie as a part of the Naukratis survey.<sup>7</sup> An amphorae kiln was found with a lower furnace chamber and an upper firing chamber.<sup>8</sup> The discovery took place before the classification of the Egyptian amphorae by Empereur and Picon.<sup>9</sup> According to the published drawings of the kiln, the type of the amphorae at Kom al-Dahab is AE2, and the kiln is dated to the late 2<sup>nd</sup> century BC (fig. 8).

### 2009 Survey

The site was visited for one day in July 2009. The mound of the gold, as the site is called in Arabic, lies along the ancient canal of al-Furniyyah. The mound is brown in colour and its surface is composed of lime and sand. The mound is

<sup>2</sup> ROBINSON 1959, 89 pl.19.

<sup>3</sup> LEIDWANGER 2010, 9–14.

<sup>4</sup> ‘Sebakh’ is an Aramaic word meaning ‘dry land’; this term is used to describe decomposed organic materials that can be employed as soil fertilizer. Since the late 19<sup>th</sup> century, it became common practice in Egypt to cut and move the dry soil away from ancient villages and towns where the houses were built of mud brick. Because of such activity many important papyri were discovered in the Fayoum. (Some farmers still do such activity in the Delta.)

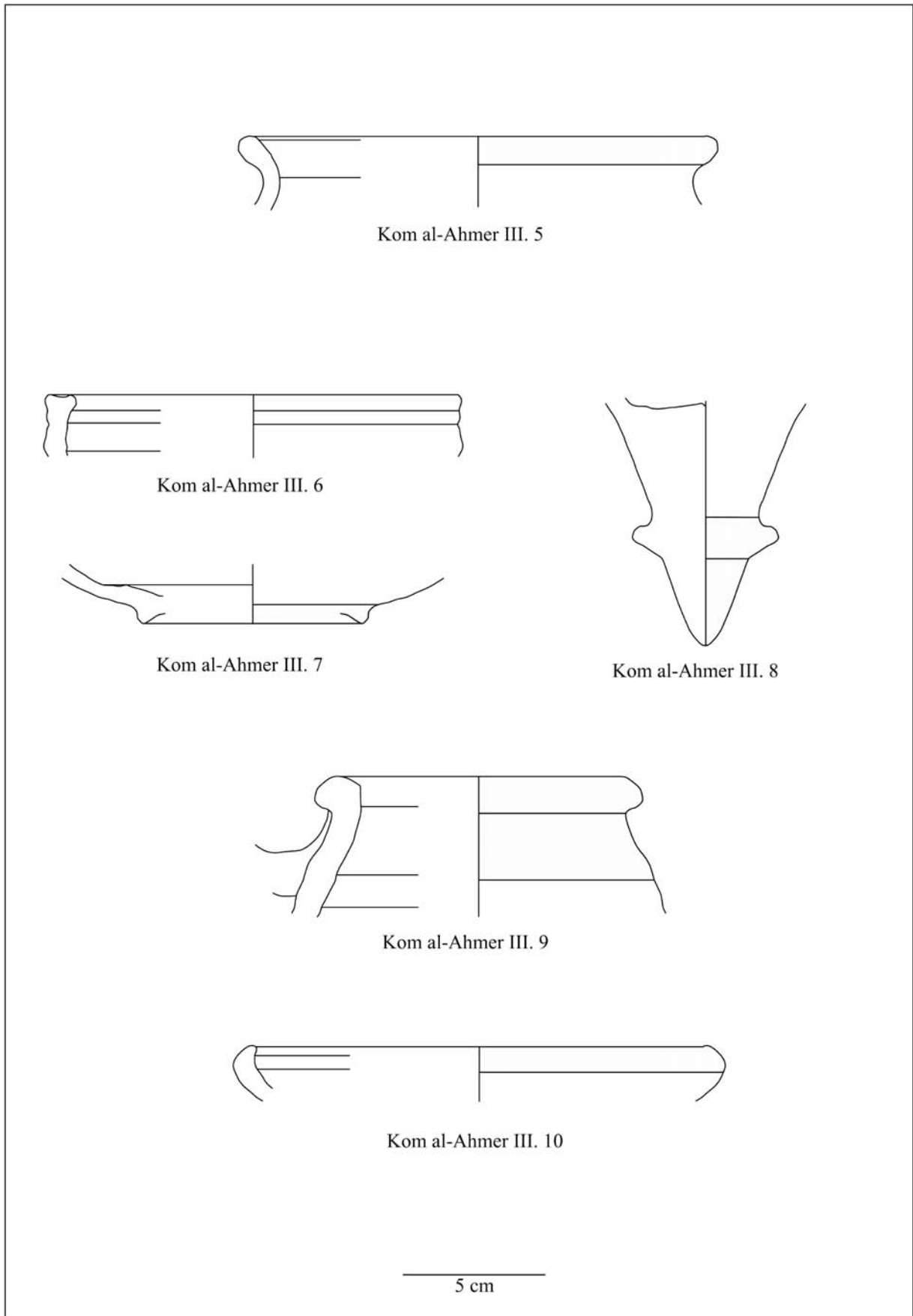
<sup>5</sup> EMPEREUR/PICON 1998, 75–90.

<sup>6</sup> LECUYOT 2007, 377–387; BRUN 2007, 505–523.

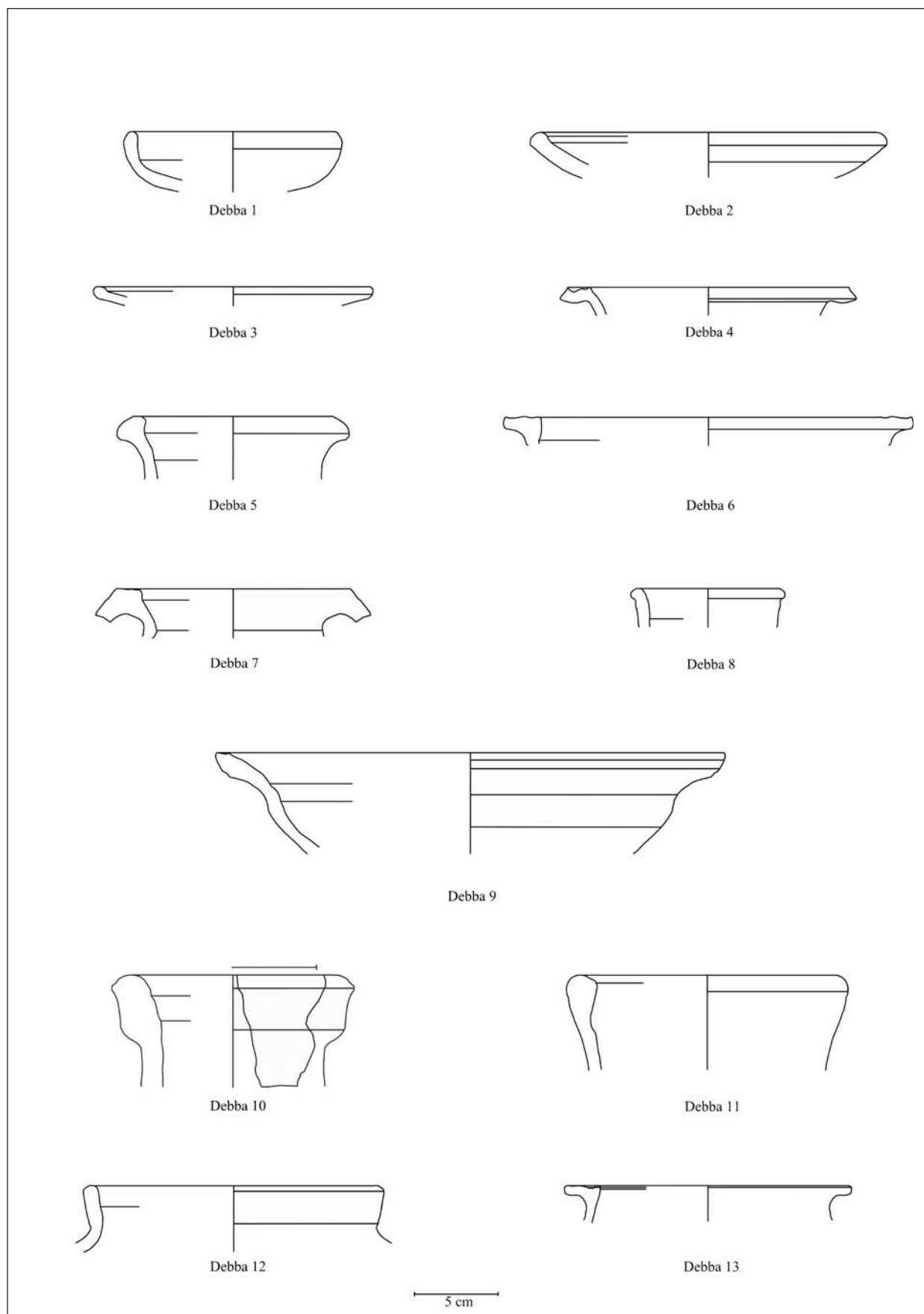
<sup>7</sup> COULSON/WILKIE 1986, 66.

<sup>8</sup> Similar structures are still functioning at Gazair Isa village.

<sup>9</sup> EMPEREUR/PICON 1998, 77.



**Fig. 4.** Kom al-Ahmer III. Surface pottery collection.



**Fig. 5.** Kom al-Debba. Pottery collection.





**Fig. 6.** Kedwet Hasan 2009. Kiln waste and melted clay lining.

undisturbed by modern buildings. The position of the kiln is not clear, as it seems that it was buried at the end of the excavation. A few pottery fragments of amphorae type AE2 were found. The paucity of the pottery may be the result of the intensive survey collection of the site in 1982.

The date of the site, based on remains found, lies between the 2<sup>nd</sup> century BC and the 2<sup>st</sup> century AD. The site probably remained in use after the 1<sup>st</sup> century AD, but because of the lack of surface finds it is not possible to ascertain this. The site is connected to the occupation of at Kom Firin which continued until the 6<sup>th</sup> century AD.

The position of the mound along the ancient canal and the function of the site as a kiln suggest a huge production area for amphorae. The workers must have lived at Kom Firin, the main city in the area. Thus, Kedwet al-Dahab was an industrial area of Kom Firin; there are no domestic structures here. Probably, the amphorae were shipped empty directly to other production areas and later to Alexandria. This can be compared with one of the last sites, which still produces pots, nearby “Gazair Isa”.

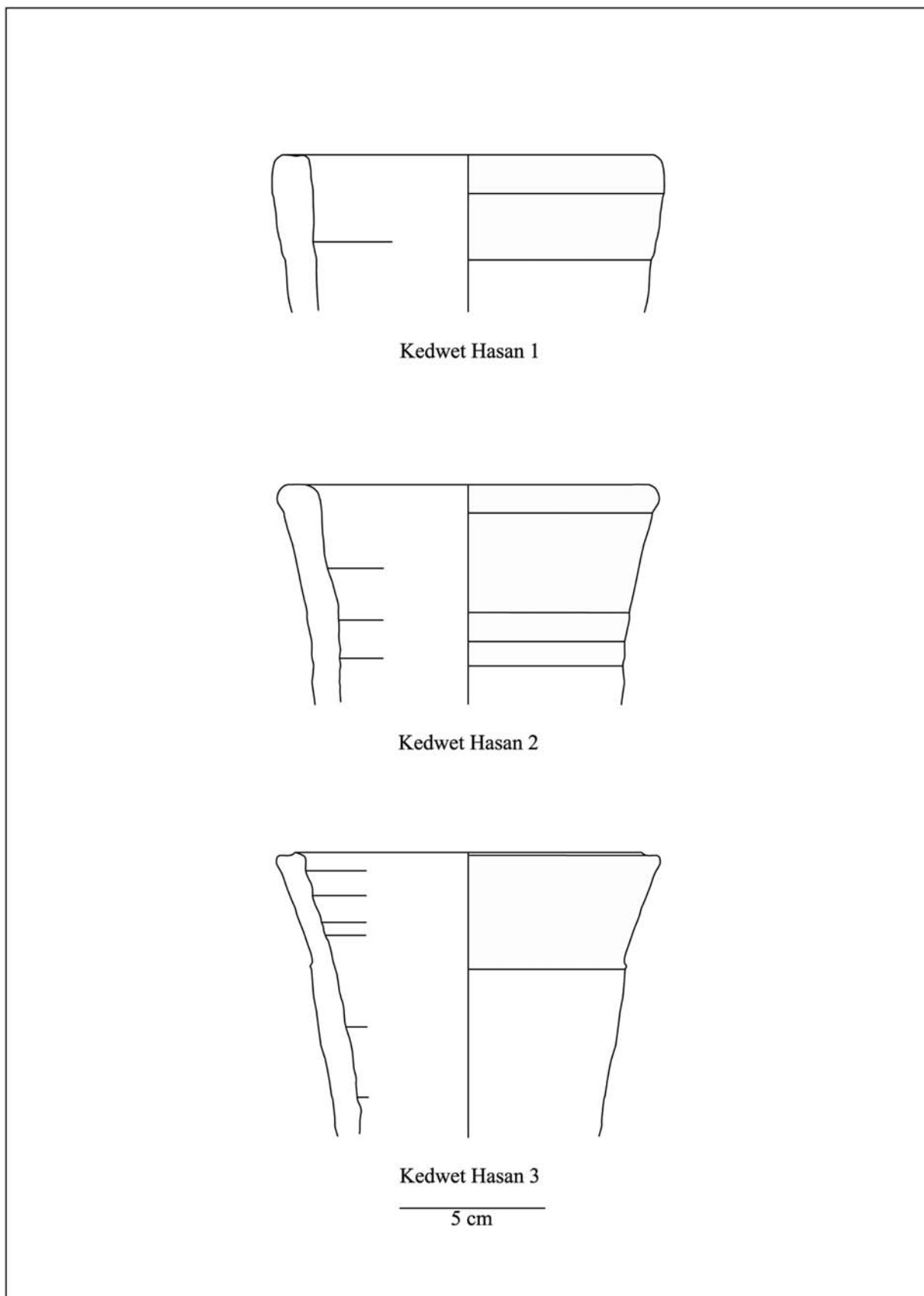
### **Past and present**

Pottery manufacture with traditional methods is still alive in the Western Delta of Egypt. In spite of the modern technology, Gazair Isa (**fig. 9**) still produces typical pots for different uses. The pots are used in building pigeons towers and to store fresh water.

The survey in the Western Delta of Egypt has proven the importance of the region as an economical centre in the Hellenistic and Roman periods. In the region there are eight wine production centers, an olive oil industry, Roman villas, pottery kilns, necropoleis, and may be the capital of the nomos Metilis can be located here. However, further investigations are required as soon as possible before the total destruction of the sites.<sup>10</sup>

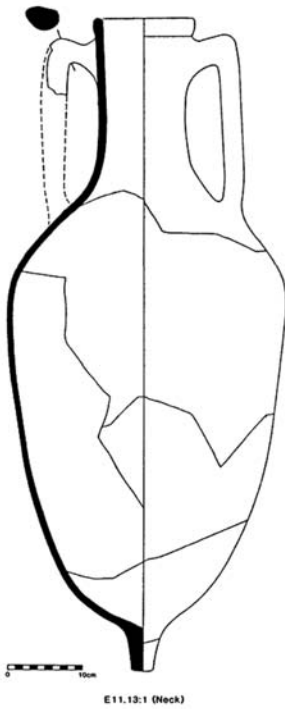
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**Fig. 7.** Kedwet Hasan. Amphora type AE2 and its variants.





**Fig. 8.**

**Fig. 8.** Kedwet al-Dahab. AE2 Amphora (after COULSON/WILKIE 1986, 73 fig. 20).



**Fig. 9.**

**Fig. 9.** Gazair Isa kilns 2009.

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