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ABBASID LUSTRE WARES IN
THE EGYPTIAN CONTEXT

BY

ROSALIND A. WADE HADDON

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ABBASID LUSTRE WARES IN THE EGYPTIAN CONTEXT

by Rosalind A. Wade Haddon

A thesis submitted to the faculty
of the American University in Cairo
in partial fulfillment of the
requirements for the degree of
Master of Arts in Arabic Studies

Cairo

1991

SPCL

Thesis

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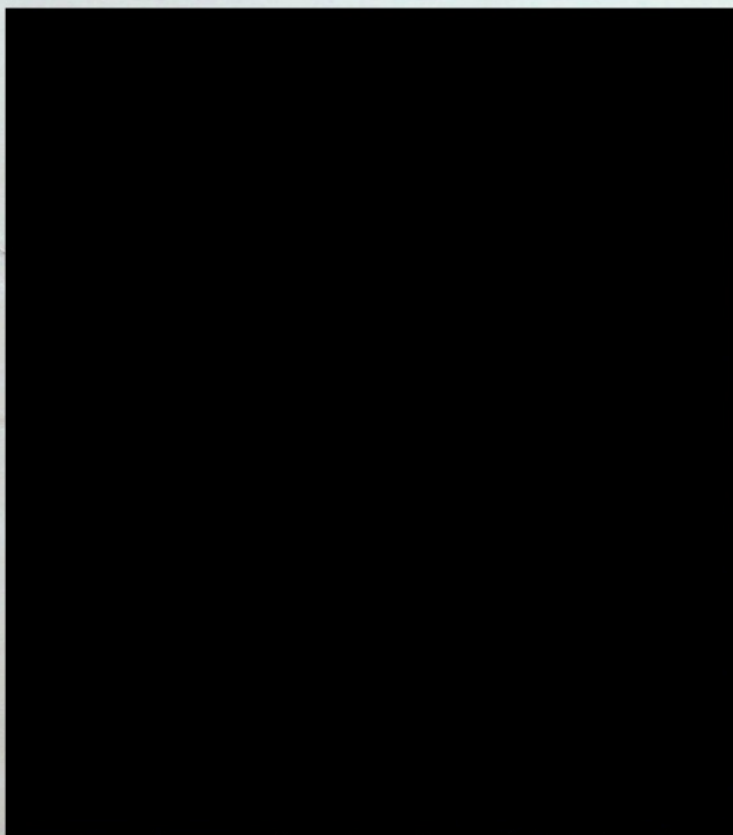
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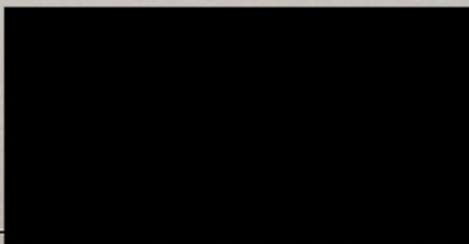
Rosalind Anne Wade Haddon

Has Been Approved

January 1992



Reader, Thesis Committee



Chairman, Department of Arabic Studies

For William and Rupert who patiently and generously
allowed me to complete these studies

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NOTES ON TRANSLITERATION AND DATES

The text follows the system of transliteration as detailed in the *Encyclopaedia of Islam*, with a few exceptions:

jim = j and dj

qaf = q and not k

When dates are given, the first quoted is the *hijrah* date, and the second that of the Christian calendar, e.g. 341/952 = 341 AH and 952 AD.

When mentioning the centuries, in most instances only the Christian one is quoted, for the purposes of brevity. Therefore, when the "tenth century" is mentioned, it is roughly equivalent to the fourth century AH.

ABBREVIATIONS USED IN THE TEXT

AARP = Art and Archaeology Research Papers

ADAJ = Annual of the Department of Antiquities, Jordan

AI = Ars Islamica

AO = Ars Orientalis

Asaro et al. Provenance = F. Asaro, J.D. Frierman, H.V. Michel: "The provenance of early Islamic lustre wares", AO 11 (1979): 111-26.

Bahgat/Massoul Musulmane = A. Baghat and F. Massoul: *La Céramique Musulmane de l'Egypte*, (Cairo, 1930).

Benaki = H. Philon: *Early Islamic Ceramics: Ninth to Late Twelfth Centuries*, (London, 1980).

ET¹ = *Encyclopedia of Islam*, first edition.

ET² = *Encyclopedia of Islam*, second edition.

Fatimid-Saljuq = G.T. Scanlon: "A note on Fatimid-Saljuq trade" in *Islamic History 950-1150 AD*, ed. D.S. Richards, (Oxford, 1973): 265-274.

Hitti: *History* = P.K. Hitti: *History of the Arabs*, 10th ed. (London, 1980).

Keir = E. Grube: *Islamic Pottery of the Eighth to the Fifteenth Century in the Keir Collection*, (London, 1976).

Kubiak: *Fustat* = W.B. Kubiak: *Al-Fustat: Its Foundation and Early Development*, (Cairo, 1987).

JARCE = *Journal of the American Research Centre in Egypt*

JEA = *Journal of Egyptian Archaeology*

JOS = *Journal of Oman Studies*

JRAS = *Journal of the Royal Asiatic Society*

Lane EIP = A. Lane: *Early Islamic Pottery* (London, 1947).

Maqrizi: *Khitat* = al-Maqrizi: *Kitab al-Mawa'iz wa al-I'tibar bi Dhikr al-Khitat wa al-Athar*, 2 vols, (Bulaq, 1270/1853 - Dar al-Sadar reprint, Beirut).

OA = *Oriental Art*

Pézard *Céramique* = M. Pézard: *La Céramique Archaique de l'Islam*, (Paris, 1920).

PSAS = *Proceedings of the Seminar for Arabian Studies*

Sarre *Keramik* = F. Sarre: *Die Kermik von Samarra*, (Berlin, 1925).

Scanlon/Kubiak *Redating* = G.T. Scanlon and W.B. Kubiak: "Re-dating Bahgat's houses and the aqueduct" *AARP* 4 (December 1973): 138-48.

Scanlon *Pits* = G.T. Scanlon: "The pits of Fustat: problems of chronolog" *JEA* 60 (1974): 60-78.

Scanlon *Reconsiderations* = G.T. Scanlon: "Fustat: archaeological reconsiderations" *Colloque International sur l'Histoire du Caire*, (Cairo, 1972): 265-274.

Schnyder = R. Schnyder: "Tulunidische lüsterfayence", *AO V* (1963): 49-78.

SPA = A.U. Pope and Ph. Ackermann (eds): *A Survey of Persian Art*, (Oxford, 1939), 10 vols.

Tampoe *Siraf* = M. Tampoe: *Maritime Trade Between China and the West: an Archaeological Study of the Ceramics From Siraf (Persian Gulf), 8th to 15th Centuries AD*, BAR International Series 555, (Oxford, 1989).

ABSTRACT

'Abbasid lustre wares in the Egyptian context have long been referred to and categorised as pre-Tulunid, Tulunid and Ikhshidid; an understandable terminology that entered the literature when 'Ali Bahgat and his colleagues were establishing the chronological sequences for the artefacts in the then Arab Museum in the early 1900s. They seemingly measured wares of varied qualities with the historical success of each period, thus fine wares were attributed to the Tulunids, relatively good quality ones to the Ikhshidids and the least decorative to the pre-Tulunid period.

This nomenclature was used into the 1960s, when it began to be questioned by Scanlon and his colleagues in their excavation reports on their work at Fustat. The diagnostic yellowish, compact, untempered body was recognised as an Iraqi import. Subsequent scientific analysis demonstrated that similar wares from other sites in the Dar al Islam had a common fabric. Basrah has now been conclusively proven to be the site of manufacture for this ware.

Using this information, this thesis explores the current state of knowledge on these early Islamic wares, and traces the historical development of 'Abassid Egypt, and contemporary trade through ceramic finds. Various collections with a known Egyptian provenance were studied to demonstrate both the uniformity of the body and the design repertoire.

INTRODUCTION

The subject of the so-called "Samarra horizon"¹ is a highly emotive issue and one that is of necessity raised with each new excavation in ninth and tenth century Islamic occupation levels. The German excavations at Samarra before 1914 and the subsequent publication of the ceramic finds², has been frustrated by the lack of a final excavation report, and the seeming lack of stratigraphy.

Subsequent scholars reporting on the subject³, and similar finds from other sites⁴, assumed a fixed chronology, by virtue of the caliphal occupation being known to cover the period 221/836-269/883. A chronology by colour and design was quickly established by Kühnel⁵, which was complemented by the accepted dating of polychrome and bichrome lustred tiles in the *mihrab* of the Great Mosque in Qairawan, present-day Tunisia⁶, as being 247/861-2, which suggested a dating of circa 860 for the introduction of bichrome lustre.⁷ It was not until Dr G.C. Miles⁸ published an article in 1954, revealing that the Samarra mint continued in production until 341/952, that scholars seriously began to doubt the value of the assumed fixed chronology for the type site.⁹ More recent work by a British team at Samarra confirms this continued occupation.¹⁰

Islamic levels on Egyptian sites have revealed considerable quantities of sherds included in the Samarra horizon. Indeed, it is one of those curiosities of research that Koechlin¹¹ first recognised these so-called Samarra lustre sherds at Fustat in 1889; he appreciated that they differed in both design and body from Fatimid lustre wares. The following year he found an identical ware in a collection from Fustat in the Victoria and Albert Museum, London, and no manufacturing provenance was assigned until the Samarra excavations. Vignier, who reported Koechlin's comments, along with Koechlin himself,¹² preferred Rayy, as he recognised that the wares his brother was excavating there were also identical. Subsequently a local manufacture for many of these sherds found in Egypt has been assumed,¹³ and it is the purpose of this thesis to demonstrate that in the case of the lustre wares this is erroneous. An Iraqi manufacture is proposed, and in consequence it seems appropriate to include a discussion on trade, demonstrating the extent of contemporary communications.

The Chinese influence on the shapes of these wares has always been accepted, but lack of precise knowledge on the Chinese kiln sites has lead to some misleading conclusions. In the light of recent research, it is hoped to clarify the situation, and a section on this aspect will be included.

Such a study cannot ignore the history of the period, or the contemporaneous state organisation. These will be investigated, and followed by a thorough examination of the ceramics. Before the Egyptian finds are discussed, the history of the relevant sites will be outlined. A special emphasis will be placed on the recent scientific investigations at Fustat.

In addition to a study of the collections in the Islamic Museum and Cairo University, visits were made to the Victoria and Albert, British and Ashmolean Museums. The appendices will include a catalogue of those pieces considered relevant to the discussion.

This study will not explore the iconography or decoration; the diversity of motifs has been well catalogued and illustrated by Dr Philon¹⁴ and the numerous articles on the iconography demonstrate how difficult it is to assess both convincingly and categorically.¹⁵ Such studies are too conjectural, and lack the necessary documentary support.

NOTES TO INTRODUCTION

1. D. Whitehouse: "Islamic glazed pottery in Iraq and the Persian Gulf: the ninth and tenth centuries", *Annali Napoli* 39, NS XXIX (1979): p. 45, viz. "...scholars believed that the pottery published by Sarre (see note 2 below) belonged exclusively to the period from 836 to 883 and provided the type-fossils of a ninth century "Samarra horizon", which could be used to date sites and stray finds elsewhere in the Middle East." These are both Islamic and Chinese wares: Islamic - white glazed pots and tiles (plain, lustred or painted with cobalt blue); colourless glazes splashed or mottled with green and yellow brown; sgraffiato; and a far higher proportion of unglazed earthenwares. Chinese - T'ang white wares, some of which are splashed *sancai* or three colour wares.
2. F. Sarre: *Ausgrabungen von Samarra II: Die Keramik von Samarra*, (Berlin, 1925).
3. Directorate General of Antiquities, Iraq: *Hafriyyat Samarra 1936-39* 2 vols, (Baghdad, 1940).
4. See H. Philon: *Early Islamic Ceramics*, (London, 1980): p. 63, notes 6 and 7 and M. Tampoe: *Maritime Trade Between China and the West* (Oxford, 1989): 105-116 for a listing of the more recently investigated sites, for an indication of the wide distribution.
5. E. Kühnel: "Die Abbasidischen lüsterfayencen". *AI I* (1934): 152.
6. G. Marçais: *Les Faiences à Réflets Métalliques de la Grande Mosquée de Kairouan*, (Paris, 1928): p. 10.
7. A. Lane *EIP*: p. 15.
8. G.C. Miles: "The Samarra mint", *AO I* (1954): 187-91.
9. D. Whitehouse: *op. cit.* p. 46.

10. R. Falkner: *Report on the Surface Pottery from the 1986 Survey Season at Samarra'*, unpublished manuscript dated 13 August 1989.
11. C. Vignier and R. Fry: "New excavations at Rhages", *Burlington Magazine* 25 (July 1914): 211.
12. R. Koechlin: "Chinese influences in the Musulman pottery of Susa", *Eastern Art Quarterly* I.1 (July 1928): 5.
13. A. Bahgat and F. Massoul: *La Céramique Musulmane de l'Egypte*, (Cairo, 1930): p. 21; and R. Schnyder: "Tulunidische Lüsterfayence", *AO V* (1963): 49.
14. H. Philon: *op. cit.*: 63-162.
15. E.g. U. al-Khamis: "The iconography of early Islamic lusterwares from Mesopotamia: new considerations", *Muqarnas* VII (1990): 109-118 and G. Féhervári: "Two early 'Abbasid lustre bowls and the influence of Central Asia", *OA NS IX* (1963): 79-88.

Chapter One

EGYPT IN THE NINTH CENTURY

Introduction

Any study of the early Islamic period is partially conjectural, for although there are abundant historical sources, few of them are contemporary. Towards the middle of the ninth century the picture is clarified, with an increased number of sources, factual chronicles and geographical routing reports made for the government. Before exploring, and sifting through the fact and fiction written about Egypt, it is essential to understand the nature of 'Abbasid rule, and what stage of its development and decline it had reached at this period.

The 'Abbasid Revolution

For many years historians interpreted the so-called 'Abbasid revolution as a largely Persian affair,¹ inspired by dissentient Shi'ites who never forgave the wrong that the Umayyads had perpetrated against 'Ali and Husayn. However, more recently Lassner has convincingly demonstrated that it was a purely Arab affair, and that all those in Khurasan had maintained their Arab identity, while having leanings towards Shi'ism.² Crone supports his views, generalising that "the non-Arab converts were the representatives of the two empires which the Arabs had respectively truncated and destroyed they signally failed to direct the political evolution of their conquerors; just as the Arab conquerors contrived to keep up their fixation on the tribal past, so the non-Arab converts remained in the position of mere clients to the Arab tribes."³ Converts were indubitably second class citizens throughout the Umayyad period.

The Umayyads, with their efficient and aggressive fiscal policy had almost denuded the land, encouraging the rural population to flee to the new towns, to avoid taxation.⁴ One way of receiving pardon for this evasion was to join the army. In consequence there were inevitably many Persians in the army.

Towards the middle of the eighth century there was increasing dissatisfaction with Umayyad rule. The majority of the population in Iraq had converted to Shi'ism, and were now opposed to Syrian rule on religious grounds.⁵ Strict Sunni pietists opposed the luxury and debauchery of the Syrian court. The 'Abbasids harnessed

this opposition for their own purposes. Being descendants of one of the Prophet's uncles, 'Abbas, their Hashimite lineage satisfied the Shi'ah elements. They centred themselves in a small village called al-Humaymah, to the south of the Dead Sea.⁶ Their proximity to both caravan and pilgrimage routes facilitated communications for their propaganda machine. The actual revolution occurred in Ramadan 127/May-June 747, when the 'Abbasid agent in Khurasan, Abu-Muslim, unfurled the black banner and entered Merv.⁷ Progress was slow: al-Kufah did not fall until 132/749, where the first 'Abbasid caliph was installed on 30 October.⁸ Damascus fell in 132/750, and Marwan II was caught and killed on 5 August at Busir in Egypt.⁹

A new era or *dawlah* began, and the centre of the *Dar al-Islam* shifted from Syria to Iraq. There was a strong Persian element, with the Khurasanians forming the caliphal bodyguard, and an inherited Persian administration; the Arabian aristocracy was gradually "replaced by a hierarchy of officers drawn from the whole gamut of nationalities under the caliphate."¹⁰ The key to the rapid expansion of the bureaucracy was an elaborate espionage system known as the *barid*.¹¹ This was a system of staging posts, between fixed routes which were policed; this system was augmented by well-trained carrier pigeons.¹² Maqrizi (766-845/1364-1442) emphasises the efficiency of this system by citing: "The ruler at Baghdad once sent a shoe to Ibn Tulun in Egypt which came from the house of his mistress, the very existence of whom none but his intimate friends knew."¹³ The post was so crucial to the caliphate, that only favourites were awarded the honour of its office.¹⁴

The 'Abbasid Empire

As long as the caliphs had a cause to fight, and could legitimately head their armies, there was no need for a political rationale. Now that they headed a vast administration it was necessary to give meaning to their rule for political expedience.¹⁵ By the ninth century the Islamic world had reached the dawn of its renaissance, with men of letters being attracted to the cities, and the caliphal families and governors of provinces establishing their fine libraries. It is thanks to these patrons that the Arab histories were initiated. But it was impossible for the 'Abbasids to steer a straight course through this age of reasoning, due to the underlying religious wrangling. They could not make themselves acceptable to Sunni and Shi'a alike once they had lost their common cause. The discontent that resulted was reflected in numerous disturbances throughout the empire.¹⁶

The ninth century witnessed a gradual decline in the 'Abbasid caliphate due to their increasing dependence on Turkish and other foreign slave labour, in both the administration and the military. The caliphs became mere puppets in the hands of their non-Arab administrators. The military maintained its Arab identity until the reign of Mu'tasim (218/833 - 227/842), when he added a new division of Turks, originally his slaves, from Farghanah and other regions of Central Asia.¹⁷ It is well known that these troops so terrorised the inhabitants of Baghdad, that in 221/836 Mu'tasim was obliged to move them and the whole government machinery to the newly-founded capital at Samarra. His grandiose plan was to keep both the slaves, their specially imported wives and their descendants within the state.¹⁸ By the 240s/860s these former Turkish slaves held most of the principal civil posts.

The religious crisis most pertinent to this thesis is that of the Zanj revolt in Basra; its effects on Egypt will be discussed below. The principal source is Tabari (d. 310/923),¹⁹ who claims in his *Ta'rikh al-Rusul wa'l-Muluk*²⁰ that their long-lasting revolt, which started on 7 Ramadhan 255/868 and was finally crushed in 273/883, crippled trade and industry. Little is known of this group, except that their leader, known as al-Burqu'i (the veiled) was assisted by Rashid Qurmati (possibly a Qarmat), a miller and a lemonade seller, and the African slaves swore an oath of allegiance in the Qarmat fashion of several years later.²¹ These slaves had been imported to clear the marshes, and had been grouped in gangs of between 500 - 5,000 labourers, housed in animal pens and rendered totally helpless. Their brushes with Islam taught them that they had certain rights. Their cause was supported by the Banu Tamim, one of the five main Arab tribes of Basrah. It is tempting to draw parallels with the Qarmat, or 'Abu Sa'idis of Bahrayn, who de Blois has demonstrated were rich, benevolent Ismaili landowners.²² Both groups apparently sacked Basrah (Zanj for three days, and the Qarmat for 17 days)²³ and then controlled its customs posts and trade outlets. Tabari's claim that the Zanj destroyed Basrah's trade and industry should probably be interpreted as being that the 'Abbasid state treasuries lost the benefit of them; indeed it is intended herein to demonstrate that Basrah flourished in the ninth and tenth centuries. Ya'qubi (d. 284/897), who wrote about this time described Basrah as "la première ville du monde, le centre commercial et riche par excellence" (Wiet's translation²⁴), which would hardly be the description of a city devastated by rebellion. Sadly there is a lacuna in the manuscript where he would have elaborated on her trade and industry. However, there are many other sources, which will be discussed at length in the next chapter.

Egypt Under the 'Abbasids

The Romans were the first to appreciate Egypt's agricultural value, and up until the Arab invasions, it had been the granary of first Rome and then Byzantium. The fertile waters of the Nile provided both food and taxable income for whosoever controlled them. It was also a conduit for Nubian gold, ivory and African slaves, and thus vital to any imperial economy.

The first century of 'Abbasid power (132/750 -254/868) in Egypt was largely ignored by historians until two studies emerged in the 1970s.²⁵ Dunn cites Maqrizi as his source for indicating that this was precisely the period that Islam spread into the countryside. He based his study on events in the Nile Delta, and concluded that the Islamicisation occurred in Egypt not through any active government policy, but as a result of their failing to control dissident elements. In answer to the Coptic resistance that they encountered, they brought in more Arab tribes, who held the real power. Financial and legal disabilities also encouraged conversion. The 'Abbasid government's greatest failure was in not centralising their authority in Egypt itself.²⁶ It would appear to have been divided into several provinces, all independently answerable to the capital.

The 'Abbasid army first entered Egypt in 132/750 in the wake of Marwan II's desperate attempt to flee. As a foil to the enemy, Marwan had ordered Fustat to be set on fire.²⁷ Egypt's finances were in total disarray. After all the necessary deductions were made in the first year of 'Abbasid rule, only 200,000 dinars were sent to Baghdad.²⁸ The following years were punctuated with low floods, which meant the land taxes could not be collected, and the people suffered years of famine. In addition, the administration was hampered by a succession of governors.²⁹ In the first 118 years of 'Abbasid rule there were 67 governors. Real power lay with the military. During the civil war which ensued after the death of Harun al-Rashid, anarchy prevailed in Egypt: the army supported Ma'mun and the Hawfi tribes in the Delta supported Amin, and they were thus drawn into the imperial conflict.³⁰ The disruption was not quelled until 208/823, when Ma'mun sent 'Abd Allah b. Tahir. As a reward Tahir was granted Egypt as an appanage or

fief; he appointed 'Isa b. Yazid as governor, so effectively the control of Egypt had been bequeathed by the caliphate to an individual courtier, thus establishing a precedent. In 214/829 Ma'mun transferred Egypt to his heir apparent, al-Mu'tasim. 'Isa b. Yazid was confirmed as governor, but an independent chief of finances was appointed. The troubles continued: these were religious and tax-related squabbles amongst the Arabs, any Coptic resistance having been largely depleted. Egypt became a thorn in the imperial crown, which Baghdad never fully appreciated until it was too late.

Ahmad Ibn Tulun

Ahmad ibn Tulun's story is well-known,³¹ and for the purposes of this thesis it is only necessary to emphasise the salient points. Creswell cites Ya'qubi's description of Samarra in his *Buldan*, and suggests that the strict separation of the Turks in Samarra would have made the second generation more 'Abassid than the 'Abassids themselves. Although Ahmed ibn Tulun was not born in Samarra, he would have moved there as a baby, and thus have been wholly influenced by it. Creswell suggests that it is inevitable that Ibn Tulun would have desired everything obtainable at the Iraqi court, to the point of importing an Iraqi architect for his grandiose building programme.³² Maqrizi relates that Ibn Tulun's palace entrance had a triple doorway replicating that of al-Mutawakkil at Samarra.³³ Although Creswell was not able to do more than record the various restorations of the minaret, Muqaddasi in the tenth century describes it as having an exterior staircase, and it is very tempting to visualise one of Samarra's helicoidal minarets.³⁴ With this obsession to emulate 'Abbasid taste and fashion, he would undoubtedly have imported furnishings and luxury articles from wherever the 'Abbasid court sought them; and continued to manufacture those luxury items that had been imported from Egypt. Certainly no reference was found in the primary sources alluding to the manufacture of luxury ceramic wares in Egypt. After Pézard³⁵ and Bahgat's³⁶ seminal works on Islamic pottery and attributions of lustre wares "excavated" in Egypt without any scientific context, or evidence of local manufacture, such categories as Tulunid and Ikhshidid wares entered the literature without references. A gross assumption thus became an accepted fact.

If one analyses Ibn Tulun's career, one appreciates that he had an uncanny knack of avoiding court intrigue by not being present during political crises or incidents. After a thorough military training and religious education, as befitted the son of a court chamberlain, he went to Tarsus on the pretext of continuing his religious studies.³⁷ As Hassan indicates, Tarsus was the 'Abbasid outpost in Asia Minor, a strong military garrison, constantly engaged with the Byzantine armies, which gave political justification for maintaining a standing army. It is inconceivable that Ibn Tulun was not involved in some form of military activity or espionage for the court. At the same time he avoided both al-Mutawakkil's and al-Muntasir's murders in 247/861, returning in 248/862 once al-Musta'in was firmly in power. From this time forward the caliphs were true puppets of the Turkish courtiers, and Ibn Tulun and his mother gained increasing power through strategic marriages.

When al-Musta'in was deposed in 252/866, Ibn Tulun accompanied him in his exile to the holy cities, and he managed to escape being implicated in the ex-Caliph's murder. Two years later his stepfather Bayakbak granted him the governorship of Fustat. His benefactor's downfall seemed to increase his power, and by 257/870 Ibn Tulun had the governorship of all Egypt conferred on him by his father-in-law Yarjukh. He did not succeed in gaining control of the finances until 258/871-2. This was formally conferred by the Caliph al-Mu'tamid: "Ibn Said adds that the letter of appointment which was brought to Ibn Tulun by a personal servant, *khadir*, of the Caliph al-Mu'tamid, was witnessed by two respected judges, one from Wasit, the other one from the marshes."³⁸ Once again one notes a striving for legitimacy. Grabar concludes that both the coins and the *tiraz* emphasise Ibn Tulun's concern for legality towards the caliphate. He justified his building expenditure on his Great Mosque by announcing a chance find of treasure. It is probably no coincidence that this was the year (259/873) he refused to send tribute to the caliph,³⁹ yet he thought it necessary to conceal the source of finance for his grandiose project. Even the foundation inscription Grabar sees as "unusually religious in nature", with its emphasis on the *jihad*.⁴⁰

Ibn Tulun's *jihad* took him into Syria in 264/877, on the pretext of gaining a road through to Tarsus to attack the Christians. It is no coincidence that the Zanj had reached Wasit by this stage in their

rebellion and the caliphal armies were receiving one humiliating defeat after another. Only his son 'Abbas' revolt prevented him from continuing his campaign. In 269/882 he invited the Caliph al-Mu'tamid to move to Fustat, but his efforts were frustrated by al-Muwaffak, al-Mu'tamid's brother, who held the real power, although he was never appointed caliph himself.⁴¹ Al-Mu'tamid's party was intercepted by the governor of Mosul on al-Muwaffak's orders, and they were forced to return to Samarra.⁴² In retaliation Ibn Tulun deleted al-Muwaffak's name in the Friday prayers; in return al-Muwaffak persuaded the Caliph to pronounce an anathema against Ibn Tulun in all mosques. Once the Zanj revolt had been finally quelled, al-Muwaffak made peace with Ahmed ibn Tulun and the anathema was rescinded. The news did not reach Ibn Tulun before his death in 270/884. His son Khumarawayh continued this search for legitimacy and al-Muwaffak invested him for a period of 30 years on condition of an annual tribute of 200,000 dinars and 300,000 dinars of arrears. The first payment was apparently sent in full, and in subsequent years reduced, and then ceased. To cement the agreement Khumarawayh offered his daughter in marriage to the Caliph's son, but al-Mu'tadid took her for himself.⁴³

The Tulunid Legacy

The 'Abbasid Empire was in effect a loose collection of provinces, with a *diwan* for each province in the capital, be it Baghdad or Samarra. The Caliph al-Mu'tadid (279-289/892-902) pulled them together into two ministries.⁴⁴ Each province was ruled by an *Amir* and *'Amil*. When these posts were combined, as under the Tulunids, the ruler became independent, as he alone was in charge of the finances. The story was repeated in Egypt in the tenth century under the other Turkish dynasty, the Ikhshids (300-349/912-960). Extortion became paramount and there was little respect for property. When an amir or caliph died, his palace was plundered by the people.⁴⁵ If this was the case, perhaps the demolishing of the Tulunid Dar al-Imara in 292/905 was a normal practice and not a specific act of outrage. By the 350s/960s things must have been so hopeless in Egypt, and the Fatimid propaganda machine so successful, that they were able to enter Egypt with minimal opposition. Much of Syria had been laid waste by the Qarmatians, or retaken by the Byzantines, and Buwayhid Iraq looked to Persia, seemingly paying scant attention to the events in the West. All that remained in Egypt was an effective administration, despite its abuse, and a native population that was well used to a degree of autonomy.

NOTES TO CHAPTER ONE

1. J. Wellhausen: *The Arab Kingdom and its Fall*, (Calcutta, 1927); and M.A. Shaban: *The 'Abbasid Revolution*, (Cambridge, 1970).
2. J. Lassner: *The Shaping of 'Abbasid Rule*, (Princeton, 1980): 5.
3. P. Crone: *Slaves on Horses: the Evolution of the Islamic Polity*, (Cambridge, 1980): 49.
4. *Ibid.*: 51.
5. P. Hitti: *History of the Arabs*, 10th edition (London, 1980): 283
6. Ya'qubi: *Kitab al-Buldan*, ed. de Goeje (Leiden, 1892): vol. 2, p. 356-7.
7. Hitti: *op. cit.*: 284.
8. Ya'qubi: *op. cit.*: p. 417-8.
9. Hitti: *op. cit.*: see note 3 on p. 285.
10. *Ibid.*: p. 287.
11. D. Sourdel: "Barid", *ET² I* (Leiden, 1960): 1045-6.
12. The first recorded use of pigeons is in 837 by al-Mu'tasim, as cited in Hitti p. 323, note 6 Mas'udi: *Al-Tanbih wa'l-Ishraf* (Leiden, 1894): vol. vii, pp. 126-7.
13. Maqrizi: *Khitat II*: p. 180.
14. Sourdel: *op. cit.*
15. Crone: *op. cit.*: p. 62.
16. *Ibid.*: p. 71 for a list from "At a provincial level.....".

17. Mas'udi: *op. cit.*: vol. vii, p. 118.
18. O.S.A. Ismail: "The founding of a new capital: Samarra", *Bulletin of the School of Oriental and African Studies*, (1968): p. 3 ff.
19. M.M. Ahsan: *Social Life Under the Abbasids*, (London, 1979): p. 136.
20. Tabari: *Ta'rikh al-Rusul wa'l-Muluk*, ed. De Goeje (Leiden, 1879-1901): vol. iii, p. 1009-10; 1066; 1885.
21. L. Massignon: "Zandj", *ET* VIII (1987): p. 1213.
22. F. de Blois: "The 'Abu Sa'idis or so-call "Qarmatians" of Bahrayn", *PSAS* 16 (1986): 13-21.
23. G. Le Strange: *The Lands of the Eastern Caliphate*, (Cambridge, 1905): p. 44.
24. G. Wiet: *Ya'kubi: Les Pays*, (Cairo, 1937): p. 183-98.
25. M.C. Dunn: *The Struggle for 'Abbasid Egypt*, Ph.D. dissertation for Georgetown University (1975). Unfortunately the bibliography and notes are missing from the microfiche copy studied. And J. White: *The Struggle for 'Abbasid Egypt*, (London, 1979): seemingly unavailable in Cairo, and the SOAS copy was missing, so unable to consult this reference.
26. In his introduction Dunn made the following comments about the sources he referred to. His major one was Severus, the tenth century Bishop of Ashmunayn, who claims to have collected many eye-witness accounts. The only ninth century official 'Abbasid commentator that he found useful was Ya'qubi, because he felt he represents an historical tradition independent of the later Egyptian authors. He regarded the tenth century geographers: Ibn Hawqal and Muqaddasi as helpful, and the tenth century historian al-Kindi's works *Kitab al Wulat al-Misr* and *Kitab al-Qudat al-Misr*, ed. R. Guest, (London, 1912), as being extremely useful. He also used the later fifteenth century chroniclers, Maqrizi and Ibn Taghribirdi. The latter's *Al-Nujum al-Zahirah fi Muluk Misr w-al-Qahirah*, ed. W. Popper, 3 vols (Berkeley, 1909-29), he noted quoted extensively from al-Kindi.

27. Dunn: *op. cit.*: p. 13, citing Severus as the source.
28. For a full discussion on "dinar" and "dirham" see G.C. Miles in *ET² I* (1960): 297-99; and 319-20, respectively. The dinar was the gold unit, and the dirham the silver; revenues from the western Islamic world were generally quoted in dinars, and those from the eastern in dirhams. In this text we will keep to the original currencies, when quoting any prices, in order to avoid any confusion or miscalculation.
29. Z.M. Hassan: *Les Tulunides: Etude de l'Egypte Musulman à la Fin du IXème Siècle 868-905*, (Paris, 1933): p. 10.
30. Dunn: *op. cit.*: p. 47.
31. Z.M. Hassan: *op. cit.*; K.A.C. Creswell: *Early Muslim Architecture II*: p. 327 ff.; O. Grabar: *The Coinage of the Tulunids*, (New York, 1957); E.K. Corbett: "The life and works of Ahmad ibn Tulun" *JRAS* 1891: 528-562; and E.T. Rogers *The Coins of the Tuluni Dynasty*, (London, 1877). All provide excellent bibliographies for the primary sources, the principal one being Ibn al-Day'a (d. circa 951), whose biography of Ahmed ibn Tulun (*Al-Mukafa'a* - stories about rewards for good deeds and punishment for evil ones, and timely escapes from difficult situations - is known to us in Ibn Sa'id's *Mughrib* (ed. K. Vollers, Berlin 1894, *Semitistische Studien I*).
32. K.A.C. Creswell: *op. cit.*: p. 332, citing Maqrizi, who refers to the architect as a *nasrani* - Wiet in *Mosquées du Caire* (1932): p. 132, suggests that if he was Copt, he would have been styled as one.
33. Maqrizi: *Khitat I*: p. 315. In Creswell & Allan's *A Short Account of Early Muslim Architecture*, (Cairo, 1989): 365, Allan cites a description from Herzfeld's account of the Balkuwara Palace: "The façades on the court and towards the garden are triple-arched façades, as also in the Bayt al-Khalifa, and in Mshatta." in *Reisebericht*, *ZDMG LXX*: p. 227-8.
34. Al-Muqaddasi: *Ahsan al-Ta'asim fi Ma'arif al-Aqalim*, Arabic text in De Goeje III (1906); English translation G.S.A. Ranking and R.F. Azoo, (Calcutta, 1901): p. 326.

35. M. Pézard: *La Céramique Archaïque de l'Islam*, (Paris, 1920).
36. A. Bahgat: *La Céramique Egyptienne de l'Epoque Musulmane*, (Basle, 1922).
37. Hassan: *op. cit.*: p. 30.
38. O. Grabar: *op. cit.*: p. 29. Cited from Ibn Said's *Al Mughrib fi Hula al-Mughrib*, a 13th century copy of Ibn al-Day'a's 10th century biography of Ahmed ibn Tulun.
39. Creswell: *op. cit.*: p. 336.
40. Grabar: *op. cit.*: 39.
41. On the death of al-Muwaffak in 278/891, he was succeeded as real ruler by his son al-Mu'tadid, who became caliph on the death of al-Mu'tamid in the following year.
42. Hassan: *op. cit.*: p. 85.
43. Rogers: *op. cit.*: p. 16.
44. A. Mez: *The Renaissance of Islam*, tr. Salahuddin Khuda Buksh and D.S. Margoliouth, (London, 1937): p. 76.
45. *Ibid.*: p. 145.

Chapter Two

TRADE AND INDUSTRY UNDER THE 'ABBASIDS IN THE NINTH AND TENTH CENTURIES

Written Sources

The chief sources are the historical geographers of the period, who travelled widely throughout the Dar al-Islam, recording some aspects in minute detail; many of these are only known to us in transcriptions included in the works of later commentators. They appear to have worked to a set format, recording distances between government posts, listing what they considered to be the important commodities traded from each port and stating the revenues for each individual province or city. It is not always clear if the author actually visited each place he describes, and certainly much hearsay is recorded as being second hand. What is evident, however, is that many of these were government intelligence manuals and doubtless commissioned by court treasury and military officials. They reflect a high degree of organisation.

The earliest of these geographers is Ibn-Khurradadhbih (b. between 205/820 and 211/825 and d. circa 300/912). Of Persian descent, he was director of posts and intelligence (*sahib al-barid wa'l-khabar*)¹ in al-Jibal (i.e. Central Iran - the administrative capital was Rayy), and subsequently promoted to the office of Director General of the same department in Baghdad and later Samarra. He became a great friend of the Caliph al-Mu'tamid, and thus a contemporary of Ahmad ibn Tulun. The date of his treatise *Al-Masalik wa'l-Mamalik* is hotly debated, and is chiefly concerned with recording road communications throughout the Dar al-Islam, and not the economy.² The other ninth century geographer of note is Ya'qubi, (d. 284/897 in Egypt) whose *Kitab al-Buldan*,³ was the first to emphasise both topographical and economical detail. Al-Jahiz (circa 160/776 - 255/868-9) should be added to this list. A native of Basrah, and a prolific literary writer, he nevertheless has one economic treatise attributed to him: *Kitab al-Tabassur bi-l-Tijara*.⁴ The tenth century saw much more activity, with Ibn al-Faqih al-Hamadhani's *Kitab al-Buldan* appearing about 291/903.⁵ Soon after 316/928, Qudamah (died at latest 337/948), a revenue accountant in the central administration at Baghdad, completed his *Kitab al-Kharaj*,⁶ which discusses the division of the caliphate into provinces, the organisation of the postal service and taxation of each district.

It is later in the tenth century that the most prolific writers emerge, with al-Balkhi (circa 236/850 - 322/934),⁷ al-Istakhri (dates unknown),⁸ Ibn-Hawqal (started his travels in 331/943 and last heard of in Sicily in 362/973)⁹ and al-Muqaddasi (d. 375/980?).¹⁰ Al-Istakhri's work *Masalik al-Mamalik* was apparently an elaboration of the geographical system of maps established by al-Balkhi whose work has not been preserved. Al-Muqaddasi's *Ahsan al-Ta'asim fi Ma'rifat al-Aqalim* claims to set out to present a comprehensive gazetteer and improve upon his predecessors: 1) al-Jaihani, whose work was completed by Ibn al-Faqih after his death in 301/913. He dismisses Jaihani as merely reporting heresay and information garnered from residents of the various lands cited through intelligence reports, commenting that they are highly inaccurate; 2) al-Balkhi is guilty of the same; 3) both al-Jahiz's and 4) Ibn Khurradadhbih's works he says are too short to be useful, yet he admits no knowledge of them, so this comment should be taken lightly. Completed in 325/985, it only describes the Dar al-Islam, but it is an excellent source.

In addition to these contemporary sources, references to some of the later authors, such as Yaqut (575-626/1179-1229)¹¹ and Maqrizi (766-845/1364-1442)¹² will be made during the course of this text. These are augmented by the Geniza documents, found in the Cairo synagogue, which have given us a fascinating insight into the trade and social life of tenth to twelfth century Jews in the Middle East, and how they interacted with their Muslim and Christian neighbours.¹³

The historiographers should not be ignored, despite the natural inclination to be biased towards the dynasty they were commissioned by. They should thus be treated with caution. Al-Tabari has already been mentioned in the previous chapter (see page 7). The other important tenth century historian is al-Mas'udi (d. 957 in Fustat), also cited in the previous chapter (see page 12, note 6). He is said to be the first Muslim historiographer to group events chronologically by year, instead of by dynasty. He did not restrict himself to libraries, and travelled widely throughout the Dar al-Islam. His principal work is *Muruj al-Dhahab wa-Ma'adin al-Jawhar* (Meadows of Gold and Mines of Gems).¹⁴

For cross checking, there are, of course, some Byzantine and Chinese sources. For these it has been necessary to rely entirely on secondary sources. A recent article by Zhang¹⁵ has shed considerable light on Chinese/Muslim trade and official relations between the seventh and ninth centuries.

Artefacts in Archaeological Contexts

Monuments and manuscripts are frequently destroyed, and it is more difficult to build up an accurate picture from fragments. In the case of ceramics, glass, textiles and coins one can gain an impression of the age range of a site from the surface finds, although if it is well-stratified, the earlier debris will not be revealed, except at the eroded edges. With the help of scientific excavations it is possible to make relatively definitive observations about the date of the site, and with whom it traded on the evidence of the artefacts excavated. If coins and dated textiles are found in an undisturbed, stratified level, they can assist in dating the ceramics and glass. Scientific dating methods, such as Carbon 14 and thermoluminescence testing can obviously be useful adjuncts for these artefacts, if used with caution. The last twenty years has seen considerable archaeological activity in Islamic levels, and a clearer picture is gradually emerging. Admittedly, much valuable evidence was destroyed in the past, as excavators cleared the upper levels of continually occupied sites, paying scant attention to the latest material.

In Egypt this was largely because these levels had already been destroyed by the locals, who had started to devastate sites towards the end of the nineteenth century in the search for the nitrogenous *sibakh*, which had accumulated amongst the rubbish of past ages. At Bahnasa (ancient Oxyrhynchus), Petrie relates that a railway had been built for the export of the *sibakh*, and that more than 100 tons were being removed every day.¹⁶ Canny dealers sifted through this rubbish, removing the glazed sherds, and sold them to foreign collectors, and discarded all the earthenware. This accounts for the seemingly disproportionate number of luxury wares in museums. There was one dealer trading in these fragments in Khan al-Khalili up until 1968. Both the British Museum and the Victoria and Albert Museum, London, and the Ashmolean Museum, Oxford have collections from this source, and examples will be incorporated in the appendix.

Taking one specific ceramic type, in this case the early lustre wares, with their diagnostic, compact, fine, yellow bodies, it is possible to trace both trade connections, and the extent to which imperial taste and fashion spread throughout the Dar al-Islam. For checks and balances, there are the imported Chinese wares. In the past these Chinese wares have caused confusion,¹⁷ but in the following chapter it will be demonstrated how scientific analysis is now clarifying the picture beyond all reasonable doubt.

Evidence for Imperial Organisation

The 'Abbasids took a keen interest in both agricultural and industrial production, as evidenced from the works of Ya'qubi, al-Muqaddasi, and others mentioned above. The principal reason for this was undoubtedly for purposes of taxation, yet there is a natural curiosity in the traditional Arab, that notes what a specific area is famous for, which frequently occurs in Yemen to this day, as, indeed, it does in Europe. There is little written information on the actual organisation of this trade, and one must assume that as the merchant classes developed they became increasingly independent, to a degree that they could override government policy.¹⁸ However, the centralised administration had given the merchants of the Dar al-Islam both the security necessary for trading, and the increased number of townships with which to trade.

An important monument towards assessing 'Abbasid agricultural organisation in present-day Cairo, is the Roda Island Nilometre constructed by the Caliph al-Mutawakkil in 247/861-2.¹⁹ By observing the height of the annual flood, it was possible to gauge how much land tax could be collected in that year. Thus the central administration in Baghdad and Samarra could calculate exactly how much they should be receiving from the revenue collectors of Egypt.

Maqrizi, writing some 500 years later, emphasises the strength of the communications. He relates that the overland route to Damascus was so well policed that a lady could go mounted or on foot without taking provisions or water, and in complete safety.²⁰

Al-Muqaddasi best summarises what becomes evident in the sources, by reporting a ninth century conversation: when al-Jahiz was asked for some useful information on cities in general, he replied: "Well, there are ten cities in each of which certain things are remarkable: humanity in Baghdad, eloquence in al-Kufah, manufacture in al-Basrah, commerce in Misr [i.e. Fustat], treachery in ar-Rayy, boorishness in Nishapur, stinginess in Merv, arrogance in Balkh and craftsmanship in Samarqand."²¹ Al-Muqaddasi agrees with him, but goes on to say that there are divers commercial products in Basrah too. It is this distinction between manufacture and commerce that is of interest, as will be seen when Basrah's ceramic industry is discussed.

The Textile Industry

This is one of the best documented industries of the period, both in the chronicles and through the *tiraz* inscriptions. There were numerous textile-producing centres throughout the Dar al-Islam,²² but Egypt appears to be the best provenance for well-preserved, legible fragments. Day attributes this disproportionate preservation to Egypt's dry climate.²³ There appears to have been both private (individual) and public (government) manufacture.²⁴ As in the case of coins, the inscriptions on the *tiraz* band normally incorporate the name of the caliph, as well as that of the individual for whom it was ordered. This was certainly used for political statements too, for in 269/882-3 Ibn al-Athir (d. 630/1232) records "...al-Mu'tamid cursed Ahmad ibn Tulun at the Public Audience and ordered this curse to be pronounced in the pulpits ... for Ibn Tulun had stopped the name of al-Muwaffak from being mentioned in the *khutbah*, and dropped the inscription of his name from the *tiraz*."²⁵

Serjeant sees the *tiraz* system as being Sasanian in origin.²⁶ He demonstrates that materials were often submitted in lieu of tax, and cites a precedent dating back to the Prophet. He goes on to say that because many of the Egyptian factories were government-owned, they were not mentioned as part of the taxable revenue.²⁷

The textile industry was well established by the Copts before the Arab invasions, and Ya'qubi gives an idea of the variety of materials produced in the ninth century, along with other notable produce from specified areas: wheat and linen from Fayyum; woollen coats from Qais; tapestry curtains from Bahnasa; coats and accacia wood from Ahnas; woven carpets from Assiut.²⁸ Ibn Hawqal elaborates on the industry at Bahnasa, telling us that wall hangings, silk and gold embroidery, ships' sails, tents, coats, curtains, carpets, pavilion tents in wool and linen, with many figural images are all manufactured there. He indicates that all directors were in government employ on orders to the Caliph. The Delta towns of Tinnis, Damietta, Shata, Dabqu, Damira and Tuna were all linen-producing centres and commanded as much as 20-30,000 dinars annually in revenue.²⁹ This seems extraordinarily low, when it is understood that Dabiqi cloth was so highly prized at the 'Abbasid court. It is stated that the lowest price for a cloth length was 70 dinars.³⁰ One can only assume, on the basis of this, that most of the factories in the Delta were public, government-owned ones and that this tax income represents that taken from the private factories.

The one textile-manufacturing site that has an archaeological record is Bahnasa. Unfortunately the Kuwait National Museum's excavations have yet to be published, and to date there is only a sketchy preliminary report.³¹ Under lustre wares, in the ceramics section, Féhervári mentions a "yellowish-white fabric compact and fine fabric, usually painted in monochrome lustre colours" (*sic*), but in the footnotes refers the reader to Fatimid lustre.³² It was possible to study all the Bahnasa lustre sherds that Schnyder examined in the Victoria and Albert Museum collection, and there is no doubt that these are all of Iraqi manufacture, contrary to his ascribing most of them to Egyptian manufacture.³³ The presence of these wares on the site indicates that a wealthy community had established itself. Even in the twelfth century the geographer al-Idrisi describes it as a prosperous city inhabited by different nationalities, and that there were both public and private factories there.³⁴ The importance of this largely government-run industry was emphasised when the Fatimid Caliph al-Aziz came to power, and his vizir Abu Faraj ibn Killis took over all the government textile factories, forbidding any exports.³⁵ This was not only a political statement, in that no *tiraz* would be made in Egypt in the name of the 'Abbasid caliph, it must have been for both economic gain and to supply the Fatimid court.

The Principal Ports

The Arabs, from a strategic point of view, had a negative attitude towards the sea. All ports in the early 'Abbasid empire were categorised as *al-thughur* (frontier fortresses),³⁶ for the military believed the enemy came from the sea. As a result inland ports were preferred, which were considered easier to protect. Thus Fustat, Basrah and Baghdad all became thriving river ports, at the cost of Alexandria and Ubullah. They traded extensively in both the Mediterranean and the Indian Ocean, continuing those trade contacts which had been well-established by the Byzantine and Sasanian empires that they inherited through conquest. Lewis considered that the major proportion of this trade was in bulk commodities, such as wheat, olive oil, fish, other foodstuffs, salt, timber, metals, wool and hides, and that luxury goods were "always the frosting on the maritime commercial cake".³⁷ However, as has been mentioned already, it is this luxury trade that leaves the most telling remains archaeologically.

Lopez notes that al-Jahiz does not consider the Mediterranean countries as important as the Asiatic ones as sources for traded goods.³⁸ This could well be because such trade involved more land travel, or the prizes were richer from the Far Eastern trade. Certainly the most commonly used route from the Mediterranean to the Indian Ocean was via Farama (ancient Pelusium) in the Eastern Delta, overland to Qulzum (present day Suez) on the Red Sea.³⁹ Qulzum was originally linked to Fustat via Trajan's canal, the *Amnis Trajanus*, as well as by road. Kubiak has demonstrated that it was used until the year 150/766-7.⁴⁰ Others went via Antioch overland to al-Jabiya and down the Euphrates to Baghdad.⁴¹ Interestingly, Ya'qubi almost ignores the Mediterranean routes too. Perhaps this is indicative of a more eastern policy throughout the ninth century,⁴² or it could be that the western routes were so well established that they needed no mention.

When using luxury artefacts to indicate trade, it must be done with caution. The Spanish found 'Abbasid lustre wares in the tenth century palace complex at Madinet al-Zahra,⁴³ but these may have been isolated gifts. Apparently these lustre wares have been found in Malaga recently but the relevant information is not available to date.

One must look to Jahiz and the geographers to appreciate the variety of goods traded, and then to modern economists to interpret the scale of this network. Chaudhuri demonstrates how the mercantile classes that emerged were indispensable intermediaries for converting agricultural surplus into disposable state income.⁴⁴ He emphasises how these trading cities could not afford lawlessness, indicating the necessity for a strong state. Two types of voyages evolved: more local between the Persian Gulf and the Red Sea, and long distance to India and China. The rise of the Dar al-Islam coincided with that of the Tang dynasty in China, thus two large markets faced each other at opposite ends of the Indian Ocean. Tabari quotes Mansur as saying on the founding of Baghdad: "This is the Tigris, there is no obstacle between us and China, everything on the sea can come to us on it."⁴⁵ Chaudhuri's summation is: "The medieval trade of Asia was really founded on the economic and social acceptance of the four great products of eastern civilisation - silk, porcelain, sandalwood, and black pepper - which were exchanged for incense (Arabian gum resins), thoroughbred horses, ivory, cotton textiles, and metal goods."⁴⁶ But this was nothing new, it was a pattern which had been broken by the economic decline of Arabia in the fourth century, and was only revived when a strong, organised state reemerged.⁴⁷ What was new was the sense of empire and uniformity created by the Dar al-Islam, and the rapid increase in urban centres. Any shift in power was reflected in the trade centres.

The ninth century saw the rise to prominence of two ports: Siraf and Sohar. Both fell into a gradual decline at the end of the tenth century.⁴⁸ These were both seaports, demonstrating a new era of confidence in the state. Both would appear to have been entrepot markets, collecting, storing and redistributing the goods for the long sea haul to the Far East and Africa. Both were well placed for taking the monsoon winds to the Indian coast and beyond. Neither had a natural port, but Sohar had the advantage of a good water supply from the Wadi al-Jizzi, plentiful agricultural supplies, and good connections with Africa.⁴⁹ Williamson goes on to note how all the tenth century geographers were impressed with Siraf, but rated Sohar above it. Al-Muqaddasi saw Sohar as "the gateway of China, the emporium of the east and al-'Iraq; it also furnishes Yemen with the necessities of life."⁵⁰ Although there is seldom mention of Islamic pottery, Al-Muqaddasi does include earthenware (*al-ghada'ir*)⁵¹ among imports to Oman and Aden. In his list for Aden, he specifically mentions earthenware in addition to Chinese wares, so it is tempting to see this as a rare reference to trading in the luxury Islamic wares found at most important sites.⁵² Much of Siraf's trade was consolidating exports from Basrah; in theory this should have been severely curtailed by the Zanj and Qarmatian attacks mentioned in the previous chapter, but there is no evidence to support this. It is tempting to interpret this as an indication that the mercantile class was so well organised and so valuable to whosoever controlled the customs posts, that trade continued despite the political situation.

The Red Sea was well known for its dangerous reefs, sudden storms, and lack of safe harbours,⁵³ and in the ninth century the only references to its trade, other than the Mediterranean link referred to above, are relatively local. Aden was the entrepot for all Far Eastern trade with Egypt.⁵⁴ Another port serving Egypt was Aydhab, in present-day Sudan, which Mez styles the main port of exchange at this time. Ya'qubi refers to Qulzum as the main port for the Hejaz and Yemen. Qulzum was linked with 'Aylah by road and sea; Aylah was considered as an important meeting place for pilgrims from Egypt, Syria and the Maghreb.⁵⁵ Certainly the bulk of the Red Sea trade was transporting Egyptian corn to Jeddah for the Holy Cities, but by the tenth century all the geographers mention Indian and China trade too. Recent excavations at 'Aqaba (Aylah), Zebid and Athar (south of Jeddah) reveal trade in the luxury Islamic ceramics, and an increased amount of Chinese wares in the tenth and eleventh centuries.⁵⁶ From the Geniza documents it is known that from the late tenth century Egypt was actively trading in both the

Red Sea and the Mediterranean. With the rise of the Fatimids, the focus was no longer on Iraq, and this probably contributed to the decline of Siraf and Sohar, and a marked shift in trade to the Red Sea. Certainly al-Muqaddasi recognised the rise of Egypt: "The Fustat of Misr in the present day is like the Baghdad of old; I know of no city in Islam superior to it."⁵⁷

Evidence from India and China

It is not clear exactly when trade with China resumed, if indeed it had ever stopped. Zhang outlines the seventh century contacts with the Umayyad court, the first envoy being sent in 31/651. He even quotes an *hadith* in which the Prophet is alleged to have said: "Seek for learning, though it might be as far away as China."⁵⁸ According to the Chinese records, between 31/651 and 182/798 the *Da-shi* (Arabs) sent 39 embassies to China, and Abu Muslim's defeat of Gao Xian-shi's army in 134/751 at the River Talas did not deteriorate relations. The following year the Abbasid caliph sent an embassy to China for the first time. In 140/757 an Arab army was sent to help the Tang quell the Turkish general An Lushan's rebellion. These relatively frequent visits would have doubtless encouraged trade and exchange of ideas and techniques, and contact was not just limited to a few prisoners taken at Talas. Zhang cites an eighth century Chinese manuscript written by Jia Dan (730-805) entitled *The Route to the Foreign Countries Across the Sea from Canton*, which outlines the various routes and mentions Sohar, Ubullah, Basrah and Baghdad. Da Huan, one of the prisoners taken at Talas and who lived in al-Kufah for twelve years apparently said: "In this city and in the streets and lanes, anything produced on the earth is provided. All are gathered from everywhere and goods are plenty and cheap." Lane cites an Arab merchant in China as early as 140/758.⁵⁹ He then goes on to mention 'Ali ibn 'Isa's gift to Harun al-Rashid (170/786-193/809) of 20 imperial China-ware pieces and 2,000 other pieces, demonstrating the novelty of the imperial wares and concludes that the other pieces must have been fairly common by then. Lane also cites al-Jahiz using the word *ghadar* for Chinese pottery.⁶⁰ Al-Muqaddasi used the very same word for earthenware, other than Chinese, in connection with imports to Sohar (see previous page).

Doubt has been raised as to whether the Chinese actually made the long sea voyage to Arabia at this time. Hourani discusses this problem and

concludes that there is no evidence of Chinese ships in the Persian Gulf in early Islam.⁶¹ Rockhill says that the earliest Chinese reference to this trade is eighth century.⁶² This describes the large ships that came to Canton (Khanfu) commanded by foreign captains, who had to register in the office of the Inspector of Maritime Trade, who inspected their manifests, and set the duty and freight charges, and forbade the export of scheduled rare and precious articles. Hourani saw Canton as the great emporium, although Quanchow and Hangchow were known to Ibn-Khurradadhbih. Certainly Canton was strictly controlled and three-tenths of every consignment was taken in duty.

There are two Arabic sources for the routes taken in the ninth century: Ibn Khurradadhbih, who describes the stages of the voyage from the Persian Gulf to China around 236/850; and Zayd Hassan of Siraf's *Salsalat al-Tawarikh* or *The Chain of Chronicles*. Rockhill says:

"From it we learn that at this time the products of China were very expensive and scarce in the markets of Basra and Baghdad, on account of the fires in Canton which frequently destroyed them, and also by reason of the frequent wrecking of the ships engaged in the trade and the acts of pirates."⁶³

For the tenth century al-Mas'udi and al-Muqaddasi are the most useful, but the other geographers help to confirm and add details. Ships either coasted, or went straight across the Indian Ocean from Sohar to Quilon in southern Malabar. The next destination was Ceylon or Sarandib, and on to Kalah Bar (probably modern Kedah in West Malaysia), through the Malacca Straits and round into the South China Seas. Buzurg's (c. 288-342/900-953) stories in *Akhbar al-Sin wa'l-Hind* add to the picture too.⁶⁴ This trade connection has been attested archaeologically by Carswell along the western Indian coast and in Ceylon.⁶⁵ With the fierce competition of superior ceramics from China, it is not surprising that they are found no further east. Two further investigations in the north-west have had similar results. Hobson in the 1920s reported on an excavation in Brahminabad conducted in 1854.⁶⁶ The excavators found what is now the established ninth/tenth century Islamic/Chinese pottery horizon, which will be discussed in the next chapter. Amongst their finds was the small monochrome lustre lamp now on display in the British Museum (no. 57 11-18 295). Excavations in the 1960s at Bambhore, Pakistan, at the mouth of the Indus and 65 kms from Karachi, revealed Daybul, a coastal port contemporary with Siraf. Both the ceramics and coinage revealed close links with the 'Abbasid caliphate.⁶⁷

Evidence from Africa

Al-Muqaddasi sailed to Africa from Aden, where it would appear he was involved in trade. Al-Mas'udi also sailed there, from Sohar, making his last voyage in 305/917. Most of the sources refer to the African trade. Hourani estimates that the furthest destinations were Sufalah in Mozambique and Qanbalu (Pemba). The Arabs sought slaves, ivory, mangrove poles for building, and ambergris from Africa. According to Horton, after the Zanj revolt of 255/868 the size of the slave market was curtailed, and rock crystal was added to the list.⁶⁸ The Arabs traded oils, dates, other foodstuffs and prestige imported ceramics for these. Lustre wares have been found at Manda and Shanga, in a ninth/tenth century context; and white wares on Pemba and Zanzibar, which attests the 'Abbasid connection. Only one very "worn and insignificant piece with slight traces of red on its outer side" was found at Kilwa.⁶⁹ The excavator thought that this was probably because Kilwa did not reach its apogee until the fourteenth century.

Conclusions

When one considers the dangers of these voyages and the hardship endured, as graphically outlined in the many travellers' tales, one can only conclude that the rewards must have been great. The rapid rise of wealthy mercantile settlements provide testimony to this, and one can only be thankful that their rubbish today gives many clues and insights into life in the ninth and tenth centuries. Their town planning and sanitation did not achieve the sophistication of the Romans, but they certainly indicate a highly organised, independent society, that operated within the framework of the 'Abbasid state.

NOTES TO CHAPTER TWO

1. See page 2 and note 12 in chapter 1.
2. M. Hadj-Sadok: *ET² III* (Leiden, 1986): 839-40.
3. Ya'qubi: *Kitab al Buldan*, ed. de Goeje (Leiden, 1892); G. Wiet: *Ya'kubi: Les Pays* (Cairo, 1937); and C. Brockelman: "Ya'kubi", *ET¹ VIII* (Leiden, 1987): 1152-3. Sadly for our purposes, the description of India, China and the Byzantine Empire is lost.
4. Ch. Pellat: "Gahiziana, I: "Le *Kitab al-Tabassur bi-liTigara* attribué à Gahiz", *Arabica I* (1955): 153-165; and Pellat: "Al-Jahiz", *ET² II* (Leiden, 1983): 385-7, wherein Pellat gives useful biographical detail. Discovered by the Caliph Ma'mun, Jahiz spent much of his time at the 'Abbasid court and was in an excellent position to gain accurate information, although it seems he never had an official post.
5. H. Massé: "Ibn al-Fakih", *ET² III* (Leiden, 1986): 761-2. Only an abridged version remains. Muqaddasi criticized him for being imprecise and taking irrelevant diversions. However, De Goeje recognized that Muqaddasi borrowed a lot of his work, and Yaqut, in his *Mu'jam al-Buldan* used him widely (cited by Massé in *ET²*).
6. S.A. Bonebakker: "Kudamah", *ET² V* (Leiden, 1986): 318-22. Used widely by Yaqut too.
7. D.M. Dunlop: "Al-Balkhi", *ET² I* (Leiden, 1960): 1003. He was a pupil of the ninth century philosopher al-Kindi. Citing Muqaddasi, Dunlop quotes "...he admits that he was an expert, especially in his own province, mentioning in particular his familiarity with the *diwans* (registers of taxes) of Khurasan."
8. A. Miquel: "Al-Istakhri", *ET² IV* (Leiden, 1978): 222-3.

9. A. Miquel: "Ibn Hawqal", *ET*² III (Leiden, 1986): 787. For us he is highly relevant because he "... is much less interested in rare or precious products, and secondly he was able to study on the spot a given economic situation in relation to a particular period or with reference to an implicit norm. He was the only Arab geographer of the period who really sketched a vivid picture of production."
10. Al-Muqaddasi: *Ahsan al-Ta'asim fi Ma'rifat al-Aqalim*, Arabic text in De Goeje III (Leiden, 1906); English trs. G.S.A. Ranking and R.F. Azoo, (Calcutta, 1901). The latter is an abridged version, with useful page indicators based on the De Goeje publication which facilitates a quick, and necessary, check on the original.
11. Yaqut: *Kitab Mu'jam al-Buldan*, (Beirut edition of Wustenfeld's *Jacut's Geographische Wörterbuch* 1866-73, 6 vols).
12. Makrizi: *Kitab al-Mawa'iz wa'l-I'tibar bi-Dhikr al-Khitat wa'l-Athar*, 2 vols, (Bulaq, 1270/1853 - Dar al-Sadar reprint, Beirut).
13. S.D. Goitein: *A Mediterranean Society*, 4 vols (Berkeley and Los Angeles, 1967-83); and A.L. Udovitch: "A tale of two cities: commercial relations between Cairo and Alexandria during the second half of the eleventh century" in *The Medieval City*, ed: H.A. Mikimin, D. Herlihy and A.L. Udovitch (Yale University Press, 1977).
14. Mas'udi: *Muruj al-Dhahab wa-Ma'adin al-Jawhar*, as cited by Hitti in *History*, p. 391 - ed. and tr. de Maynard and de Courteille, 9 vols (Paris, 1861-77).
15. Zhang Jun-yan: "Relations between China and the Arabs in Early times", *JOS* 6 pt. 1 (1983): 91-109.
16. G. Féhervári: *Bahnasa Preliminary Report*: p. 3, citing W.F. Petrie's *Tombs of the Courtiers and Oxyrhynchus*, (London, 1925): p. 12-13.

17. W. Watson: "On T'ang soft-glazed pottery", *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): 41-47. In this article he refutes Sarre's theories that his Chinese Samarra finds were in fact Chinese at all, and sees a local manufacture in the Chinese style. This theory was taken up by Whitehouse in connection with his excavations at Siraf and J.D. Frierman: "T'ang and Sung ceramics exported to the west in the light of archaeological discoveries", *OA NS XXIV* (1978): 195-200.
18. G.F. Hourani: *Arab Seafaring*, (Beirut, 1963): 68, who cites *Kitab 'Aja'ib al-Hind (The Book of the Wonders of India)* as being a useful commentary on commercial organisation and strength of the merchant classes as accounted for in the tenth century. A. Williamson: "Sohar and the seatriade of Oman in the 10th century AD", *PSAS 4* (1974): p. 94, cites the tale of Ishaq from 'Aja'ib and how when he returned from 30 years at sea in 912 with "musk, silk, porcelain, jewels and precious stones, and other wonderful Chinese merchandise", an envious group persuaded the Caliph al-Muqtadir to confiscate all Ishaq's belongings. The governor of Sohar and the merchants intervened, however, and threatened to cease trade if their safety was not assured.
19. K.A.C. Creswell and J.W. Allan: *A Short Account of Early Muslim Architecture*, (Cairo, 1989): p. 383-5.
20. Al-Maqrizi: *Kitab al-Mawa'idh wa'li tibar Bidhkr al-Khitat wa'lathar*, trs. U. Bouriant and M. Paul Casanova, vol 1, fasc. 1e (Paris, 1895): p. 671.
21. Al-Muqaddasi: *Azoo and Ranking op. cit.*, p. 48.
22. Ch. Pellat: "Gahiziana", *op. cit.*, p. 159-61, wherein he lists the various silks, woollens, linens, cottons produced in the empire.
23. F.E. Day: "Dated tiraz in the collection of the University of Michigan", *AI IV* (1937): p. 420.
24. *Ibid.*, wherein no. 4 specifies made in a private factory in Sana'a, and no. 7 in a public factory in Egypt (Cairo) in 298/910-11 in the name of the Caliph al-Muqtadir. No. 12 was also made at a public factory in Misr in 310/922-3.

25. R.B. Serjeant: *Islamic Textiles: Material for a History up to the Mongol Conquest*, (Beirut, 1972), quoting from Ibn al-Athir's *Al-Kamil fi'l-Tarikh*, (Cairo, 1290), vol. 7, p. 143. See also chapter 1, page 11, where Ibn Tulun also deleted al-Muwaffak's name in the *khutbah*.
26. *Ibid.*: p. 8.
27. G. Wiet: *op. cit.*: Egypt.
28. G. Wiet and J.H. Kramers: *Configuration de la Terre (Kitab Surat al-Ard)* by Ibn Hawqal, (Paris, 1964), 2 vols, p. 137.
29. *Ibid.*, p. 150.
30. M.A. Ahsan: *Social Life Under the Abbasids (170-289/786-902)*, (London, 1979): p. 74, citing 'Arib's (d. 369) *Silat Ta'rikh al-Tabari*, ed De Goeje (Leiden, 1897), p. 116.
31. G. Féhervári: *op. cit.*
32. *Ibid.*, p. 21 and footnote 39. In a personal communication with Dr G. Féhervári dated 24 August 1990, he said that permission had been granted for me to study the Bahnasa ceramic collection stored in the Islamic Museum, Cairo, but the Museum never received the letter.. Féhervári has yet to answer my more specific questions about the lustre wares.
33. R. Schnyder: "Tulunidische Lüsterfayence", *AO V* (1963): 49-78.
34. Al-Idrisi: *Kitab Nuzhat al-Mushtaq fi Ikhtirag al-Afaq*, (Rome, 1970), p. 130 - cited by Féhervári in note 6 of his preliminary report.
35. A. Mez: *The Renaissance of Islam*, trs. Salahuddin Khuda Buksh and D.S. Margoliouth, (London, 1937): p. 444; and Wiet and Kramers *op. cit.* p. 150.
36. A.L. Udovitch: "A tale of two cities: commercial relations between Cairo and Alexandria during the second half of the eleventh century" in *The Medieval City*, *op. cit.*: p. 143.
37. A. Lewis: "Mediterranean Maritime Commerce AD 300 - 1100" in *The Sea and Medieval Civilizations*, (London, 1978): chapter XII, p. 2.

38. R.S. Lopez and I.W. Raymond: *Medieval Trade in the Mediterranean World*, (New York, 1967): p. 24; Azoo and Ranking *op. cit.* p. 321 translate al-Muqaddasi as styling Qulzum as the storehouse of Egypt, as well as being filthy!
39. *Ibid.*, p. 32.
40. G.F. Hourani: *op. cit.*, p. 60 - "'Amr reopened Trajan's canal using forced labor (12/641-2)." And Kubiak: *Al-Fustat: Its Foundation and Early Urban Development*, p. 119, and note 58 on p. 166, wherein he states: "According to al-Maqrizi, *Khitat I*, p. 71, it was used until the year A.D. 766-7 (A.H. 150) when it was filled up by order of al-Mansur."
41. *Ibid.*, p. 32.
42. Wiet: *op. cit.* Ya'qubi seems to ignore the Mediterranean connection, despite detailing the land routes. Qulzum he styles as the main port for Yemen and the Hejaz.
43. R. Velasquez Bosco: *Medina Azzahra y Alamiriya*, (Madrid, 1912): pl. XLIX and L fig. 4.
44. K.N. Chaudhuri: *Trade and Civilisation in the Indian Ocean*, (Cambridge, 1985): p. 11. Chaudhuri enlarges his theme of Asian trade in his recent publication *Asia Before Europe*, (Cambridge, 1990).
45. *Ibid.*: p. 36.
46. *Ibid.*: p. 39.
47. N. Groom: *Frankincense and Myrrh*, (London, 1980).
48. M. Tampoe: *Maritime Trade Between China and the West: an Archaeological Study of the Ceramics from Siraf (Persian Gulf), 8th to 15th Centuries AD*, BAR International Series 555, (Oxford, 1989), for a summary of all Whitehouse's publications too; and A. Williamson: *op. cit.* note 19.
49. *Ibid.*
50. Al-Muqaddasi: Azoo and Ranking: *op. cit.*, p. 142.

51. E.W. Lane: *An Arabic-English Lexicon* Bk I, pt 6 (London, 1877): p. 2266, *ghadar*: "clay that is cohesive, of a good kind without sand or without salt earth. "*Ghadur*: sticky clay that adheres to the foot by reason of its compactness." There are also references to green pots, perhaps celadon, but by context one would assume this was a later interpretation. The implication would appear to be a distinctive, compact clay, and it is tempting to see the compact Basran wares.
52. Al-Muqaddasi: *op. cit.* De Goeje III: p. 97.
53. Hourani: *op. cit.*: p. 31, citing the fateful Roman expedition led by Aelius Gallus, when he lost many men at sea between Egypt and Nabataea. The *Periplus* details the hazards of the Red Sea too. Mez: *op. cit.*, p. 509.
54. Mez: *ibid.*, p. 511.
55. Wiet: *Ya'kubi*, *op. cit.*, p. 160.
56. D. Whitcomb: *Aqaba: "Port of Palestine on the China Sea"*, (Amman, 1988): p. 20 - there are some fine Fatimid examples too; J. Zarins and A. Zahrani: "Recent archaeological investigations in the Southern Tihama Plain (the sites of Athar and Sihi), *Atlat* 9 (1985): 70-83; and E.J. Keall and R.B. Mason: "Provenance of local ceramic industry and the characterization of imports: petrography of pottery from medieval Yemen", *Antiquity* 62, no. 236 (September 1988): 452-63.
57. Al-Muqaddasi: *Azoo op. cit.*, p. 51.
58. Zhang: *op. cit.*, p. 93.
59. A. Lane and R.B. Serjeant: "Pottery and glass fragments from the Aden littoral", *JRAS* (1949): p. 110. Their source is T. Lewicki's "Les premiers commerçants arabes en Chine", *Rocznik Orientalistyczny* (Lwów, 1935), xi, pp. 73-168. It is tempting to surmise that by the tenth century *ghadar* had become synonymous with Islamic white wares, and in the ninth century had meant Chinese white wares.
60. *Ibid.*: 10, quoting from Pellat's "*Le K. al-Tabassur bi l-Tadjara*" *op. cit.*, p. 159.

61. Hourani: *op. cit.*, p. 46-50.
62. Chou Ju Kua: *Chu-fan-chi: Chinese and Arab Trade in the Twelfth and Thirteenth Centuries*, ed. and trs. E. Hirth and W.W. Rockhill, (St. Petersburg, 1911): p. 11.
63. *Ibid.*, p. 15.
64. Ibn Shahriyar Buzurg: *Kitab 'Aja'ib al-Hind*, trs. P. Quennel (London, 1928). According to Hourani, *ibid.*, p. 68, note 65, most stories date from the first half of the tenth century, and one is dated 390/1000.
65. J. Carswell: "China and Islam in the Maldiv Islands", *TOCS* 41 (1975-77): 121-98; "A survey of Chinese ceramic exports to India and Ceylon", *TOCS* 42 (1977-8): 43-69.
66. R.L. Hobson: "Potsherds from Brahminabad", *TOCS* 8 (1928-30): 21-30.
67. M. Tampoe: *op. cit.*: 106-7.
68. M.C. Horton: "Asiatic colonization of the East African Coast: the Manda evidence", *JRAS* (1986) pt. 2: 204; and "Facing Mecca at Shanga: some problems in the origins of Islam in Eastern Africa", *African History Seminar of the School of African Studies*, (London, 1989): 2-7.
69. N. Chittick: *Kilwa: an Islamic Trading City on the East African Coast*, 2 vols. The British Institute in Eastern Africa. Memoir no. 5, (Nairobi, 1974): p. 18, vol. 1.

History of Excavations

The history of the Fustat excavations will be covered in the following chapter. The focus of this chapter is the evidence from the numerous excavations that have been carried out in the early Islamic levels at sites throughout the Dar al-Islam. The aim is to iron out many misconceptions that have entered the literature, and to demonstrate how much damage was caused by assuming that knowledge of early medieval Chinese ceramics was unquestionably well-established. Of necessity, this becomes a catalogue of sites where these 'Abbasid lustre wares have been found. Most of the information has been culled from preliminary reports, and these are sufficient for present needs.

The Introduction touched upon the chronological problems that have arisen from the so-called "Samarra horizon". In an attempt to correct the idea of a fixed period of occupation for the typesite, Samarra, field archaeologists working on comparable sites have added a further complication: some advocating a high chronology and others a low chronology. The high chronology is primarily based on Adams' excavation at Tell Abu Sarifa, a small site near Nippur, south of Baghdad.¹ He demonstrated a sequence of glazed wares from the Sasanian levels through to the early Islamic ones, and suggests that white-glazed pottery "was of Sassanian derivation and ...not an imitation of Chinese production at all."² In his level VI, which he dates to the seventh and eighth centuries, he found 50 white-glazed (some lustred) and 34 splash-ware sherds. On this basis he concludes that these wares must be as early as the seventh/eighth century. He is thus in agreement with Day, who favoured this early manufacture, arguing that the Chinese wares on which the shapes and splashed decoration were based, went out of production in the mid-eighth century, after the An Lushan rebellion.³ She did admit that it was impossible to distinguish between the Umayyad and 'Abbasid levels, so she was tying her ceramic chronology to an historical event. The fact that they were arguing for different origins of these wares is immaterial.

The primary exponent for the low chronology, suggested by Hansman through his extensive surveys in Khuzistan, is Whitehouse.⁴ Hansman, in a personal communication to Whitehouse, based on findings for his doctoral dissertation, suggests that Islamic white-glazed and splashed pottery may not have come into use until after the ninth century. This idea appealed to Whitehouse in the context of his finds at Siraf. It will be seen when his findings at Siraf are examined, and more recent scientific analysis of these Chinese wares is discussed, that it is not wise to use survey results as support for one's argumentation.

Samarra

Since Herzfeld's and Sarre's excavations, the Iraqi Directorate General of Antiquities has been excavating at Samarra intermittently, seemingly on the assumption that they were exploring a single-period site.⁵ A British team led by Northedge has admirably demonstrated the continuous occupation of the area through a number of thorough surveys, and has reached some interesting conclusions which can only be confirmed through excavation.⁶ Through these surveys they propose that it is possible to distinguish which parts of the site belonged solely to the 'Abbasid period. In the main palace area H, which they assign solely to the limited 'Abbasid occupation, they were able to examine discarded sherds from an excavation dump.⁷ This produced 11 polychrome lustre, two Chinese porcelain and three celadon sherds. Site N1, known as the glassworks, produced a monochrome lustre ware; this area was seen to be continuously occupied from Sasanian through to the Middle Islamic periods (i.e. eleventh century).⁸ On the basis that there appears to be no monochrome lustre at Samarra during the caliphal period, Northedge has formulated "the idea that polychrome was introduced during the period of the Caliphs at Samarra", and that monochrome had not yet been introduced".⁹ He does not, however, suggest that polychrome ceased to be produced once monochrome had been introduced. In all these reports cited, it is important to note the small quantities of lustre wares found, indicating that it was a true luxury ware.

The study of Sarre's Chinese ceramic finds,¹⁰ was thrown into confusion by Watson,¹¹ when he concluded that they were in fact locally manufactured and not imports. Recent research carried out by Rawson and colleagues at the British Museum on *sancai*, or Chinese three-coloured lead-glazed wares, from Mantai, Fustat and Samarra, has proved that Sarre was correct in assigning these wares a Chinese provenance.¹² Rawson cites three kilns in southern China that continued to produce *sancai*. Using a scanning electron microscope (SEM), they found it easy to distinguish between the Chinese and Islamic wares sampled, and they established a quick and accurate method of recognition and distinction by X-ray fluorescence analysis of the bodies. By neutron activation analysis it is possible to fingerprint the sherds and establish kiln site provenances. Because very few of the *sancai* sherds found have classic designs, Rawson suggests they are later. This is evidenced by their shapes too. This is an important breakthrough in the study of Chinese ceramics, for it reveals that *sancai* was not just made for burial grounds, and that its manufacture did not end with the An Lushan rebellion.

Basrah

Basrah has now been fairly positively identified as the manufacturing site for the fine, compact, yellow-bodied 'Abbasid lustred white wares that are under discussion.¹³ Before exploring the archaeological record, it is interesting to delve into the Arabic sources. Al-Jahiz's description of Basrah being remarkable for manufacture has already been noted in the previous chapter.¹⁴ According to al-Muqaddasi Basrah produced linen, silk, pearls, henna, floss silk, and dates.¹⁵ The chroniclers and geographers make no mention of a ceramics industry, other than the fact that glass makers, potters and rushmat makers were amongst the artisans sent to Samarra, to help build al-Mu'tasim's city.¹⁶ Tamari found two references to Basrah's pottery manufacture, which are relevant. In a unique fourth/tenth century narrative, al-Azdi describes white-glazed vessels and, most importantly, what must be a ruby-lustre cup:

في كأس كقشرة الدرّة البيضاء مجرودة أو محفورة كأنها مخروطة من دارة
القمر أو قدح من لحاحى البلور مجرود الشفة مخلوع لا خدش فيه ولا
نمش يخرج من غلاف مسلول أبيض في سواد من عمل البصرة في بدنه
ملع بحمّة كشقائف النعمان ورأسه ختم سليمان وأسفله وحزّة البستان

"[wine is put] in a cup, whose pearl-like surface is either plain or inscribed, and is shaped like a full moon. Another cup resembles opaque crystal, plain-lipped, without a scratch or blemish. [The clay] is extracted from a white layer in the Sawad (region near Basrah) and fashioned in Basra. It has a lustrous, red sheen. The top is decorated with a Solomon's seal motif and the bottom with a garden flower."¹⁷

The other account comes from al-Jahiz, who describes the outstanding quality of Basrah's clays and ceramic wares:

ويستدل على كرم طينهم ببياض كيزانهم وعذوبة الماء البائت في قلالهم وفي لون آجرهم كأنما
سبك من معج بيض

"The whiteness of the vessels and the delicious taste of water contained in their jars is an indication of the good quality of their clay, whose colour is as if it was moulded from an egg yolk."¹⁸

There are two uncorroborated references to kiln finds: Frierman says "recent excavations have revealed kilns and wasters. This is an extremely important find in determining the origin of Samarra wares."¹⁹ Unfortunately he gives no citation for his information. Philon in a footnote says that F  herv  ri informed her that recent excavations in Basrah, carried out by the Iraqi Directorate General of Antiquities in 1966, 1973 and 1977 revealed nine kilns producing white-glazed ware, blue on white (the preferred term for this ware is ink-on-snow) and a few splashed wares, together with a ninth century coin.²⁰ No lustre painted examples were found in the course of these excavations. Unfortunately they still do not appear to have been published. Philon also mentions a white-glazed waster from the Metropolitan Museum of Art, (no. 52.130, 1-2B). No lustre-painted examples were found in the course of these excavations.

Recent research carried out by Mason in the Petrographic Department of the Royal Ontario Museum (ROM), has shed new light on the question of Basrah's ceramic industry. Mason is confident that products of a particular kiln can be identified by physical characterisation of their petrofabric.²¹ In his research he has analysed the full gamut of the so-called Samarra horizon, and makes many cogent comments. In discussing wasters and kiln furniture he has a good, commonsense approach and warns about the possibility of acceptable "seconds" being in general use and should not be interpreted as evidence for a kiln site. More importantly:

"The 'lustre-painted' type provides a particular problem in this regard. Here a metallic pigment is affixed to the surface of an already fired vessel, in a second low-temperature firing, in a specially designed kiln in a reducing atmosphere. As the lustre-pigment is fixed to the vessel at a low temperature, wasters of lustre-painted pottery are rare, if they exist at all. This produces a considerable problem in the identification of lustre-ware production centres, a problem often not recognized by excavators who publish fragments of 'lustre-painted' pottery found in the vicinity of an ordinary kiln as evidence of production."²¹

Mason's argument for a Basran production of these 'Abbasid opaque white wares is based on wasters and kiln furniture found in old Basrah in 1952, and housed in the Metropolitan Museum of Art (the same collection that Philon referred to, although her reference should be amended to 1-26). Sampling from representative collections from most of the contemporary sites reveal that as far as lustre and ink-on-snow wares are concerned, based on the evidence of their petrofabric, Basrah is the only place of manufacture. Lane made the observation that these wares were probably produced in the same centre, based on two bowls in the Victoria and Albert Museum.²² Some plain white wares have other petrofabrics, indicating other production centres. These results emphasise the importance of Basrah as both a manufacturing and trading centre, and how widespread the fashionable influence of the 'Abbasid court was.

Rayy

Rayy was once considered as a centre of manufacture for 'Abbasid lustre wares, based on Vignier's so-called excavations there in the early 1900s.²³ Many of the figural examples were attributed to Rayy, and to this day remain so. Mason analyzed some fragments from Rayy, which also indicated a Basran manufacture.^{23a} Rayy became a dealer's label in the early 1900s, which will take a long time to remove. Schmidt, who excavated the site in the 1930s reported that there was very little lustre excavated, and because it was so scarce concluded that it was probably imported to the site, though "not necessarily from abroad".²⁴ Watson discounts Rayy as a production centre, on grounds of lack of evidence.²⁵ Until further research is carried out at this site, any piece attributed to Rayy should be regarded with extreme scepticism.

Istakhr

Schmidt's excavations at Istakhr are more revealing with regard to the history of the development of early Islamic wares. Istakhr was the Sasanian capital, which continued as a modest town through to the end of the tenth century, when it was destroyed by Samsam ad-Dawlah. By the twelfth century it was only a village of some 100 inhabitants.²⁶ Schmidt claims that they did not find the houses of the wealthy or the government, and found an almost total absence of glazed ceramics in the early levels, and concludes: "We believe therefore that Iran had no

share in the development of the beautiful glazed wares which suddenly appear in great quantities after the fall of the Umayyad caliphate." His team found small quantities of both polychrome and monochrome lustre, as well as a couple of ink-on-snow sherds.²⁷ All had a "Samarra-type" paste, i.e. what we now know to be Basran. Of course, such a report should be treated with caution, as only a small percentage of the site was excavated. Nevertheless, it is one in which commonsense prevailed, which is the key to good archaeology.

Nishapur

Nishapur, a great medieval city in eastern Khurasan, was chosen by the Metropolitan Museum of Art because it was known to have been founded by the Sasanians, and that Yazdegird II (438-457) made the city his usual residence.²⁸ It was completely sacked by the Mongols in 1221 and finally destroyed by an earthquake in 1280.²⁹ This made it an especially interesting site to excavate, and the initial sondages revealed pottery from the ninth through to the thirteenth centuries. It was excavated between 1935 and 1940, with a final season in 1947. Although the final results were inconclusive, Wilkinson's observations on the pottery, and his chapter entitled "Opaque White Ware and its Imitations" are highly relevant to this thesis.³⁰

Wilkinson concluded that Nishapur did not manufacture lustre ware, but it did imitate it.³¹ Indeed he saw the flow of ceramic inspiration being from Iraq to Iran. All the lustre- and ink-on-snow-decorated whitewares he attributed to Iraq: either Baghdad or Basra. However, he did follow Schnyder and report that early lustre wares were manufactured in Egypt. Despite the beautiful presentation of his ceramic finds, the serious scholar is frustrated by a seeming lack of stratigraphy, and a tendency to date by type and design rather than actual find spot. Following contemporary opinion, therefore, he assigns polychrome to the ninth century and monochrome to the tenth century.

Susa

The site of Susa, in Khuzistan, is a highly complicated site archaeologically, for it has been continuously occupied for at least 5,000 years, and has been excavated by the French since 1897. Sadly the volume of reports does not match the volume of material and information that should have been extracted. In the Islamic period it was a relatively minor site, but by virtue of its topography and considerable reuse of existing buildings, the Islamic occupation is extensive, and an overall chronology has yet to be conclusively established.³² Lacam attempted to do this in 1950,³³ and in the 1970s Rosen-Ayalon³⁴ concentrated on the Royal City and Kervran did the same for the Apadana.³⁵ This is the site that seemingly breaks all the rules with regard to conformity with its contemporaries, allegedly producing its own ink-on-snow (almost a century earlier than anywhere else) and lustre wares, including a ware styled as "blue lustre".

Kervran, who had the advantage of excavating, recording and writing up her own report, has published an admirably graphic pottery sequence. She modifies both Lacam's and Rosen-Ayalon's chronologies, maintaining the three Islamic periods, but preferring a much higher chronology for the actual wares.³⁶ Certainly Kervran's chronology is more convincing than Rosen-Ayalon's, but more stratigraphic proof is needed for her levels I and II. She admits that both use the same small, yellow bricks, and that there has been considerable erosion on the tepe or tell. A little later she confesses that very few pieces were well stratified.³⁷ She puts ink-on-snow production as early as mid-eighth century, and sees it as local. This would mean, of course, that it was produced at Susa before Basrah, if the ninth century dating is correct. Mason analysed a collection of sherds from Susa in the Louvre collection and that of Jean Soustiel in Paris, and all revealed the Basran petrographic fabric.³⁸ Another problem with Susa is that Unvala,³⁹ and Kervran, following his report, see lustre manufacturing at Susa, based on Mecquenem's 1927-8 report on the City of the Artisans. Koechlin mentions Mecquenem discovering kiln furniture and wasters, but does not allude to lustre manufacture, preferring Rayy.⁴⁰ This points to a perfect example of incorrect interpretation of an ordinary kiln and lustre sherds being found in proximity to each other, a point which Mason made with regard to the Basrah kiln furniture, and quoted in full above in the section on Basrah (page 36).

It is not clear if Mason analysed in the Susa collections what he describes as the "earlier Islamic forms", such as Kervran's fig. 38, no. 6 on page 129. In profile it looks to be purely Chinese, perhaps one of Koechlin's copies that he alludes to. Crowe illustrates a similar bowl in polychrome lustre.⁴¹ She attributes these shapes to wares from late ninth/early tenth century Canton or Fujien.⁴² Note a 200 year discrepancy between two commentators who were working on the same site at the same time! From Crowe's description of the body of the white wares, it certainly resembles a Basran product. The splashed-wares had the same shape, but pink body.

Crowe had glaze samples of the opaque white wares analysed by the Beta-ray back scatter method at the Oxford laboratories, which demonstrated that the Susa glazes were alkaline.⁴³ Whitehouse found the same for 13 Siraf sherds.⁴⁴ Tamari subjected ten of the Ashmolean's al-Hira samples to the same method, and had some interesting results. Both the interior and exterior of each sherd was analysed: two sherds revealed two different glaze compositions, with a lead/tin glaze for the interior and an alkaline glaze for the exterior. Only two al-Hira samples were completely alkaline. Two different effects of cobalt blue applications were found too: one with fuzzy edges and no surface protrusion; and the other thickly painted, and applied directly to the body. While this in no way helps to establish a dating sequence for Susa, it demonstrates the variety of methods available to the potters, and emphasises the degree of experimentation they were still going through. Both the cobalt and the lead had to be imported, and perhaps these changes reflect a degree of availability and necessity to adapt, rather than experimentation. Cost may also have come into the equation: Crowe demonstrated that the alkaline samples were fired to a very low temperature, somewhere below 750°C. The tin-glazed wares would have needed a firing temperature nearer 1,000°C. This would be more costly in firing materials, as well, yet would have made the pot more durable, thus commanding a much higher selling price. How the potter achieved the two glazes on the al-Hira samples is a mystery.

Siraf

The Siraf excavations provide an invaluable corpus of Islamic and Far Eastern material from the Sasanian period up to the Ottoman, with a major accent on the ninth/tenth centuries during the port's apogee. As for all sites though, the interpretation is at the mercy of the excavator and his/her ability to extrapolate convincingly.

No comprehensive final report has been published to date, but Whitehouse put out six Interim Reports to cover each of his six seasons between 1966 and 1973, in addition to a fascicle on the congregational mosque and smaller mosques and another on the coins and monumental inscriptions.⁴⁶ More recently, Tampoe has explored the trade connections, largely through the ceramic record, and attempted to revise Whitehouse's dating.⁴⁷ This was necessary, for Whitehouse had adopted Watson's theory that no Chinese lead-glazed wares were found at Samarra, and used this to support Hansman's low chronology. Based on evidence of his sounding A, and the acknowledged longer occupation for Samarra, Whitehouse saw evidence for a gradual process of development for the Islamic white wares: 1) white and some ink-on-snow; 2) white and more colours, with some splashed; and 3) lustre and incised-splash wares. He allowed a century for this development, between 850 and 950.⁴⁸ Much of his argumentation was also based on the sequence and sealed platform fills of the Great Mosque. Allen pointed out the dangers of this criteria, and demonstrated how unsafe it is to use fill material for a firm ceramic dating.⁴⁹ Both Allen and Tampoe argued for a much earlier dating of the Great Mosque, bringing it back to about 800. Tampoe still adhered to Whitehouse's split development of these wares, using the coin evidence, which is heavily criticized by Mason and Keall.⁵⁰ Their doubts about the dangers of attempting to establish a firm ceramic chronology will be attested below when examining recent research in China. Several examples painted in a combination of ink-on-snow and lustre will be discussed in the appendix, thus questioning Whitehouse's argumentation for a gradual development of these Islamic white wares.

The tenth century geographers indicate that Siraf was closely linked with Basrah. Hourani suggests that because the headwaters of the Persian Gulf were difficult to navigate, Siraf grew as an entrepot:

"The geographers describe the extravagant residence of its merchants and shipowners, built in stories of teak wood imported from India and other woods from East Africa. Akhbar reports that cargoes were generally brought in smaller vessels from al-Basrah and other ports of the Gulf to Siraf and there transferred to the large China boats."⁵¹

Certainly the evidence from the luxury Islamic wares in the 'Abbasid period indicates imports from Basrah, but it should be pointed out that these are relatively few.⁵² The Chinese wares are even fewer. Both are found largely in the residential area F, indicating a limited wealthy merchant class, as one would expect in a bulk freight port. It has already been noted in the section on Susa that Whitehouse found that his Siraf opaque white wares had an alkaline glaze too, and it was suggested that this could have been for either economic or practical reasons. If the former, it is tempting to interpret the lack of tin-glazed wares as revealing a less wealthy merchant class than hitherto imagined. There is certainly no indication of Siraf ever being an important administrative or intellectual centre.

Siraf's contribution to Islamic archaeology is of prime importance, and the availability of its ceramic assemblage for scientific analysis has given a fascinating insight into the ceramic history of a ninth/tenth century trading centre.

Sohar, 'Arja and Lasail

Sohar and its two hinterland sites of 'Arja and Lasail have been studied intermittently since the 1970s. Williamson brought the archaeological potential of Sohar to light, citing the numerous tenth century geographers' descriptions of Sohar's importance. For example Istakhri said "it is not possible to find on the shore of the Persian Sea nor in all the land of Islam a city more rich in fine buildings and foreign wares than Sohar."⁵³ Williamson was intensely interested in Sohar as a site, due to its known Sasanian occupation since the first century AD, and its dense ninth/tenth century material revealed in an initial survey. He emphasised that although the Qarmati occupied Oman for 35 years from 929, Sohar experienced its greatest prosperity during this period.⁵⁴ This adds weight to the argument that the Zanj and Qarmati did nothing to hinder trade and commerce. Williamson's sad and untimely death greatly hindered the Sohar studies. Farries continued his initial excavations, but his results still await publication.⁵⁵ Kervran has excavated the centre of Sohar, but her finds have yet to be published.

When Costa and Wilkinson explored the copper mining town of 'Arja, they found a typical ninth/tenth century pottery assemblage.⁵⁶ The high and low chronologies are mentioned, and Whitehouse's Siraf dating evidence followed. No reference is made to the Fustat evidence at all.

Only one lustreware sherd was found, and a few Chinese sherds for which Costa prefers a post 900 dating. More polychrome lustre sherds were found at the mining town of Lasail, but not in any stratified context.⁵⁷

Sohar is undoubtedly an important link in the study of 'Abbasid ceramics, trade and organisation, and the excavation results promise to shed more light on the archaeological evidence for the period.

Zabid, Aden

Aden's prominence as a China-trade port has already been noted, but its archaeological evidence has yet to be fully explored. Lane and Serjeant indicated the potential of the Aden area ceramic assemblage, citing the occurrence of lustre wares and Chinese imports, amongst many other wares.⁵⁸

ROM's excellent work at Zabid is shedding considerably more light on the picture. Al-Muqaddasi, who knew both cities personally, styles Zabid as having the administrative status of a metropolis, just as Fustat, whereas Sana'a and Basrah were only capitals of districts, as Alexandria and Aswan were.⁵⁹ He goes on to describe Zabid: "It is a splendid, well-built town, called commonly the Baghdad of al-Yemen."⁶⁰ The ROM team are investigating the ceramic dynamics of the Tihama region through their survey finds, and more recently have been excavating in Zabid. As one is coming to expect, "a very minor percentage of the ceramics collected in Yemen were imports"⁶¹, but the Iraqi 'Abbasid assemblage is well represented, with both lustre and ink-on-snow amongst the Basran fabrics. It is hoped that their current work will clarify many of the anomalies that have occurred in the study of early Islamic ceramics. Certainly their scientific analysis programme has already demonstrated this.

Athar

This is the only southern Red Sea port to be excavated to date.⁶² Despite the importance of the Gulf ports during the ninth and tenth centuries, one notes from the geographers that the Red Sea ports became increasingly important. Istakhri indicates that Persian merchants played a major role in this Red Sea trade, being the principal traders in Jedda.⁶³ Al-Muqaddasi describes it as "a large and pleasant town and a well-known place, as it is the chief city of the district and a seaport of Sana'a and Sa'dah."⁶⁴

Athar was continuously occupied from the seventh century, and most probably from the fourth, although it was not mentioned in the *Periplus*.⁶⁵ The 1984 excavations revealed a 560 hectare settlement, most of which was covered with *barasti* huts, but areas H and B revealed substantial coral stone and brick constructions: H being interpreted as a residential area and B as the customs area and bazaar.⁶⁶ The early ceramic assemblage is typically 'Abbasid, whereas the later medieval ceramic connections point more to southern Arabia than Fatimid Egypt. This certainly emphasises the unity of the Dar al-Islam in the ninth/tenth centuries, and the fragmentation thereafter. The reporting on the Chinese wares is a little confusing, and points to a need for further investigation.⁶⁷

Aqaba or Aylah

The port was established as early as the first millenium BC, but Whitcomb sees the Muslim site of Aylah, as distinct from the Roman/Byzantine site of Ailana, as being occupied from early Islam through to the Crusades, and then abandoned.⁶⁸ Ghawanmeh indicates that Trajan re-established Aylah's Red Sea trade (the Nabataeans had preferred the overland route), connecting her to Gaza and Damascus by road, and Egypt by sea and the canal with which he linked the Nile with Suez or Qulzum.⁶⁹ This not only established trade with southern Arabia, but with the African coast, India and China also. Whitcomb quotes al-Muqaddasi's description:

"Wayla, at the very end of the eastern arm of the China Sea, is a chief-place (*madinah*), very prosperous, having palms and fish; it is the port of Palestine and the storehouse of the Hijaz."⁷⁰

Al-Muqaddasi goes on to say the town was disputed by the Syrians, Hijazis and Egyptians. Effectively Egypt supplied the Hijaz and the Holy Places with wheat through Aylah, which was the main conduit for pilgrims from Egypt, Syria and the Maghreb.

Whitcomb's excavations have revealed a walled, well-planned settlement, in which he sees three phases:

Early Islamic I	650 - 800
Early Islamic II	800 - 950
Middle Islamic I	950 - 1100

The ceramics indicate an active trade between Egypt, Syria, Iraq and China, especially in the 'Abbasid period.⁷¹ While this is a seemingly perfect site to clarify many of the puzzling anomalies of the early Islamic ceramic assemblage, we need further documentation of the stratigraphy at this stage. There appears to be a problem with the so-called Fatimid residence.⁷² Whitcomb found both polychrome and bichrome lustre wares which he dates to the ninth/tenth centuries,⁷³ along with Chinese wares that he dates to the tenth century, on the floor. The most common Chinese ware was a Jingdezhen qingbai, which he dates to the tenth/eleventh centuries. From the structure and artifactual content he states that the residence is Fatimid. One needs further proof to convince the reader, for the reporting on the pottery evidence is confusing.

What is beyond doubt, is that there was a considerably wealthy merchant class at Aylah throughout the ninth/tenth centuries, as evidenced by the luxury wares found there. The exact number of 'Abbasid lustre-ware sherds excavated is not known, but in a recent communication with Whitcomb he kindly sent line drawings prepared for publication in which he illustrated 14 lustred sherds, the majority of which would appear to be 'Abbasid.⁷⁴

The Syrian Sites

Some of the early Islamic sites have been excavated, and most of these have produced small amounts of the luxury 'Abbasid wares. Although Tarsus is in present day Turkey, it should be included in this section, as it has already been noted that it was a frontier fortress town under the 'Abbasids, and proved to be the ultimate downfall of Ahmad Ibn Tulun.

Tarsus⁷⁵, Antioch⁷⁶, and al-Mina⁷⁷ were all excavated in the 1930s, and represent sites which were sandwiched between Byzantine occupation levels, with their submission to Constantinople following the invasions between 965-9. Despite their convenient *terminus post quem* they only confirm the broad ninth/tenth century parameters for the 'Abbasid lustre wares; both polychrome geometric and monochrome figural designs were found. At Tarsus, as already noted above, Day favoured the low chronology on historical grounds, but the archaeology would appear to refute this.

More recent excavations at Hama⁷⁸ and Qasr al-Hayr al-Sharqi⁷⁹ have added little to the picture. At Qasr Hayr monochrome lustre was more common, but the stratigraphy is not secure and most of these examples would appear to have come from dumps.

Alexandria, Bahnasa, and Edfu

Investigations at Kum al-Dikka, or the rubbish mound of Alexandria, have produced considerable quantities of medieval pottery, but relatively few early Islamic wares.⁸⁰ A few 'Abbasid fine wares and Chinese imports have been found, however, but the "bulk of the pottery finds of the earlier period are of unquestionably Egyptian make and are in the greater part identifiable as Fustat ware."⁸¹ The archaeological evidence thus attests the written sources, in that after the Arab invasions Alexandria was merely a frontier post, and Fustat was the commercial centre of Egypt.

Bahnasa's considerable wealth generated from her textile industry has already been discussed in the previous chapter. It was noted that much valuable archaeological evidence was removed by the *sibakh* excavators. The relative abundance of fine 'Abbasid lustre wares known to have come from Bahnasa attests this wealth. F  herv  ri's recent archaeological investigations infer considerable local ceramic activity during the Fatimid period,⁸² but the earlier lustre wares would appear to be imports.

Investigations at Edfu in the 1920s produced some bichrome 'Abbasid lustre ware in an almost secure tenth century context.⁸³ Two dated ostraka (932 and 935) were found associated with these wares, thus indicating the continued importation of Iraqi wares during the Ikhshidid period. This is pertinent to the current thesis that all early lustre wares were manufactured in Basrah.

Madinet al-Zahra'

Although the evidence of 'Abbasid lustre wares being found in 'Abd-al-Rahman III's (912-61) palace at Madinet al-Zahra', as proof of trade was discounted, it is important archaeologically. The Spanish excavating the palace have found a few polychrome and monochrome lustre sherds in a tenth century context.⁸⁴

Mantai, Bambhore and Brahminabad

That the Indian subcontinent was a major link in Indian Ocean trade is testified by ceramic finds. The site of Mantai, on the north-western tip of Sri Lanka, was well placed for emporia trade, and controlled excavations at the site between 1980 and 1984 have identified three archaeological periods.⁸⁵ The third period, styled *Early Medieval*, coincided with "an impressive symmetrically-planned city, surrounded by a horseshoe-shaped double moat. Substantial remains of stone masonry and brick architecture were found, with the foundation of a palatial brick-building associated with a cistern discovered in an older excavation, along with indications of a street plan and a number of wells."⁸⁶ The full gamut of early Islamic wares was found from the ninth century through to the eleventh, but the reporting is too general to be useful. Tampoe refers to "early monochrome and polychrome lustre", and Carswell illustrates some of these with his early survey material.⁸⁷

Bambhore, or the Sasanian/early Islamic trading port of Daybul, at the mouth of Indus, is another site that has been excavated. Its apogee would appear to coincide with that of Siraf and Mantai, and four distinct Islamic phases were identified between the Umayyad and mid-13th century.⁸⁸ According to Tampoe the "finer details of the glazed ceramic assemblage have not been published, but the general picture provided tallies with that from Siraf."⁸⁹ She does not mention any lustre wares, but the other early Islamic glazed wares are all present.

The excavations at Brahminabad were carried out in 1854 by Bellasis and Richardson, two officers serving in the Indian Civil Service, during their holidays, and not reported until 1930.⁹⁰ Brahminabad lies in the Sind, about 50 miles north-east of Hyderabad, in a dry river bed believed to have been the Indus. The historical record is scanty, but it is believed to have flourished from the seventh century through to 1020, when it was destroyed. The excavators discovered houses on the edge of a principal bazaar or square, with humans trapped as if from an earthquake. The ceramic finds revealed Islamic and Chinese wares (similar to the Samarra ones), in addition to local ones. The lustre wares were described by Hobson as being made of "soft, buff faience with opaque, greyish-white glaze and decoration in olive-brown or golden brown lustre", i.e. monochrome lustre wares. This included the small lamp, which Hobson styled as a "dove-shaped tray,"⁹¹ which is now on display in the British Museum (no. 57 11-18 295).

Although this information is relatively fragmentary, it does give a reasonable insight into the extent and continuity of the archaeological evidence that exists.

Lamu

Excavations carried out by the British Institute in East Africa and others in the Lamu archipelago at the sites of Manda, Shanga and Pate have demonstrated the trading links with the Persian Gulf during the early Islamic period. Imported Chinese and Islamic ceramics provide an identical sequence with those found at Siraf.⁹² Chittick's results from his excavations at Manda,⁹³ are now being questioned by Horton.⁹⁴

Chittick used the Siraf chronology for dating, which is undoubtedly open to doubt, and put the earliest occupation at Manda as 850. Horton's criticisms are addressed to his interpretation of beach archaeology, and the dating of whitewares. He uses evidence from his excavations at Shanga and Pate convincingly. Chittick found both imported lustre and Chinese wares at Manda, which he ascribed to the ninth and tenth centuries.⁹⁵ While no firm conclusions can be drawn, the current trend to prefer an earlier dating for the introduction of whitewares is supported by the recent research carried out in China.

Current Research in China

It has already been noted that the study of ninth/tenth century Chinese ceramics is not as well advanced as hitherto supposed, largely due to a similar paucity of excavated material and lack of information on the kilns, as that experienced in the Islamic world. Watson's extraordinary citation that Sarre's Chinese wares from Samarra were locally manufactured demonstrates the lack of practical knowledge pertaining to the Chinese ceramic experts. For too long politics and fashion had produced a succession of ceramic connoisseurs who were well versed in museum quality artifacts, but had little knowledge of manufacturing sites and more mundane wares. This dreadful hiatus is gradually being reduced, as scientific analytical methods improve and the Chinese explore more of their sites.

Paul-David was sufficiently astute to appreciate this situation at the same time Watson made his blunder. In her paper on Tang white porcelains and stoneware she specifically warns against making any categoric statements because the study of kiln sites was in its infancy.⁹⁶ She is the first to bring to the attention of English readers that the Gongxian kilns, in Henan province, were producing both *sancai* and whitewares in the eighth century.⁹⁷ The situation was partially corrected by a travelling exhibition of Chinese kiln finds in 1980.⁹⁸ This demonstrated the variety of wares manufactured, especially during the Tang period.

Richards, in her paper entitled "Early northern whitewares of Gongxian, Xing and Ding", presented to the Oriental Ceramic Society in 1985 further clarified these Chinese studies, and it is appropriate to quote her:

"High-fired northern whitewares made their appearance in the Late Northern Dynasties (368-581) and developed to a high degree of perfection during the Sui (581-618) and Tang periods (618-907). The kilns that produced early whitewares are found in present-day Hebei, in Lincheng and Quyang counties; in Henan, at Gongxian, Mixian, Dengfeng, Jiaxian, Xingyang and Anyang, at the last of which unglazed whitewares have been found dating back to the Shang dynasty (c. 1600-1027 BC); in Shanxi, at Hunyuan and Pingding; in Shaanxi, at Yaozhou, and in Anhui at Mixiao. A Five Dynasties (906-60) kiln-site producing whitewares has also been found, in the south, at Jingdezhen in Jiangxi province."⁹⁹

While this information does not pinpoint a date for the start of the Islamic whiteware tradition, it does broaden the parameters considerably and indicates that production was possible from the eighth century, when these Chinese wares could have been imported. Richards goes on to demonstrate the extent of the Chinese kiln-site research and their discoveries in the early 1980s. At all these aforementioned sites, high-fired whitewares, some of which have been classified as porcelains, were manufactured during the Tang period. The Gongxian and Xing kilns in particular produced the Samarra-type shapes.¹⁰⁰ Analytical research being carried out by the Chinese on the chemical make-up of their bodies will facilitate fingerprinting these wares. Richards published their results in two tables.

Rawson and colleagues' important research on the Samarra Chinese material at the British Museum has already been noted, in the section on Samarra. A recent discovery in Korea adds further to the history of the whitewares, and has been reported by Hongnam Kin.¹⁰¹ The undisturbed tomb of King Muryong (d. 523 AD) of Paekche produced six cups, which the excavators argue were produced in southern China under the early Liang dynasty, who ruled from Nanjing between 501-55. Everything in the tomb was Chinese, including its construction, as Muryong is known to have loved all things Chinese. Kin notes that these wares have been argued to be celadon, as they have a greenish tinge; this he argues is probably due to the thickness of the glaze, and draws an analogy with the greenness of a stack of sheet glass, whose greenness decreases as you remove each sheet. While this is seemingly digressing, it is an

important feature of glazes to note, as many of the 'Abassid lustre wares examined in the course of this thesis have a greenish tinge where the glaze has pooled, or is thicker. In order to gauge the taste of near contemporary Chinese patrons, Kin quotes from an eighth century connoisseur of tea, Lu Yu, in his *Cha Jing* (Classic on Tea):

"their highly refined celadon wares were given the place of honour above the white porcelains and received the highest esteem at the court as well as in upper class society."

Bearing in mind that celadons do not appear to have been exported to the Near East until the late tenth century, once again it is seen that China was exporting her second best only. Richards in her section on Xing wares quotes from the Tang writer Li Zhen in his *Guo Shi Bu* (Historical supplement):

"The white porcelain cups of Neijiu are used everywhere by rich and poor alike."¹⁰²

She sees this as an indication of the vast scale of Xing production and that it was probably well-established by the beginning of the Tang dynasty.

Conclusions

It should now be clear that the state and progress of excavations on these Islamic sites is slow and inconclusive. Each excavation seemingly raises more problems and opens up new horizons of research. Many of these problems are generated by the excavators, who in the quest of a firm chronology become inflexible. Hopefully the introduction of scientific analyses coupled with a common sense approach will iron out many of the inconsistencies that have arisen.

With regard to the focus of this paper, the study of 'Abbasid lustre ware production, progress has been made. Conclusive evidence has been presented for a single production centre in Basrah. Chinese research demonstrates that Islamic whiteware production was possible from the eighth century, and that the shapes that they copied were in full production by then. This chronological extension emphasises how the archaeologist must allow for greater flexibility in his dating.

NOTES TO CHAPTER THREE

1. R.McC. Adams: "Tell Abu Sarifa: a Sasanian-Islamic ceramic sequence from south central Iraq" *AO* 8 (1970): 87-119.
2. *Ibid.*, p. 110.
3. F. Day: "The Islamic finds at Tarsus" *Asia*, March 1941: 143-6; and "A review of the 'The Ceramic Arts': 'The History' in a *A Survey of Persian Art*" *AI* VIII (1941): 17-48.
4. D. Whitehouse: "Islamic glazed pottery in Iraq and the Persian Gulf: the ninth and tenth centuries" *Annali Napoli* 39 NS (1979): p. 46-7.
5. Directorate General of Antiquities: *Hafriyyat Samarra'* 1936-1939, 2 vols.; T.A. al-Jannabi "Islamic archaeology in Iraq: recent excavations at Samarra" *World Archaeology* 14 (1982): 305-37; T.A. al-Jannabi: "Al-tanqib wa'l-siyana fi Samarra' 1978-1981" *Sumer* 37 (1981): 188-211 (Ar. section); K.K. Hamudi: "Qasr al-Khalifa al-Mu'tasim fi Samarra'" *Sumer* 38 (1982): 168-205.
6. A.E. Northedge: "Planning Samarra': a report for 1983-84" *Iraq* XLVII (1985): 109-128; A.E. Northedge and R. Falkner: "The 1986 survey season at Samarra'" *Iraq* XLIX (1987): 143-174; and R. Falkner *Report on the Surface Pottery from the 1986 Survey Season at Samarra'* (13 August 1989), unpublished ms kindly supplied by A.E. Northedge.
7. Falkner: *op. cit.*: p. 9.
8. *Ibid.*: p. 25.
9. Personal communication by letter dated 23 September 1990.
10. F. Sarre: *Ausgrabungen von Samarra II: Die Keramik von Samarra* (Berlin, 1925).

11. W. Watson: "On T'ang soft-glazed pottery", *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): p. 45-6.
12. J. Rawson, M. Tite and M.J. Hughes: "The export of Tang sancai wares: some recent research" *TOCS* 52 (1987-8): 39-61.
13. R.B. Mason and E.J. Keall: "The 'Abbasid glazed wares of Siraf and the Basra connection: petrographic analysis" *Iran* XXIII (1991): received an MS submitted by the authors, and latest Iran still not on library shelves.
14. See page 18 above, under *Evidence for Imperial Organisation*, in chapter 2.
15. Al-Muqaddasi: *Ahsan al-Ta'asim fi Ma'rifat al-Aqalim*, Arabic text in Goeje III, Eng. trs. G.S.A. Ranking and R.F. Azoo, (Calcutta, 1901): p. 206.
16. G. Wiet: *Ya'kubi: Les Pays* (Cairo, 1937): p.256.
17. Muhammad b. Ahmad Abul Mutahhar al-Azdi: *Hikayat Abi'l Qasim al-Baghdadi*, (Heidelberg, 1902): p. 46. I am extremely grateful to Ms Vera Tamari for sending her draft MS of an article on 'Abbasid blue and white wares from al-Hira housed in the Ashmolean Museum, which she has submitted for a volume of *Oxford Studies in Islamic Art*, which will not be published until 1992. Her research forms part of her M.Phil. thesis submitted to Oxford University in 1989. Most of the translation is hers.
18. Al-Jahiz: *Rasa'il*, vol. 3, ed. Ubaid-allah b. Hassan (Egypt, 1979): p. 141.
19. J.D. Frierman: *Medieval Ceramics, VIth to XIIIth Centuries* (exhibition catalogue). Frederick S. Wright Art Gallery, University of California, Los Angeles 11 March - 13 April 1975: p. 38.
20. H. Philon: *Early Islamic Ceramics* (London, 1981): p. 63, note 4.

21. Mason and Keall: *op. cit.*: p. 3 of MS.
22. Lane: *EIP*: p. 14. These must be V & A catalogue nos. C12-1934, ruby lustre with a cobalt inscription from Rayy, and C.350-1930, monochrome lustre with figural decoration and cobalt inscription. These will be discussed in the appendix in connection with a lustred and ink-on-snow sherd found at Fustat, now housed in the British Museum.
23. C. Vignier and R. Fry: "New excavations at Rhages", *Burlington Magazine* 25 (July 1914): p. 211.
- 23a. R.B. Mason and E.J. Keall: "Petrography of Islamic Pottery from Fustat" *JARCE* 27 (1990): p. 172.
24. E.F. Schmidt: "Rayy research, 1935, part I" *University Museum Bulletin, Philadelphia* VI (1936): pt. I, p. 83.
25. Watson, in answer to a question as to why he ignores Rayy in his *Persian Lustre Ware* (London, 1985): "I ignore the excavations at Rayy because they are not properly published and because I do not see what useful information they provide." Personal communication of 18 July 1991.
26. E.F. Schmidt: *The Treasury of Persepolis and the Discoveries in the Homeland of the Achaemenians* (Chicago, 1939): p.101.
27. *Ibid.* p. 113.
28. M.S. Dimand et al: "The Iranian expedition 1936: excavations at Nishapur" *Bulletin of the Metropolitan Museum of Art* XXXII/10 (October 1937): p. 4.
29. *Ibid.*, p. 4.
30. C.K. Wilkinson: *Nishapur: Pottery of the Early Islamic Period*, (New York, 1973): 179-193.
31. *Ibid.* p. 181.
32. M. Kervran: "Les niveaux Islamiques du secteur oriental du Tépé de l'Apadana: II le matériel céramique" *Cahiers de la DAFI* 7 (1977): p. 78.

33. J. Lacam: "La céramique de Suse (Iran)" campagnes de fouilles de 1946, 1947, 1948 *Musées de France VIII* (Oct 1950): 206-9.
34. M. Rosen-Ayalon: *Ville Royale de Suse IV: la Poterie Islamique* (Paris, 1974).
35. Kervran: *op. cit.* p. 76-8.
36. *Ibid.*, p. 77.
37. *Ibid.*, p. 87.
38. Mason and Keall: *op. cit.*, p. 10 in MS.
39. J.M. Unvala: "Note on the lusted ceramics of Susa" *Bulletin of American Institute for Persian Art & Archaeology V* (1935): p. 79.
40. R. Koechlin: *Les Céramique Musulmanes de Suse au Musée du Louvre* (Paris, 1928).
41. Y. Crowe: "Certains types et techniques de la céramique de Suse" *Atti VII Convegno Internazionale della Ceramied* (1974): p. 76, pl. 1, 1b.
42. *Ibid.*, p. 78-9.
43. *Ibid.*, p. 76.
44. Whitehouse: *op. cit.* p. 49-50.
45. Tamari: *op. cit.*, p. 12-14.
46. N.M. Lowick: *Siraf XV: the Coins and Monumental Inscriptions* The British Institute of Persian Studies (London, 1985).
47. M. Tampoe: *Maritime Trade Between China and the West: an Archaeological Study of the Ceramics from Siraf (Persian Gulf), 8th to 15th centuries AD BAR International Series 555* (Oxford, 1989). See pages 155-9 for a full bibliography of Whitehouse's publications.
48. *Ibid.*, p. 88.

49. T. Allen: "Review of Siraf III" AO 13 (1982): p.188-9.
50. Mason and Keall: *op. cit.*, p. 8 of MS.
51. G.F. Hourani: *Arab Seafaring* (Beirut, 1963): p. 70.
52. Tampoe: *op. cit.*, p. 85. In ceramic assemblage 3 (i.e. 800-1000) the percentage of Islamic glazed and Chinese glazed, and earthenware is:-

	<i>Islamic glazed</i>	<i>Chinese glazed</i>	<i>Earthenware</i>
Mosque B:	11.4%	0.5%	88.1%
Bazaar C:	7.4%	0.9%	91.7%
Houses F:	12.2%	0.9%	86.9%

The scientific analysis points to southern Iraq for the glazed wares, p. 44. Ziglar reported in her thesis that only 80 lustre ware sherds were found at Siraf, from a personal communication with Whitehouse. No attempt is made to distinguish chronologically between the polychrome and monochrome lustre wares.

53. A. Williamson: "Sohar and the seatriade of Oman in the 10th century AD" *PSAS* 4 (1974), p. 79, quoting from Istakhri's *Kitab al Masalik wal-Mamalik*.
54. *Ibid.*, p. 94.
55. P. Costa: personal communication dated 15 September 1991, in which he states that Kervran "will certainly include a discussion on a stratigraphic dig by Peter Farries in the early 1970s". I have written to Kervran for more information, and await her reply. If my memory serves me correctly, Farries only worked for a brief period in Oman, and was the stop-gap between Williamson and Costa. Whitcomb refers to these excavations as being 1975 in his "The archaeology of Oman: a preliminary discussion of the Islamic periods" *JOS* 1 (1975): p. 125 and note 8 on p. 131.
56. P.M. Costa and T.J. Wilkinson: *The Hinterland of Sohar: Archaeological Surveys and Excavations Within the Region of an Omani Seafaring City*, *JOS* 9 (1987): p. 185.

57. G. Weisgerber: "Patterns of early Islamic metallurgy in Oman" *PSAS* 10 (1980): p. 125, fig. 10.
58. A. Lane and R.B. Serjeant: "Pottery and glass fragments from the Aden Littoral, with historical notes" *JRAS* (1948): p. 123.
59. al-Muqaddasi: *Azoo and Ranking op. cit.*, p. 85.
60. *Ibid.*, p. 134.
61. R.B. Mason and E.J. Keall: "Provenance and local ceramic industry and the characterization of imports: petrography of pottery from medieval Yemen" *Antiquity* 62/236 (Sept. 1988): p. 456.
62. J. Zarins and A. Zahrani: "Recent archaeological investigations in the southern Tihama plain (the sites of Athar and Sihi, 1404/1984)" *Atlat* 9 (1985): 70-90.
63. Al-Istakhri: *Kitab al-Aqalim*, trs. Elliot and Dowson I: 26-30. *Ibid.* ed. M.J. de Goeje *Bibliotheca Geographorum Arabicorum* 2nd ed. (Leiden, 1967): p. 127.
64. Al-Muqaddasi: *Azoo and Ranking, op. cit.*: p. 136.
65. Tampoe: *op. cit.*, p. 110.
66. Zarins and Zahrani: *op. cit.*, p. 70-75.
67. Tampoe: *op. cit.*, p. 110.
68. D. Whitcomb: *Aqaba: "Port of Palestine on the China Sea"* (Amman, 1988): p. 3.
69. Y. Ghawanmeh: "The port of 'Aqaba and its role in the Indian Ocean trade in ancient and medieval times" *ADAJ* 30 (1986): p. 311.
70. D. Whitcomb: "Excavations in 'Aqaba. First preliminary report" *ADAJ* 31 (1987): p. 247.
71. D. Whitcomb: "Medieval Aqaba: a brief report on the 1986 and 1987 seasons" *Syria* 65 (1988): 423-5.
72. D. Whitcomb: "A Fatimid residence at Aqaba" *ADAJ* 32 (1988): 207-224.

73. *Ibid.* He sees most of these 'Abbasid lustre wares as being of Iraqi manufacture, but suggests that some may be Egyptian. In *Aqaba: "Port of Palestine on the China Sea"*, p. 21 he states: "Other lustre wares are more typical of products made in Egypt under the Abbasid (and local Tulunid) dynasty." It has already been noted on page 20, in chapter 2 that the sherds which Schnyder attributed to Egyptian manufacture in his article "Tulunidische Lüsterfayence", *AO V* (1963): 49-78 are of Iraqi manufacture, and this will be discussed at length in Appendix B.
74. A letter dated 28 May 1991. The illustrations were from a paper entitled "Glazed ceramics of the Abbasid period from the Aqaba excavations" which was presented to the Oriental Ceramic Society in London this year. It will appear in next year's *TOCS*.
75. F.E. Day: "The Islamic finds at Tarsus" *Asia* (March 1941): 143-6.
76. W. Waage: *Antioch on the Orontes IV*, pt. I, *Ceramics and Islamic Coins* (Princeton, 1948).
77. A. Lane: "Medieval finds at al-Mina in Northern Syria" *Archaeologia* 87 (1937): p. 21, pl. XVI/1.
78. P.J. Riis, V. Poulsen, and E. Hammershaimb: "Les verreries et potteries médiévales", in *Hama: Fouilles et Recherches* (Copenhagen, 1957).
79. O. Grabar, R. Holod, J. Knustad, and W. Trousdale: *City in the Desert*, 2 vols., (Cambridge, Mass., 1978).
80. A. Lane: "Archaeological excavations at Kom ed-Dik, a preliminary report on the medieval pottery" *Bulletin of the Faculty of Arts, University of Alexandria* 5 (1949): 143-7; and W.B. Kubiak: "Overseas pottery trade of medieval Alexandria as shown by recent archaeological discoveries" *Folia Orientalia* X (1969): p. 7-8.
81. *Ibid.*, p. 10.
82. G. Fehervári: *Bahnasa Preliminary Report*, unpublished MS from the Kuwait National Museum excavations from 1985-87: four seasons: p. 21.

83. H. Henne: *Fouilles de l'Institut Français d'Archaeologie Orientale du Caire (Années 1923-24), 3e partie: Rapport sur les Fouilles de Tell Edfou*: p. 18 and pl. XIX.
84. R. Velasquez Bosco: *Medina Azzahra y Alamiriya* (Madrid, 1912): pl. XLIX and L/fig. 4.
85. Tampoe: *op. cit.*, p. 108. She cites Carswell and Prickett 1984: 57-9, but fails to give the exact reference in her bibliography. They used *Ancient Ceylon* for their preliminary report, so it is possibly in the same journal.
86. *Ibid.*
87. J. Carswell: "China and Islam in the Maldive Islands" *TOCS* 41 (1975-77): pl. .
88. Tampoe: *op. cit.*: p. 107.
89. *Ibid.*
90. R.L. Hobson: "Potsherds from Brahminabad" *TOCS* 8 (1928-30): p. 21.
91. *Ibid.*, pl. 8/fig. 1.
92. Tampoe: *op. cit.*: p. 111.
93. N. Chittick: *Manda: Excavations at an Island Port on the Kenya Coast*, The British Institute in East Africa (Nairobi, 1984).
94. M. Horton: "Asiatic colonization of the East African coast: the Manda evidence" *JRAS* pt. 2 (1986): p. 201.
95. N. Chittick: *Kilwa: an Islamic Trading City on the East African Coast* 2 vols. The British Institute in East Africa Memoir No. 5 (Nairobi, 1974): p. 18.
96. M. Paul-David: "White stoneware and porcelains in the T'ang dynasty" in *Pottery and Metalwork in T'ang China: Their Chronology and External Relations, Colloquies on Art and Archaeology in Asia I* (1970): p. 61.

97. *Ibid.*, p. 58.
98. P. Hughes-Stanton and R. Kerr: *Kiln Sites of Ancient China*, (London, 1980).
99. C-A. Richards: "Early Northern whitewares of Gongxian, Xing and Ding" *TOCS* 49 (1984-5): p. 58.
100. *Ibid.*, p. 64.
101. Hongnam Kin: "China's earliest datable white stonewares from the tomb of King Muryong (d. AD 523), Paekche, Korea" *OA* XXXVII/1 (Spring 1991): 17-34.
102. Richards: *op. cit.*, p. 61.

Chapter Four

THE EVIDENCE FROM FUSTAT

A Brief History of the Site

Although the Islamic settlement known as Fustat was only founded in 22/641, by the conqueror 'Amr ibn al-'As, the area had been a route between Memphis and On (Heliopolis) since the third millenium BC. The area between present-day Gizeh, utilising the southern point of Rawdah Island, was the lowest crossing point of the Nile before it divided into the Delta, and was thus a major communication point between eastern and western Egypt. A small settlement was established on the west bank, but the east bank remained unsettled until the late Dynastic period (beginning of first millenium BC), when a small fortress settlement named Khery-Aha was established to guard the crossing. This assumed greater importance around 500 BC, after the Persian occupation, when it was refortified and named Babylon.

When the Romans occupied Egypt in 30 BC the site was in ruins, but at the beginning of the second century AD the Emperor Trajan recognised its strategic importance and established another fortified settlement. Trajan's contemporary, the geographer Ptolemy records that Trajan constructed a canal which divided the city into two, thus establishing that there was a large settlement and that Babylon was not just a fortress.¹ One of the three Roman legions resident in Egypt was stationed here. Babylon's subsequent history is obscure, but it was certainly the seat of a bishopric.

'Amr ibn al-'As was apparently given specific instructions by the Caliph 'Umar to establish his encampment at the site, regarding Alexandria as a threat to security.² In present-day terms, following Kubiak, the general area of Fustat can be described thus:

"The northern boundary can be delimited by a hypothetical line drawn between the westernmost spur of al-Muqattam, which in later times was occupied by the Citadel, and the Nile somewhere near the present-day Midan Sayyida Zaynab. To the south the area of the town reached the depression of Birkat al-Habash, which is equivalent to the plain belonging today to al-Basatin village and extending to al-Ma'adi.

"The greater part of the territory was occupied by a rocky plateau of varying height, which in the period under discussion was most probably barren and covered with loose blocks of stone, the residue of erosion."³

When exploring the historical record for possible events that might effect the archaeology of the site, the early Islamic period provides a few fixed dates. There was scant regard for planning and the city was an agglomeration centred on the mosque of 'Amr (see plan I). Little is known of the early architecture, but Kubiak sees the first prolific architectural patrons as being the Umayyads, roughly contemporaneous with Mu'awiya (41/661-60/680).⁴ The first recorded calamity was the burning of Fustat in 132/750, when Marwan II was in full retreat from the 'Abbasid armies. Kubiak quotes extensively from a contemporary Christian account, which indicates the chaos and damage caused at the time.⁵ In principal, if there was a major conflagration, this should be revealed in the archaeological sections during an excavation.

Successive dynasties established themselves on sites adjacent to Fustat, with the 'Abbasids to the north-east in al-'Askar (the soldiers); the Tulunids even further north-east, incorporating Jebel Yashkur, in al-Qata'i' (the concessions); and finally the Fatimids yet further north-east again in al-Qahirah (the victorious). Each satellite city was absorbed into the agglomeration. There was a gradual drift away from the river Nile, which meant that through ease of communications, the original area of Fustat would retain its importance as a commercial and industrial centre, and be the principal port for all Egypt. It was finally superceded in the late fifteenth century by Bulaq. One would have expected each succeeding dynasty to introduce architectural innovation; certainly this is evident in existing religious monuments, but the picture is not so clear on the domestic side. Scanlon believes that it is impossible to establish the perimeters of the three original areas:

"First, because all the areas excavated to date have been in the eastern and south-eastern sectors of Misr, and it is quite evident that the most populous, most important and <teeming> parts of the old city are impossible to reach due to the building-up of Old Cairo from the mid-18th century to the present day. Secondly, these sets of original foundations

merged to such a degree that I believe demarcation was almost impossible to achieve. Since this merging involved the clearing of derelict buildings, the erection of new ones on *djabel* foundations, or, more generally, rebuilding within terms of earlier foundations, no one excavated area has proved specifically 'Umayyad, 'Abbasid, Tulunid, or Fatimid, but are rather admixtures of some or all."⁶

The second major recorded calamity was the great famine of 446-465/1054-1072, which resulted in political unrest, widespread epidemics and decrease in population; a century later, in 564/1168, the Fatimid vizier Shawar is said to have burned Fustat to avoid Amaury, the French crusader king of Jerusalem occupying the site.⁷ If one looks at the maze-like, narrow streets on the plans of the excavated areas today, one would doubt that any military commander would risk installing his army in such an area. Kubiak demonstrates that the contemporary Jewish records do not reflect a major catastrophe as depicted by Maqrizi, and his astute observations that Salah ad-Din would not have incorporated a ruinous area within his city walls support the idea that Fustat was not razed to the ground.⁸ Scanlon sees the wall as protecting the eastern habitation, "though it may be that this domestic and industrial 'far-out' life was conducted amid the *kharab* (ruins) so often evoked by the chroniclers."⁹

One important factor that should be noted before studying the excavations at Fustat, is the nature of the natural topography. It has already been stated above that it is "a rocky plateau of varying height". Its undulating nature was probably as great a challenge to the original builders as it has been to the archaeologists. To avoid the Nile flood plain, the inhabitants naturally chose the rising land for their buildings. Although earthquakes were not thought to have been a major consideration,¹⁰ they certainly occurred, which is reflected in the builders' quest to lay their foundations directly onto the bedrock to assure greater stability. This presents an immediate problem for the archaeologist: original walls were rubbed out, and any associated stratigraphy destroyed by a massive clearance prior to rebuilding. It is therefore impossible to ascribe finds to an early or late period by their depth in the accumulated debris, without having a clear idea of the related structure in which it was found, and even then it is

frequently inconclusive evidence. Scanlon found that the only solution to this seemingly infinite problem was in the stratigraphy of the roadways, baulks left by the Fatimid builders when they cut into the earlier structures and accumulated rubbish, and sanitation pits.¹¹ Goitein demonstrates how due to the expense of repairs, and problems of inheritance, the living Fustat of the tenth through to the thirteenth centuries was always full of decayed and abandoned houses (*kharab*), which again help to obscure the archaeological record.¹²

History of the Early Explorations

The first recorded mention of an excavation in Fustat is that of Count d'Hulst on behalf of the Egypt Exploration Fund in the winter of 1889.¹³ D'Hulst is reported to have examined the area outside the Roman gateway, formerly the entrance to the fortress of Babylon, and his finds were sent to the British Museum. According to Wallis they were hoping to find early period pottery, but did not discover any. Sadly the Egypt Exploration Society (the name has been changed, but it is the same body as that of the Fund) has no written records except two brief notes in their minutes:

"9th October 1889

It was suggested by Mr Poole (Orientalist and Keeper at the British Museum) that Count d'Hulst in the interim between his leaving Bubastis and joining M. Naville should excavate the mounds round Cairo for Coptic and Arabic Antiquities. Mr Poole reported that Mr Franks* had offered to pay a part of the expenses. Sir Francis Grenfell said he hoped to get the help of a Royal Engineer.

"26th November 1889

Old Cairo. Resolved that a grant of GBP35 to be made to Count d'Hulst towards the expenses of excavation at Old Cairo."¹⁴

*Presumably this was Mr A.W. Franks, FRS, FSA, Keeper of British and Medieval Antiquities and Ethnology in the British Museum

A search in the reserves of the British Museum this year produced three boxes of sherds pertaining to these investigations, each containing a typically representative collection of Fustat wares: i.e. Fayyumi splash wares, Fustat Fatimid Sgraffiato (FFS), Sultanabad and Raqqa wares, Mamluk glazed wares, unglazed filter fragments, imitation celadon, and two 'Abbasid lustre sherds. These were catalogued as being purchased from the Egypt Exploration Fund.

Wallis reports that there were three interested parties in the Fustat mounds: d'Hulst, Dr Fouquet and Corbett Bey. There is no indication as to where Corbett's ceramic collection is housed today, if it still exists, but one assumes that he is the author of "The life and works of Ahmad ibn Tulun" published in the *JRAS* of 1891. Fouquet published a study of his own ceramic finds, which was an admirable piece of pioneering work.¹⁵ There are no early lustre wares illustrated. He reports that most of his pieces came from near the mosque of Abu Saoud, and that specifically lustre wares came from the south-east side, due east of the mosque of 'Amr. Between 1892 and 1897 Fouquet gave two lots of fragments to the Louvre Museum, who handed them on to the Sèvres Porcelain Museum.¹⁶ Joel notes that Fouquet started collecting in Fustat from 1884, i.e. prior to d'Hulst. His fragments comprised 500 pieces of ceramics and glass from Fustat, from which Joel only publishes one 'Abbasid lustre sherd, together with three others from Soustiel's collection.¹⁷ The paucity of these early 'Abbasid lustre wares cannot be over emphasised, for our received impression that they lay around in abundance amongst the Fustat mounds, is the result of *sibbakhin* and dealers combing large areas of the site, and possibly chance finds when excavating the foundations for newer buildings in the urban conglomeration around Jabal Yashkur.

The next character to feature in this catalogue of early excavators is Martin. His first report was published in 1899.¹⁸ Martin records that he brought home to Stockholm a collection of several thousand fragments, "of which only about 100 small pieces were with lustre, the best of which are produced here." There only appear to be three 'Abbasid lustre pieces amongst his illustrated fragments, which are largely Fatimid, with the exception of one Kashan "miniature" vase. Martin, along with Fouquet and Butler favoured an Egyptian origin for lustre,¹⁹ and he even mounted an exhibition at Faenza in 1929 tracing its origins in Egypt to the XVIIIth dynasty.²⁰ The most pertinent information that is recorded

in this catalogue is Martin's admission that he was working in conjunction with Father Cleophas, a German-American Franciscan who was custodian of the Latin Cemetery at Old Cairo. Cleophas' personal collection was handed over to the Museum authorities, with exact provenances indicated. Bahgat apparently published many of his pieces, ignoring this vital information. Martin goes on to say that "pre-Muhammedan fragments of pottery with lustre were found in the lowest layer at Fustat, almost directly on the rock, as the Arabs and Father Cleophas told me."²¹ As he saw the early pieces as Coptic,²² it is a fairly safe assumption to make that he is referring to the 'Abbasid lustre wares here.

The Latin Cemetery lies to the north of the Citadel aqueduct, on present-day Shari' al-Diyura, south-west of the Church of Mari Mina (B and C 10 on sheet 2 of the Survey of Egypt 1950 map). Kubiak estimates that today's streets of Abu al-Sayfayn and its continuation north, Shari' al-Diyura, marked the eastern bank of the Nile in the seventh century.²³ This would place the Latin Cemetery in the heart of the port area, and surely this is indicated in the very name of the Church of Abu Mina (port) or Mari Mina closeby? In which case, Father Cleophas could well have chanced on the pottery warehouses, which would account for the abundance of early wares published by Bahgat relative to the paucity elsewhere on the site. Presumably this whole area was vacant in the late nineteenth/early twentieth century, and proved to be a treasure trove of these early imports.

Lady Evans adds a little more to the Fustat picture, saying that while d'Hulst, Fouquet, Corbett and Martin were working *in situ*, Guérin, Koechlin, Kelekian and others were "working" on their finds in Paris.²⁴ Koechlin, as observed in the Introduction, was the first to recognise the diagnostic 'Abbasid lustre body, but wrongly assigned it to Rayy. Evans went on to say that "Lustrated fragments came from all over the site, always at a low level, generally at from two to three metres below the surface."²⁵ As she does not illustrate any of the early lustre wares, it must be assumed that she is referring to Fatimid wares.

Father Cleophas and Bahgat evidently were at loggerheads in the 1920s, and doubtless over "archaeological" method. Raphael in his short article on Fustat fragments reports on Bahgat's work. Apparently Bahgat considered that he had prevented looting, except on the part of a

"certain priest".²⁶ Raphael's paper was based on a sherd collection that he had purchased from the Islamic Museum in Cairo. At this period the authorities permitted the sale of duplicates; Raphael bemoans the fact he was not allowed to purchase a ruby lustre fragment, surely indicating its extreme rarity. An interesting twist to the history of processing finds in the Islamic Museum was found in the Victoria & Albert Museum ceramics catalogue: G.D. Hornblower, a retired British civil servant, who had been working in Egypt, donated a "large number of objects, including embroidery, carved wood, metalwork and drawings",²⁷ in addition to over 900 ceramic pieces. In a letter from Hornblower addressed to Rackham, he says that he was responsible for "classification in the Arabic Museum, but it is not trustworthy".²⁸ Of thirteen of Hornblower's lustre wares studied in the V & A, seven were found in the "Bahnasa excavations"; unfortunately there are no details of these excavations. If Hornblower spent his life-time career in Egypt, and this is possible, judging by the extent of his collection, they could well have come from Petrie's excavations in 1905, or from his dumps.

Twelve Years of Excavating Fustat Directed by 'Ali Bahgat

In 1912 Bahgat managed to persuade the authorities that something had to be done to arrest the activities of treasure hunters, *sabbakhin* and those quarrying amongst the ruins for ready-made building materials. Their activities were destroying what little stratigraphy there was. The *sabbakhin* were organised and supervised, and a massive clearing operation commenced.²⁹ The work was carried out under the auspices of the Museum of Arab Art, an almost independent branch of the Antiquities Service, and directed by Bahgat. He chose the area east of the mosque of 'Amr, surmising that this represented the central part of medieval Fustat, and the city limits.³⁰ Some twelve hectares were investigated. He claims to have attempted to date each area, but pointed out that the stratigraphy was difficult due to different periods of abandonment and a lot of dumping. It is hard to appreciate this concern in an archaeological report that does not contain one measured section! Architecturally his work was invaluable, for he revealed street plans and houseplans, giving subsequent excavators a clearer idea of what to expect on this complex site. If an excavation's success were to be measured on the number of treasures retrieved, then Bahgat's endeavours would be rated highly. He can be forgiven his lack of archaeological method for the number of important pieces saved for the nation's future enjoyment and scholarship.

Bahgat's method was to follow the walls. He established the streetways on the basis that all sanitation conduits emptied out on the streets. These streets varied between 6 metres and 1.5 metres in width. He revealed one public fountain, and discovered that many of the houses had private wells and cisterns. Bahgat preferred an 'Abbasid/Tulunid dating for the houses that he revealed. This dating was not to be revised until the American Research Centre in Egypt's (ARCE) excavations in the 1960s demonstrated them to be Fatimid.³¹

Hassan el-Hawary's Tulunid House

Amongst the many small-scale excavations that were carried out on behalf of the Egyptian Antiquities Organisation (EAO) after Bahgat's extensive investigation, only the results of el-Hawary's Tulunid house would appear to have been published.³² El-Hawary, a student of Bahgat's, originally thought he was investigating the missing 'Abbasid mosque, known to have been built in al-'Askar in 169/785 by a prefect.³³ The building, constructed in burnt brick, revealed some fine stucco work in pure Samarra C style on the walls of the main reception room.³⁴ Unfortunately for the present thesis, el-Hawary's work was pure architectural clearance and no ceramic finds were published in the article. Lack of archaeology withstanding, his plans are a useful adjunct to the history of Fustat architecture.

The American Research Centre in Egypt's Rescue Excavations

The Cairo governorate announced an ambitious development plan in the spring of 1963 which would have incorporated the remaining unexcavated section of Fustat. The area was to be cut by a road network linking the corniche to a new Ma'adi/Helwan highway, and much of the remainder was to be given over to low-cost housing projects.³⁵ Upon request, the EAO granted a concession to ARCE to mount a rescue excavation and to carry out soundings in Fustat relative to this redevelopment scheme. Three separate areas were delineated and work began in March 1964.³⁶ The team, directed by Scanlon and Kubiak worked for eight seasons between 1964 and 1980, being forced to adapt standard, stratigraphical, archaeological methods to the anomalies of this complex site.³⁷ Although they maintained a rigid grid pattern, it was almost impossible to cut straight sections through the rubble and debris. It would have been counterproductive to attempt this, as it was demonstrated to be of little archaeological value.³⁸ The excavators established that the layers of nitrogenous *sibakh* indicated undisturbed occupational levels, and could be used for dating purposes.

The difficulties encountered with the undulating bedrock or *jabal* have already been noted above. It had been extensively exploited for drainage channels, building materials, sanitation pits and road building hard core or *dakkah* by the Fustat dwellers, which provided invaluable dating evidence for the excavators.³⁹ Scanlon and his colleagues were able to distinguish between the different architectural periods by these methods, and to firmly establish the dating of Bahgat's houses.⁴⁰ Topographically they were also able to identify one of the main roads, the *Darb al-Ma'asir* or Funerary Route as cited by Casanova.⁴¹ Again they appealed to the irregularity of the *jabal* to explain why the road deviated, in order to avoid a protruding outcrop, a fact that Casanova would not have been able to appreciate from his topographical survey through the medieval chroniclers. Stratigraphical cuts made in 1968 demonstrated that the street was laid sometime around 700, continually heightened and remained in use into the early eleventh century.⁴²

Their ceramic finds were copious,⁴³ yet despite establishing several ninth/tenth century pits and road levels, there were very few 'Abbasid lustre wares. Only five fragments were registered, which will be discussed in Appendix A, below. Two ruby and gold lustre sherds were found in Pit V (XVI-16),⁴⁴ but monochrome lustre wares seem to have predominated. While these finds confirm a ninth/tenth century dating for these wares, they neither narrow the dating margins, nor do they indicate that polychrome preceded monochrome.

Cairo University Excavations at Hawsh 'Abu 'Ali

In 1972 Dr Su'ad Mahir Mohammed investigated the area to the south-west of the funerary mosque known as al-Hadra al-Sharifa, to the west of the Southern Cemetery. After three seasons' work she published a brief report on the architecture and her finds.⁴⁵ Before exploring the mosque of 'Abu 'Ali, and its adjacent buildings, she uncovered numerous Fatimid tombs. Unfortunately she gives no clear indication of her stratigraphy, but reports three phases: Umayyad, 'Abbasid/Tulunid and the third unspecified, using coins and textiles for dating purposes.⁴⁶ No 'Abbasid lustre wares were reported.

The Japanese Rescue Excavations

A Japanese team from Waseda University and the Idemitsu Museum of Arts joined the rescue excavations at Fustat and worked for five seasons from 1978 onwards, in an area to the west of ARCE's area B, 300 metres south of the Mosque of 'Amr.⁴⁷ The bulk of their work has been published in Japanese, and therefore inaccessible to most scholars. They report that they found no evidence for anything earlier than Fatimid.⁴⁸ However, when Mikami carried out his initial work on the Chinese ceramics housed in the Fustat stores with the late Profesor Fujio Koyama in 1964, he identified for the Tang and Five Dynasties *sancai*, white wares, Yue and Changsha wares.⁴⁹ Finishing in 1966, Mikami states that from between 600,000 and 700,000 sherds they found between 12,000 and 13,000 Chinese fragments, around 2%. Of course, it is dangerous to attempt to use statistics in this instance, as it is impossible to gauge the distribution and provenance from the site. One can only presume that this collection represented the finds from the numerous unpublished EAO excavations. Again, no 'Abbasid lustre wares were reported.

The French Excavations at Istabl 'Antar

A French archaeological team, jointly sponsored by the Centre Nationale des Recherches Scientifique and the Institut Française d'Archaeologie Orientale, under the directorship of R-P. Gayraud, has been working in the southern suburbs of Fustat since 1985 (see fig. 3). To date they have completed six seasons, but only two reports have been published.⁵⁰ The site was chosen because the surface evidence with traces of walls and an aqueduct promised architectural interest, and the pottery indicated a seventh/eighth century occupation through to Fatimid period. Three sondages made in the first season demonstrated destruction levels, different methods of construction and promised to provide a chronological history of the early occupation. The final Fatimid occupation level is a necropolis, possibly dating to 385/995.⁵¹

During a site visit at the end of the 1990 season, Gayraud was able to demonstrate four occupational phases:-

1. Early phase between 642 and circa 700 - the foundations have traces of the first Arab occupation with small holes for livestock pens or tethers, or even possibly for tents. Construction was in burnt brick with a mud mortar, and some mudbricks.
2. Umayyad period between circa 700 and 750 - construction was in mudbrick with the odd reused burnt brick. Streets were blocked off and rooms divided, perhaps indicating a population increase. Many storage facilities, and the living areas had wider walls. This phase ended with a major burn level which probably indicates Marwan II's burning of Fustat.
3. Mid-eighth to mid-tenth century - construction in limestone rubble (probably represents the foundations for more substantial walling which has been rubbed out in the area excavated). The trepizoidal building excavated in this level was cut by the aqueduct, which Gayraud dates to the Tulunid period, circa 256-262/870-75.
4. Fatimid - the necropolis level has revealed a complete complex with the remains of a bath, garden, five levels of stone paving, all destroyed during the time of al-Mustansir (doubtless during the troubles caused by the famine of 446-465/1054-1072). During the 1990 season they uncovered a mosque believed to have been first built during the 'Abbasid period, and renewed in the Fatimid period, when typically herringbone paving was installed in the courtyard.

Gayraud sees the tombs as being like palaces, and says that Maqrizi described the wealthy spending their weekends near the Birkat al-Habash. During Mustansir's crisis they could no longer protect their family tombs, and they were left to decay. The only indication of later occupation is a few Mamluk wasters, perhaps from a pottery amongst the *kharab*. The area was cleaned by the *sabbakhin* in the 1930s and 1940s and Gayraud suspects that their finds are all in the Benaki Museum now!

The importance of Gayraud's work cannot be over emphasised, for he has the good fortune to be working in an area with complicated, but manageable stratigraphy. He does not have to resort to pits and roads. Unfortunately it has not been possible to study his ceramic finds to date, but he reports a few 'Abbasid bichrome lustre wares of the "Tulunid" type, and postulates that they are of Iraqi origin.⁵² He has communicated verbally that these, without exception, were found in tenth century contexts.

Conclusions

It has already been noted in the previous chapter that all scientific analysis of 'Abbasid lustre wares found at Fustat have indicated a common body, which has now been positively identified with a Basran manufacture.⁵³ What is not certain is the dating of this ware, a subject which is hotly debated, and which could possibly be solved at Fustat. For the present we cannot escape from relative chronology. Too much emphasis has been placed on Samarra, wherein Sarre found very few examples. Only seven of his published pieces were excavated by the German mission, the rest being from museum collections. Fustat does demonstrate that the polychrome, bichrome and monochrome wares could be contemporaneous. Al-Azdi in the tenth century describes what can only be a ruby lustre cup,⁵⁴ thus indicating that these wares continued into the tenth century. What the Fustat excavations do demonstrate is the rarity of this ware, thus openly questioning a local manufacture, without having to resort to scientific analysis.

NOTES TO CHAPTER FOUR

1. A.J. Butler: *Babylon of Egypt* (Oxford, 1914): p. 44.
2. D. Behrens-Abouseif: *Islamic Architecture in Cairo: an Introduction* (Cairo, 1989): p. 3.
3. W.B. Kubiak: *Al-Fustat: Its Foundation and Early Urban Development* (Cairo, 1987): p. 33.
4. *Ibid.*, p. 125.
5. W.B. Kubiak: "The burning of Misr al-Fustat in 1168. A reconsideration of historical evidence" *Africana Bulletin* 25 (1976): p. 63-4.
6. G.T. Scanlon: "Fustat: archaeological reconsiderations" *Colloque International sur l'Histoire du Caire* (Cairo, 1972): p. 415.
7. Kubiak: *op. cit.*, p. 52.
8. *Ibid.*, p. 63.
9. Scanlon: *Reconsiderations*, p. 417.
10. Kubiak: *Fustat*, p. 33 and note 1 on p. 137.
11. G.T. Scanlon: "The pits of Fustat: problems of chronology", *JEA* 60 (1974): 60-78.
12. S.D. Goitein: "Cairo: an Islamic city in the light of the Geniza documents" in *Middle Eastern Cities*, ed. I.M. Lapidus (Berkeley, 1969): p. 83.
13. H. Wallis: *Persian Ceramic Art in the Collection of M.F. du Cane Godman* (London, 1891): p. 40.
14. Kindly provided by the secretary, Dr Patricia Spencer.
15. D. Fouquet: *Contribution à l'Etude de la Céramique Orientale* (Cairo, 1900).

16. G. Joel: *Catalogue Raisonné des Céramiques du Monde Iranien Jusqu'au XIe Siècle et du Proche Orient Arabe Jusqu'au Milieu du XIIIe Siècle au Musée Nationale de Céramique de Sèvres* 3 vols, (June, 1983) - unpublished MS found in the Islamic Museum Library.
17. *Ibid.*: nos. 13 and 14 are Fouquet 'Abbasid lustre wares, with no rovenance; nos. 15-17 are Soustiel 'Abbasid lustre wares from Fustat; and no. 18 is a similar piece from the Fouquet collection, also from Fustat.
18. F.R. Martin: *The Persian Lustre Vase in the Imperial Hermitage of St. Petersburg and Some Fragments of Lustre Ware Found Near Cairo at Fustat* (Stockholm, 1899).
19. F.R. Martin: "Lustred pottery in Egypt", *Burlington Magazine* 17 (1910): p. 46.
20. F.R. Martin: *Lustre on Glass and Pottery in Egypt from the Period of Hadrian to Saladin* (Faenza, 1929): p. 18.
21. *Ibid.*
22. Martin: *Burlington*: *op. cit.*
23. Kubiak: *Fustat*, p. 45-6.
24. Lady M.M. Evans: *Lustre Pottery* (London, 1920), p. 6.
25. *Ibid.*
26. O.C. Raphael: "Fragments from Fustat" *TOCS* (1923-24): p. 18.
27. O. Watson: personal communication of 15 May 1991.
28. G.D. Hornblower: V & A ceramics catalogue, under C 775-1921, in a letter addressed to Rackham dated 27 January 1922.
29. Kubiak: *Fustat*: p. 30.

30. A. Bahgat and A. Gabriel: *Fouilles d'al Foustat* (Paris, 1921): p. 6.
31. W. Kubiak and G.T. Scanlon: "Fustat: re-dating Bahgat's houses and the aqueduct" *AARP* 4 (1973): p. 138.
32. Kubiak: *Fustat*: p. 30 and note 67 on p. 136.
33. H.M. el-Hawary: "Une maison de l'époque Tulunide", *Bulletin de l'Institut Egyptien* 25 (1932-3): p. 79.
34. *Ibid.*, plate III.
35. G.T. Scanlon: "Preliminary report: excavations at Fustat, 1964", *JARCE* 4 (1965): p. 9.
36. *Ibid.* p. 10.
37. For a full list of the ARCE team's publications look in the bibliography under Scanlon and Kubiak.
38. G.T. Scanlon: "The Fustat mounds: a shard count 1968" *Archaeology* 24/3 (June 1971): p. 220.
39. Scanlon: *Pits*, p. 61.
40. Scanlon/Kubiak: *Redating*: *op. cit.*
41. W. Kubiak and G.T. Scanlon: "Fustat expedition: preliminary report 1971: part II", *JARCE* 17 (1980): p. 77.
42. G.T. Scanlon: "Fustat expedition: preliminary report 1968: part II" *JARCE* 13 (1976): p. 77 and pl. XXVb.
43. G.T. Scanlon: "The Cairo-Athens connection: an archaeological counterview" MS prepared for *JARCE* review pages on H. Philon's *Early Islamic Ceramics*. To indicate the volume of the ceramic finds, on p. 3 Scanlon says: "It must be recalled that the mounds yielded between 40,000 and 60,000 shards for each fortnight's clearing."
44. G.T. Scanlon: "Fustat expedition: preliminary report 1965: part I", *JARCE* 5 (1966): p. 89.

45. S. Mahir Mohammed: "Hafa'ir Kulliyat al-Athar bi-Zahir Medinat al-Fustat", *Majallat Kulliyat al-Athar* 1 (1976): 95-126.
46. *Ibid.*, p. 103.
47. M. Kawatoko: "Archaeological finds from Egypt and East Africa relating to international trade", in *Cultural and Economic Relations Between East and West*, ed. H.I.H. Prince Takahito Mikasa (Wiesbaden, 1988): p. 45.
48. *Ibid.*, p. 48.
49. T. Mikami: "China and Egypt" *TOCS* 45 (1980-81): p. 68-9.
50. R-P. Gayraud: "Istabl 'Antar (Fostat) 1985: rapport de fouilles", *Annales Islamogiques* 22 (1986): 1-26; and R-P. Gayraud: "Istabl 'Antar (Fostat) 1986": rapport de fouilles", *Annales Islamogiques* 23 (1987): 55-71.
51. *Ibid.* (1987): p. 59. This is based on a foundation inscription in the name of Tagrid, mother of the Fatimid caliph al-'Aziz (365-386/975-996), who died in 385/995, which was found in the funerary complex excavated by the French team, during a previous investigation of the site by Hussein Rachid of the Museum of Arab Art in the early 1930s. Fortuitously Madame Leila Ibrahim remembered the discovery, and still has photographs, from her father's collection of a body wrapped, in a cloth with a *tiraz* band, from a grave excavated by Rachid in the same spot.
52. *Ibid.*, p. 58.
53. G.T. Scanlon: "Early lead-glazed wares in Egypt: an imported wrinkle", in *Quest for Understanding: Arabic and Islamic Studies in Memory of Malcolm H. Kerr*, eds. S. Seikaly, R. Ballbaki, and P. Dodd, (Beirut, 1991): 253-62. In this article, Scanlon demonstrates that two lead-glazed relief ware sherds found during the 1972 season at Fustat had a parallel from a site on the Darb Zubayda in the area of Jabal Says. On p. 256 he states that "There can be little doubt now that this Iraq/Iran clay is the same as that used both in the white wares (particularly those carrying decoration in cobalt over glaze) and lustre wares familiar to us from Samarra." Thus it can be taken a step further, on the basis of the petrographic analysis evidence already presented on p. 37, these lead-glazed relief wares with the diagnostic compact, yellowish body were made in Basrah too. This is, of course, subject to scientific confirmation.
54. See note 17 to chapter 3, page 53.

Appendix A

A CATALOGUE OF FRAGMENTS STUDIED IN EGYPTIAN COLLECTIONS

For the pottery drawings, all fragments have been drawn at a scale of 1:1 unless stated otherwise. The drawings have not been reduced when reproduced.

In order to limit the extent of this catalogue, it was decided to apply strict criteria for inclusion. The principal one was that each piece had to have a named Egyptian findspot. A glance at the Islamic Museum's register indicated that not one of the 17 'Abbasid lustrewares on public display had been excavated scientifically, and that all had either been bought directly from local dealers, or from collectors who had originally bought them on the open market. Three of these have been published by the Museum as being found in Egypt, but there is no mention of a specific site.¹ While it is recognised that these are all interesting examples of 'Abbasid lustrewares, a certain provenance is essential for the purposes of this thesis.²

The second criterion was to choose pieces which displayed a variety of shape and design, thus adding to the corpus of published pieces. Previously published pieces have only been included if additional information has come to light about them, subsequently; those from the ARCE excavations at Fustat; or if they have been subjected to any scientific analysis.

The third criterion was to include only pieces that it was possible to handle oneself, with three exceptions from the ARCE Fustat pieces. Ceramics should neither be studied from a purely art historical viewpoint nor from a purely scientific one. Touch and feel is an equally essential part of ceramic studies, as the eye cannot fully appreciate texture, only physical contact can do this.

One point to note, the colour of this diagnostic body does vary between a bright yellow to buff-yellow to buff-white, largely because the exterior has been affected by salts in the ground. If one is fortunate enough to find a new break, then a much more yellow body is evident. Some commentators have used Munsell chart colour designations to describe the body, but this is only relevant if it is possible to take a thin section. Past experience in using Munsell charts is rather negative, as colour is a highly individual judgement and can differ greatly in different lighting. However, once handled in quantity, this body is instantly recognisable, and only scientific analysis can support or refute an attribution.

Reg. no.:	777
Type of object:	Rim of shallow dish (No. 1 and over for profile)
Current location:	Cairo University Museum
Date found:	Not recorded
Location:	Fustat
Dimensions:	9 cms x 6.2 cms
	Approximate rim diameter 35 cms

Rim of a shallow dish or platter with an everted rim and flat, glazed base. The overall glaze is thickly applied, and is a whitish, bluey-grey, decorated with geometric designs in ruby and gold lustre. The ruby lustre has bled in parts. The exterior has ruby dashes in a herringbone pattern running horizontally around the rim, and seemingly rather arbitrarily placed on the base, although the fragment is far too small to establish any patterning here.

The interior rim and cavetto design is divided into registers, of which three different motifs remain: 1) a squiggley, asymmetric meander which is infilled with dots, somewhat resembling an "amoeba", and will henceforth be referred to as such; 2) a bracket motif; 3) ruby circles, to be known as "tadpoles" henceforth, infilled with gold stars. The outside of the rim has a ruby gadrooning or lunette pattern, which is common to many 'Abbasid lustre wares.

It is impossible to postulate what the patterning on the interior base of the dish would have been, though by analogy it is most probable that it was a continuation of the rim design, with perhaps an abstract floral theme.

The body is composed of fine, dense, buff-yellow clay, and the glaze has started to flake at the edges, which is fairly common in these early 'Abbasid lustreware fragments.

Although the most common shape known for these wares is an open bowl with an everted rim, these flat dishes occur fairly frequently in the early Islamic ceramic repertoire. They would have been necessary as serving dishes for large banquets and communal eating. A contemporary pictorial example can be found painted on the walls of the harim in the Jawsaq palace at Samarra.^{2a} This would appear to have fruit arranged in a pyramidal form on the flat dish. From the comparative material cited below, one can appreciate the wide variety of the lustre artists' palette when examining the diversity of pattern executed on the same shaped vessel.

Comparative Material

Islamic Museum, Cairo no. 3768. An unpublished bowl which has the same rim patterning, but in this instance it radiates from a central, small petal at its base. The exterior has the ruby dash motif, which again has bled slightly. It has a low footring, and dashes on the base too. Of particular interest, this bowl has two spur marks on the interior, a feature rarely seen in these early lustre wares. This piece was bought from M. Nahman in 1911, and is highly likely to have been found in Fustat too. It has been restored, but more than sufficient of the original remains to confirm the patterning.

Benaki Museum no. 455.³ Philon calls the amoeba patterning "cactus" forms. This was evidently the rim of a similarly shaped dish to that under discussion. It is interesting to note her measurements here: she gives the maximum diameter as 6.2 cm. One assumes she means width of the sherd. The approximate diameters given in this catalogue are those for the original whole. She has no comparative material for the patterning, and this piece is the only one with this decoration cited in the Benaki collection.

Pippin collection no. 14, housed in the American University Cairo. See below.

Islamic Museum no. 13995. This is an unpublished piece, with a diameter of 37.4 cms, that was bought in 1938 from the dealer Acheroff. Its decoration is in bichrome lustre on a buff-white glaze. Though very faded, the design would appear to be executed in a midbrown and chocolate brown lustre. The broad rim has a zigzag pattern, and the centre has a stylised petal design outlined in what Philon describes as pine-tree branches.⁴ The exterior design is a series of segments and roundels with the dash motif, painted in the same bichrome colours.

Victoria and Albert Museum no. C45.1952, formerly Kelekian loan no. 159. According to the V & A catalogue, it probably came from the Fouquet collection originally. First published by Pézard, this flat rimmed dish is of a size similar to the others, with a diameter of 34.5 cms.⁵ The inside decoration is composed of a square, painted in brown,

divided into four triangular panels, in two of which is a dotted check pattern in yellow, and in the other two sprays of trefoil-shaped leaves in yellow and brown. Outside the square there are foliate patterns reserved in a spotted yellow ground. The cavetto has pointed ovals reserved in yellow, and the rim is divided by broad brown lines into panels containing alternately spotted diaper patterns and rosettes reserved in a yellow ground. On the reverse the base has wide cross-hatching in yellow which also covers the back of the cavetto and rim.

Benaki Museum no. 202.⁶ Although this monochrome lustre dish is apparently smaller than the others, with a maximum diameter of 25.6 cms, it retains the shape. It is important to note this consistency in shape for the polychrome, bichrome and monochrome.

This catalogue is almost inexhaustible with regard to similar shapes: in a collection of sherds in the British Museum which are recorded as being "exchanged" with 'Ali Bahgat (nos. 1923 7.26 1 and 1923 7. 26) there are two decorated with golden-olive green lustre in stylised designs. Both are recorded as coming from Fustat and have the diagnostic 'Abbasid body. Numbers 18 and 6 in the Pippin collection are polychrome examples, also from Fustat. The Benaki collection has many more: 21315 (bichrome); 21348 (bichrome); 21322 (polychrome); 19182a (polychrome); 19182D (polychrome); 21330 (bichrome); 21243b (polychrome); 11676 (polychrome); and 21362 (polychrome), to name a few. Most of the Benaki collection would have come from Fustat too. This shape was not limited to lustre wares either, both tinglazed and lead glazed examples were found during the ARCE excavations at Fustat in ninth/tenth century contexts.⁷ Falkner includes a green and white glaze ware dish from site E at Samarra.⁸ A brief glance at other published collections reveals: LNS98C, a bichrome lustre dish in the Kuwait Museum, diameter 37 cms; Keir collection no. 18, a polychrome dish with a diameter of 40 cms; and in the Ashmolean Museum, Reitlinger gift no. 1978.2146, half a dish in monochrome lustre, with a lady playing the oudh.⁹ In the Louvre there is a stylised, polychrome floral dish from Bahnasa.¹⁰ Benaki nos. 1341 and 726 are both white wares with green glazed decoration, the former linear and the latter epigraphic.

Reg no.: 870
 Type of object: Rim of jar (No. 2 and over for profile)
 Current location: Cairo University Museum
 Date found: Not recorded
 Location: Fustat
 Dimensions: Height 11 cms; width 16 cms;
 Approximate diameter at rim 12cms.

This jar rim fragment with a lugged handle is decorated in a monochrome golden-olive lustre on a whitish opaque glaze with speckles. The glaze has worn on the rim and flaked from the dense, yellow body. The interior has a speckled, whitish glaze with some bluish tinges where it is thicker.

The neck of the jar is decorated in rounded letters which Kratchkowskaya has demonstrated to be Kufic in reserve, executed in a similar style to stone-carved letters.¹¹ Although not all the letters are preserved, it is possible that what Kratchkowskaya read to be either *al-falak* (the heavenly sphere) or *al-mulk* (the kingdom or possession) was inscribed. The fragmentary register below appears to have some form of architectural design with stylised, trilobed arches below pointed ones in reserve; the spandrels of the pointed ones have white circles in reserve, a device frequently occurring on the shoulders of animals' bodies, viz. Cairo University Museum no. 1723¹² and Islamic Museum no. 15971,¹³ and used decoratively on the chair of the seated oudh player in Islamic Museum no. 1463.¹⁴

Comparative Material

Philon catalogues several jar fragments in the Benaki collection, but only one has the similar stylised inscription, no. 237.¹⁵ This is not on the neck, but on the shoulder register, where it is incorporated into the lugged handles too. Philon also cites similarities with the inscription on a bowl in the Keir collection,¹⁶ and another one at the Louvre.¹⁷ The latter inscription has apparently been read as *al-falak*, but she prefers the reading *al-mulk*.

Freer jar no. 53.90.¹⁸ This tall jar has a similar stylised inscription on the neck, and from the illustration, it looks as though it continues after *al-mulk* with an *alif*, *lam*. Atil evidently does not recognise any letters, and describes the design as "circles and strokes". The lugged handles have been placed rather lower on this piece.

Reg. no.:	768
Type of object:	Rim of a bowl (No. 3 and profile over)
Current location:	Cairo University Museum
Date found:	Not recorded
Location:	Fustat
Dimensions:	Approximate diameter 20cms Existing height 7 cms

An initial glance will tell the reader that this is not an 'Abbasid lustre ware, but a Fatimid one. This is unquestionably true, but it has been chosen for contrast and for its colouration: the stylised *alif*, *lam* is executed in a bright, ruby lustre. This colour is no kiln-firing accident, for it has been purposefully decorated in midbrown and ruby lustre, with the letters and thin wavy line below the gadrooning in ruby. Surely this continued use of ruby lustre indicates that the 'Abbasid potters never ceased to include it in the decorative repertoire, and they passed this technical knowledge on to their Fatimid successors. The work is too accomplished to be a one-off experiment, especially when one considers the misfires and bleeding in the 'Abbasid ruby lustre wares.

The body is of course, buff clay, visually infinitely inferior to the 'Abbasid body, but one senses that the potter was attempting to imitate it. Both lustres have bled slightly into the white glaze, which is rather poor and thin relative to its Iraqi model. The exterior is decorated with crudely executed dashes, and the glaze has pooled badly just below the rim. By analogy with examples cited below, this fragment should be dated to the beginning of the eleventh century, and thus an early example of Fatimid lustre ware, executed at the experimental stage of the Egyptian industry. The only other cited Fatimid lustre piece which incorporates another colour is Islamic Museum no. 15952 which is signed by the potter al-Tabib.

Comparative Material

Benaki no. 201.¹⁹ A monochrome lustre bowl with similarly stylised letters in a scrolling rinceau design, with a bird in the centre. Executed in yellow-gold lustre, the inscription is said to read *al-yumn* (good fortune) or *al-mann* (gracious bestower or gift). The profile has a slightly everted rim; no. 1117 on the opposite page has a similar profile to the Cairo University Museum example.

Islamic Museum 12974.²⁰ An almost identical bowl to the Benaki example.

Islamic Museum 13997.²¹ Although lacking the scrolling rinceau design, this bowl has similar lettering to the Cairo University Museum fragment. This piece has an inscription which assigns its date to between November 1011 and November 1013, by virtue of the titulature of its patron Ghaban, Commander-in-chief of the Fatimid caliph al-Hakim (386-411/996-1021).

Reg. no.:	None
Type of object:	Rim of bowl (No. 4)
Current location:	AUC
Date found:	Not recorded
Location:	Fustat
Dimensions:	5 cms x 4.5 cms

This small, straightsided rim fragment appears to be unique in its patterning. It is decorated with a filler of rounded pin heads and halos with diagonal hatching, in dull chocolate brown and yellow on a greyish-white glaze. Above this is a thin horizontal yellow line, and a chocolate one lines the rim. The reverse is painted in solid yellow lustre with specks of brown showing through.

Of particular interest are the two profiles illustrated, being taken from either end of the sherd. It displays the slightly haphazard nature of these wares, and how one should allow for wide margins of similarity at this period. Its dense yellow body is a strong indicator of its Iraqi origin.

Mason reported that one bichrome fragment with similar colouring, also found at Fustat, did not conform with his established standardisation of the Basrah petrofabric.²² Aware that this, and the following fragment, could have been instrumental in either refuting or confirming a single manufacturing site, samples were taken and despatched to ROM for analysis.²³ A Basran manufacture was confirmed.

Comparative Material

Benaki no. 21418, fig 219 on p. 108 for the body profile.

A similar patterning, but somewhat hastily executed is found on the Qairawan tiles.^{21a}

Reg. no: None
 Type of object: Rim of bowl (No. 5)
 Current location: AUC
 Date found: Not recorded
 Location: Fustat
 Dimensions: 4.5 cms x 4.5 cms

Unlike the previous sherd, this fragment of a small bowl with an everted rim has several similarly decorated counterparts. The interior bichrome decoration is painted in midbrown and yellow lustre on a greyish, speckled glaze. The top of the rim has a series of parallel, diagonal lines at approximately equal intervals in midbrown; below which are two horizontal, parallel lines running around the interior. Inside the bowl there are traces of a scrolling trefoil pattern: the outlines picked out in the midbrown, and the leaves in yellow.

The exterior surface has yellow bands on a speckled glaze. The body is of dense, yellow clay that shows signs of flaking. The glaze is about 0.05 cm thick with the odd intrusion.

Comparative Material

Bowl no. 157 published with Sarre's Samarra material.²⁴ A similar piece with a seated oudh player framed in the centre square was sold at Christie's in 1986.²⁵ A variation on this theme, with a purely geometrical central panel, and a few wavy vines, was exhibited in London in 1984.²⁶ The catalogue entry described a large bowl of yellow paste, with a low footring, flaring sides and an everted rim. The decoration was executed in brown and yellow lustre on an opaque white glaze. The exterior was painted with yellow lustre in elongated ovals and heavy lines around the rim and inside the footring. The authors suggested it came from either Iraq or Tunisia, and dated it to the middle or late ninth century. The Tunisian ascription came from analogy with a bowl from the Museum of the Great Mosque at Qairawan.²⁷ This unique bowl has four large splashes interspersed with a guilloche pattern and leafy foliage. This foliage, which is common to all these pieces, is, however, found on the imported lustre *mihrab* tiles at Qairawan, which points to an Iraqi provenance also.^{27a}

Fustat has several similar examples: Philon cites two in the Benaki collection, nos. 21419b and 21346. There was one in a box of Fustat sherds studied in the British Museum. Lane illustrates two complete examples with similar foliage and colouring: the Chicago Art Institute jarlet with handles and a bowl from Susa in the Louvre.²⁸

Reg. no.: Pippin 13
 Type of object: Part of a base of a bowl (No. 6)
 Current location: AUC
 Date found: Not recorded
 Location: Purchased as from Fustat
 Dimensions: Approximate diameter of base 11 cms.

This polychrome lustred bowl fragment is a superb example of the repertoire used for decoration in the geometric floral manner. As if with *horror vacui*, the artist fills each petal and leaf with herringbone hatching, arrows, and dots, leaving a fine space between each so that the eye can appreciate the composition. For the interior his palette is golden-olive, midbrown and chocolate on a greyish white glaze; for the exterior he used chocolate and midbrown coloured lustre on a bluish tinged glaze. This exterior glaze is crackled; it covers the base, but not all of the foot. The body or paste is dense and yellow, with some flaking.

Note the arrow-shaped fillers, for these are frequently used as fillers in the contour lines of the figural lustre wares as well, and can thus be seen as an essential part of the decorative repertoire for both the geometric and figural pieces. Raby sees stippling in contour panels "as a transfer from precious metalwork, where ring or dot-matting is common as a means of providing a textural contrast in an essentially monochrome medium. The most frequent type of stippling in 'Abbasid monochrome lustre pottery consists, however, of 'arrow-head' motifs, rather than of round dots, which one would expect in a derivative from precious metal."²⁹

Comparative Material

The Louvre flat dish found at Bahnasa, already mentioned in connection with Cairo University Museum no. 777.³⁰ This has similar, geometric treatment of the petals.

Fragment no. C762-1921 in the Victoria and Albert Museum, which will be discussed in Appendix B. This was also found at Bahnasa. Both this and the Pippin example are of a notably high quality seldom achieved except in the ruby lustre wares. The glazed surface is extremely fine and smooth.

Falkner's no. 574 from the palace area at Samarra has both similar decoration and shape too.³¹

This decoration falls under Philon's category A.³² She notes that: "The predominant shape in this group is a bowl, occurring in different sizes with a well-defined low footring and either a straight or a slightly everted rim. Similarly shaped bowls are known from white glazed pottery painted in cobalt blue, while the curvilinear vessel derives from Chinese imported examples." In fact both derive from Chinese examples, for Mason has already demonstrated that both lustre and ink-on-snow wares were manufactured in Basrah together (see section on Basrah in Chapter 3, page 36). These designs are also found on the mihrab tiles at the Great Mosque of Qairawan.³³

Reg. no.:	Pippin no. 14
Type of object:	Body sherd (No. 7)
Current location:	AUC
Date found:	Not recorded
Location:	Purchased as from Fustat
Dimensions:	5.4 cms x 6.5 cms

This yellow-bodied fragment was probably part of the rim and cavetto of a flat-based dish, similar to Cairo University Museum no. 777. It has been included in this catalogue to provide another example of the amoeba patterning executed in bright gold, which has a tinge of golden-olive in parts, on ruby lustre. The intended white glaze on the interior was stained red when the ruby lustre bled; that on the exterior is a crackled, greyish glaze with speckling. The ruby and light chocolate brown herringbone dashes have bled slightly. The very smooth glaze is about 0.05 cms thick. It has an old drill hole, but it is difficult to gauge whether this was an ancient rivet hole, or a more recent one for wiring the sherd for display purposes. Most of the Cairo University Museum samples were wired in this manner.

Comparative Material

See Cairo University Museum no. 777 for the list.

Reg. no.	Pippin no. 17
Type of object:	Bowl base fragment (No. 8)
Current location:	AUC
Date found:	Not recorded
Location:	Purchased as from Fustat
Dimensions:	Approximate diameter of ring foot 6 cms

This yellow-bodied, polychrome bowl fragment is decorated in gold, mid-brown, chocolate brown and pale green over a thick, smooth glaze which is about 0.05 cms thick. It is difficult to see the patterning, but there are two, waving green petals, leaves or wings flanking a petal filled with stars and tadpoles. The exterior is decorated in midbrown splashes, one of which is a bright gold where it has pooled. The exterior glaze has a bluish tinge and speckles, and covers the low footring.

The uniqueness of this piece lies in the plain green petals, leaves or wings, for, as noted in Pippin no. 13 above, the 'Abbasid artists usually had a *horror vacui*.

Comparative Material

A polychrome painted dish in the Louvre, which would appear to have plain, coloured palmettes.³⁴

Ashmolean Museum Fustat fragment P52 has the same bright green colouration.

Reg. no.:	Pippin no. 18
Type of object:	Base of small bowl (No. 9)
Current location:	AUC
Date found:	Not recorded
Location:	Purchased as from Fustat
Dimensions:	Diameter of base 3.5 cms

This tiny base of a monochrome lustre bowl belongs to the school of freely painted figural designs which has eschewed the more common contour panels in favour of the odd word or palmette filler and ample white spaces. The interior is decorated with a curious quadruped, with large ears, and a stiffly flying scarf, in golve lustre on a creamy, white glazed yellow-buff body. It is most probably a hare, for the Islamic potters continued the Byzantine mosaic tradition of depicting hares and rabbits with equally long legs, and long ears projecting from the back of the head, viz. those at the Church of the Saints Lot and Procopius at Khirbet el-Mukhayyet on Mount Nebo, Jordan. The treatment of the feet is unique, for they appear to be finely drawn webbed feet; even the large eye drawn in reserve with a tiny dot in the centre is unusual. The whole body looks as though it has been drawn out like a piece of elastic to fit the bowl. The only filler is a semi-palmette below the body.

The exterior is a series of finely drawn dots and dashes. The glaze does not cover all of the low footring.

Comparative Material

Islamic Museum no. 14653 (see note 14). Although this is part of a large dish, the comparison should be made with the two confronted hares rushing towards each other, as if on a collision course. No contour panels appear in this piece, and the fillers are odd words such as in 'Ali, 'amil 'Ali and barakat.

Alphonse Kann's bowl with a stylised hare leaping over the back of a feline.³⁵ This has the same spontaneity of the Fustat piece.

Reg. no.:	Pippin no. 20
Type of object:	Base of an oval, foliated cup (No. 20 and section drawing over)
Current location:	AUC
Date found:	Not recorded
Location:	Purchased as from Fustat
Dimensions:	Length of base 5.5 cms, width 3.6 cms

This fragment is an extremely interesting piece, for it reveals the success and care taken in copying Chinese prototypes achieved, and demonstrates the number of different Islamic wares that used Chinese prototypes.

The dense buff-yellow body is covered in a creamy-white glossy glaze, which has traces of a few speckles. It is decorated in bright golden-olive, which has bled slightly on the exterior. There appear to be four interior ridges in the walls, and the patterning seems to follow the contours. There would appear to be fragments of inscriptions, and the central decoration is pseudo-epigraphic with a sketchy fleur-de-lis. The exterior has a few diagonal splashes and a three-pronged device on the base which could be pseudo-Chinese epigraphy. The low-footed base has been applied separately; no doubt the cup itself was made in a mould.

Comparative Material

There are two similar lustred examples: one in the David Collection,³⁶ and another that was sold at auction at Sotheby's in 1985.³⁷ Both have a relief-moulded inscription on the base, which has been read as *'amal ibn Hani*. The David cup has the same foliated, low-footed base; the base of the Sotheby's is unknown.

A parallel with the three-pronged design found on the Pippin base can be seen on the exterior of a bowl excavated at Samarra.³⁸

The Eton bowl should be brought into this discussion.³⁹ It is part of the Myers collection housed in the Eton College Museum, and was labelled Roman or Byzantine, found in Egypt. Butler correctly recognised a Sasanian/Tang influence, and dated it to the sixth or seventh century. He describes its interior moulded ornament as being herringbone and pellets in relief, and alludes to the decoration as being strongly reminiscent of Samarra moulded relief wares. Rawson indicates that the Sasanians favoured these oval cups and illustrates a silver one on a high foot in the British Museum, which Butler alluded to. However, she also illustrated a white ware one from the tomb of Qian Kuan, who was buried in AD 900,⁴⁰ and is now housed in the Zhejiang Province Museum, thus insinuating that this shape could have been known in China for around 300 years. As it is unlikely that Chinese white wares were exported to the Near East until the eighth century, the Eton bowl should be placed in the eighth/ninth centuries too. If it was a direct Sasanian copy it would have had a much higher foot. Although the Myers' Eton collection only contained Roman and Byzantine pieces, with this exception, V & A no. C 891-1902 is a ruby lustre fragment from Fustat which was donated by Myers, so evidently he was collecting Islamic fragments too.

Sarre excavated a similar-shaped, Chinese, moulded-whiteware cup at Samarra, which Fan Dongqing has recently demonstrated to be the product of a Ding kiln.⁴¹ Those with foliated footrings were manufactured at Xing kilns. Thus the two 'Abbasid lustre ware examples cited above have been copied from Xing prototypes. Fan goes on to say that this shape was very popular in the Tang period: "it was employed by the Yue, Xing and Ding kilns, and sometimes given a *sancai* glaze."

Whitehouse found a similarly foliated and moulded green and white splash ware at Siraf, but unfortunately it was not stratified and there is no illustration of its base.⁴² However, it is positive, tangible proof in the Near East for the Chinese kilns producing both white wares and splash wares in identical forms.

Reg. no.:	Pippin 47
Type of object:	Rim fragment of a bowl (No. 11)
Current location:	AUC
Date found:	Not recorded
Location:	Purchased as from Fustat
Dimensions:	Approximate rim diameter 28cms

At a first glance one would assume that this is a Fatimid piece, but closer inspection of the body reveals a diagnostic, dense, yellow-buff paste, with some signs of flaking. The interior decoration is a simple, meandering semi-palmette scroll running round the rim, painted in a dull chocolate brown lustre on a white glaze. Two thin parallel lines divide it between the rest of the bowl and the top of the rim. It is difficult to ascertain the lower design in the bowl, but one can see traces of more intricately scrolling foliage.

The exterior has vertical, thick golden-olive, splashed lines on a crackled glaze. It would seem that this was applied before the chocolate brown, for there are golden-olive specks under the interior design.

It is tempting to see this piece as either transitional, and perhaps a prototype for the Fatimid potters, or what was being produced contemporaneously in Iraq as the Fatimid potters were just establishing their industry.

Comparative Material

The design is very much in the spirit of those on the sherds illustrated on plate XCIV in the Iraqi Directorate General of Antiquities report on the 1936-9 Samarra excavations.

In the Benaki collection the closest links are the friezes in jar fragments nos. 11666 and 315.

Bahgat and Massoul have two similar friezes in *Musulmane*: plate V/7, a jar fragment which he dates to the Tulunid period; and plate VI/2, the base of a jar which he assigns to the Ikhshids. For some reason he includes a photograph of the latter, taken from a different angle, on plate C/27.

Commentary

Looking beyond the rich variety that has been illustrated here, it is important to note that these are all either chance finds (many of which were probably acquired through dealers), or fragments donated by the Arab Museum.⁴³ Whether these pieces have been excavated legally or illegally, their only scientific value lies in that they definitely came from Egyptian sites, and with the exception of Cairo University Museum no. 768, they all have the diagnostic Basran body.

The following examples from the ARCE excavations have far greater scientific value, for they have well-established findspots, even if some of them lack secure stratigraphy. The anomalies and difficulties of Fustat have already been described in Chapter 4, and it is well understood that it is a complex site to excavate. This puts a greater onus on Gayraud at Istabl 'Antar to produce the necessary evidence to confirm Scanlon's chronology.

One important point to stress in this study is that the variety of shape is limited, and there is seemingly no difference in shape between wares decorated in polychrome, bichrome or monochrome lustre, or indeed in any of the other decorative colour schemes. The Iraqi shapes were also adopted by the Egyptian potters for their local wares. It is open to question as to whether one copied the other, or both sought inspiration from the same Chinese prototype simultaneously. For the purposes of this thesis, the relevant factor is that if the potters were decorating the same shapes with different colouration, it is highly probable that they were contemporaneous. The fact that many misshapen and slightly misfired pieces (i.e. some of the ruby lustre wares whose colours bled obscuring the white tin-glaze) passed the production line and entered into the market, underlines the heavy demand for this ware. Perhaps the worst pieces were exported as seconds. Such practices certainly continue in the English potteries today.

Reg. no.: 68.11.53
 Type of object: Part of a small bowl (No. 12)
 Current location: Kelsey Museum, University of Michigan
 Date found: 10 November 1968
 Location: Fustat B, locus XI¹-12, pit G @ 2.6 metres
 Dimensions: Original height 4.7 cms; base diameter 4.8 cms
 Approx. rim diameter 14 cms
 Published: *Pits* pl. XVII/8
Fatimid-Seljuq pl. V/b
 Asaro et al. *Provenance*

The register describes a small bowl (about one-third preserved) with a low footring and pinched scallop rim, with an internal radial design in greenish lustre on a white tin glaze, and three solid gold rays alternating with ones decorated with peacocks eyes and arrowheads used as fillers between them, i.e. a bichrome ware. The exterior is decorated in Grube's type E design (see fig. 4): several concentric circles with stipple dots in the centre, with diagonal slashes and dots in between.⁴⁴

The three published reports confirm what is obvious to the eye from the photograph, that this is a monochrome ware. It was found in a well-stratified, undisturbed domestic water-holding pit. The excavators interpreted the fill as single-period, indicative of a ninth/tenth century occupancy, with a few eighth century pieces.⁴⁵

Subsequent neutron activation analysis carried out by Asaro and colleagues on the body, at the University of California laboratories, confirm that its body is of the same make-up as other 'Abbasid lustre wares found at the Iranian sites of Siraf, Muveh and Jiruft.⁴⁶ Recently, Mason has analysed the Siraf pottery and can confirm that amongst the opaque white-glazed group, without exception, the lustred and ink-on-snow wares had the Basrah fabric.⁴⁷ Hence, we can safely confirm that this is a Basran product.

Although this piece was found in an undisturbed pit, the associated finds covered a period of 150 years, so it is only possible to provide a relative date. In publications it has been assigned to the tenth century, which is strongly supported by Chinese prototypes, see below.

Comparative Material

Benaki nos. 19204 and 306.⁴⁷ The former is a bichrome bowl fragment with a stylised vegetal design on the interior and Grube's type C, D or E pattern on the exterior; and the latter is approximately one-third of a monochrome bowl decorated with part of a camel and contour lines filled with arrow heads; both have a plain solid dark band around the rim.

Small, monochrome bowl from the Brangwyn collection.⁴⁹ This piece has an interesting three-part radiating branch design infilled with peacocks' eyes and crosshatching.

Keir collection no. 22.⁵⁰ A small, figural monochrome lustre bowl with a type C patterning on its exterior. Grube assigns this to tenth century Iraq. This belongs to the same school as Pippin no. 18, as it has no contour panels (see above).

Victoria and Albert Museum no. C440.1898. Unpublished salt cellar. See listing in Appendix B.

Louvre Museum fragment.⁵¹ Small piece with two pinches on the rim extant. Wallis says it has a white paste and tin glaze, and decorated in ruby lustre. From his sketch one can see that it probably had a radial design and a panel of peacocks' eyes. He published this fragment along with another obviously 'Abbasid lustre piece, and said they both came from Susa.

Monochrome yellow lustre, five-lobed bowl no. MNC 22686, in the Sèvres Museum, attributed to tenth century Mesopotamia by Joel.⁵² The interior decoration has gadrooning on the rim, and four large branches emanating from the centre ending in fleurs-de-lys. In between these are the three petalled, heart-shaped motifs which will be discussed in Appendix B; the rest of the space is filled with stippling. The exterior design is Grube's type E. On the base there is a *ba*, ray, most probably from *barakah*. It has been broken and restored.

Whitehouse found a lobed bowl fragment at Siraf at site F in the residential quarter.⁵³ It is difficult to tell from the line drawing whether it was monochrome or polychrome, but by virtue of its inscription one would assume monochrome.

British Museum no. 1965 4-14 1. A five-lobed cup in yellowy-brown lustre decorated with a duck occupying most of the space, and minimal arrow-head contour panels. The rim has a plain lustred band. Rim diameter is 9.5 cms. The register assigns it to 9th century Mesopotamia, but there is no provenance.

From these citations, one can see that these lobed bowls were a popular shape, and were used for a variety of designs. However, they do not appear to have been used for any of the other wares. Its Chinese prototype was equally popular in Fustat: the Yue Yao porcelain bowls with five ribs date to a similar period,⁵⁴ as do similar wares from the Ding kilns. According to Fan, during the Five Dynasties period (907-60) the Ding white wares "were mostly left undecorated, but were often made in the shape of flowers with three, four or five petals. Those with five petals, such as mallow, peach or plum blossom, were the most common."⁵⁵ They also had shallow footings. The whiteware spittoon 68.11.81 found at 3.20 metres in the same pit has a similarly dated Ding ware prototype published in the same article.

The most relevant observation that emerges from studying this piece is that the same shapes were used for polychrome, bichrome and monochrome lustre, which would surely favour a contemporary manufacture.

Reg. no: 71.5.17
 Type of object: Three fragments of a small footed bowl (No. 13 and over for section drawing)
 Current location: Kelsey Museum, University of Michigan
 Date found: 21/22 May 1971
 Location: Fustat B, locus XI-3, pit R @ 3.5 - 4 metres
 Dimensions: Height 4.5 cms, approximate rim diameter 13 cms
 Foot diameter 5 cms
 Published: FEPR 71-I, fig. 4 and pl. XII/1

Two of these fragments match, and it was possible to reconstruct this small footed bowl with a hard, white-buff body. The design is executed in a light greenish lustre, consisting of an interior geometrical design of arcading around an indented central roundel; the exterior has a series of inscriptions in reserve: the Kufic letters of *barakah* and 'Allah are discernible.

It was found in pit R, the first 2 metres of which the excavators report to have been disturbed. However, they are confident that the remaining 2.5 metres were undisturbed, due to the hardpacked nature of the fill. It was found in association with a ninth century filter, and therefore it has been assigned a ninth century dating. This area was definitely part of a pre-Fatimid complex, so a broader ninth/tenth century dating is more appropriate.

The interior decoration is of great interest, as the trilobed arch is rare in Egypt, and a Mesopotamian prototype has to be sought. The excavators cited a Mesopotamian stucco example.

Comparative Material

Reitlinger collection no. 1978.21 46, housed in the Ashmolean Museum, Oxford.⁵⁶ Pézard erroneously published this figural dish as being decorated in polychrome lustre, but this should be corrected to monochrome. In the rim decoration it has a frieze of trilobed arches.

Cairo University Museum jar fragment no. 870, already described above. It has traces of a trilobed arch.

Although the decoration may not be so common, the shape, with its everted rim and small, saucer-like indent in its centre can be found in many ninth/tenth century wares. There is no need to look to fragments for parallels. Victoria and Albert Museum no. C.1323-1921, which will be discussed in Appendix B is a monochrome lustre example from Fustat. Pit G, the findspot of 68.11.53 produced a similarly shaped Fayyumi splash bowl 68.12.67 and a buff ware yellow-brown glazed bowl 68.12.87.^{56a} Koechlin at Susa found a polychrome glazed ware from Afrasiyab with an epigraphic design and dotted contour panels imitating tenth century lustre wares with the same indented base.⁵⁷ The list is endless.

Falkner's no. 580 is an example of a monochrome lustre ware with an inscription in reserve.⁵⁸ This was found at the tenth century site N1, known as the Glassworks. However, this is a survey find, and not a stratified find, so not definitively dated.

Reg. no.: 72.10.46
 Type of object: Five matching fragments of a small ringfooted bowl
 (No. 14 and over for section drawing)
 Current location: Ashmolean Museum, no. P2700
 Date found: 30 October 1972
 Location: Fustat B, locus XXI.6 baulk A
 Dimensions: Base 3.7 cms; rim 8.6 cms; height 3.5 cms
 Published: FEPR 72-I: p. 66, fig. 24.

From these five fragments it was possible to ascertain the shape of this small bowl decorated in golden-olive lustre on a greyish-white glaze, on a diagnostic compact, buff-yellow body. The interior decoration was described in the register as being that of a bird or animal with a bough in its beak or mouth, and the spaces filled with dotted contour lines. The exterior with wavy lines and blobs.

It was possible to study this piece, and a few corrections should be made: the animal is unquestionably a stylised rabbit running at full tilt from right to left, with a semi-palmette in its mouth, and a white band for a collar. Its eye is in reserve. The contour lines are unusually angular, with both dot-stippling and arrowhead-stippling. The rim has a narrow line of gadrooning. The exterior glaze has been largely removed between the foot and the upper part of the body, as though it was inserted inside another vessel prior to firing. The exterior design is of hastily executed dots and dashes in golden-olive on white glaze, which, where more thickly applied, has a bluish tinge. Of special interest is a tiny knob on the base.

This piece was found in a baulk which had been created by the Fatimid builders when constructing the later domestic complex. The excavators explained that baulk A-A' was tightly packed and appeared to have two distinctive layers; they surmised, by extrapolating from comparative material, that "cumulatively, the evidence bespoke an occupancy throughout the eighth and ninth centuries." A boat-like "tub", with a brick and plaster lining, and its base hewn into the *jebel* lay below this baulk. It contained a coin of Matar, governor of Egypt between 156-159/773-76, and two fragments of a lustre-painted glass vessel. This relatively chronology should perhaps be stretched to the tenth century; however, the relevant point to accentuate is that this small bowl was found in a pre-Fatimid context.

Comparative Material

Benaki no. 231, fig. 335 and plate IX/B. More care has been taken on the exterior decoration, but otherwise it is almost identical. The only other difference is that the Benaki animal has no collar.

Islamic Museum no. 15971. An unpublished small bowl with a diameter of 9 cms, with a similar shape. It is decorated with an indeterminate quadruped holding a diminutive branch in its mouth. The rest of the space is filled with stippled contour lines, but the animal seems to have been squashed in this minute space, so that its hindquarters are being pushed upwards in a most awkward position. The exterior has similar dots and dashes. The catalogue says that it was acquired from the Dr 'Ali Pasha Ibrahim collection in 1949, and categorises it as either Tulunid or 'Abbasid.

Victoria and Albert Museum no. C 1628-1921. Fragment with a similar profile, contour panel with stippled arrowheads and gadrooning on the rim, all in golve lustre on a white-glazed yellow body. It is really too small to gauge its diameter, but the maximum would have been 12 cms. This came from Hornblower's Fustat collection.

Bahgat/Massoul *Musulmane* pl. IV, no. 1. Fragment of a bowl, with a low footring, and decorated in monochrome with a rabbit and arrowhead contour panels. The exterior has Grube's type C design. The rabbit is more sedate than on 72.10.46, and has one foreleg raised.

It is interesting that all of this comparative material probably or definitely comes from Fustat. The decorative theme is well known, but the shape is more unusual; its Chinese prototype is not obvious, it seems to be a combination of the tenth century porcelain shapes.

Reg. no.: 72.10.47
 Type of object: Fragment of a bowl, with full section, and smaller, unmatching one (No. 15 and over for section drawing)
 Current location: Ashmolean Museum no. P2684
 Date found: 30 October 1972
 Location: Fustat B, locus XXI-6 baulk A'
 Dimensions: Height 6cms; base diameter 6 cms; rim diameter approximately 20 cms
 Publication: FEPR 72-I, p.66 and pl. XIV, fig. C

Although somewhat worn, the interior design of a long-eared animal carrying a foliated bough in its beak-like mouth is clear. As in 72.10.46, the eye is depicted in reserve, and it has a more decorative collar, which incorporates an inscription in reserve, but it is difficult to ascertain. Above the collar there are two tiny projections. The contour panels with arrowhead stippling are faint, as is the gadrooning around the rim. The exterior decoration is Grube's type C. The interior of the base is glazed and lustred with traces of a signature. The glaze has, however, worn off the footring. The exterior has a lot of intrusions, and the glaze on the base is bluish, with pooling. All the decoration is in a golden olive lustre on a white tin-glazed, compact yellow-buff body.

The findspot in baulk A cannot be considered well-stratified in any conventional sense, but consistent with the anomalies of this archaeologically complex site, the excavators have demonstrated that its context is definitely 'Abbasid.'⁵⁹

Comparative Material

Benaki no. 231, as cited for 72.10.46. for the interior decoration only.

Keir nos. 24, 26 and 27 on p. 65. The closest likeness for the animal is the monumental stag on no. 24. He has the similar smaller projections just above the collar, and a similar collar design. The only difference is in the contour panelling, which consists of a peacock's eye motif. Grube dates them all to tenth century Iraq.

Museum für Islamische Kunst Dahlem I, no 12/62.⁶⁰ This has a similar beak-like mouth with a foliated bough hanging from it. Also dated to the tenth century.

Reg. no.: 78.10.40
 Type of object: Two unassociated sets of matching sherds of a lustred bowl (No. 16 and section drawing over)
 Current location: AUC
 Date found: 23 October 1978
 Location: Fustat B, locus XXVII-13 W, lower fill
 Dimensions: Rim diameter 24 cms; height 5.2 cms; diameter of base 10 cms; thickness of ring foot 0.8 cms
 Publication: *FEPR* 78, fig. 37

The two unassociated sets consisted of four and three fragments apiece; together they made a bowl with an internal design of thrice repeated epigraphic lines, radiating from the centre and an external one of repeated epigraphic motifs within ocular scrolled reserves. It is decorated in a light golden-olive lustre on a white tin glaze, which has faded to a degree that makes it almost undecipherable. It has a low, straight footring, with a slightly flaring, tapering body of buff-white clay. It has been well illustrated by a line drawing in the preliminary report, and an attempt to read the letters illustrated for the interior could plausibly read: *takfa*, which would translate as "sufficient".⁶⁰ But here we are heavily reliant on an artist's interpretation of indistinct words.

It was found in the lower fill of room W, and all the associated material can be dated to the tenth century.

Comparative Material

Nishapur no. 37.⁶¹ Wilkinson found what is most probably an almost identical bowl in Sabz Pushan. He describes the body as pale yellow with a brilliant opaque white glaze and gold lustre. The interior decoration consists of an inscription and bold forms with smaller designs inserted in the interstitial spaces. The exterior decoration he says is "less massive" and composed of Kufic lettering surrounded by patterns drawn in outline. Certainly from his photographs, the exterior decoration recalls that of 78.10.40. He refutes Jenkins' allusion to it being manufacture in Susa,⁶² and favours a tenth century Iraqi manufacture. Unfortunately there is no sectional drawing for comparison of shape, and his stratigraphy is insufficient to allow for an absolute dating. However, he dates it to the tenth century.

Monochrome lustre-painted fragmentary bowl excavated in Susa, declared to be of local manufacture in the tenth century, now housed in the Louvre.⁶³ Kervran found a similarly decorated fragment in a tenth century context at Susa.⁶⁴

Victoria and Albert Museum no. C1648-1921, to be discussed in Appendix B.

The Walters Art Gallery, Baltimore, no. 48.2037. The registration card classifies it as "Egypt, late 10th c. Fatimid dynasty".⁶⁵ It came from Kelekian's estate (inventory no. 8289, auction sticker # 103) in 1951. It should be recalled that Evans stated that Kelekian was one of those working on Fustat finds in Paris in the early 1900s (see chapter 4, page 6).

Fragments from Madinet az-Zahra.⁶⁶

Benaki nos. 230, 19292 and 319.

Fragments of a similar shaped bowl were found at Antioch.⁶⁷ Decorated in a green-gold lustre, with an assymetric design and a large area of solid colour and contour panels with dots, there was possibly an animal represented in the centre.

The commentators do not agree on the place of manufacture for all these pieces cited, but at least they are unanimous in agreeing on a tenth century dating. Philon demonstrates a number of different shapes with similar decoration, to a degree that one is tempted to think in terms of dinner service sets, and not an individual artistic output. If the 'Abbasids were organised in other industries, there is every reason to believe that the potteries could also have been under some form of control, whether it be government or individual merchants. Different communities would, therefore, reflect different taste, which would account for more examples of a specific design being found at one site or another.

NOTES TO APPENDIX A

1. No. 4176: a bichrome bowl divided by vertical and horizontal lines into squares, which are filled with a peacocks' eye motif. First published in *La Céramique Egyptienne de l'Epoque Musulmane* by the Islamic Museum, Cairo in 1922, pl. 2. The register says it was bought from Mohammed Ughly in 1915; and No. 3766: a polychrome bowl with a four petal design outlined in a classical laurel wreath design, and the spaces filled with herringbone, peacocks' eye motifs, and dots and stars, pl. 3 in *La Céramique Egyptienne*. This was bought from M. Nahman in 1911; and No. 3767: a similarly designed bowl to 3766, with a single wreath delineating the petals, pl. 4 in *La Céramique Egyptienne*. This was also bought from M. Nahman in 1911.
2. The other pieces are: nos. 13199; 13200; 13995; 13620; 3768; 15998; 16000; 13201; 15999; 16335; 15971; 16099; 16102; 14653; and 16103/2.
- 2a. E. Herzfeld: *Die Malerien von Samarra*, (Berlin, 1927): plates 11 & 12. This mural is currently housed in the Çinili Kiosk, Istanbul.
3. H. Philon: *Early Islamic Ceramics*, (London, 1980): p. 104, fig. 209. Henceforward *Benaki*.
4. *Ibid.*, p. 113-4, figs 233 and 235.
5. M. Pézard: *La Céramique Archaique de l'Islam*, (Paris, 1920): pl. CXXXIV 1 & 2. Henceforward Pézard *Céramique*. The patterning is reminiscent of Sarre's pl. XIII, fig. 1.
6. *Benaki*, p. 142, fig. 308, and pl. IXA.
7. Scanlon: *FEPR '68 II*: 68.10.46, on pl. XVIIIb - an imitation porcelain dish; *FEPR '68 I*: pl. XIXc, a flat-bottomed, shallow, leadglazed bowl from Pit D in XI'-7; and *FEPR '78*: splash ware shallow bowl, fig. 43, p. 26.
8. R. Falkner: *Report on the Surface Pottery from the 1986 Survey Season at Samarra*', unpublished MS of 1989: no. 499.
9. Pézard *Céramique*: p. 144.

10. *Ibid.* pl. XL: height 2.4 cms, diameter 32 cms.
11. V.A. Kratchkowskaya: "A propos de l'épigraphie d'un plat à lustre métallique", *AI IV* (1937): 468-71.
12. Z.M. Hassan: *Moslem Art in the Fouad I University Museum* (Cairo, 1950): p. 36.
13. Unpublished piece: a small bowl of 9 cms diameter, with a small quadreped, acquired from Dr 'Ali Pasha Ibrahim's collection in 1949.
14. Published in Pézard's *Céramique* pl. 116, p. 244; G. Féhervári: "Two early Abbasid lustre bowls" *OA 9, NS* (1963): fig. 11; A. Rozanthal: *Arts Antiques de l'Asie Occidentale à Partir du IVe Millénaire Avant JC et les Origines des Motifs de la Céramique Islamique Archaïque*, (Nice, 1948): p. 201-2, fig. 372.
As it came from the Vignier collection, it was attributed to Rayy. The Islamic Museum acquired it from a Cairo dealer Y. Acheroff in 1941.
15. *Benaki*: p. 156, fig. 346.
16. E. Grube: *Islamic Pottery of the Eighth to the Fifteenth Century in the Keir Collection*, (London, 1976): p. 79, no. 40.
Henceforward Keir.
17. Pézard *Céramique*, pl. CXIV.
18. E. Atil: *The Art of the Arab World*, (Washington, 1975): p. 34, fig. 12.
19. *Benaki*: p. 195, fig. 398 and pl. XIV.
20. A. Lane: *Early Islamic Pottery* (London, 1947): pl. 22B.
Henceforward Lane *EIP*.
21. M. Jenkins: "The palmette tree: a study of the iconography of Egyptian lustre painted pottery", *JARCE 7*: p. 119, fig. 1 and A.R.A. Yousuf: "Khazzafun min al-'asr Fatimi wa asahbuhum al-fanniya" *Bulletin of the Faculty of Arts, Cairo University XX/2* (1958): p. 174, pls. Ia and b.

- 21a. G. Marçais: *Les Faïences à Reflets Métalliques de la Grande Mosquée de Kairouan*, (Paris, 1928): pls. IX nos. 49, 50; XI no. 66; XII nos. 67, 71, 72; XIII nos. 73, 76.
22. R.B. Mason and E.J. Keall: "Petrography of Islamic pottery from Fustat", *JARCE* 27 (1990): p. 173, fig. 5, sherd no. 988.117.249.
23. Personal communication dated 26 August 1991: "The petrofabrics of both is consistent with production at Basra. I am beginning to think that perhaps the one strange piece published in the *JARCE* article may have just been an anomalous sport from Basra." In the Mason/Keall article "The 'Abbasid glazed wares of Siraf and the Basra connection: petrographic analysis" submitted for *Iran* 23 (1991), note 56 he had already stated: "Subsequent analysis of four sherds from Fustat in the Ashmolean Museum, Oxford were all found to be Basra petrofabric."
24. F. Sarre: *Die Keramik von Samarra*, (Berlin, 1925): pl. XIII/1; no. 156, the famous eagle bowl has similar patterning too. This was found in the *serdab* at the Qasr 'Ashiq, but no. 157 has no provenance. Henceforward Sarre *Keramik*.
25. *Christie's Review* (London, 1987): p. 412-16. Bowl diameter: 27.5 cms, sold in London on 21.11.86.
26. G. Féhervári and Y.H. Safadi: *1400 Years of Islamic Art: A Descriptive Catalogue*, (London, 1984): pl. 79. First published in *Pézarid Céramique* pl. CXXXIII/2. Bowl diameter: 28 cms, height 9 cms.
27. D. Jones and G. Michell: *The Arts of Islam*, (London, 1976): no. 260, p. 217.
- 27a. Marçais: *op. cit.*, pls. IX no. 51; XI no. 61; and XVI no. 94.
28. Lane *EIP*: pl. 10B and pl. 11B.
29. J. Raby: "Looking for silver in clay: a new perspective on Samanid ceramics" in *Pots and Pans*, ed. M. Vickers, (Oxford, 1986): p. 195.

30. See note 10. Also G. Migeon: *Musée de Louvre L'Orient Musulman* (Paris, 1922): pl. 16, fig. 55.
31. Falkner: *op. cit.*, p. 60 and line drawing no. 574.
32. Benaki: p. 65 and figs. 134-154.
33. G. Marçais: *op. cit.*: pls. XI - XVI.
34. R. Ettinghausen and O. Grabar: *The Art and Architecture of Islam 650 - 1250* (London, 1987): p. 114, fig. 92. Diameter 19.7 cms.
35. Pézard *Céramique*, pl. CXXII. Height 4.2 cms, diameter 12.8 cms.
36. K. von Folsach: *Islamic Art: the David Collection* (Copenhagen, 1990): p. 83, fig. 68, no. 7/1970. The author kindly provided a photocopy of the base, and it is interesting to note that the glaze is badly crackled, and it has been heavily restored.
37. Sotheby's catalogue no. 34 for sale of 15 October 1985. Information kindly supplied by von Folsach.
38. Iraqi Directorate General of Antiquities: *Hafriyyat Samarra 1936-9* (Baghdad, 1940): pl. XCIII.
39. A.J. Butler: *Islamic Pottery: a Study Mainly Historical*, (London, 1926): p. 77 and pl. VIIB.
40. J. Rawson: "Tombs or hoards: the survival of Chinese silver of the Tang and Song periods, seventh to thirteenth centuries AD", in *Pots and Pans* ed. M. Vickers, (Oxford, 1986): p. 36.
41. Sarre *Keramik*, pls. XXIV and XXV; and Fan Dongqing: "Early Ding wares in the Shanghai Museum", *Oriental Art* 22/2 (1991): p. 50-1.
42. M. Tampoe: *Maritime Trade Between China and the West: an Archaeological Study of the Ceramics from Siraf (Persian Gulf), 8th to 15th Centuries AD*, (Oxford, 1989): no. 1667, p. 327. Henceforward Tampoe Siraf.

43. A.W. Azzam: *Museum of Muslim Art* (Cairo, 1945): p. 6.
The Cairo University Museum was established in 1933. Students were apparently being taken regularly to Fustat to monitor the excavations. Ali Pasha Ibrahim presented nearly 500 pieces: carpets, ceramics, bronzes, brass, glass, woodwork, bookbindings and textiles; and assisted in the acquisition of "a valuable collection of remains from the Fustat excavations which was kindly offered to us by the Arab Museum". Three dealers also presented pieces: Messrs. Acheroff, Tano and Hatoun.
44. Keir, p. 50.
45. Scanlon *Pits*, p. 69.
46. Asaro et al: *Provenance*: p. 123, fig. 5.
47. Mason and Keall, *op. cit.* p. 10 of MS.
48. Benaki figs. 239 and 340, colour pl. IX/c. Diameter of 340: 11.9 cms.
49. Pézard *Céramique* pl. CXVIII and *SPA* vol. 9, pl. 575.
50. Keir, p. 61, no. 22. Measurements: diameter 11.6 cms.
51. H. Wallis: *The Godman Collection. Persian Ceramic Art in the Collection of Mr F. DuCane Godman, F.R.S. The Thirteenth Century Lustrated Vases*, (London, 1891): pl. XV, fig. 7.
52. G. Joel: *Catalogue Raisonné des Céramiques du Monde Iranien Jusqua'au XIe Siècle et du Proche Orient Arabe Jusqua'au Milieu du XIIIe Siècle au Musée National de Céramique de Sèvres*, 3 vols, (June 1983) - unpublished MS: no. 19. First published in J. Lacam: "La céramique des époques omeyyade et abbaside, VII au X siècle" *Cahiers de la Céramique, du Verre et des Arts du Feu* 20 (1960): p. 293, fig. 99. Dimensions: height 4 cms, rim diameter 10.3 cms.
53. Tampoe *Siraf*, p. 281, fig. 1136 and p. 356.
54. B. Gyllensvard: "Recent finds of Chinese ceramics at Fostat I", *Bulletin of the Museum of Far Eastern Antiquities* 45 (1973): p. 94, figs. 5 & 6.

55. Fan Dongqing: *op. cit.*, p. 51.
56. Raby: *Pots and Pans*, *op. cit.*, fig. 9. First published by Pézard *Céramique* pl. CXV, as being in the Vignier collection and attributed to Rayy. On p. 144 Pézard sees the trilobed arch as a valuable piece of dating evidence and dates it to the beginning of the ninth century, like the blind niches in the palace of Harun al-Rashid and the Baghdad Gate at Raqqa, and that one sees it particularly at Samarra.
- 56a. Scanlon: *Pits*, p. 72-3, pl. XVIII/5 and XIX/6, respectively.
57. R. Koechlin: *Les Céramiques Musulmanes de Suse au Musée du Louvre*, (Paris, 1928): pl. 109 and Pézard *Céramique* pl. CXIII/1.
58. Falkner, *op. cit.*, fig. 580.
59. FEPR 72-I: p. 66.
60. M.R. Rogers: "Ceramics" in *The Arts of Persia*, ed. R.W. Ferrier (London, 1989): p. 258, fig. 7.
- 60a. Benaki: p. 297, wherein the expression *tawakkul takfa* or *tawakkul takfa wa sal tu'ta* is discussed. Dr 'Abd al-Rauf Yousuf has suggested this reading. It occurs on the Islamic Museum's lustre bowl 15998, which he says has been published by M. Jenkins in the Metropolitan Museum of Art's journal.
61. C. Wilkinson: *Nishapur: Pottery of the Early Islamic Period*, (New York, 1973): p. 189-90, fig. 37a, b. Dimensions: diameter 15.5 cms.
62. Jenkins, *op. cit.*, figs. 9 & 10, p. 123. She discusses most of the comparative material cited and follows Schnyder's and Koechlin's views of potters moving out of Iraq after the fall of Samarra and the Basra troubles.
63. Koechlin, *op. cit.*, pl. XXIII, no 161. Dimensions: diameter 12 cms; height 4 cms. Note this is considerably smaller than the piece under discussion.

64. M. Kervran: "Les niveaux Islamiques du secteur oriental du tépé de l'Apadana", *Cahiers de la DAFI* 7 (1977): p.134-5, fig. 2.
65. Kindly supplied by Hiram W. Woodward, Jr, Curator of Asian Art. Dimensions: diameter 21.1 cms; height 6.9 cms.
66. Lady M.M. Evans: *Lustre Pottery* (London, 1920): pl. IX, opp. p. 32, fig. 28.
67. F.O. Waage, ed.: *Antioch on the Orontes*, (Princeton, 1948): fig. 87.1.

A CATALOGUE OF FRAGMENTS STUDIED IN BRITISH COLLECTIONS

During the course of 1991 several visits were made to British Museums, to study their Fustat material and that of other Egyptian sites. Again, the same strict criteria for inclusion in Appendix A have been applied here. Although none of these pieces has been recorded scientifically, the reader should refer to the discussion of the early exploration of Fustat in Chapter 4 for a broad idea of the findspots.

One may question the usefulness of this material, but it became increasingly evident that a thorough study of the reserves and the register of the three museum collections studied (Victoria & Albert, British and Ashmolean Museums) would be pertinent to this thesis. Most of these sherd collections were made by interested amateurs themselves, and not bought from the local dealers. G.D. Hornblower's collection of some 900 ceramic fragments donated to the Victoria & Albert Museum are all well annotated and provenanced. It has already been noted that he claims to have been responsible for the classification of the Arab Museum. He doubtless represents one of the many modest, understated and anonymous individuals who inspired and encouraged Bahgat, and who but for an obscure note in the register would long remain unacknowledged. Another bonus of studying such material is that it gives the student an opportunity to handle a considerable quantity: this would not be possible during an excavation, as it has already been established that such a luxury ware is poorly represented.

One might also question the relevance of further study of 'Abbasid lustre wares found in Egypt when Benaki's collection has been published at considerable length. The vital difference between these collections is provenance. Doubtless most of his collection comes from Fustat, but it is not stated. Much of it was established with the help of the Cairo art dealer Phokian Thanos. As a representative sample spanning the full gamut of the Islamic occupation it is a great achievement, but without secure provenances it has little scientific value. The Benaki collection is an art historian's delight, but an archaeologist's despair.

Reg. no.: C.1600-1921
 Type of object: Six fragments forming most of the base of a ringfooted bowl (No. 17)
 Current location: Victoria & Albert Museum, London
 Date accessed: 26 April 1921
 Location: "Excavated" at Fustat
 Source: Gift of G.D. Hornblower
 Dimensions: Diameter of base 7.8 cms

This bowl fragment represents the monochrome figural school already represented by ARCE 72.10.46 in Appendix A. In this instance it is difficult to ascertain whether it is a bird or animal depicted. It has a humped back, long neck, a large round eye in reserve, and two minute knobs on the head below a crest or some such projection. The gaps are filled with hastily drawn stippled contour panels. On the exterior it is just possible to see that it had a Grube type C, D or E decoration.

The decoration is painted in an olive-brown lustre on a white glazed fine yellow body, with fine quartz particles. The exterior base is of greater interest, with the glaze covering most of the footring as well. It has an inscription in cursive letters, unlike the more usual, formalised squared Kufic executed on the interior of inscribed pieces. Despite its informality, it is possible to read *Bin Khaldan*, and to interpret it as a potter's signature. This signature has been found on two other published pieces cited below. The latter has been ascribed an Egyptian manufacture under the tenth century Ikhshidid dynasty. In the case of this fragment, it is only possible to consider ascribing an Iraqi, Basran manufacture, on the basis of its diagnostic body.

Comparative Material

Benaki no. 21451.¹ This is also a fragment of a figural bowl and it has traces of the same lettering. Philon read it as "perhaps" [*bin khal*]dan, on the basis of a comparable inscription on Benaki no. 19335b and the fact one can clearly read a am, dal, alef, nun on the fragment.

Similarly styled letters are found on Bahgat/Massoul's *Musulmane* plate VI, fig. 4^{b1s} (see no. 17a, reverse of no. 17). Jenkins read this as *ibn Khaldan* or *ibn Dahan*.² V & A C.1648-1921, which will be discussed on page 120 below is a similar piece, and can also only be considered to be of Iraqi manufacture, and not Egyptian.

Reg. no.: C762-1921
 Type of object: Fragment of the base of a ringfooted bowl (No. 18 and over for profile)
 Current location: Victoria & Albert Museum, London
 Date accessed: 26 April 1921
 Location: Bahnasa
 Source: Gift of G.D. Hornblower
 Dimensions: Approximate diameter of base 12 cms
 Published: Schnyder no. 35, pl. 6

This polychrome base fragment is decorated on the interior with stylised foliage and berries, with arrowhead and chevron infills, in golden-olive, gold-brown and midbrown lustre on a greyish white glazed, yellow-buff body. The exterior has dashes and circles executed in gold-brown and a chocolate brown which has bled red.

The importance of this fragment lies in its previously published attribution. Schnyder declared that this and a number of other lustred sherds housed in the Victoria & Albert Museum were all of Egyptian manufacture. This specific piece he dated to 880-90, i.e. Tulunid. Special care was taken to check all the pieces that he studied and published, and without exception, all should be regarded as Iraqi imports, and specifically attributed to Basra, subject to positive confirmation by petrographic analysis.

Comparative Material

Pippin 13, see description in Appendix A, and all comparative material therein.

Reg. no.: C.1595-1921
 Type of object: Inscribed rim fragment (insufficient remains to gain an accurate profile)
 Current location: Victoria & Albert Museum
 Date accessed: 26 April 1921
 Location: Fustat
 Source: Gift of G.D. Hornblower
 Dimensions: 4.5 cms x 5 cms
 Published: A. Caiger-Smith: *Lustre Pottery* (London, 1985), no. 3.

This tiny fragment was chosen for its epigraphic style and content. Decorated in midbrown and golden-olive lustre on a creamy speckled glazed, yellow body, the inscription reads 'amil 'Ali "work of 'Ali" or 'umila 'ala "was made on .." in Philon's Kufic style D.³ The exterior patterning has all flaked off with the glaze.

Comparative Material

The Benaki has several fragments with approximately similar lettering: 11379, 11674 and 11740. But none of these has exactly the same characteristic orthography, their letters are more angular.

Islamic Museum no. 14653, already cited in connection with Pippin no. 18. This is a figural monochrome bowl.

Pézarid's *Céramique* pl. CXXIV/3 is a simple bowl with 'amil 'Ali, and pl. XCCIII/1 has 'Ali on the base. Pl. CXXII has already been noted in connection with Pippin no. 18, in this instance it should be noted for the similar styled writing. Both the Islamic Museum piece and those illustrated in *Céramique* have been attributed to Rayy. On more recent evidence, one can propose that they all belong to the same school of writing or are the work of the same person. Once again one has an example of a link between the use of polychrome and monochrome. Hitherto it has been shape, now it is epigraphic style.

British Museum 1968 7-23.25, see below.

Reg. no.: C.1597-1921
 Type of object: Two pieces of a rim fragment (No. 20 and over for profile)
 Current location: Victoria & Albert Museum, London
 Date accessed: 26 April 1921
 Location: Fustat
 Source: G.D. Hornblower
 Dimensions: Approximate rim diameter 27 cms

Two matching pieces of a rim fragment decorated in a bright golden-olive lustre on a white-glazed, fine yellow body with pits and intrusions in the glaze. The outer part of the interior rim has a running inscription, which according to the register reads *al-'afiyah* or "good health", framed top and bottom by a thick line. It is difficult to be confident with this reading, and it is seemingly pseudo-epigraphic. Below this is a horizontal band of tadpoles surrounded by stippled dots.

This is a perfectly standard 'Abbasid lustre ware, with one exception. The exterior has Grube's type E decoration, the profile can be found throughout the Benaki book, the body is unmistakably of Iraqi origin and not of Egyptian manufacture, yet the spiralling, floreated Kufic inscription seemingly has no ninth/tenth century parallels. The shape of the letters have parallels with eleventh century Fatimid examples, yet their very boldness is unknown. It comes under a similar category as Pippin no. 47 in Appendix A, in that it is almost unique.

Comparative Material

Benaki no. 19731b's scrolling letters are similar, yet they do not have the same floreated split, and the spontaneity of this piece.⁴

The nearest example of this floreated, spiralling in ceramics is on the exterior patterning of the Nishapur bowl, no. 37, already cited as comparative material for ARCE 78.10.40, along with V & A C.1648-1921 and the fragments from Medinet az-Zahra. But this is not in the inscription itself, but seemingly used as a divider between words.

Reg. no.: C. 1622-1921
 Type of object: Fragment of a base of a ringfooted figural bowl
 (No. 21)
 Current location: Victoria & Albert Museum, London
 Date accessed: 26 April 1921
 Location: Fustat
 Source: G.D. Hornblower
 Dimensions: Base diameter approximately 13 cms
 Published: Bahgat/Massoul *Musulmane* pl. IV, fig. 3
 (see No. 21a for illustration)

There can be no doubt as to the fact that this is the same fragment that Bahgat and Massoul published as being Tulunid, but a close inspection of its diagnostic yellow body indicates an Iraqi manufacture. The design of a bird holding a foliated bough in its beak, a simple collar, and stippled contour panels is all too familiar. The lustre is a typical golden-olive colour on a white glaze, which has a bluish tinge on the exterior where it is slightly thicker. The exterior patterning looks to be Grube's C, D or E, insufficient remains to judge. The inner base and footring are glazed, and there is a trace of a word.

Amongst the interior design, one can just make out the top of 'amil or 'umila, just below the bird's chest, written in Kufic similar to that on C.1595-1921 discussed above. This fragment is worn on the interior, but if one compares it with the photograph in *Musulmane* there has been no deterioration in the intervening 70 years, so one must assume that this was affected when underground.

Comparative Material

ARCE 72.10.47 for the foliated bough, and genre. See Appendix A.

Brooklyn Museum no. L.63.9.23.⁵ This bowl depicts a stylised peacock carrying a foliated bough.

Freer Gallery no. 25.6 for an example of a Kufic inscription inserted in a bubble in the middle of the stippled, contour panelling.⁶

Reg. no. C.1648-1921
 Type of object: Section of a monochrome bowl (No. 22 and over for profile)
 Current location: Victoria & Albert Museum, London
 Date accessed: 26 April 1921
 Location: Fustat
 Source: G.D. Hornblower
 Dimensions: Approximate base diameter 6 cms, and rim diameter 16cms

This section of a small, monochrome bowl decorated in golden-olive lustre has the usual white glaze on a compact yellow body. Part of the exterior lustre is worn; the glaze has several large intrusions, and it has pooled near the foot; on the base where it is also thicker it has gone bluish in colour.

The interior decoration consists of stylised palmettes with traces of an inscription running vertically from the rim. The exterior has foliated branches dividing the inscription panels. Insufficient remains to make any sense of them.

Comparative Material

See ARCE 78.10.40 in Appendix A for the full citations.

This is probably the only group that has been found in a unanimously tenth century context.

Reg. no.: C.165C-1939
 Type of object: Section of a bichrome, ringfooted cup (No. 23 and over for section drawing)
 Current location: Victoria and Albert Museum, London
 Date accessed: 1939
 Location: Fustat
 Source: Selected from a large box left at the museum by Dr W.L. Hildburgh of Elvaston Place, S.W. 7. Hildburgh was under the impression that the whole collection was from Fustat
 Dimensions: Rim diameter 7 cms; base diameter 3.8 cms; height 3 cms
 Published: F.R. Martin: *The Persian Lustre Vase in the Imperial Hermitage of St Petersburg and Some Fragments of Lustre Ware Found Near Cairo at Fustat* (Stockholm, 1899): pl. III, fig. 10.

This small cup is a perfect example of how important it is to handle ceramics. A first reading of Martin's catalogue of Fustat pieces categorised them all as Fatimid, with the exception of one Kashan lustre ware. A second reading, after studying these museum collections, found this piece and a couple of other 'Abbasid pieces.

This seemingly insignificant piece is of interest for several reasons: 1. its simple, seemingly unique, decoration of golden-olive stripes on the interior and chocolate roundels on the exterior which are bleeding ruby, on a thick grey glazed yellowy buff body; 2. its extreme irregularity in shape, indicating that it is perhaps a second, or that the market accepted these wares in any state as long as they were whole; and 3. the fact that part of Martin's collection (he "brought home a collection of several thousand fragments, of which only about 100 small pieces were with lustre.." *op. cit.*) of 1896 was obviously dispersed at some stage, whereas it was understood to have been housed in the Stockholm Oriental Museum.

Comparative Material

Nothing was found.

Reg. no.: C.1323-1921
 Type of object: Complete, but restored footed bowl with an everted rim painted in yellow lustre (No. 24)
 Current location: On display in the Victoria & Albert Museum, London
 Date accessed: 26 April 1921
 Location: Fustat excavations (unspecified, but one can assume Bahgat's)
 Dimensions: Height 3.8 cms; rim diameter 12.7 cms
 Source: G.D. Hornblower

This small bowl is unique in that it is the only positively provenanced complete bowl from Fustat. It is to be regretted that it has no recorded findspot. It has a deep indent in its base. Decorated in a golden, monochrome lustre, the interior design is of an ewer with a long spout and foliated extremities in a reserve on a ground of stippled contour panels, with the outer rim having a continuous band of gadrooning. The exterior is decorated with Grube's type E design.

Comparative Material

Pézard's *Céramique* pl. CXXVI. This is an almost identical piece, but for the fact the ewer in this case has no spout, and instead has double handles. The extremities have symmetrically placed semipalmettes, which are extensions of the handles. Even the measurements are almost identical, being height 3.5 cms, and rim diameter 12.1 cms. This piece was apparently found at Rayy and was in the Kelekian collection.

For shape comparisons refer to ARCE 71.5.17 in Appendix A.

Reg. no.: C.441-1898
 Type of object: Salt cellar with five lobes (No. 25)
 Current location: On display in the Victoria & Albert Museum, London
 Date accessed: 1898
 Location: Acquired in Cairo
 Dimensions: Height 1.9 cms; rim diameter 4.8 cms

This minute five-lobed bowl or salt cellar is decorated in bright, golve lustre on a brilliant white glazed quatrefoil pattern with crosses or stamens in reserve. Strictly speaking this should not be included, as it has no definite provenance, and it was not possible to handle it, but being a unique and unpublished piece it was decided to include it.

The register describes the body as being of "reddish earthenware". Although it was not possible to handle this piece, by eye through a well-lit showcase, it appeared to have all the attributes of a typical Iraqi import.

Comparative Material

No other piece of this size and decoration is known, but for similarly shaped five-lobed fragments and bowls please refer to the comparative material for ARCE 68.11.53 in Appendix A.

Reg. no.: OA 6708
 Type of object: Section of a small dish or stand (No. 26 and over for section drawing)
 Current location: British Museum, London
 Date accessed: 28 March 1906
 Location: Aswan
 Source: H.R.H. Hall, no. 19
 Dimensions: Maximum diameter 12 cms; base/top diameter 8 cms

A note in the box wherein this was found in the BM's reserves stated: "Fragments from rubbish heaps at Aswan found with fragments of Roman pottery (Coptic also) going back to the 2nd century AD; these pieces anything between late Roman and ? medieval: near the town close to the Saracenic fortress, built about 1150. There is nothing against their being later than medieval."

This is a curious piece: there is no patterning on the one side, which is covered with a very thin grey glaze, whereas the other side is covered in a bichrome pattern of squares and blobs in a dull midbrown and chocolate lustre, and the side with a wavy line in midbrown on a chocolate band. It has a fine, compact yellow body. Its rather thick sides and flat, decorated surface indicate that it is most probably a stand and that the flat surface was uppermost.

Comparative Material

Victoria & Albert Museum no. C632-1922. An identical piece with a compact yellow, but slightly flakey body. The register records that it was found at Samarra, and it is described as a shallow dish. No donor is recorded, only the instructions: "to be labelled given by His Majesty's government". It came to the museum via the then High Commission in Baghdad. Evidently collected by an anonymous civil servant who did not wish to be associated with the area or collecting antiquities. Perhaps he feared the wrath of Gertrude Bell.

Metropolitan Museum fragment no. 23.75.22 a 52598. A small fragment with identical patterning to the base/top. On the registration card it is described as having a "design in brown and green on drab body, transparent glaze". This was part of a group of sherds from Samarra which were purchased from the British Museum in 1923.⁷ Judging from the designs and descriptions of the same group, most of them are lustre sherds, including this one, but not recognised as such at the time.

Whatever the purpose of these dishes or stands, the interest lies in the findspots: Aswan and Samarra. Aswan was an entrepot for the Red Sea port of Aidhab and would have acted as conduit for some of the imports through to Fustat. It would also have boasted a small merchant community trading along the profitable African trade routes, importing gold, ivory and slaves, and thus could have well afforded these imported luxury wares. The mere fact an identical example was found in Samarra, whether its context is caliphal or not, is yet another positive indication of its Iraqi manufacture, along with its diagnostic body.

Reg. no.: BM 1891, 0701.22
 Type of object: Rim and base fragment of a flat bowl (No. 27 and over for profile)
 Current location: British Museum, London
 Date accessed: 1891
 Location: Egypt Exploration Fund excavations at Fustat
 Dimensions: Approximate diameter 26 cms; height 4.2 cms
 Source: Purchased from the Egypt Exploration Fund

This rim and base fragment of a flat bowl is unusual in the 'Abbasid ceramic repertoire, with its almost straight sides and lack of everted rim. Its decoration is, however, well known, with three-petalled florets in yellow and reddish lustre on an ivory-glazed yellow-buff body. The glaze is fairly evenly applied and about 0.05 cms thick; on the exterior it is pitted and speckled, and has flaked in parts. The bichrome lustre dashes and lines on the exterior are executed in a reddy-brown and yellow lustre; the former shows the usual signs of bleeding into the glaze.

Comparative Material - Shape

Pézar's *Céramique* pl. CIV/2: a manganese and green on a creamy-white tin glaze splashware of the same shape, with the exception it has cushion feet; pl. CXI has two splash wares in a similar shape, with diameters of 29.7 cms and 32 cms.

Benaki no. 19203.⁸ A polychrome lustre straight-sided dish with a naturalistic foliage design on a white-glazed yellow body. Philon gives the maximum diameter as 7.1 cms, but this is doubtless the measurements for the actual piece and not an estimate of the diameter when complete. This comment has already been made under Cairo University no. 777, Appendix A.

Susa AP.Is1.73-833.13: a white-glazed, compact yellow-buff body with a pale golden-olive lustre, seemingly decorated in lines and running squiggles from the line drawing.⁹ This was found in a solid ninth century context.

Pattern

The Benaki collection has many fragments with the three-petalled floret design: nos. 19239, a small bowl illustrated in fig. 261; and 19240, 19241, 19243, 19244, 19245, 19246a, 19246b, and 21309, which are not illustrated.

Schnyder's no. 23, fragment no. 9102 from the Islamic Museum, Cairo and originally from Fustat.¹⁰ He assigns this piece an Egyptian manufacture, despite describing its yellow-buff body, yet at the same time cites an identical, non-registered fragment in the Tehran Museum, without comment. On the basis of all the examples handled, there can be no doubt that fragments with this design are of Iraqi manufacture.

Victoria and Albert Museum no. 764-1921 from Bahnasa. Small bowl fragment from Hornblower's collection, and of undoubted pedigree.

British Museum 1968 7-23.47. A rim fragment of undoubted origins; no. 25 in the same collection will be discussed in full below.

Ashmolean Museum bowl fragment no. P54 from Fustat.

There is no doubt that this three-petalled floret design was popular in Egypt.

Reg. no.: BM 1968 7-23.25
 Type of object: Rim fragment (No. 28)
 Current location: British Museum, London
 Date accessed: 1968
 Location: Fustat
 Source: G.T. Scanlon, bought from Tano as from Fustat
 Dimensions: 6 cms x 5.5 cms

Almost identical in colouration, design and paste to BM 1891,0701.22, this small rim sherd has one obvious difference, an inscription runs around the outside of the interior rim. Written in Philon's style D Kufic, it reads "...*bihi barak[ah]*". It was most probably a running, repetitive inscription reading "blessings to the owner".

Comparative Material

Islamic Museum no. 15998, exhibited in Hall 15. This unpublished polychrome lustre piece decorated with the Sasanian winged motif with peacocks' eyes fillers, has a similarly styled inscription running around the rim of the interior. Exhibited in poor light, and rather faded itself, it is difficult to photograph and read successfully, but it is definitely a continuous inscription and not a repetitive one. It has no provenance, other than it was acquired from Dr 'Ali Pasha Ibrahim's collection in 1949.

David Collection, Copenhagen, no. 14/1962 is a monochrome dish, which has a similarly styled repetitive inscription of *barakat li-sahibihi* running all around the rim.¹¹

Reg. no.: BM 1968 7-23.54
 Type of object: Body fragment (No. 29 and over for colour illustration)
 Current location: British Museum, London
 Date accessed: 1968
 Location: Fustat
 Source: G.T. Scanlon, bought from Tano as from Fustat
 Dimensions: 9 cms x 7 cms; body is 0.4 cms thick

This seemingly insignificant body sherd is of extreme importance, as not only is the interior design executed in cobalt and green on a greyish glazed compact yellow body, it is also in polychrome lustre (gold, chocolate and midbrown). The design is difficult to ascertain, but it must have had a central segmented flower, which is painted in blue, emanating from which are lustred brackets, infilled with stippling and tadpoles. All the gaps are filled with green. The exterior is painted in chocolate and golden brown lustre, in Grube's type B design. Here is support for Mason's argumentation that all the lustre and "blue-painted" types were manufactured in Basrah.¹²

Such a sherd also raises large question marks over Kervran's chronology at Susa and Whitehouse's at Siraf. As has already been noted, both saw a development of ink-on-snow before lustre, even if they saw this development in different centuries.

Lane, as noted in chapter 3, had already concluded that both methods of decoration were probably carried out at the same kiln sites, as he had two splendid examples in the Victoria & Albert Museum: C350-1930, a monochrome figural piece with a cobalt inscription; and C12-1934 a much broken and restored ruby lustre bowl with a cobalt inscription, alleged to have been found at Rayy. Unfortunately neither has a secure provenance, and both were bought through dealers in Paris. From handling them, there can be no doubt about their Iraqi origins.

Comparative Material

The Keir collection no. 10 for the hatched, central flower. The Keir piece was executed in fine gold lustre on ruby, whereas here this part is in cobalt blue. The lustre tadpole designs are also found on the Keir piece.

Kuwait Museum no. LNS100C for the central flower, in this instance executed in cobalt and filled with green splashes.

Reg. no.: 1968 7-23.55
 Type of object: Body fragment (No. 30)
 Current location: British Museum, London
 Date accessed: 1968
 Location: Fustat
 Source: G.T. Scanlon, bought from Tano as from Fustat
 Dimensions: 5 cms x 6 cms

It is almost impossible to ascertain any patterning on this tiny fragment. There is an abstract, geometric design executed in golden brown lustre on a buffish glazed, compact yellow body; the spiralling cobalt blue lines are either part of an inscription or perhaps a rinceau design. Too little remains to do more than guess. Its importance lies in its existence as a monochrome lustre fragment with additional cobalt blue, and the fact it is an import found at Fustat.

NOTES TO APPENDIX B

1. *Benaki*, p. 152, fig. 336.
2. M. Jenkins: "The palmette tree: a study of the iconography of Egyptian lustre painted pottery", *JARCE* 7 (1969): pl. VI, fig. 15.
3. *Benaki*, p. 293-302.
4. *Ibid*, p. 188, fig. 381.
5. D. Jones and G. Michell: *The Arts of Islam* (London, 1976): p. 217, no. 262.
6. E. Atil: *Art of the Arab World* (New York, 1975): no. 11, p. 32.
7. Kindly sent by Dr M. Jenkins on 25 February 1991.
8. *Benaki*, p.. 111, fig. 230.
9. M. Kervran: "Les niveaux Islamiques du secteur oriental du tépe de l'Apadana", *Cahiers de la DAFI* 7 (1977): p. 134-5, fig. 41/4.
10. R. Schnyder: "Tulunidische lüsterfayence", *AO V* (1963): p. 72, pl.4.
11. K. von Folsach: *Islamic Art: the David Collection*, (Copenhagen, 1990): p. 83, no. 65.
12. R.B. Mason and E.J. Keall: "The 'Abbasid glazed wares of Siraf and the Basra connection: petrographic analysis", *Iran* 23 (1991): p. 10 of submitted MS.

The Dar al-Islam experienced a renaissance of thought, communications and manufacture throughout the ninth and tenth centuries, and achieved a unity never to be repeated on such a wide scale. A wealthy family in Malaga could have had the same luxurious utensils and objects as their counterparts in Baghdad, Siraf, Fustat, Sohar and any other city in their commercial orbit. The impetus for this intellectual and commercial unity was a strong, well-organised state under 'Abbasid rule. At the opposite end of the Indian Ocean lay an equal trading partner, China, ruled by an equally well-organised dynasty, the Tang. Their apogee and decline roughly mirrored events in western Asia. Each partner desired the others' products and a profitable trade gave rise to a wealthy merchant class, thereby increasing both supply and demand for luxury products.

In the Dar al-Islam it would seem that the demand for Chinese ceramics greatly outstripped the irregular supply, and a more local luxury ceramic industry was considered necessary. In 1970 the focus of scholarship on these Chinese wares was thrown into confusion by Watson, who argued that the Samarra Chinese wares published by Sarre were, in fact, locally produced.¹ This has since been convincingly refuted by Rawson and colleagues.² Whitehouse used Watson's argumentation to conclude that Chinese white wares did not appear in the Near East until the late ninth century.³ Recent work in China demonstrates that an eighth century dating can be allowed, which widens the possible chronological sequence.⁴ Chinese white ware shapes were slavishly copied, and a varied decorative repertoire emerged. This may explain how the Arabic word *al-ghada'ir* evolved. It has been noted that in a ninth century context the manuscript attributed to al-Jahiz, *Kitab al-Tabassur bi-l-Tijara* uses the word *al-ghada'ir* to mean Chinese ceramics.⁵ In the tenth century al-Muqaddasi is using the same word for earthenwares, in addition to listing Chinese ceramics traded through Sohar.⁶ It is tempting to see this as proof of the evolution and considered success of the trade in luxury Islamic wares under discussion.

The most easily recognisable white ware is that represented by lustred pieces, with their diagnostic, compact, untempered, yellow body (it has been seen that this colour varies due to firing and discoloration caused to broken fragments when buried). Examples have been found at most of the principal ninth/tenth century Islamic sites investigated. It was first recognised by Koechlin in 1898 on a Fustat fragment, and whilst admitting the possibility of a single site of manufacture and wide export of this ware, he attributed it to Rayy on the basis that many similar wares were found there.

With the discovery of the same wares at Samarra, an Iraqi manufacture was favoured. However, Bahgat and the *sabbakheen* found so many examples at Fustat that an Egyptian manufacture was conveniently presumed too for these early wares. No other criterion was presented, such as documentary or practical proof. It is to be hoped that from the evidence presented in this thesis, the reader will now reconsider this assumption. Several important points emerge to substantiate this argument:-

1. The Royal Ontario Museum's (ROM's) petrographic analysis programme has demonstrated that Basrah was the site of manufacture for these early lustre wares.⁷

2. Al-Jahiz referred to Basrah's ceramic industry in describing what must have been a ruby lustre cup;⁸ and al-Azdi praises Basrah's outstanding clays "whose colour is as if it was moulded from an egg yolk,"⁹ thus substantiating the seemingly irrefutable indications that these wares were manufactured in Basrah.

3. The American Research Centre in Egypt's (ARCE's) finds at Fustat demonstrate the paucity of these wares relative to locally manufactured contemporary wares, thus accentuating their rarity and indicating that they should be considered, along with the known Chinese wares, as imports.

Northedge believes, from recent survey evidence produced from Samarra, that monochrome wares were subsequent to the caliphal occupation.¹⁰ From studying the shapes and colour of these wares found in Egypt it becomes evident that many of the typical shapes had both bi-, poly- and monochrome decoration, suggesting contemporary manufacture. The same is true for epigraphic pieces: similar orthographic styles are found on all three combinations.

Gayraud in his excavations at Istabl 'Antar maintains that these early lustre wares are not found in any context prior to that of the tenth century.¹¹ It is tempting to deduce that this was possibly a poorer area in the ninth century and the inhabitants would not have been able to have afforded this luxury ware. However, it boasts a fine bath house with Tulunid stucco work, which could be used to argue against such an assumption. He does, however, agree with the theory that these early lustre wares were imports.

Museum collections seem to have a disproportionate number of early lustre fragments, many of which have been published. For the student this is a bonus, for it allows one to explore the subject matter extensively. The appendices for this thesis have been used to demonstrate the state of recent research and to draw upon unpublished material. The stratified pieces from Fustat can be used as an anchor for argumentation, but they do not allow for a rigid chronology. It may be impossible to escape from a ninth/tenth century dating for these wares, but it is possible to concede that no 'Abbasid lustre wares, with their distinctive yellowish body, were produced in Egypt during this period. It is this writer's firm belief that the so-called Tulunid and Ikhshidid lustre wares were convenient labels for wares which were thought to have been manufactured locally by virtue of their abundance. The excavators had discarded all the common, everyday wares, knowing that the collectors and museums would prefer the luxury ones, and thereby created a dangerously inaccurate picture of the ceramic profile.

The presence of these wares at all the principal ports has proved a useful indicator for trade, and presents a suitable argument for the logistics of their wide distribution. It also points to the usefulness of ceramics as a tool for assessing trade organisation during a period that is relatively poorly documented. Their continued presence in Egypt in a ninth/tenth century context can be used to demonstrate that: a) the 'Abbasid state still had a measure of control over Egyptian affairs; b) the state organisation allowed the merchant classes considerable freedom of movement to engage in private trade; and c) that either the Egyptian potters had temporarily lost the ability to manufacture such fine wares or the ease of importation was a deterrent to local production.

NOTES TO CONCLUSION

1. See note 11, page 53.
2. See note 12, page 53.
3. See note 4, page 52.
4. See page 50.
5. See notes 4 and 51/52 to chapter 2, on pages 26 and 31, respectively.
6. See note 51, *ibid.* The modern meaning of the root *ghadar* is "to become rich, abundant, lavish, opulent, lush, luxuriant", cf H. Wehr: *Arabic-English Dictionary*, ed. J.M. Cowan, 3rd ed., (New York, 1976): p. 676.
7. See note 13, page 53.
8. See note 17 on page 53.
9. See note 18 on page 53.
10. See page 34, and note 9 on page 52.
11. See page 72, and note 52 on page 76.

- R.M. Adams: *Land Behind Baghdad* (Chicago, 1965).
- R.M. Adams: "Tell Abu Sarifa, A Sassanian-Islamic Ceramic Sequence from Southern Iraq", *Ars Orientalis* (AO) 8 (1970): 87-119.
- J.W. Allan: *Medieval Middle Eastern Pottery*, (Oxford, 1971).
- T. Allen: "Review of Siraf III", AO 13 (1982): 188-9.
- T. Arnold: *Painting in Islam*, (New York, 1965).
- L. Ashton: "China and Egypt", *Transactions of the Oriental Ceramic Society* (TOCS) 11 (1933-4): 62-72.
- E. Atil: *The Art of the Arab World* (Washington, 1975).
- Austellung des Museums für Islamische Kunst: *Islamische Kunst Verborgene Schätze*, (Berlin, 1986).
- A.W. Azzam: *Museum of Muslim Art*, (Cairo, 1945).
- K.K.H. al-A'zami: "Al-khazaf Samarra' al-Islami", *Sumer* 30 (1974): 203-22.
- M. Azarnoush-Maillard: "Les tessons de Fostat conservé à la section islamique des Musées Royaux d'Art et d'Histoire", *Bulletin des Musées Belges* 49 (1977): 103-128.
- A. Bahgat: *La Céramique Egyptienne de l'Epoque Musulmane*, (Basle, 1922).
- A. Bahgat and A. Gabriel: *Fouilles d'al Foustat, Musée de l'Art Arabe du Caire*, (Paris, 1921).
- A. Bahgat and F. Massoul: *La Céramique Musulmane de l'Egypte* (Cairo, 1930).
- A.D. Bivar: "Trade between China and the Near East in the Sasanian and early Muslim periods", in *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): 1-11.
- F. de Blois: "The Abu Sa'idis or so-called "Qarmatians" of Bahrayn", *Proceedings of the Seminar for Arabian Studies* (PSAS) 16 (1986): 13-21.

- A.J. Butler: *Islamic Pottery: a Study Mainly Historical*, (London, 1926).
- A.J. Butler: *Babylon of Egypt: a Study in the History of Old Cairo*, (Oxford, 1914).
- A. Caiger-Smith: *Lustre Pottery: Technique, Tradition and Innovation in Islam and the Western World*, (London, 1985).
- A. Caiger-Smith: "Lustre Pottery", *Ur* 3 (1981): 10-17.
- Cairo: *Islamic Art in Egypt, 969-1517*, Cairo, Ministry of Culture, U.A.R. Exhibition Catalogue, 4-30 April, 1969.
- J. Carswell: "China and Islam in the Maldive Islands", *TOCS* 41 (1975-77): 121-98.
- J. Carswell: *Blue and White: Chinese Porcelain and its Impact on the Western World*, (Chicago, 1985).
- R.J. Charleston: *Islamic Pottery: Masterpieces of Western Ceramic Art*, vol. 4, (Kodansha, 1979).
- K.N. Chaudhuri: *Trade and Civilisation in the Indian Ocean: an Economic History from the Rise of Islam to 1750*, (Cambridge, 1985).
- K.N. Chaudhuri: *Asia Before Europe*, (Cambridge, 1990).
- N. Chittick: *Kilwa: an Islamic Trading City on the East African Coast*, 2 vols, (Nairobi, 1974).
- Christie's Review 1987, (London, 1988): 412-16.
- E.K. Corbett: "The life and works of Ahmad ibn Tulun", *Journal of the Royal Asiatic Society (JRAS)* (1891): 528-562.
- P.M. Costa and T.J. Wilkinson: "The hinterland of Sohar", *Journal of Oman Studies (JOS)* 9 (1987): *passim*.
- K.A.C. Creswell: *Early Muslim Architecture*, vol. 2, (New York, 1979).
- P. Crone: *Slaves on Horses: The Evolution of the Islamic Polity*, (Cambridge, 1980).

Y. Crowe: "Certains types et techniques de la céramique de Suse", *Atti Convegno della Ceramic Albisola 7* (1974): 75-83.

Y. Crowe: "Early Islamic pottery and China", *TOCS* 41 (1975-77): 263-75.

Y. Crowe: "Khazaf", *Encyclopedia of Islam*² (EI²) IV (1978): 1164-71.

J. David-Weill: *Catalogue Générale du Musée Arabe du Caire: Les Bois à Epigraphes Jusqu'à Epoque Mamlouke*, (Cairo, 1931).

F.E. Day: "The Islamic Finds in Tarsus", *Asia*, XLI (1941): 143-166.

F.E. Day: "Dated Tiraz in the Collection of the University of Michigan", *AI* IV (1937): 420-48.

M.S. Dimand et al: "The Iranian expedition: the excavations at Nishapur", *Bulletin of the Metropolitan Museum of Art* XXXII/10 (October 1937): 3-23.

Directorate General of Antiquities, Iraq: *Hafriyyat Samarra 1936-39*, 2 vols, (Baghdad, 1940).

B. Doe: "Pottery sites near Aden", *JRAS* (1963), 150-162.

M.C. Dunn: *The Struggle for 'Abbasid Egypt*, unpublished doctoral thesis for Georgetown University, May 1975.

R.E. Ettinghausen: "Early realism in Islamic art", in *Studi Orientalistici in Onore di G. Levi della Vida*, I, (Rome, 1956): 250-73.

R.E. Ettinghausen: *Islamic Art in the Metropolitan Museum of Art*, (New York, 1972).

R.E. Ettinghausen: "Notes on the lustre ware of Spain", *AO* I (1954): 133-56.

Lady M.M. Evans: *Lustre Pottery*, (London, 1920).

- T. Falk (ed): *Treasures of Islam*, (London, 1985).
- R. Falkner: *Report on the Surface Pottery from the 1986 Survey Season at Samarra'*, unpublished manuscript dated 13 August 1989.
- Fan Dongqing: "Early Ding wares in the Shanghai Museum", *Oriental Art* 22/2 (February 1991): 48-53.
- G. Fehérvári: *Islamic Pottery: a Comprehensive Study Based on the Barlow Collection*, (London, 1973).
- G. Fehérvári: "Two early 'Abbasid lustre bowls and the influence of Central Asia", *Oriental Art* (OA), NS IX (1963): 79-88.
- G. Fehérvári: *Bahnasa Preliminary Report*, unpublished MS from the Kuwait National Museum excavations from 1985-87: four seasons.
- G. Fehérvári: "Near Eastern wares under Chinese influence" in *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): 27-34.
- P. Fields: *The Abbasid Recovery* (Albany, 1987), Doc. 242296. Series in *The History of al-Tabari - Ta'rikh al-Rusul wa'l-Muluk* vol. 37.
- S. Flury: "Une formule épigraphique de la céramique archaïque de l'Islam", *Syria* 5 (1924): 53-66.
- D. Fouquet: *Contribution à l'Etude de la Céramique Orientale*, (Cairo, 1900).
- Freer Gallery of Art: *Medieval Near Eastern Ceramics in the Freer Gallery of Art*, (Washington, 1960).
- J.D. Frierman: *Medieval Ceramics, VIth to XIIIth Centuries* (exhibition catalogue). Frederick S. Wright Art Gallery, University of California, Los Angeles 11 March - 13 April 1975.
- J.D. Frierman, H.V. Michel and F. Asaro: "Chemical analysis of ceramic wares from Fustat", *Archaeometry* XVIII pt. 1 (1976): 85-92.
- J.D. Frierman: "T'ang and Sung ceramics exported to the west in the light of archaeological discoveries", *OA NS XXIV* (1978): 195-200.

- J.D. Frierman, F. Asaro, and H.V. Michel: "The provenance of early Islamic lustre wares", *AO XI* (1979): 111-26.
- R.-P. Gayraud: "Notes sur le ceramique medievales de fouille de Kom al-Dikka", *SAnnale du Service des Antiquites de l'Egypte* 70 (1984-5): 243-45.
- R.-P. Gayraud: "Istabl `Antar (Fostat) 1985: rapport de fouilles", *Annales Islamogiques* 22 (1986): 1.26.
- R.-P. Gayraud: "Istabl `Antar (Fostat) 1986: rapport de fouilles", *Annales Islamogiques* 23 (1987): 55-71.
- Y. Ghawanmeh: "The port of `Aqaba and its role in the Indian Ocean trade in ancient and medieval times", *Annual of the Department of Antiquities of Jordan (ADAJ)* 30 (1986): 311 ff.
- S.D. Goitein: "Cairo: an Islamic City in the light of the Geniza documents" in *Middle Eastern Cities*, ed: I.M. Lapidus, (Berkeley, 1969): 80-96.
- S.D. Goitein: *A Mediterranean Society*, 4 vols (Berkeley and Los Angeles, 1967-83).
- S.D. Goitein: "The main industries of the Mediterranean as reflected in the records of the Cairo Geniza", *Journal of the Economic and Social History of the Orient* IV (1961): 168-97.
- L. Golvin: *Récherches Archéologiques à la Qal'a des Banu Hamad*, (Paris 1965).
- O. Grabar: *The Coinage of the Tulunids*, (New York, 1957).
- O. Grabar, R. Holod, J. Knustad, and W. Trousdale: *City in the Desert*, 2 vols, (Cambridge, Mass., 1978).
- B. Gray: "The export of Chinese porcelain to the Islamic world", *TOCS* 41 (1975-77): 231-261.
- N. Groom: *Frankincense and Myrrh*, (London, 1980).

E. Grube: *Islamic Pottery of the Eighth to the Fifteenth Century in the Keir Collection*, (London, 1976).

E. Grube: "Studies in the survival and continuity of pre-Muslim traditions in Egyptian Islamic art", *Journal of the American Research Centre in Egypt (JARCE)* 1 (1962): 75-102.

B. Gyllensvärd: "Recent Finds of Chinese ceramics at Fostat I", *Bulletin of the Museum of Far Eastern Antiquities (BMFEA)* 45 (1973): 91-119.

K.K. Hamudi: "*Qasr al-khalifa al-Mu'tassim fi Samarra*", *Sumer* 38 (1982): 168-205 (Arabic section).

Z.M. Hassan: *Al-Fann al-Islami fi Misr*, (Cairo, 1935).

Z.M. Hassan: *Atlass al-Funun al-Zakhrifiyyah wa al-Tasawiyyah al-Islamiyyah*, (Cairo, 1956).

Z.M. Hassan: *Les Tulunides: l'Etude de l'Egypt Musulmane à la Fin du IXème Siècle 868-905*, (Paris, 1933).

Z.M. Hassan: *Moslem Art in the Fouad I University Museum*, (Cairo, 1950).

Z.M. Hassan: "Ahmad b. Tulun", *ET²* III (1960): 278-9.

H.M. el-Hawary: "Une maison de l'époque tolounide" *Bulletin de l'Institut Egyptien* 25 (1932-3): 79-87, pls II-X.

R.E.M. Hedges and P.R.S. Moorey: "Pre-Islamic ceramic glazes at Kish and Nineveh in Iraq", *Archaeometry* 17 (1975): 24-53.

H. Henne: "Rapport sur les fouilles de Tell Edfou", *Fouilles de l'Institut Francais d'Archaeologies Orientale du Caire* 3 (1923-24), p.18 and plate XIX.

E. Herzfeld: *Der Wandeschmuck der Bauten von Samarra und Seine Ornamentik*, (Berlin, 1923).

E. Herzfeld: *Die Malereien von Samarra*, (Berlin, 1927).

- R.L. Hobson: "Potsherds from Brahminabad", *TOCS* 8 (1928-30): 21-30.
- H. Hodges: "The technical problems of copying Chinese porcelain in tin glaze", *Colloquies on Art and Archaeology in Asia* 3 (1973): 79-87.
- H. Hollis: "Two Fustat bowls", *Bulletin of the Cleveland Museum of Art* XXXII (1945): 94-5.
- Hongnam Kin: "China's earliest datable white stonewares from the tomb of King Muryong (d. AD 523), Paekche, Korea", *OA*, NS XXXVII/1 (Spring 1991): 17-34.
- G.F. Hourani: *Arab Seafaring*, (Beirut, 1963).
- P. Hughes-Stanton and R. Kerr: *Kiln Sites of Ancient China*, (London, 1980).
- Ibn al-Faqih al-Hamadhani, Ahmad ib Muhammad: *Mukhtasar Kitab al Buldan*, (Leiden, 1885).
- Ibn Hawqal: *Configuration de la Terre (Kitab Surat al-Ard)*, translated by G. Wiet and J.H. Kramers, 2 vols (Paris, 1964).
- al-Istakhri: *Kitab al-Aqalim* trs. Elliot and Dowson I: 26-30.
Ibid. ed. M.J. de Goeje *Bibliotheca Geographorum Arabicorum* 2nd ed. (Leiden, 1967).
- al-Jahiz (attributed to): "*Al-Gahiziana, I: Kitab al-Tabassur bi-l-Tigara*" trs Ch. Pellat, *Arabica* I (1955): 153-65.
- T.J. al-Jannabi: "The excavation and restoration work at Samarra" *Sumer* 37 (1981): 188-211 (Ar. section).
- T.J. al-Jannabi: "Islamic archaeology in Iraq: recent excavations at Samarra", *World Archaeology* 14 (1982): 305-327.
- M. Jenkins: "The palmette tree: a study of the iconography of Egyptian lustre painted pottery", *JARCE* 7 (1968): 119-26.
- M. Jenkins: "Muslim: an early Fatimid ceramicist", *Bulletin of the Metropolitan Museum of Art* XXVI (1968): 359-69.

- M. Jenkins: *Islamic Pottery, a Brief History*, (New York, 1983).
- M. Jenkins (ed): *Islamic Art in the Kuwait National Museum*, (London, 1983).
- M. Jenkins: "Sa'd: content and context", in *Content and Context of Visual Arts in the Islamic World*, ed. P.P. Soucek, the Pennsylvania State University Press (University Park and London, 1988): 68-75.
- G. Joel: *Catalogue Raisonné des Céramiques du Monde Iranien Jusqu'au XIe Siècle et du Proche Orient Arabe Jusqu'au Milieu du XIIIe Siècle au Musée National de Céramique de Sèvres*, 3 vols, (June 1983), unpublished manuscript.
- D. Jones and G. Michell (eds): *The Arts of Islam*, exhibition catalogue for Hayward Gallery 8 April - 4 July, London, 1976.
- M. Kawatoko: "Archaeological finds from Egypt and East Africa relating to international trade" in *Cultural and Economic Relations Between East and West*, ed. H.I.H. Prince Takahito Mikasa (Wiesbaden, 1988): 45-61.
- C.W. Kelley: "Tang dynasty gold and silver", *Oriental Art* 16/3 (March 1985): 10-17.
- M. Kervran: "Les Niveaux Islamiques du Secteur Est de l'Apadana", *Cahiers de la DAFI* 7 (1977): 75-161.
- M. Kervran: "Deux forteresses Islamiques de la côte orientale de l'Arabie", *PSAS* 13 (1983): 71-77.
- U. al-Khamis: "The iconography of early Islamic lusterware from Mesopotamia: new considerations", *Muqarnas* VII (1990): 109-118.
- W. King: "The origin of lustre", *TOCS* (1928-30): 15-20.
- R. Koechlin: "A propos de la céramique de Samarra", *Syria* 7 (1926): 242-250.
- R. Koechlin: "Chinese influences in the Musulman pottery of Susa", *Eastern Art Quarterly* I.1 (July 1928): 2-12.
- R. Koechlin: *Les Céramiques Musulmanes de Suse au Musée du Louvre*, (Paris, 1928).

R. Koechlin and G. Migeon: *Cent Planches en Couleurs d'Art Musulman* (Paris, 1928).

V.A. Kratchkowskaya: "A propos de l'épigraphie d'un plat à lustre métallique", *AI IV* (1937): 468-71.

W.B. Kubiak: "The burning of Misr al-Fustat in 1168. A reconsideration of historical evidence", *Africana Bulletin* 35 (1976): 51-64.

W.B. Kubiak: "Overseas pottery trade of medieval Alexandria as shown by recent archaeological discoveries: a preliminary communication", *Folia Orientalia X* (1969): 5-30.

E. Kühnel: "Die Abbasidischen lüsterfayencen", *AI I* (1934): 140-159.

J. Lacam: "La céramique de Suse (Iran)", campagnes de fouilles de 1946, 1947, 1948 *Musées de France VIII* (Oct 1950): 206-209.

J. Lacam: "La céramique musulmane des époques omeyyade et abbaside, VII au X siècle", *Cahiers de la Céramique du Verre et des Arts du Feu* 20 (1960): 244-94.

A. Lane: "Medieval finds at al-Mina in North Syria", *Archaeologia* 87 (1938): 19-78.

A. Lane: *Early Islamic Pottery*, (London, 1947).

A. Lane: "Archaeological excavations at Kom e-Dik, a preliminary report on the medieval pottery", *Bulletin of the Faculty of Arts, University of Alexandria* 5 (1949): 143-7.

A. Lane and R.B. Serjeant: "Pottery from the Aden littoral with historical notes", *JRAS* (1949): 108-33.

J. Lassner: *The Shaping of Abassid Rule*, (London, 1980).

G. Lechler: "The tree of life in Indo-European and Islamic cultures", *AI IV* (1937): 369-419.

G. Le Strange: *The Lands of the Eastern Caliphate* (Cambridge, 1905).

- R. Koechlin and G. Migeon: *Cent Planches en Couleurs d'Art Musulman* (Paris, 1928).
- V.A. Kratchkowskaya: "A propos de l'épigraphie d'un plat à lustre métallique", *AI IV* (1937): 468-71.
- W.B. Kubiak: "The burning of Misr al-Fustat in 1168. A reconsideration of historical evidence", *Africana Bulletin* 35 (1976): 51-64.
- W.B. Kubiak: "Overseas pottery trade of medieval Alexandria as shown by recent archaeological discoveries: a preliminary communication", *Folia Orientalia X* (1969): 5-30.
- E. Kühnel: "Die Abbasidischen lüsterfayencen", *AI I* (1934): 140-159.
- J. Lacam: "La céramique de Suse (Iran)", campagnes de fouilles de 1946, 1947, 1948 *Musées de France VIII* (Oct 1950): 206-209.
- J. Lacam: "La céramique musulmane des époques omeyyade et abbaside, VII au X siècle", *Cahiers de la Céramique du Verre et des Arts du Feu* 20 (1960): 244-94.
- A. Lane: "Medieval finds at al-Mina in North Syria", *Archaeologia* 87 (1938): 19-78.
- A Lane: *Early Islamic Pottery*, (London, 1947).
- A. Lane: "Archaeological excavations at Kom e-Dik, a preliminary report on the medieval pottery", *Bulletin of the Faculty of Arts, University of Alexandria* 5 (1949): 143-7.
- A. Lane and R.B. Serjeant: "Pottery from the Aden littoral with historical notes", *JRAS* (1949): 108-33.
- J. Lassner: *The Shaping of Abassid Rule*, (London, 1980).
- G. Lechler: "The tree of life in Indo-European and Islamic cultures", *AI IV* (1937): 369-419.
- G. Le Strange: *The Lands of the Eastern Caliphate* (Cambridge, 1905).

- R. Levy: "Notes on costume from Arab sources", *JRAS* (1935): 319-38.
- R.S. Lopez and I.W. Raymond: *Medieval Trade in the Mediterranean World*, (New York, 1955).
- N. Lowick: "Trade patterns on the Persian Gulf in light of recent coin evidence", in *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honor of George C. Miles*, ed: D.K. Konymjian, (Beirut, 1974): 319-333.
- A. Lucas: "Glazed ware in Egypt, India and Mesopotamia", *Journal of Egyptian Archaeology (JEA)* XXII (1963): 141-64.
- M. Lukens-Svietowski: *Metropolitan Museum of Art Guide to the Collections: Islamic Art*, (New York, 1965).
- L.W. Mackie: "Covered with flowers: medieval floor coverings excavated at Fustat in 1980", *Oriental Carpet and Textile Studies* 1 (1985): 23-35.
- S. Mahir: "Hafa'ir Kulliyat al-Athar bi-jahir Madinat al-Fustat", *Majallat Kulliyat al-Athar* 1 (1976): 95-126.
- al-Maqrizi: *Kitab al-Mawa'idh wa'li tibar Bidhkr al-Khitat wa'lathar*, translation by U. Bouriant and M. Paul Casanova, 4 vols, (Paris, 1895-1920).
- al-Maqrizi: *Kitab al-Mawa'iz wa al-I'tibar bi-Dhikr al-Khitat wa al-Athar*, vols 1-2, (Bulaq, 1270/1853 - Dar al-Sadar reprint, Beirut).
- G. Marçais: *Les potteries et faience de la Qala'at Beni Hammad*, (Paris, 1913).
- G. Marçais: *Les Faiences a Réflets Métalliques de la Grande Mosquée de Kairouan*, (Paris, 1928)
- F.R. Martin: *The Persian Lustre Vase in the Imperial Hermitage of St. Petersburg and Some Fragments of Lustre Ware Found Near Cairo at Fustat*, (Stockholm, 1899).
- F.R. Martin: *Lustre on Glass and Pottery in Egypt From the Period of Hadrian to Saladin*, (Faenza, 1929).

- M.A. Marzuk: "The evolution of inscriptions on Fatimid textiles",
AI X (1943): 164-5.
- M. Marzuq: "*Fukhar al-'Iraq wa-khazafuha fi al'asr al-Islami*",
Sumer 20 (1964): 101-121 (Ar.Sect.).
- R.B. Mason and E.J. Keall: "Provenance of local ceramic industry and the characterization of imports: petrography of pottery from medieval Yemen", *Antiquity* 62, no. 236 (September 1988): 452-63.
- R.B. Mason and E.J. Keall: "34. Islamic ceramics: petrography and provenance", in *Proceedings of the 26th International Archaeometry Symposium*, held at University of Toronto 16 May through 20 May 1988: 184-187.
- R.B. Mason and E.J. Keall: "Petrography of Islamic pottery from Fustat",
JARCE XXVII (1990): 165-84.
- R.B. Mason: "Petrography of Islamic ceramics", (in press).
- R.B. Mason and E.J. Keall: "The 'Abbasid glazed wares of Siraf and the Basra connection: petrographic analysis", *Iran* 29 (1991): only MS submitted to editors available.
- H. Massé: "Ibn al-Faqih", *ET²* IV (1979): 761.
- L. Massignon: "Zandj", *ET¹* VIII (Leiden, 1987): 1213.
- F. Massoul: "La céramique musulmane de l'Egypte", *Syria* 13 (1932): 231-2.
- M. Medley: "T'ang gold and silver", *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): 19-26.
- M. Medley: *The Chinese Potter: a Practical History of Chinese Ceramics*, (Oxford, 1982).
- M. Meyerhof: "Die ausgrabungen von al-Fustat", *Islam* 14 (1925): 91-4.
- A. Mez: *The Renaissance of Islam*, translated into English by Salahuddin Khuda Buksh and D.S. Margoliouth (London, 1937).

- G. Migeon: "Céramique orientale à reflets métalliques, à propos d'une acquisition récente du Musée du Louvre", *Gazette des Beaux-Arts*, 3ème per XXVI (1901): 192-208.
- G. Migeon: *Musée de Louvre, l'Orient Musulmane, Céramiques*, (Paris, 1922).
- G. Migeon: *Manuel d'Art Musulmane: Les arts Plastique et Industriels*, (Paris, 1927 [revised edition]).
- T. Mikami: "China and Egypt: Fustat", *TOCS* 45 (1980-81): 67-89.
- T. Mikami: "Chinese ceramics from medieval sites in Egypt" in *Cultural and Economic Relations Between East and West: Sea Routes*, ed. H.I.H. Prince Takahit Mikasa (Wiesbaden, 1988): 8-44.
- T. Mikami: "The ceramic road", *ibid.*: 1-7.
- G.C. Miles: "Dinar" and "Dirham" in *EI+2 I* (1960): 297-99 and 319-20, respectively.
- A. Miquel: "Ibn Hawqal", *EI² III* (1971): 786-8.
- Al-Muqaddasi: *Ahsan at-Ta'asim fi Ma'rifat al-Aqalim*, Arabic text in Goeje III (1906); English translation by G.S.A. Ranking and R.F. Azoo, (Calcutta, 1901).
- Al-Muqaddasi: *Ahsan at-Ta'asim fi Ma'rifat al-Aqalim*; French translation by A. Miquel, (Damascus, 1963).
- Musée d'Art et d'Histoire, Genève: *Céramiques Islamiques dans les Collections Genevoises*, (Geneva, 1981).
- M.A. Mustafa: "Taqrir awwali 'an al-tanqib fi al-Kufa lil-mawsim al-thani", *Sumer* 10 (1954): 73-85 (Ar.Sect.)
- M.A. Mustafa: "Taqrir awwali 'an al-tanqib fi al-Kufa lil-mawsim al-thalith", *Sumer* 12 (1956): 2-32 (Ar.Sect.); tr. Kessler, *Sumer* 19 (1963): 36-65.
- A. Northedge: "Planning Samarra': a report for 1983-84", *Iraq* XLVII (1985): 109-28.

- A. Northedge and R. Falkner: "The 1986 survey season at Samarra'", *Iraq* XLIX (1987): 143-74.
- A. Northedge: "Karkh Fairuz at Samarra'", *Mesopotamia* 22 (1987): 251-8.
- M. Paul-David: "White stoneware and porcelains in the T'ang dynasty", *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): 56-63.
- Ch. Pellat: "Basra", *EF² I* (London & Leiden, 1960): 1085-87.
- P. Pelliot: "Des artisans Chinois à la capitale Abbasside en 751-762", *T'oung Pao* XXVI (1929): 110-112.
- M. Pézard: *La Céramique Archaïque de l'Islam*, (Paris, 1920).
- H. Philon: *Early Islamic Ceramics*, (London, 1981).
- R. Pinder-Wilson: "Recent acquisitions of Islamic Pottery", *British Museum Quarterly* XVII (1952): 80-2.
- J.H. Plumer: "Certain celadon potsherds from Samarra traced to their source", *AI* IV (1937): 195-200.
- A.U. Pope and P. Ackerman: *A Survey of Persian Art*, (Oxford, 1939).
- A.U. Pope: "The Survey of Persian Art and its critics", *AI* IX (1942): 169-208.
- J. Raby: "Looking for silver in clay: a new perspective on Samanid ceramics", in *Pots and Pans*, ed. M. Vickers, (Oxford, 1986): 179-203.
- O.C. Raphael: "Fragments from Fustat", *TOCS* 2 (1923-24): 17-25, pl. 8.
- J. Rawson: "Tombs or hoards: the survival of Chinese silver of the tang and Song periods, 7th to 13th centuries AD", in *Pots and Pans*, ed. M. Vickers, (Oxford, 1986): 31-56.

J. Rawson, M. Tite and M.J. Hughes: "The export of Tang sancai wares: some recent research", *TOCS* 52 (1987-88): 39-61.

C-A. Richards: "Early Northern whitewares of Gongxian, Xing and Ding" *TOCS* 49 (1984-5): 58-77.

D.S. Richards (ed): *Islam and the Trade of Asia*, (Oxford 1970).

P.J. Riis, V. Poulsen, and E. Hammershaimb: "Les verreries et potteries médiévales", in *Hama: Fouilles et Recherches*, (Copenhagen, 1957).

W.W. Rockhill: *Chao Ju-Kua's Chu-Fan Chih*, (St. Petersburg, 1911).

E.T. Rogers: *The Coins of the Tuluni Dynasty*, (London, 1877).

J.M. Rogers: "Apamea, the Medieval Pottery" in *Preliminary Report Colloque Apamée de Syria, bilan de Recherches Archéologiques, 1969-71*, (Brussels, 1972): 253-270.

J.M. Rogers: "Review of M. Rosen-Ayalon, *Ville Royale de Suse IV: La Poterie Islamique*", *Biblioteca Orientalis* XXXIII no. 5/6 (1976): 370-4.

J.M. Rogers: "Ceramics" in *The Arts of Persia*, ed. R.W. Ferrier, (London, 1989): 255-69.

M. Rosen-Ayalon: "Islamic pottery from Susa", *Archaeology* 24 (1971): 204-8.

M. Rosen-Ayalon: *Ville Royale de Suse IV: La Poterie Islamique*, (Paris, 1974).

F. Rosenthal: "Ibn al-Dayā", *EP²* III (London & Leiden, 1971): 745-6.

A. Rozenthal: *Arts Antiques de l'Asie Occidentale à Partir du IV^e Millénaire Avant JC et les Origines des Motifs de la Céramique Islamique Archaïque*, (Nice, 1948).

F. Safar: *Wasit, the Sixth Season's Excavations*, (Cairo, 1945).

F. Sarre: *Ausgrabungen von Samarra II: Die Keramik von Samarra*, (Berlin, 1925).

F. Sarre: *Keramik und Andere Kleinfunde der Islamischen Zeit von Baalbek*, (Berlin and Leipzig, 1925).

J. Sauvaget: "Introduction à l'étude de la céramique Musulmane", *Revue des Etudes Islamiques* 32-33, (Paris, 1964-5): 1-50.

G.T. Scanlon: Preliminary Report: Excavations of Fustat, 1964", *JARCE* IV (1965): 7-30.

G.T. Scanlon: "Fustat Expedition: Preliminary Report (FEPR) 1965 Part I", *JARCE* V (1966): 83-112.

G.T. Scanlon: "FEPR Part II", *JARCE* VI (1967): 65-86.

G.T. Scanlon: "Fustat and the Islamic arts of Egypt", *Archaeology* XXI/3 (June 1968): 188-95.

G.T. Scanlon: "Ancillary dating materials from Egypt", *AO* VII (1968): 1-17.

G.T. Scanlon: "Egypt and China: trade and imitation" in *Islam and the Trade of Asia*, ed. D.S. Richards (Oxford, 1970): 81-95.

G.T. Scanlon: "The Fustat mounds: a shard count 1968", *Archaeology* XXIV/3 (June 1970): 220-33.

G.T. Scanlon: "Housing and sanitation: some aspects of medieval Egyptian life", in *The Islamic City*, eds. A.H. Hourani and S.M. Stern, (Oxford, 1970): 185-194.

G.T. Scanlon: "Fustat: archaeological reconsiderations", in *Colloque International sur l'Histoire du Caire*, (Cairo, 1972): 415-428.

G.T. Scanlon: "A Note on Fatimid Seljuk Trade", in *Islamic Civilization 950-1150*, ed. D.H. Richards, (Oxford, 1973).

G.T. Scanlon and W.B. Kubiak: "Re-dating Bahgat's houses and the aqueduct", *Art and Archaeology Research Papers* 4 (Dec. 1973): 138-148.

G.T. Scanlon, Th. Bianquis and A. Watson: "Numismatics and the dating of early Islamic pottery in Egypt", in *Near Eastern Numismatics, Iconography, Epigraphy and History: Studies in Honour of George C. Miles*, ed. D.K. Kouymjian (Beirut, 1974): 163-173.

G.T. Scanlon: "The pits of Fustat: problems of chronology", *JEA* 60 (1974): 60-78.

G.T. Scanlon: "FEPR, 1968, Part I", *JARCE* XI (1974): 81-91.

G.T. Scanlon: "FEPR, 1968, Part II", *JARCE* XIII (1976): 69-89.

G.T. Scanlon and W.B. Kubiak: "FEPR 1971, Part I", *JARCE* XVI (1979): 103-120.

G.T. Scanlon: "FEPR, Part II", *JARCE* XVII (1980): 77-96.

G.T. Scanlon: "FEPR 1973 - Back to Fustat-A", *Annales Islamologiques* XVI (1981): 407-36.

G.T. Scanlon: "Municipal planning and archaeology: the case of Fustat (Old Cairo)", in *The Arab City*, eds. Ismail serageldin and Samir el-Sadek, (Riyadh, 1982): 230-4.

G.T. Scanlon: "FEPR 1972, Part II", *JARCE* XIX (1982): 119-129.

G.T. Scanlon: "FEPR 1978", *JARCE* XXI (1984): 1-38.

G.T. Scanlon and W.B. Kubiak: *Fustat Expedition Final Report vol. 2, Fustat C*, (ARCE Winona Lake, 1989).

G.T. Scanlon: "Ceramics of the late Coptic period", in *The Coptic Encyclopedia*, vol. 2, ed. A.S. Atiya (New York, 1991): 504-11.

E.F. Schmidt: "Rayy research, 1935, part I, *University Museum Bulletin*, Philadelphia VI (1936): 79-87. Part II, *ibid*: 133-5.

E.F. Schmidt: *The Treasury of Persepolis and the Discoveries in the Homeland of the Achaemenians*, (Chicago, 1939).

- H. Schmidt: "Expedition de Ctésiphon en 1931-2", Syria XVI (1934).
- R. Schnyder: "Tulunidische Lüsterfayence", AO V (1963): 49-78.
- R.B. Serjeant: *Islamic Textiles: Material for a History up to the Mongol Conquest*, (Beirut, 1972) - originally published in *Ars Islamica* 1942-51 (IX-XVI).
- J. Soustiel: *La Céramique Islamique*, (Paris, 1985).
- V. Tamari: Article on Hiran glazes submitted for a volume on *Islamic Art in the Ashmolean*: in press. This is material taken from her M.Phil. thesis submitted in 1989, and received through personal communication.
- M. Tampoe: *Maritime Trade Between China and the West: an Archaeological Study of the Ceramics From Siraf (Persian Gulf), 8th to 15th Centuries AD*, BAR International Series 555, (Oxford, 1989).
- G.R. Tibbets: *Arab Navigation in the Indian Ocean Before the Coming of the Portuguese*, (London, 1971).
- A.L. Udovitch: "A tale of two cities: commercial relations between Cairo and Alexandria during the second half of the eleventh century" in *The Medieval City*, ed: H.A. Mikimin, D. Herlihy and A.L. Udovitch (Yale University Press, 1977): 143-162.
- J.M. Unvala: "Note on the lustred ceramics of Susa", *Bulletin of American Institute for Persian Art and Archaeology* 4 (1935): 79.
- R. Velzasquez Boso: *Medina Azzahra y Alamiriya*, (Madrid, 1912).
- Victoria and Albert Museum: *Annual Review* (1934): 8-9.
- C. Vignier and R. Fry: "New excavations at Rhages", *Burlington Magazine* 25 (July 1914): 211-18.
- R. von Folsach: *Islamic Art: the David Collection*, (Copenhagen, 1990).

- W. Waage: *Antioch on the Orontes IV, Part I, Ceramics and Islamic Coins*, (Princeton, 1948).
- J. Walker: *A Catalogue of the Arab-Sassanian Coins*, (London, 1941).
- H. Wallis: *Persian Ceramic Art in the Collection of M.F. du Cane Godman*, (London, 1891).
- O. Watson: "Persian lustre-painted pottery: the Rayy and Kashan styles", *TOCS* (1973-5): 1-19.
- O. Watson: "Persian lustre ware, from the 14th to the 19th centuries", *Le Monde Iranien et l'Islam III* (??): 65-66.
- O. Watson: *Persian Lustre Ware*, (London, 1985).
- W. Watson: "On T'ang soft-glazed pottery", in *Pottery and Metalwork in T'ang China, Colloquies on Art and Archaeology in Asia I* (1970): 41-47.
- G. Weisgerber: "Patterns of early Islamic metallurgy in Oman", *PSAS* 10 (1980): 115-26.
- D. Whitcomb: "The archaeology of Oman: a preliminary discussion of the Islamic periods" *JOS* 1 (1975): 123-158.
- D. Whitcomb: "Excavations in Aqaba: first preliminary report", *ADAJ* 31 (1987): 247-66.
- D. Whitcomb: "Medieval Aqaba: a bridge report on the 1986 and 1987 seasons", *Syria* 65 (1988): 423-5.
- D. Whitcomb: "A Fatimid residence at Aqaba", *ADAJ* 32 (1988): 207-224.
- D. Whitcomb: *Aqaba: "Port of Palestine on the China Sea"*, (Chicago, 1988).
- D. Whitcomb: "Coptic glazed ceramics from the excavations at Aqaba, Jordan", *JARCE* XXVI (1989): 167-82.
- D. Whitcomb: "Mahesh ware: evidence of early Abbasid occupation from Southern Jordan", *ADAJ* 33 (1989): 269-85.

D. Whitehouse: "Islamic glazed pottery in Iraq and the Persian Gulf: the 9th and 10th centuries", *AION* 39 (NS, 29, 1979): 45-61.

D. Whitehouse and A. Williamson: "Sasanian maritime trade", *Iran* XI (1973): 29-49.

G. Wiet: *Ya'qubi: Les Pays*, (Cairo, 1937).

G. Wiet: "Une peinture du XIIème siècle", *Bulletin de l'Institut d'Egypte* 26 (1943-4): 116 ff.

C.K. Wilkinson: "Ceramic relationships between Nishapur, Merv and Samarkand", *Memorial Volume of the Vth International Congress of Iranian Art and Archaeology*, vol. 2 (Tehran, 1972): 167-85.

C.K. Wilkinson: *Nishapur: Pottery of the Early Islamic Period*, (New York, 1973).

A. Williamson: "Sohar and the Sea Trade of Oman in the Tenth Century AD", *PSAS* 4 (1974): 78-96.

A. Williamson: "Regional distribution of mediaeval Persian pottery in the light of recent investigations", *Oxford Studies in Islamic Art* IV (1987): 11-22.

J. Wirgin: "Treasures from the Holger Lauritzen collection", *OA N.S.* (1966): 135.

Abd al-Rauf Ali Yousuf: "*Khazzafun min al-'asr al-Fatimi wa asalibuhum al-fanniya*", *Bulletin of the Faculty of Arts, Cairo University*, XX/2 (1958): 173-279.

Abd al-Rauf Ali Yousuf: "*Ar-Rasum al-Admiya ala'l Khazaf al-Misriya fi'l 'asr al-Islami*", *Al-Magalla* XXI (1961): 75-86.

Ya'qubi: *Kitab al-Buldan*, ed. De Goeje (Leiden, 1891/2).

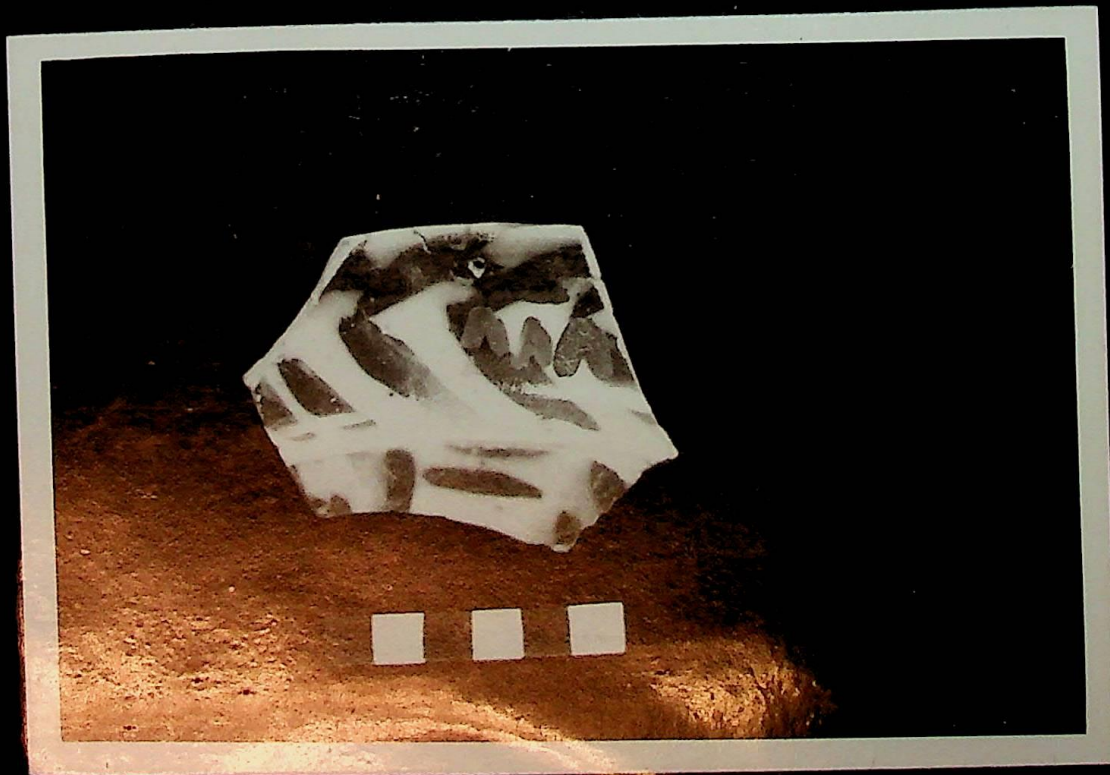
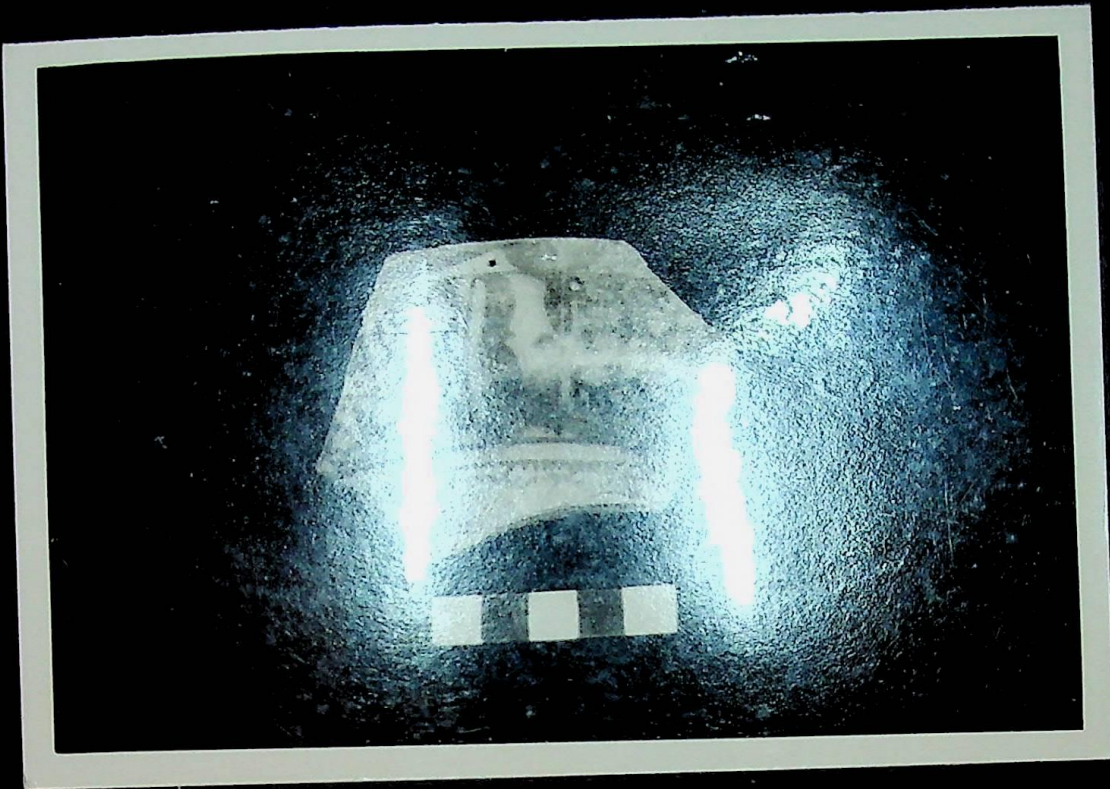
Yaqut (Abu 'Abd Allah Yaqut ibn 'Abd Allah al-Hamawi: *Kitab Mu'jam al-Buldan*, (Beirut edition of Wustenfild's *Jacut's Geographische Wörterbuch* 1866-73, 6 vols).

J. Zarins and A. Zahrani: "Recent archaeological investigations in the Southern Tihama Plain (the sites of Athar and Sihi 1404/1984) *Atlal* 9 (1985): 70-90.

K.M. Ziglar: *Fatimid Lustre: Origins, Evolution and Influences*, unpublished AUC thesis (1986).

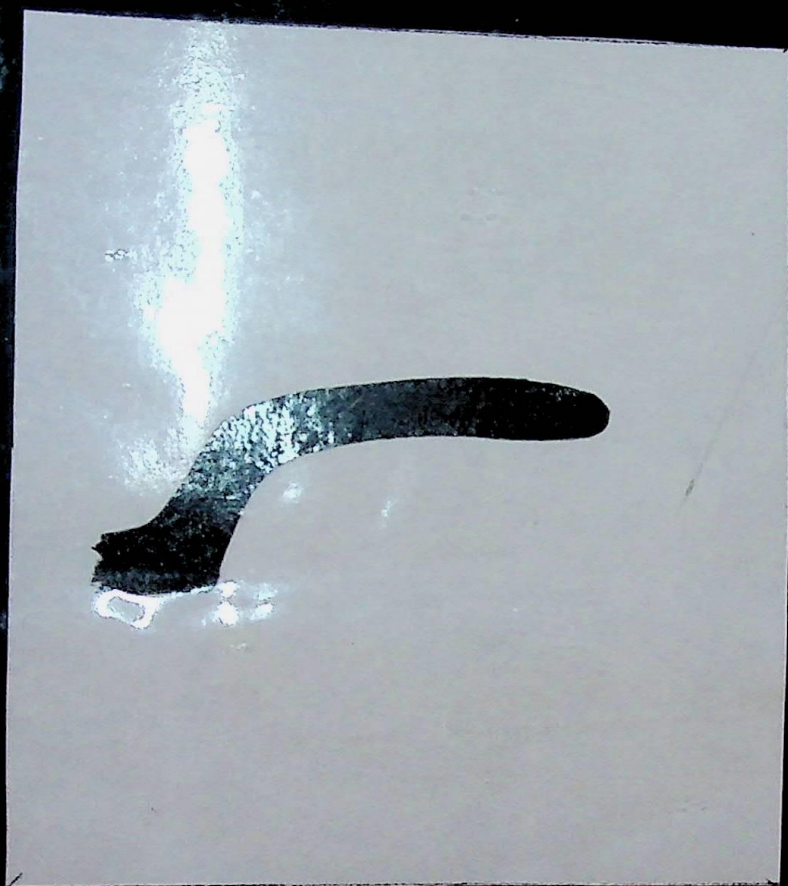
Zhang Jun-yan: "Relations between China and the Arabs in early times", *JOS* 6 part 1 (1983): 91-109.

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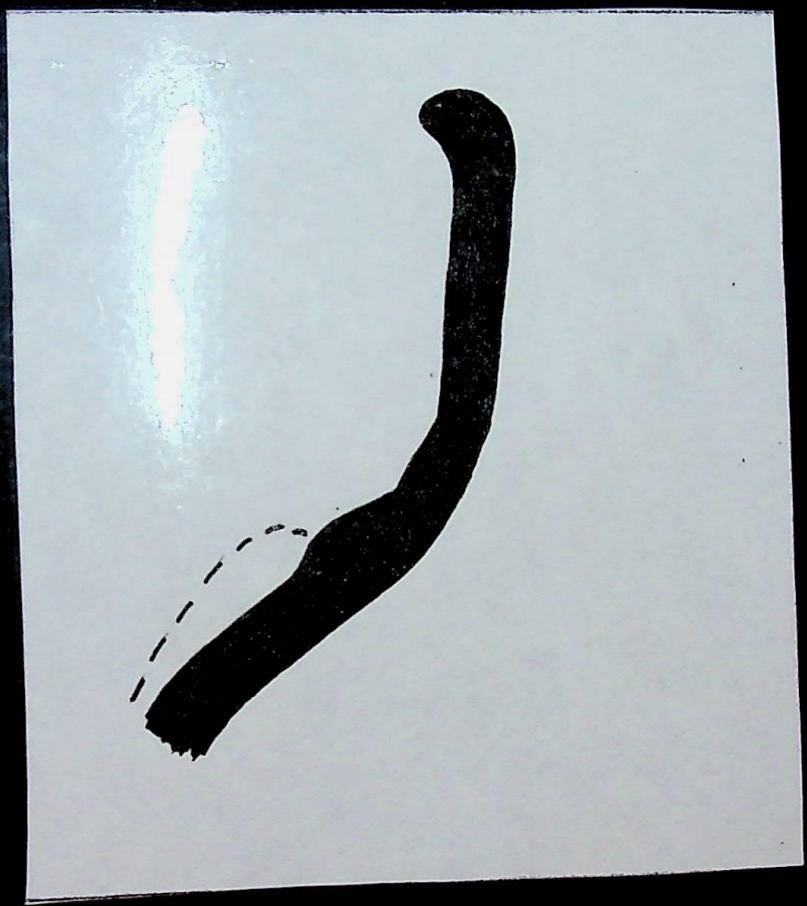
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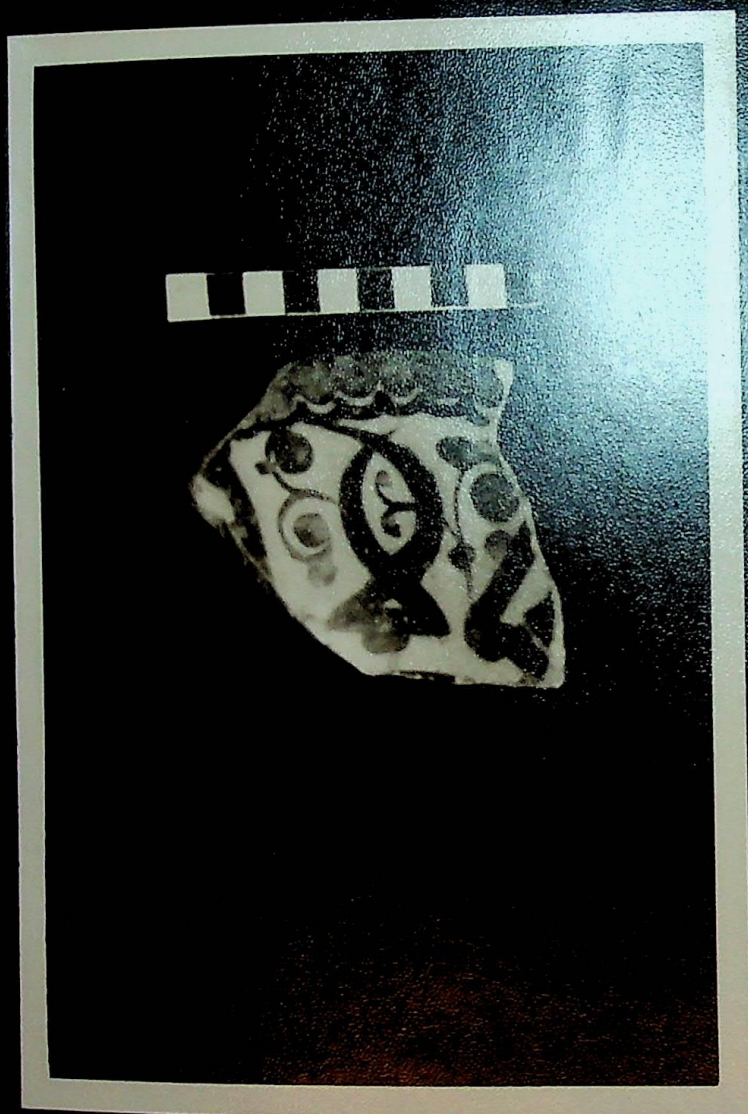


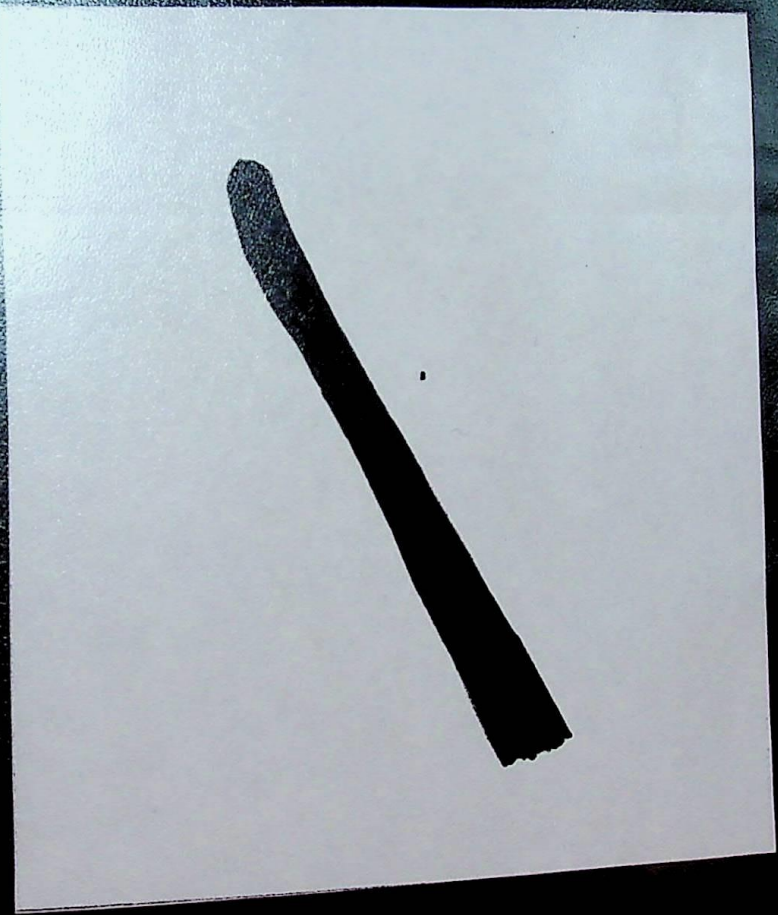
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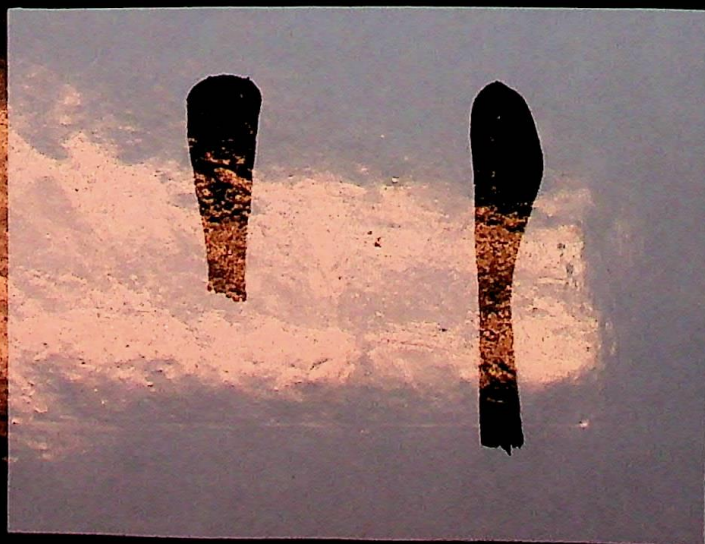
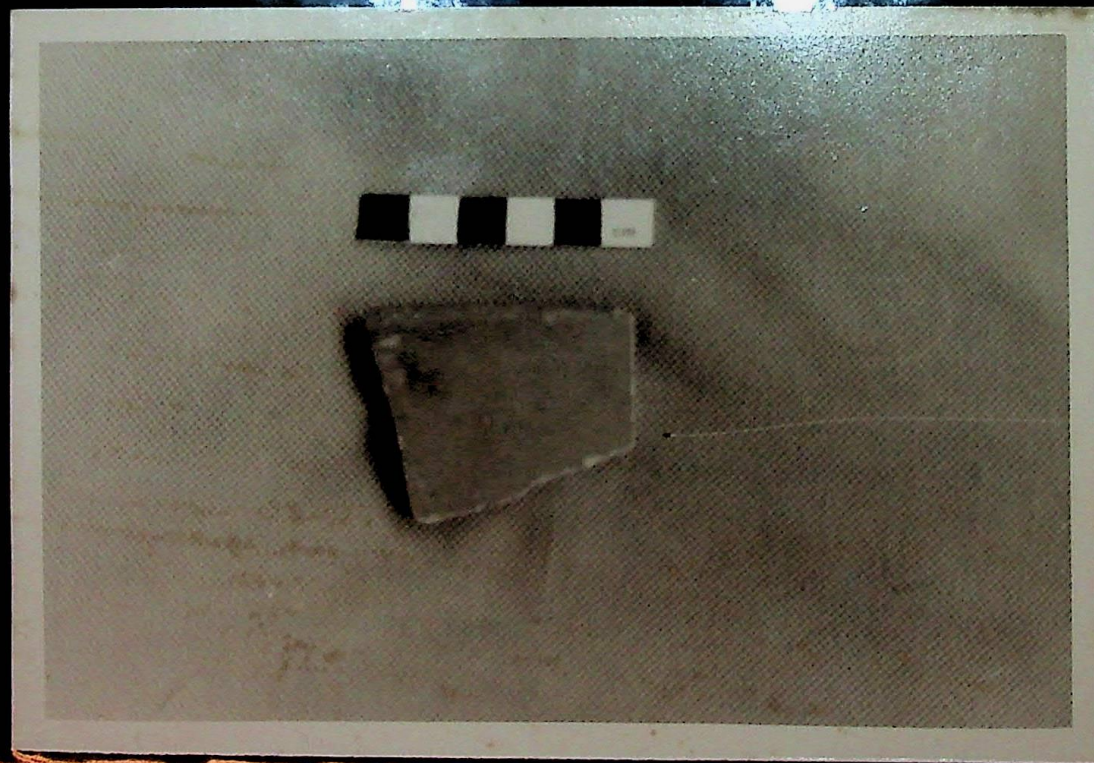


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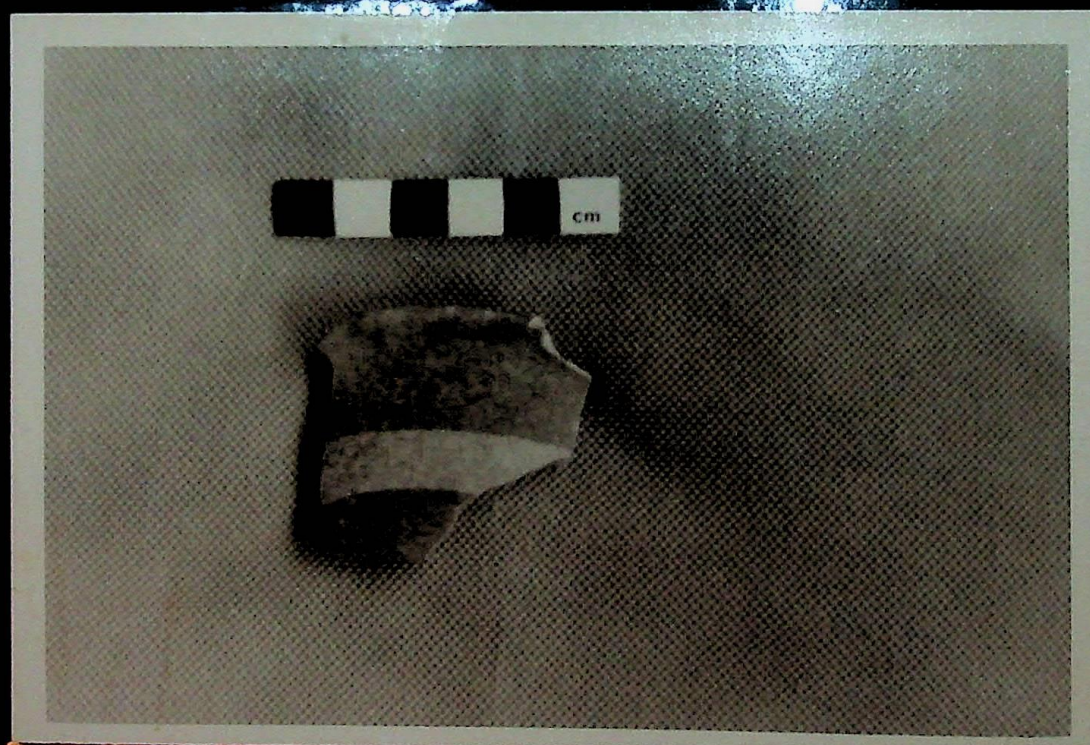
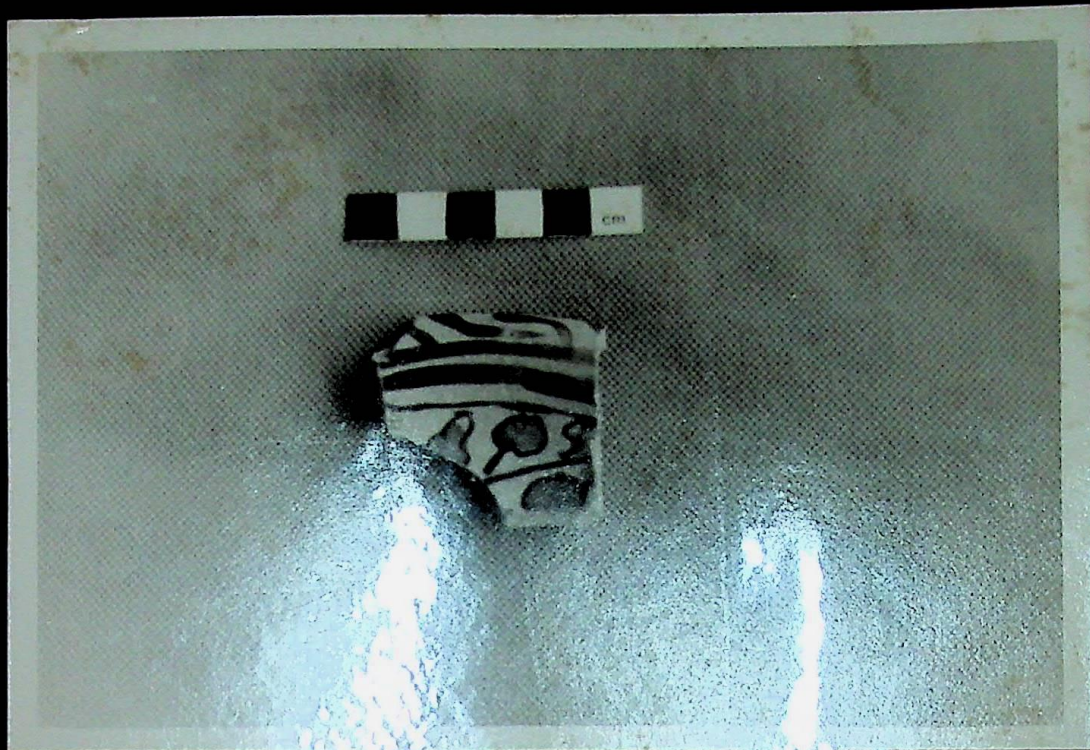




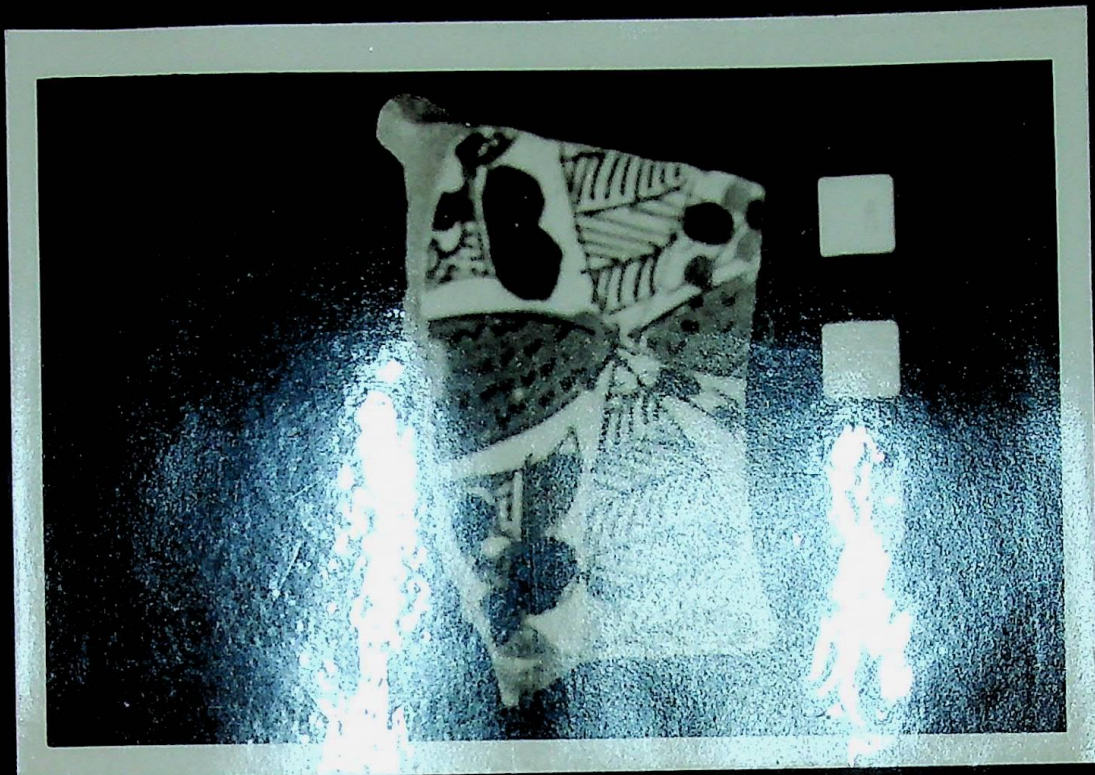
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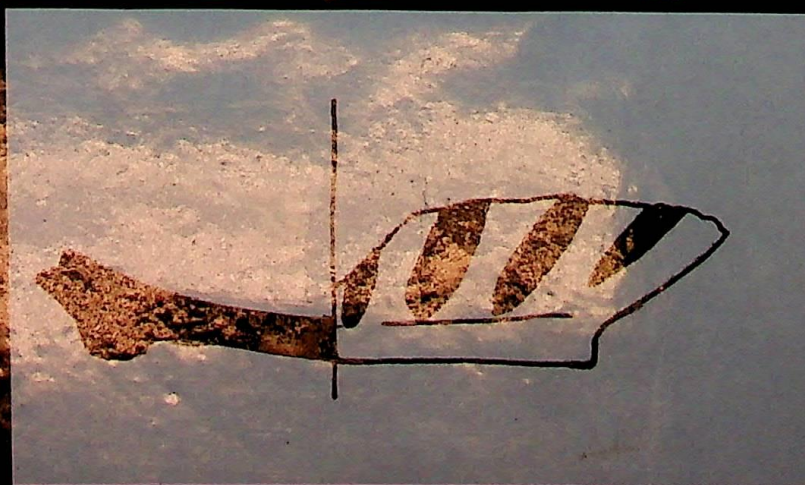
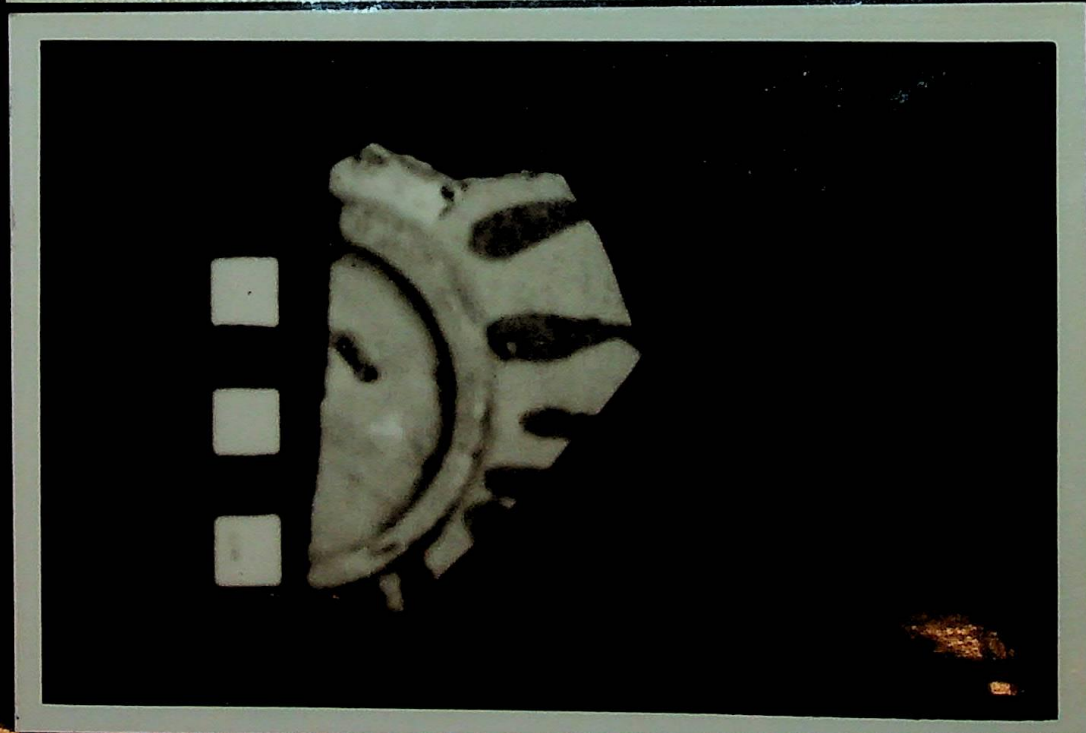
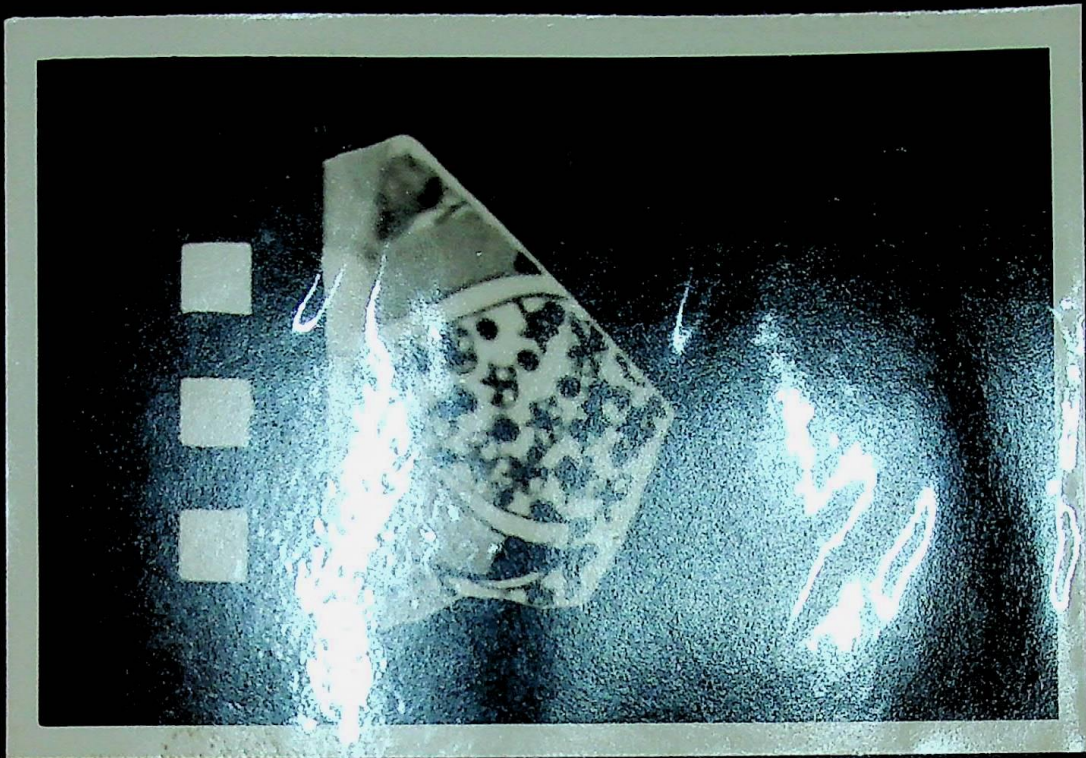
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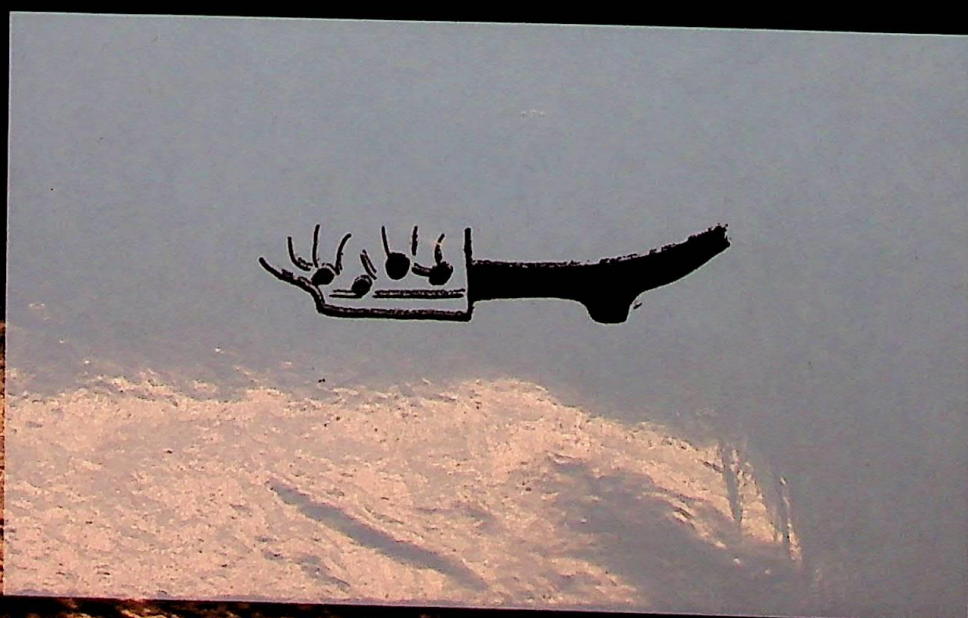
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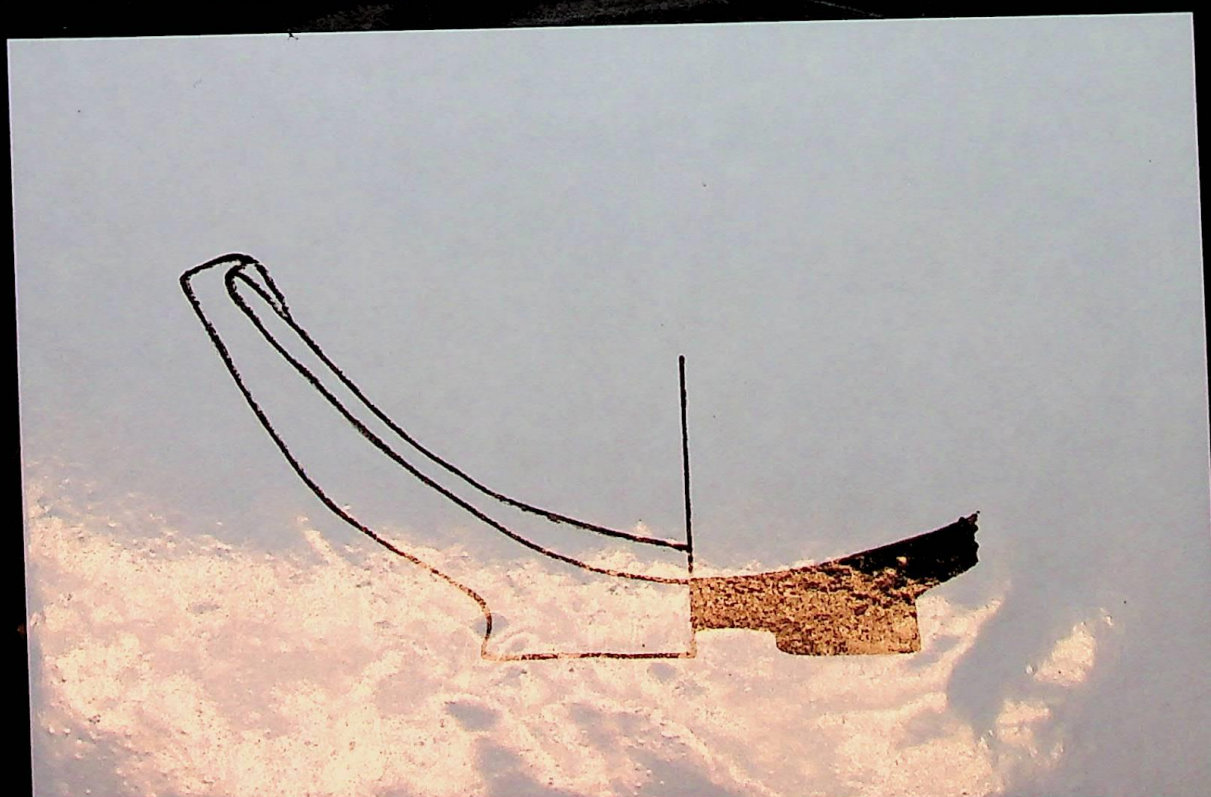




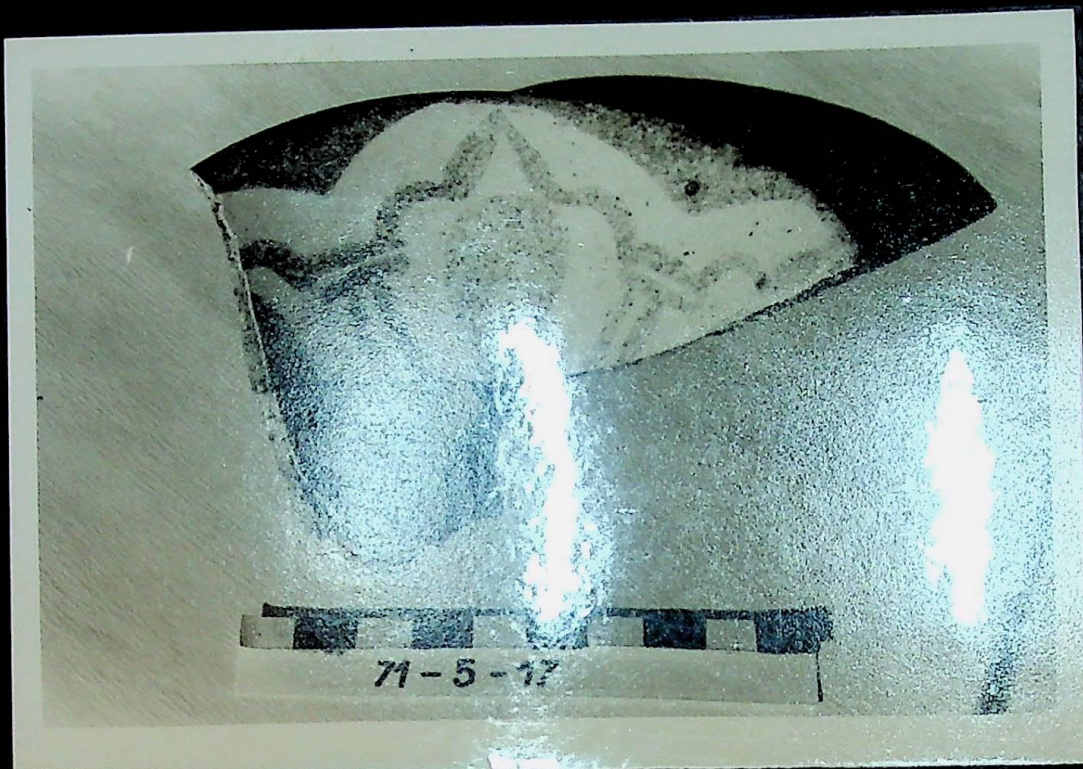
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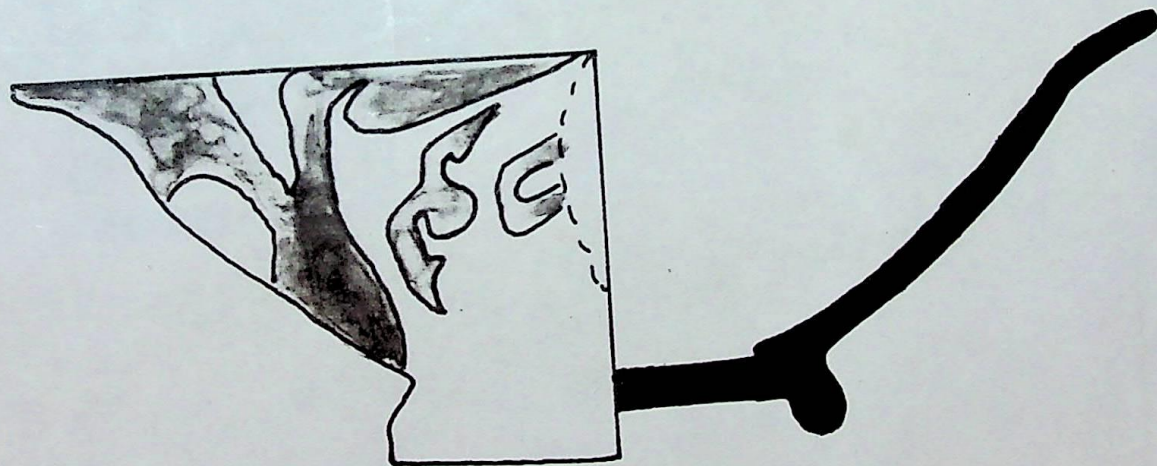


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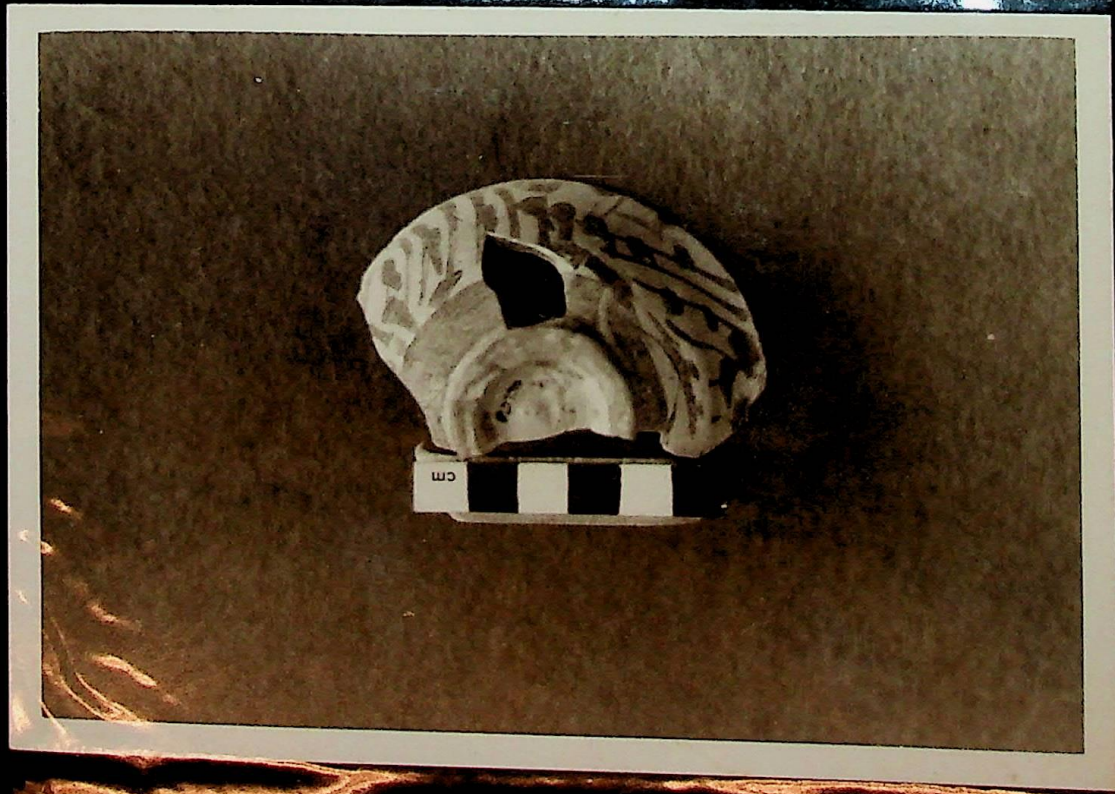


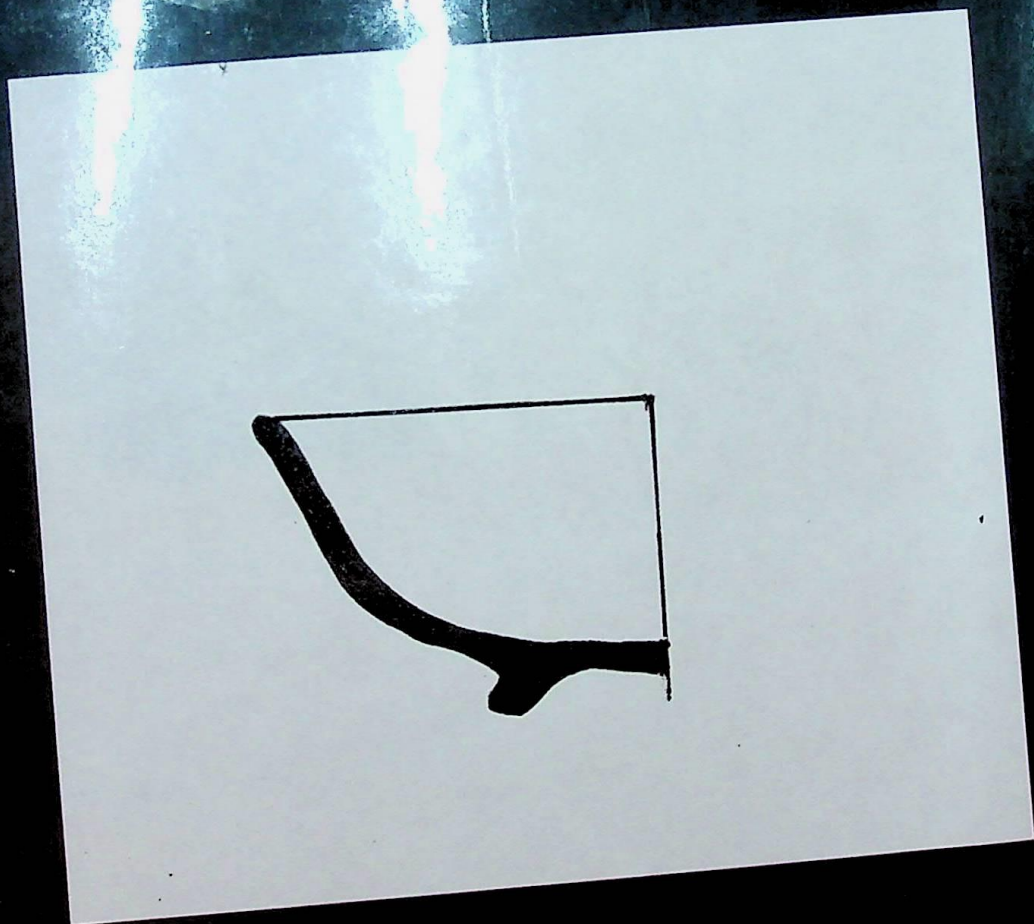
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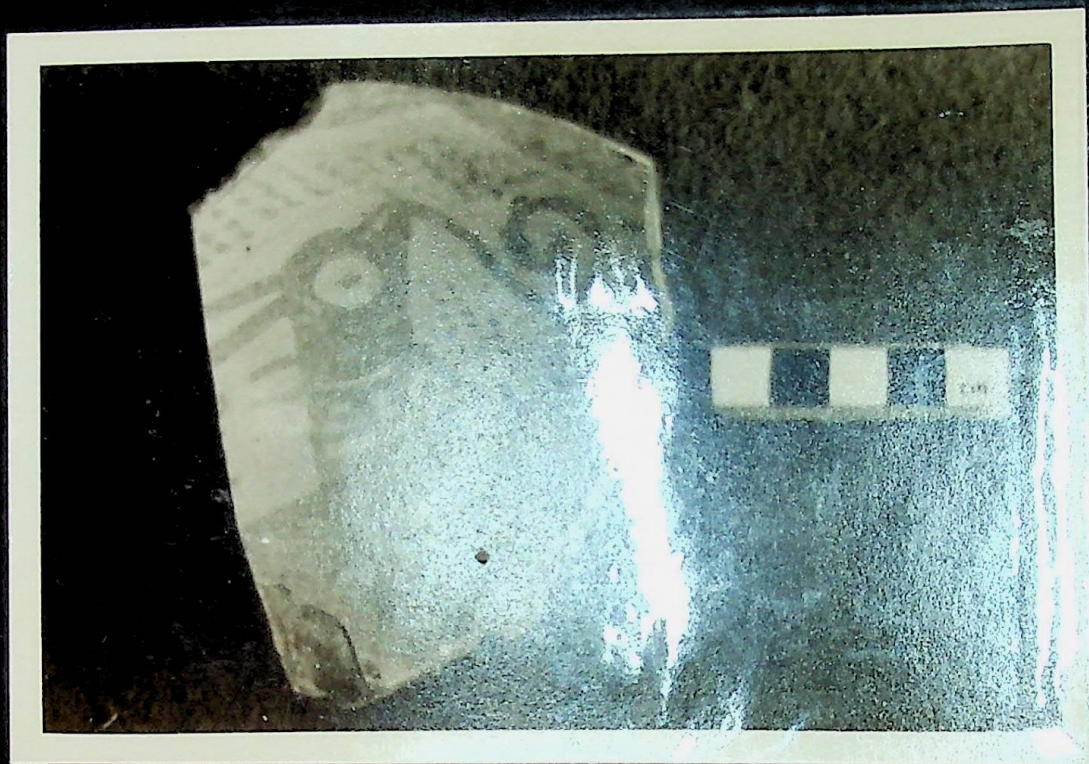


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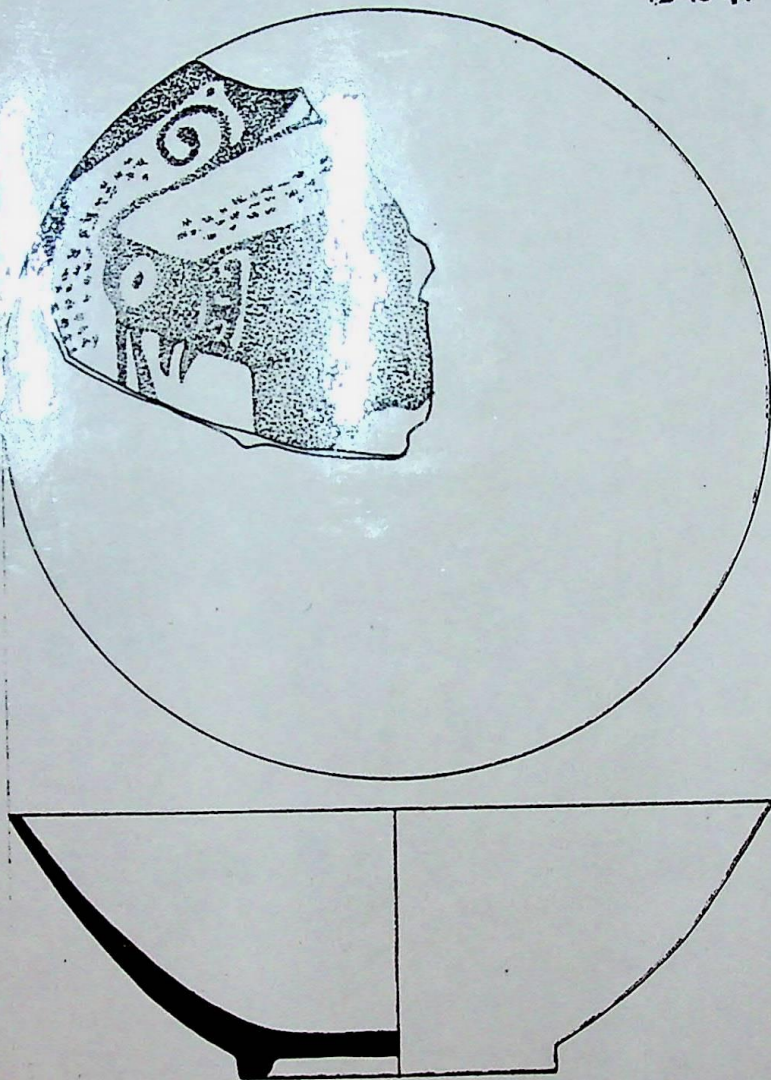




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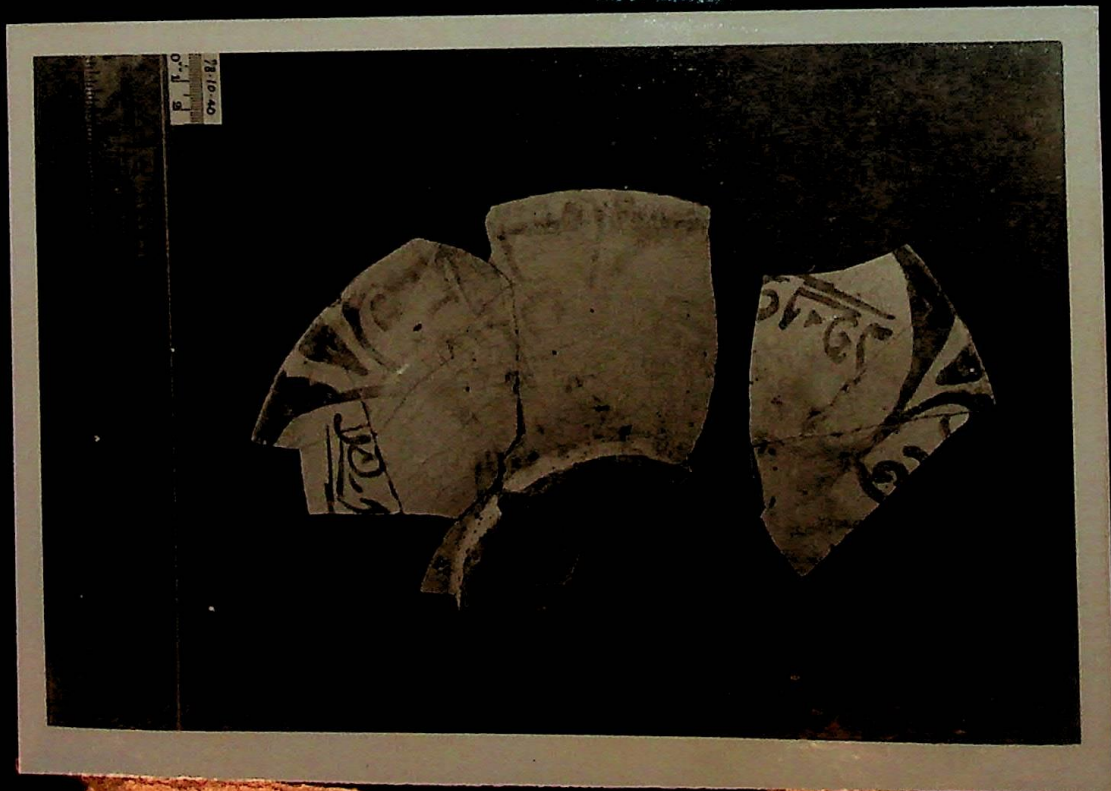
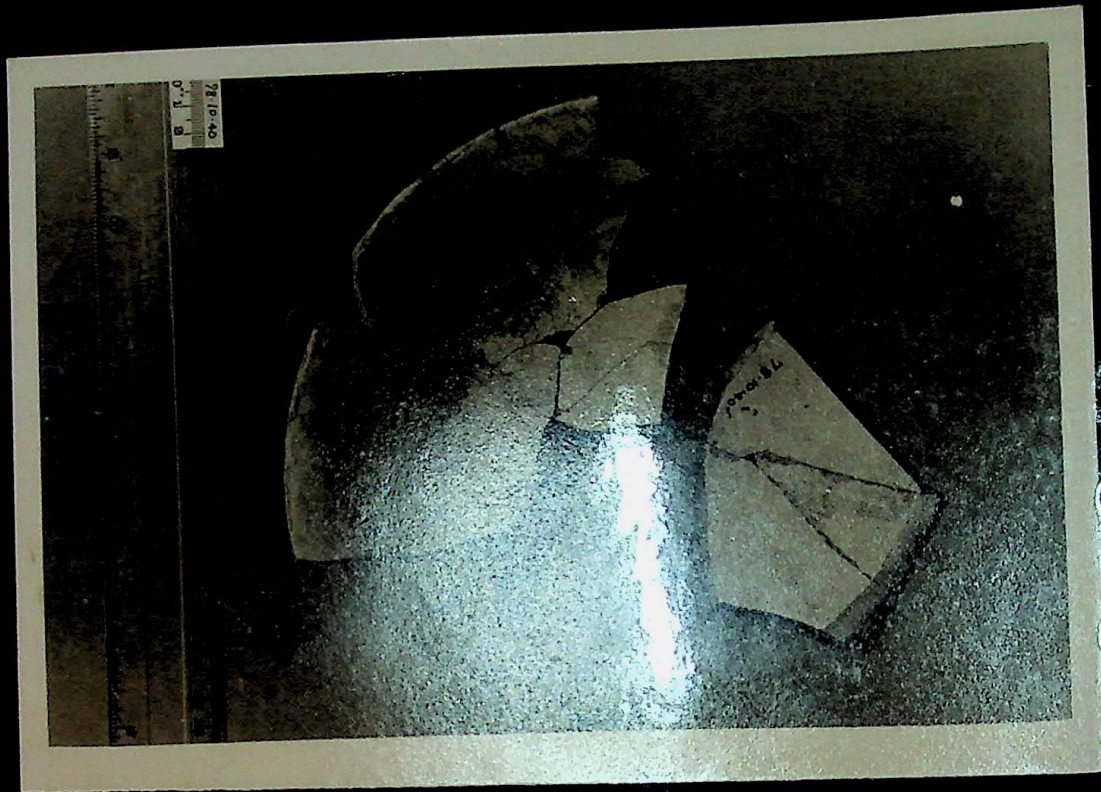


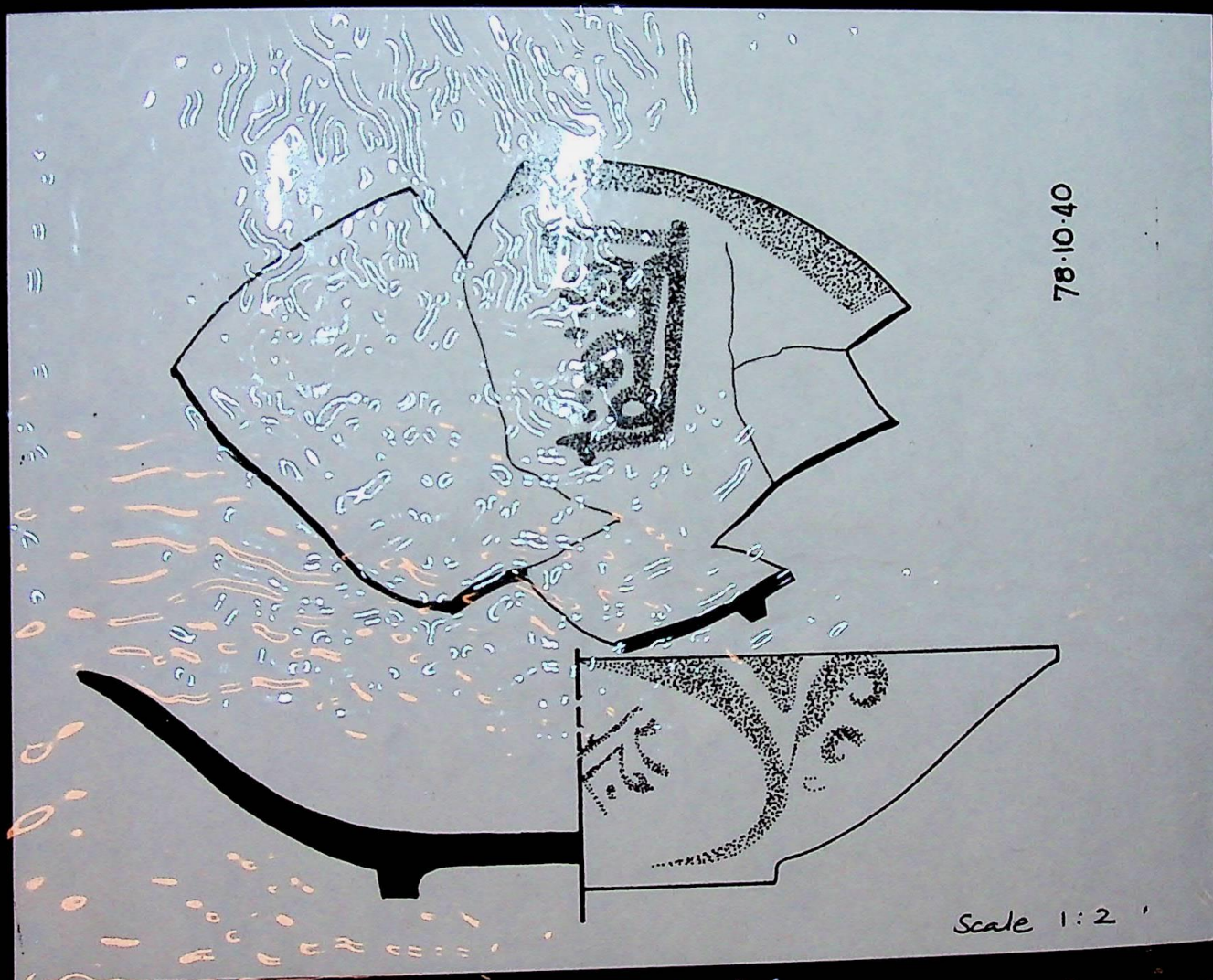
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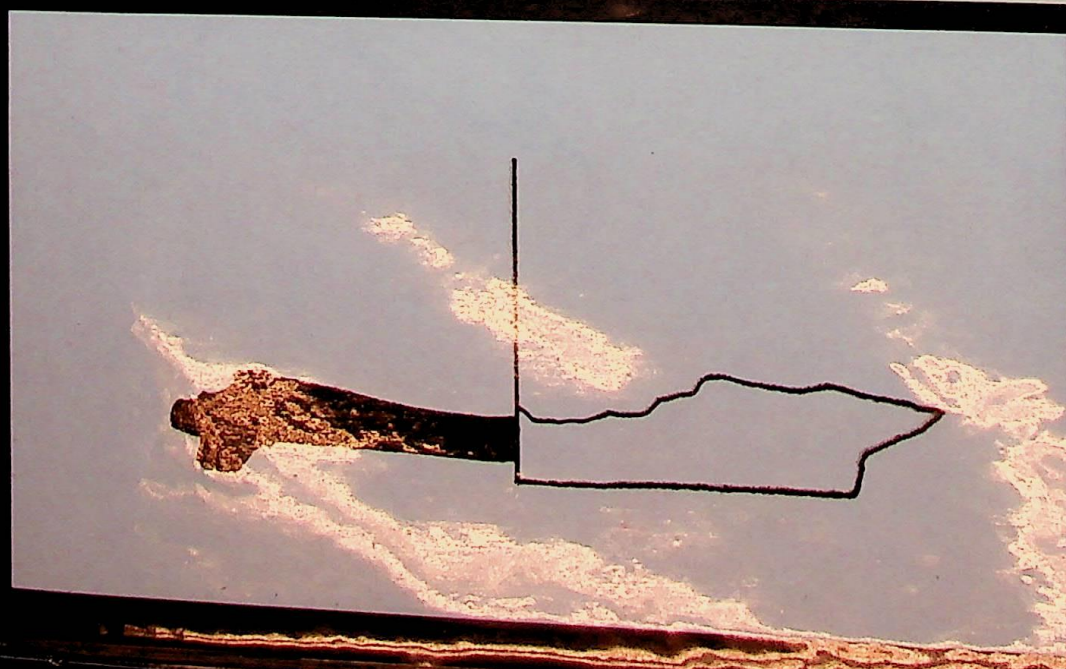
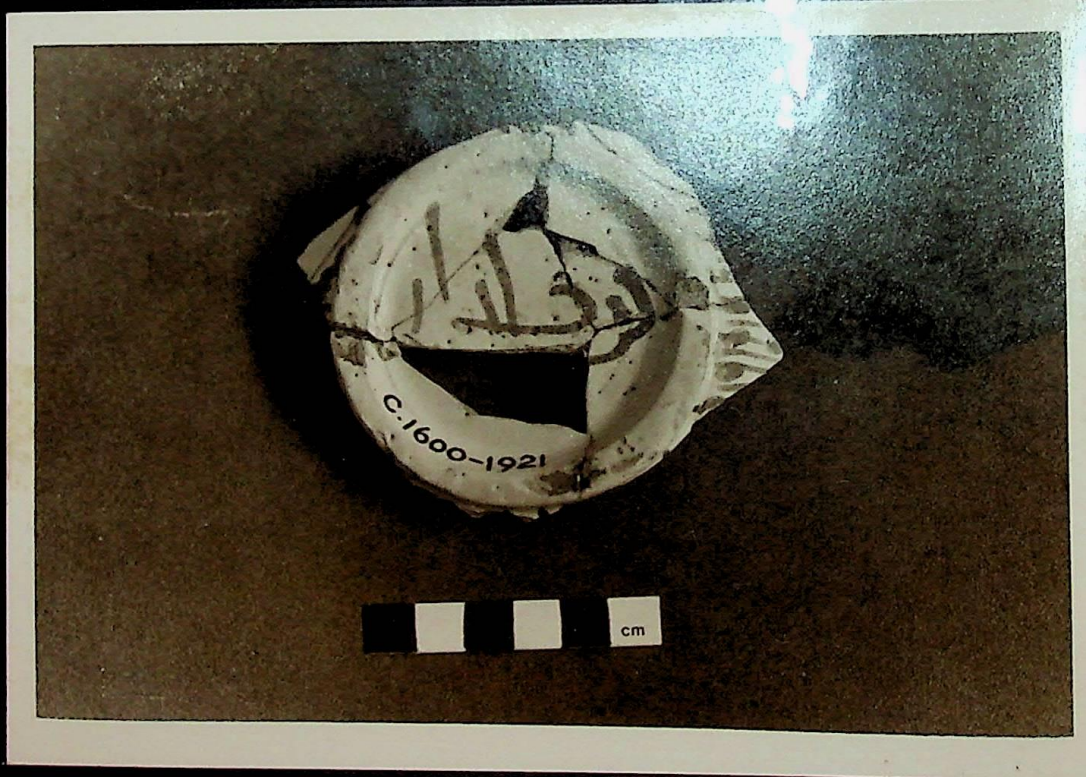




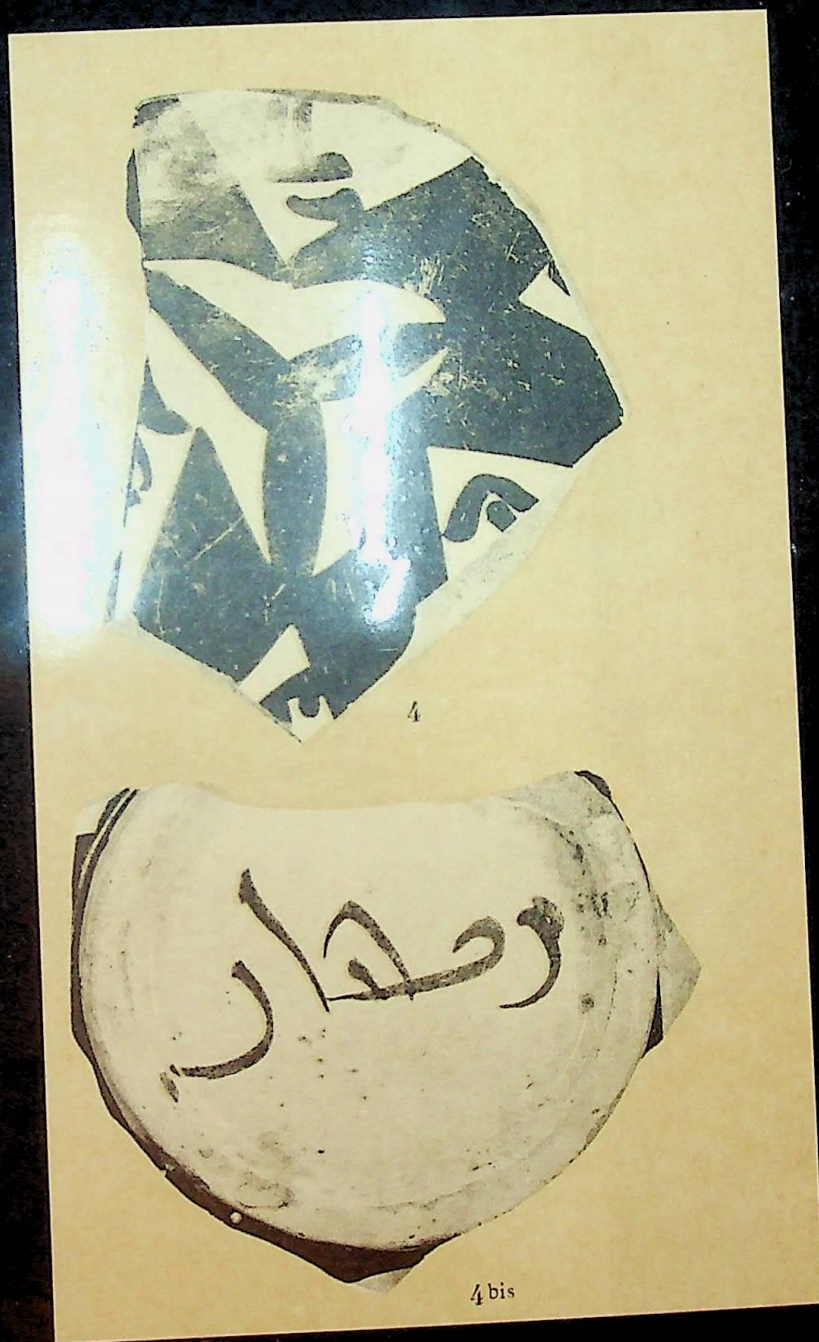
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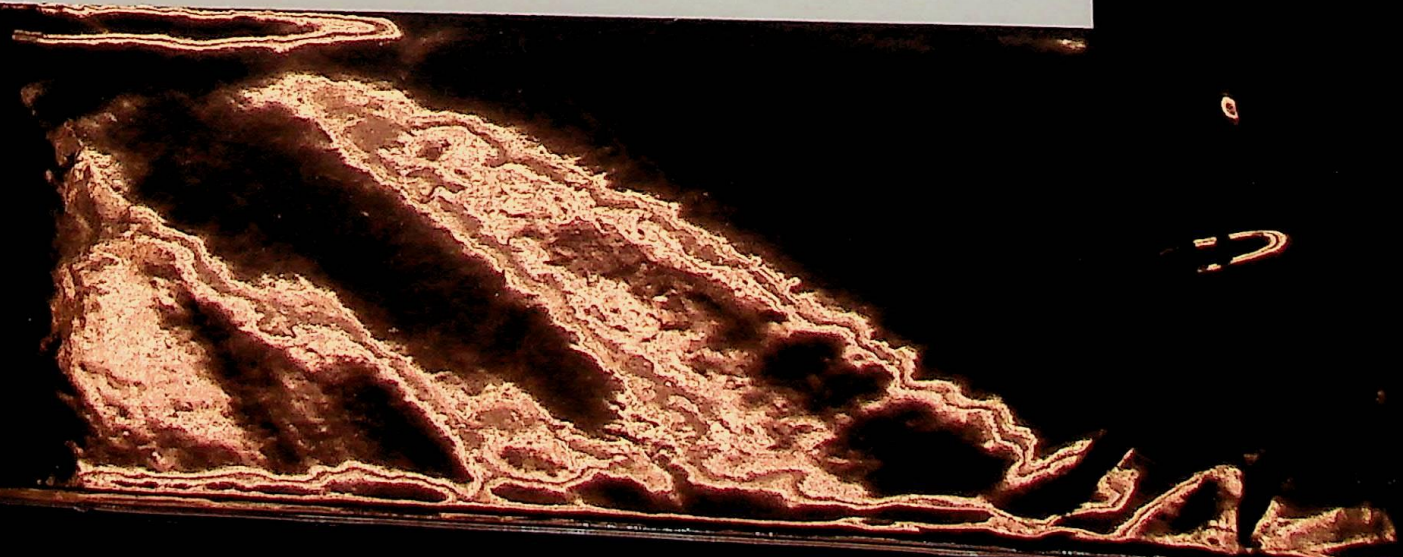
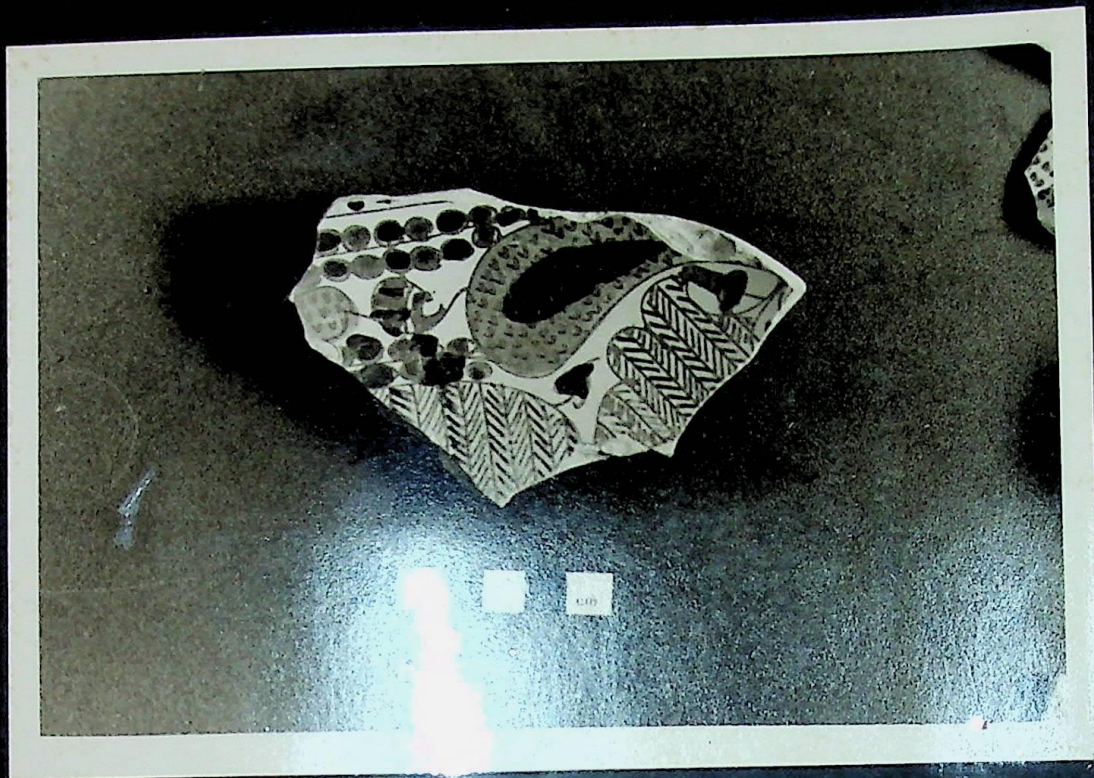
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17a. Bahgat/Massoul Musulmane pl. VI/4 & 4^{bis}



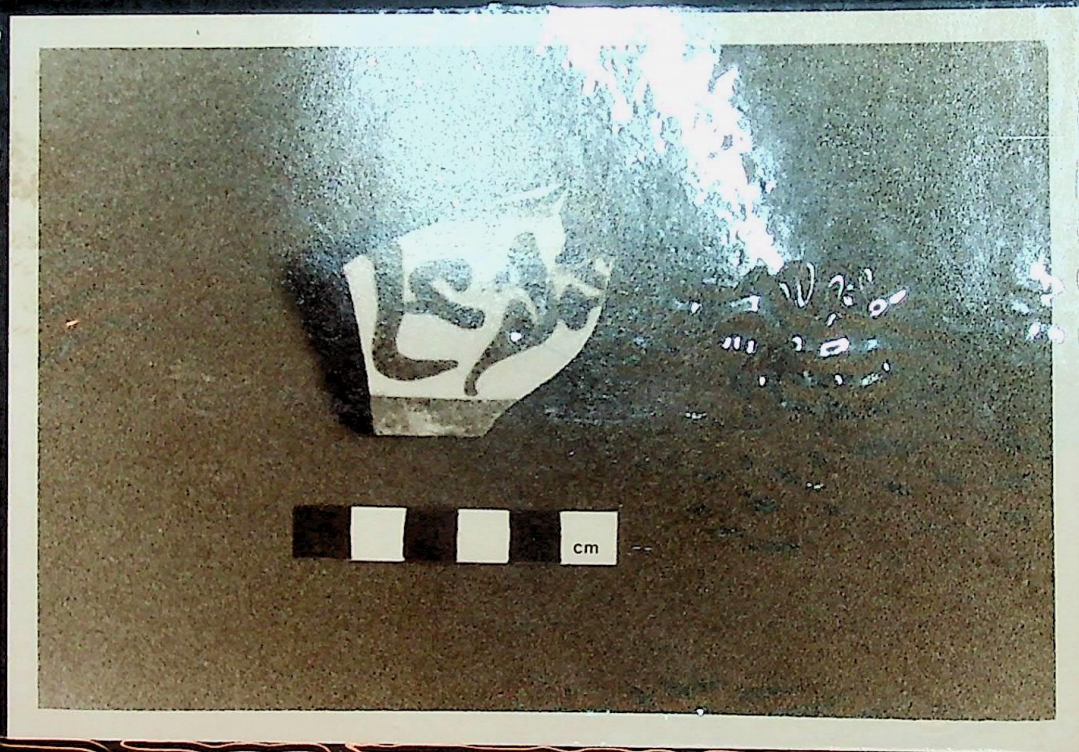
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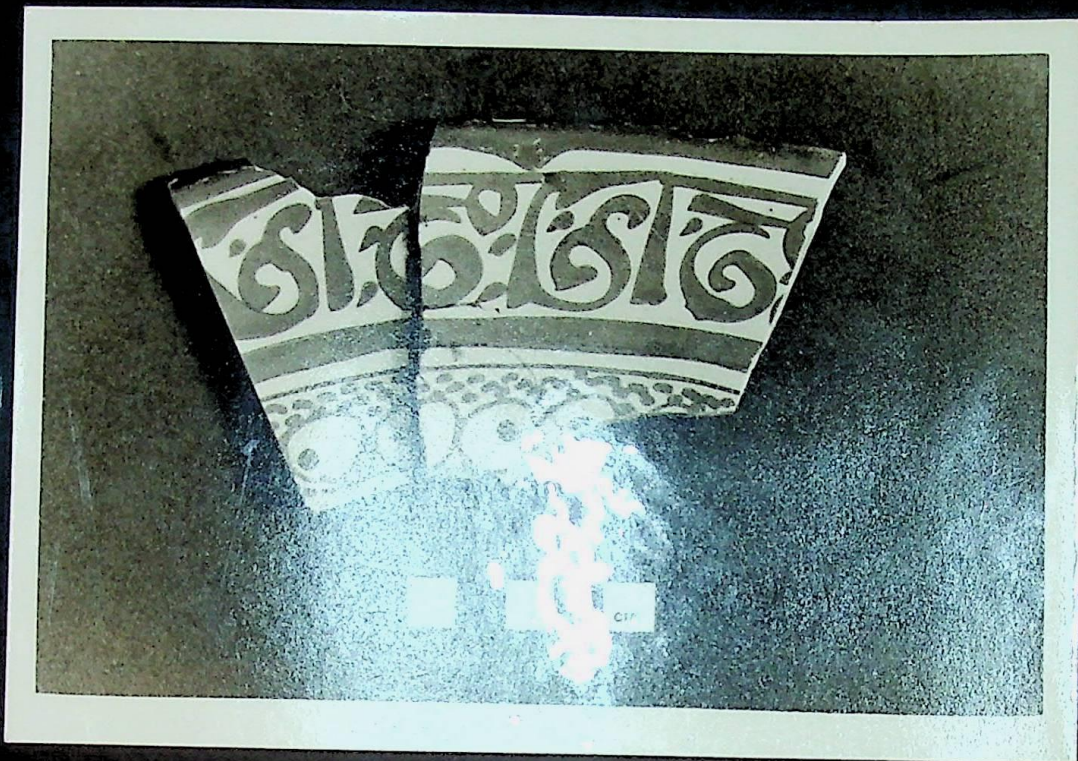


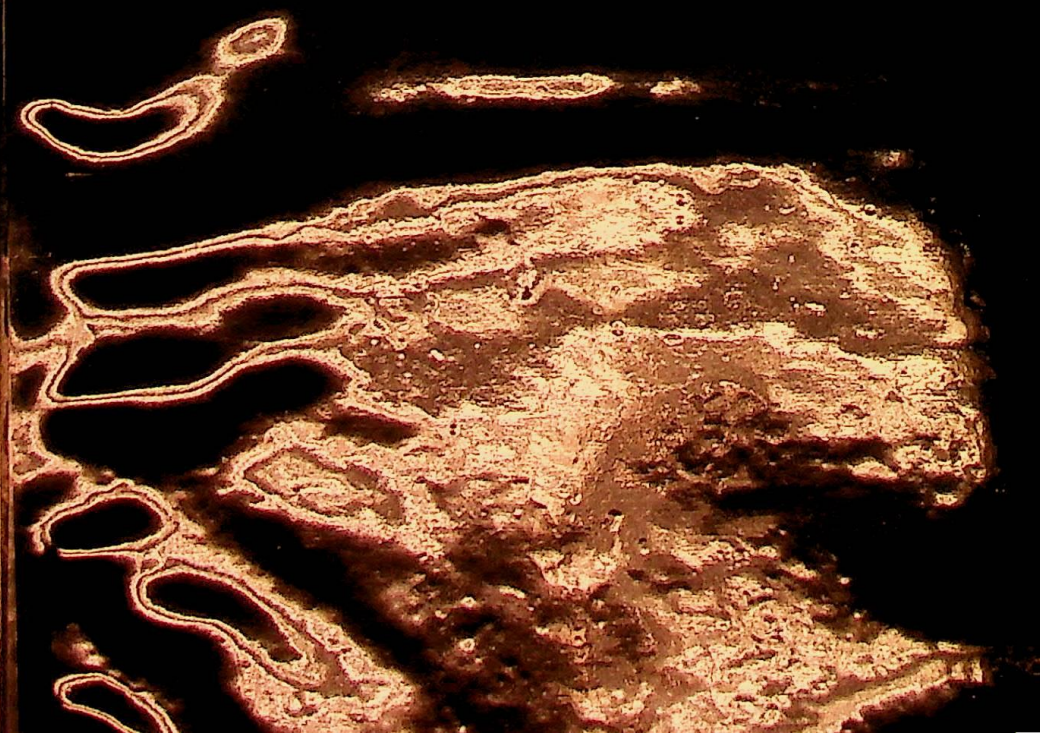
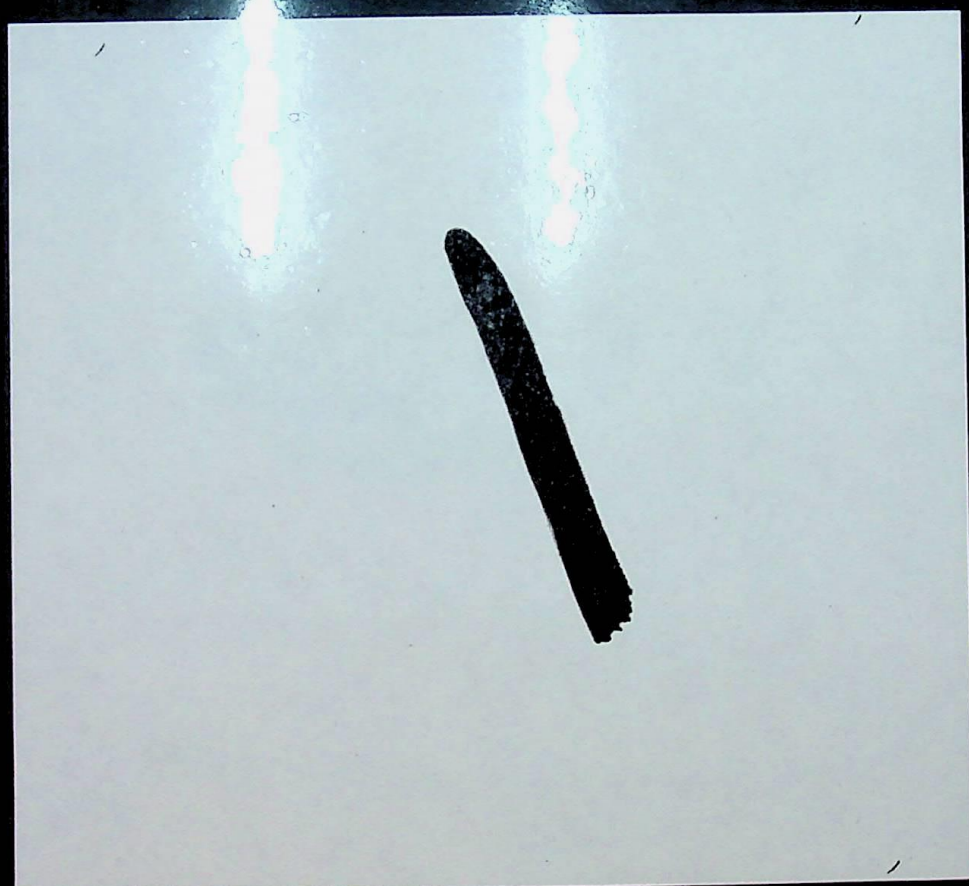
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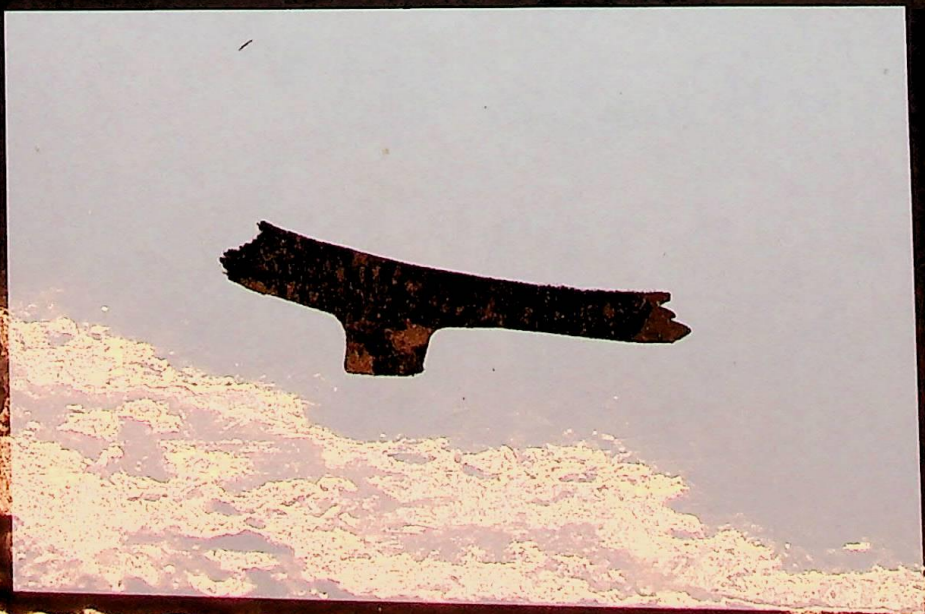


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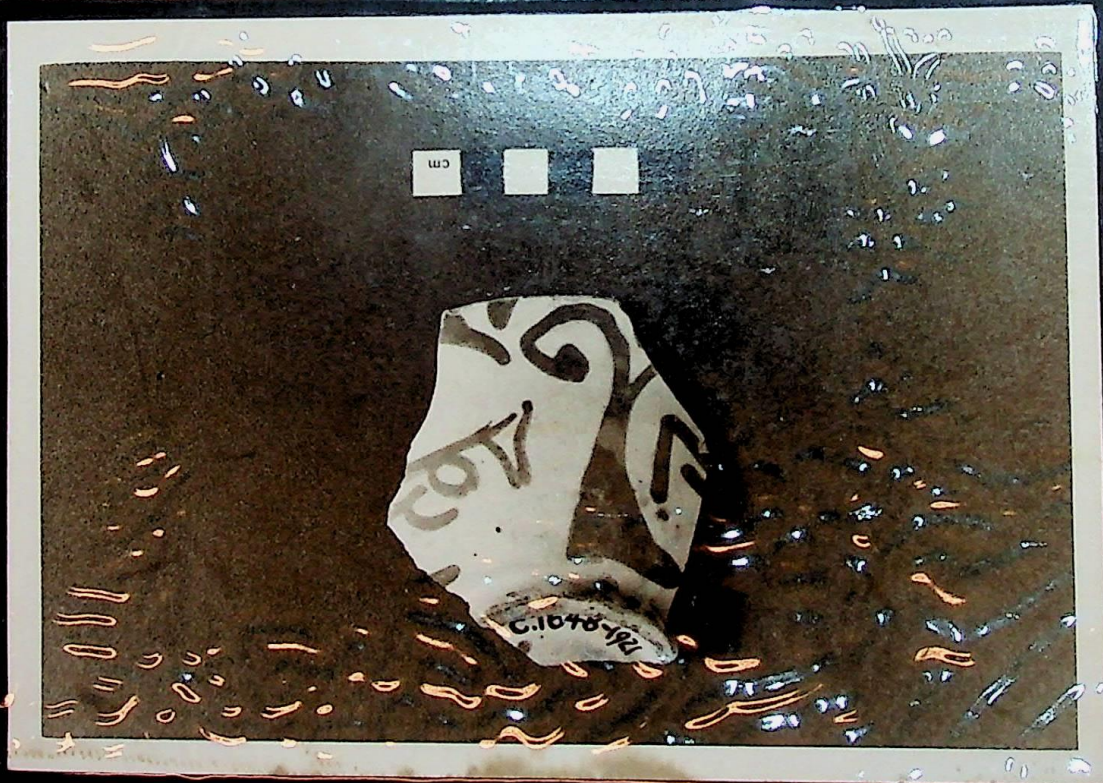


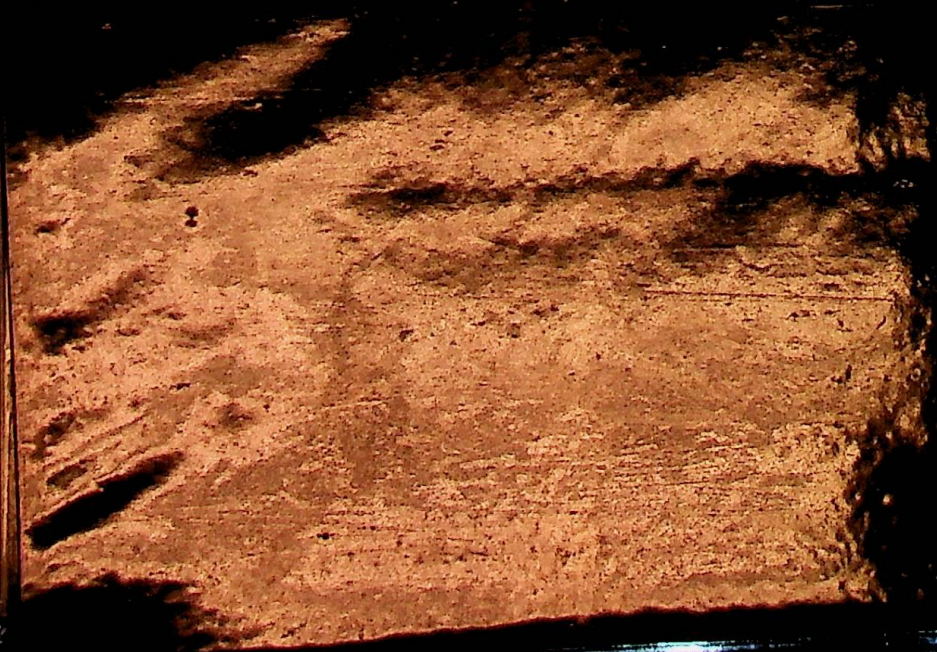
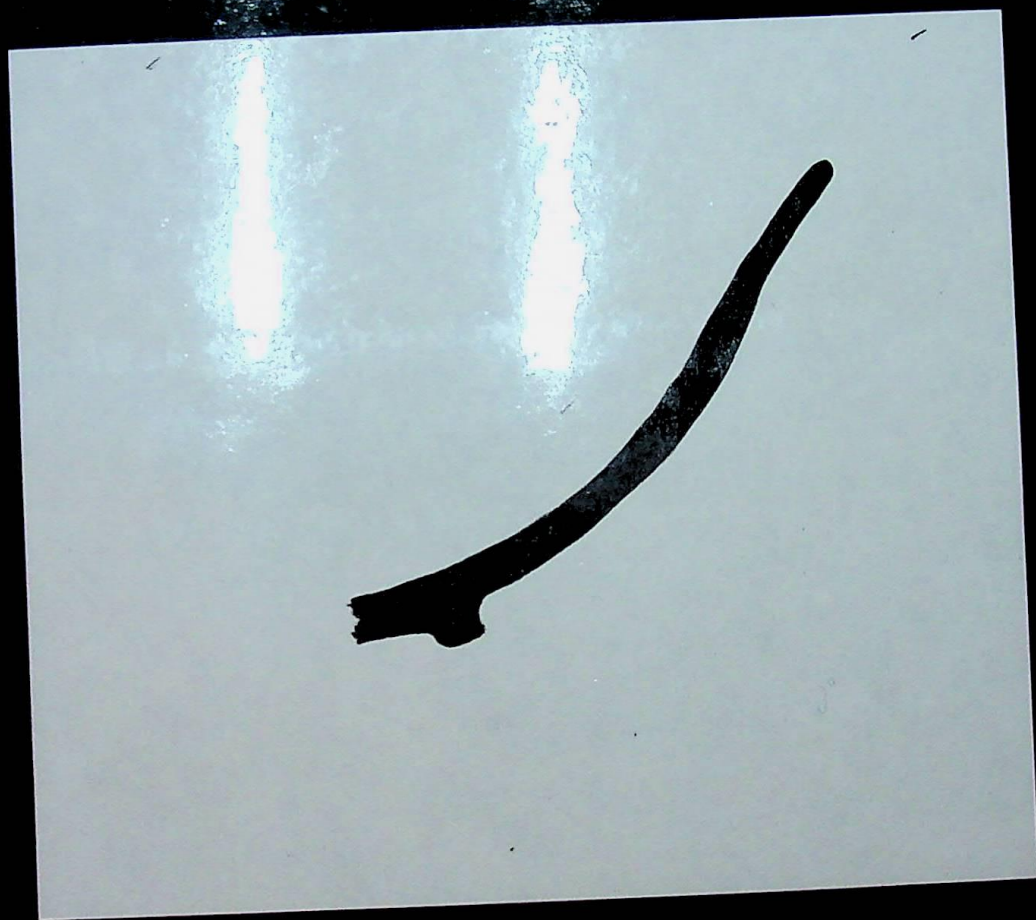
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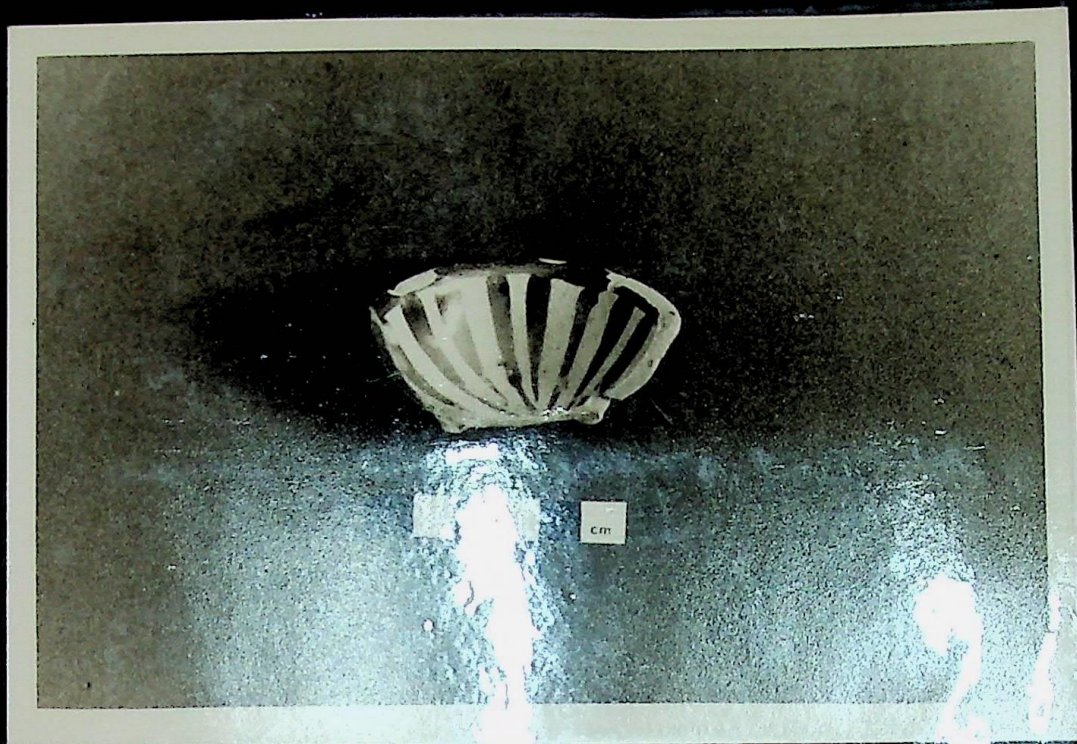
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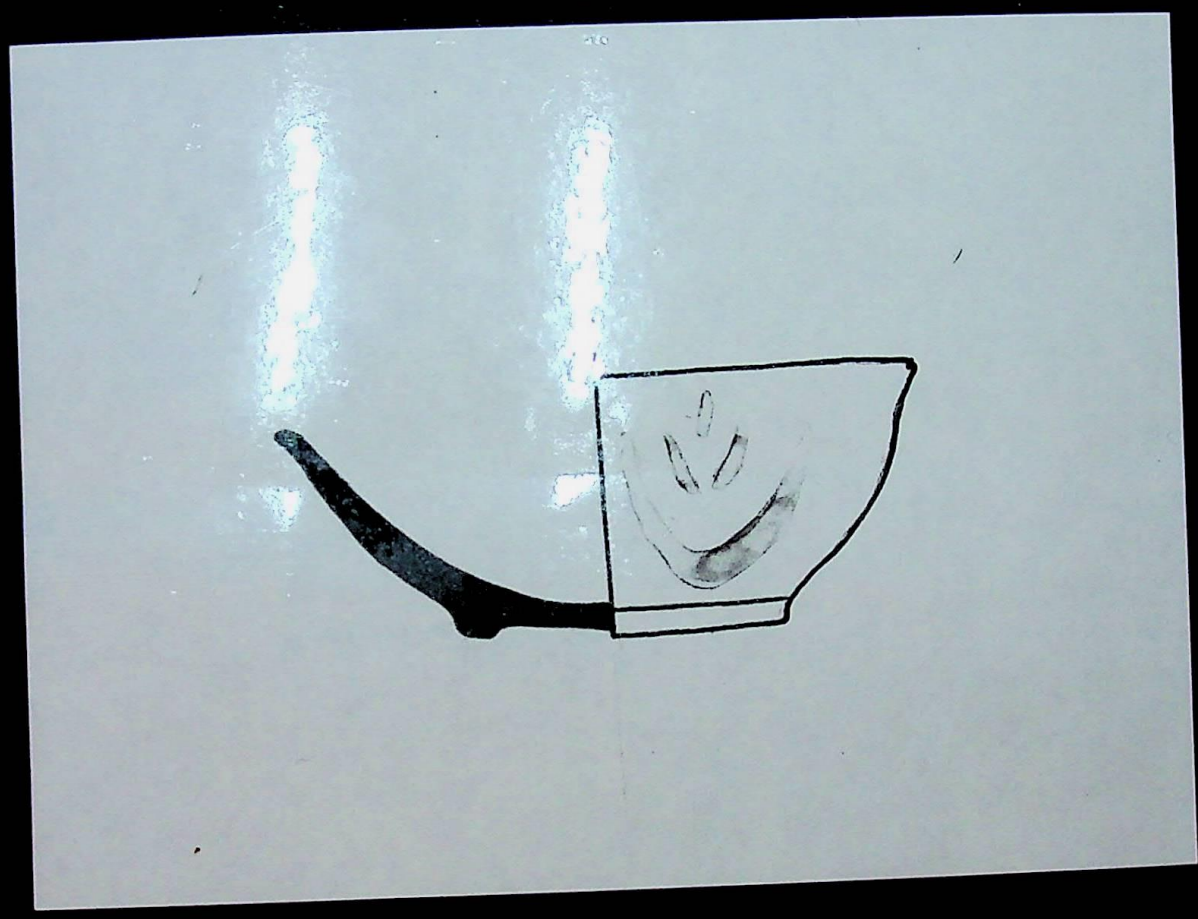
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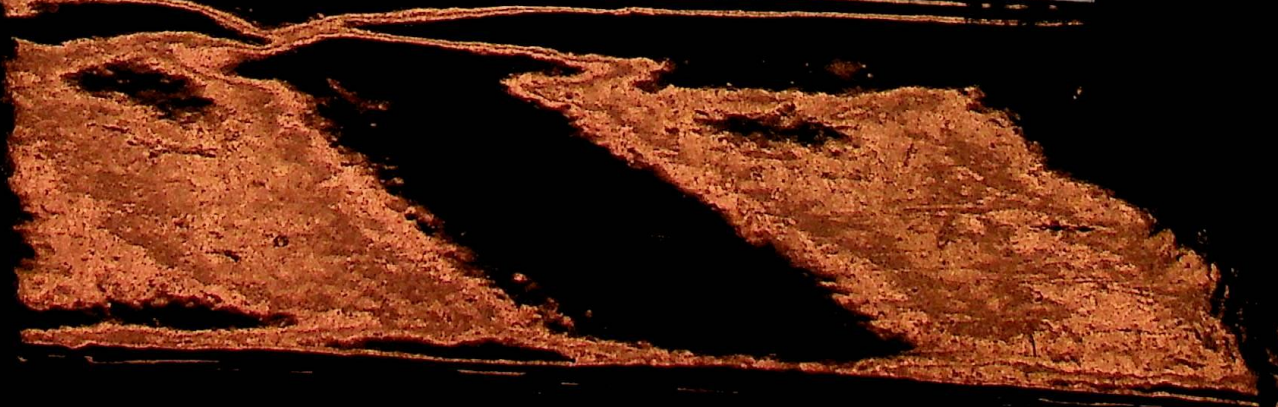


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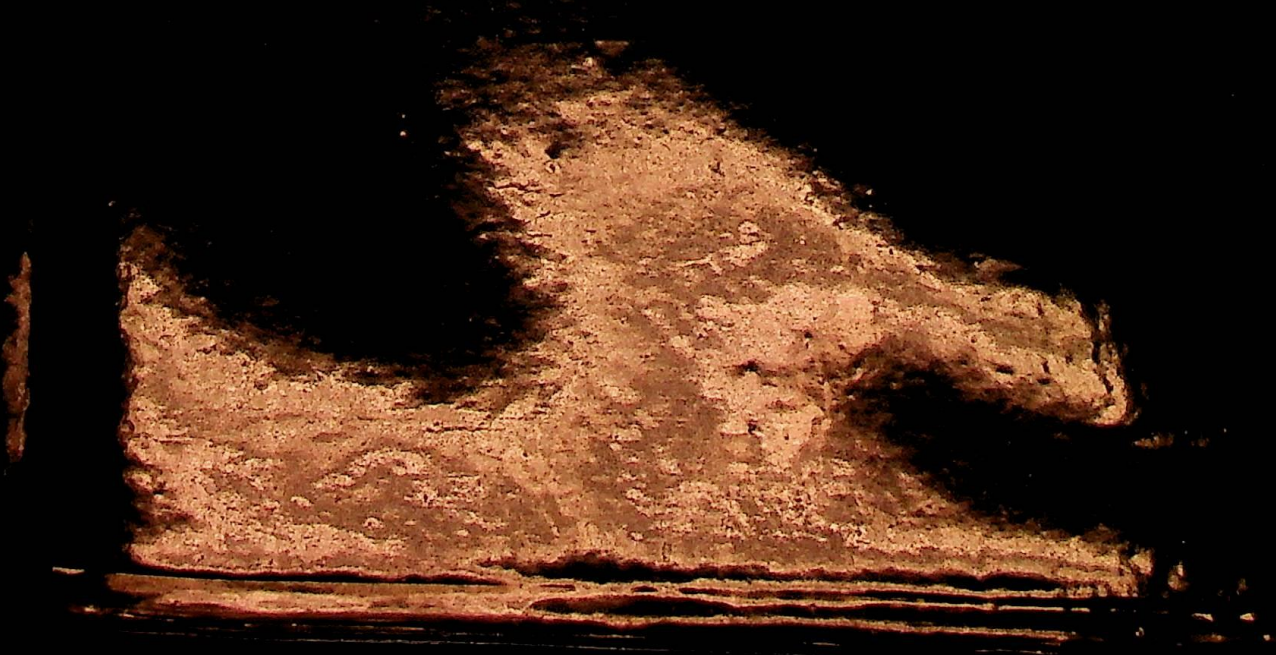
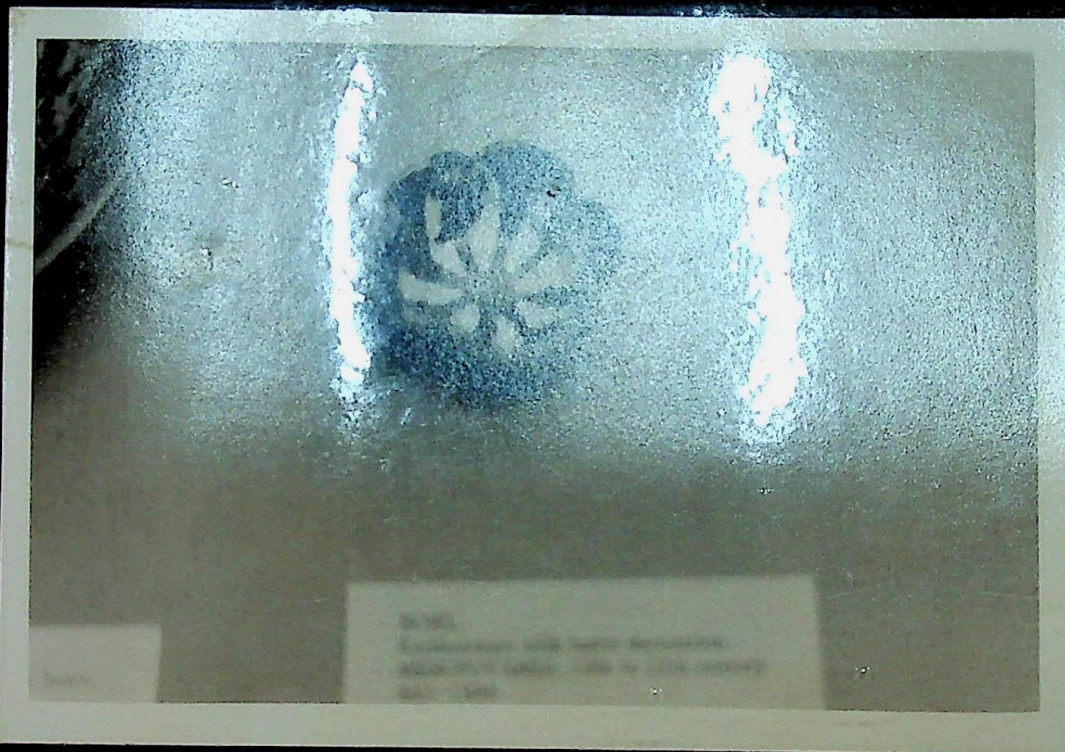




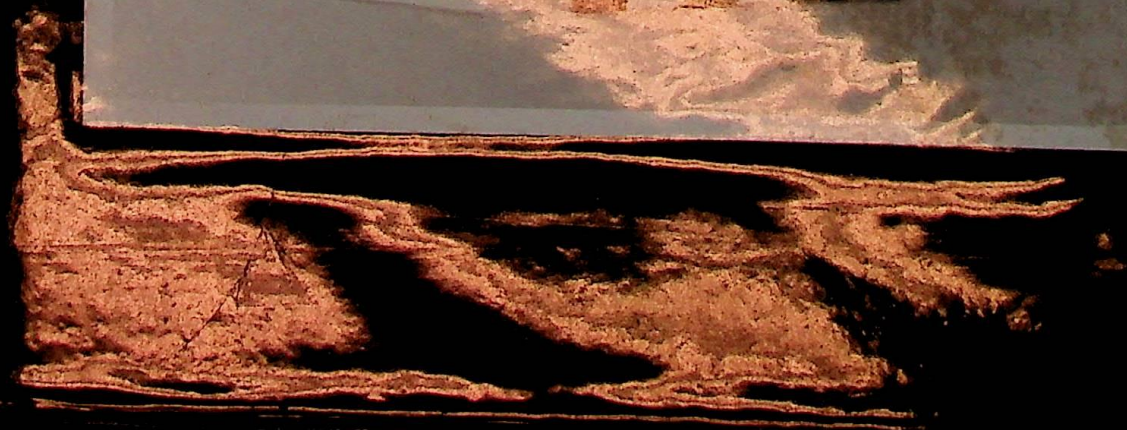
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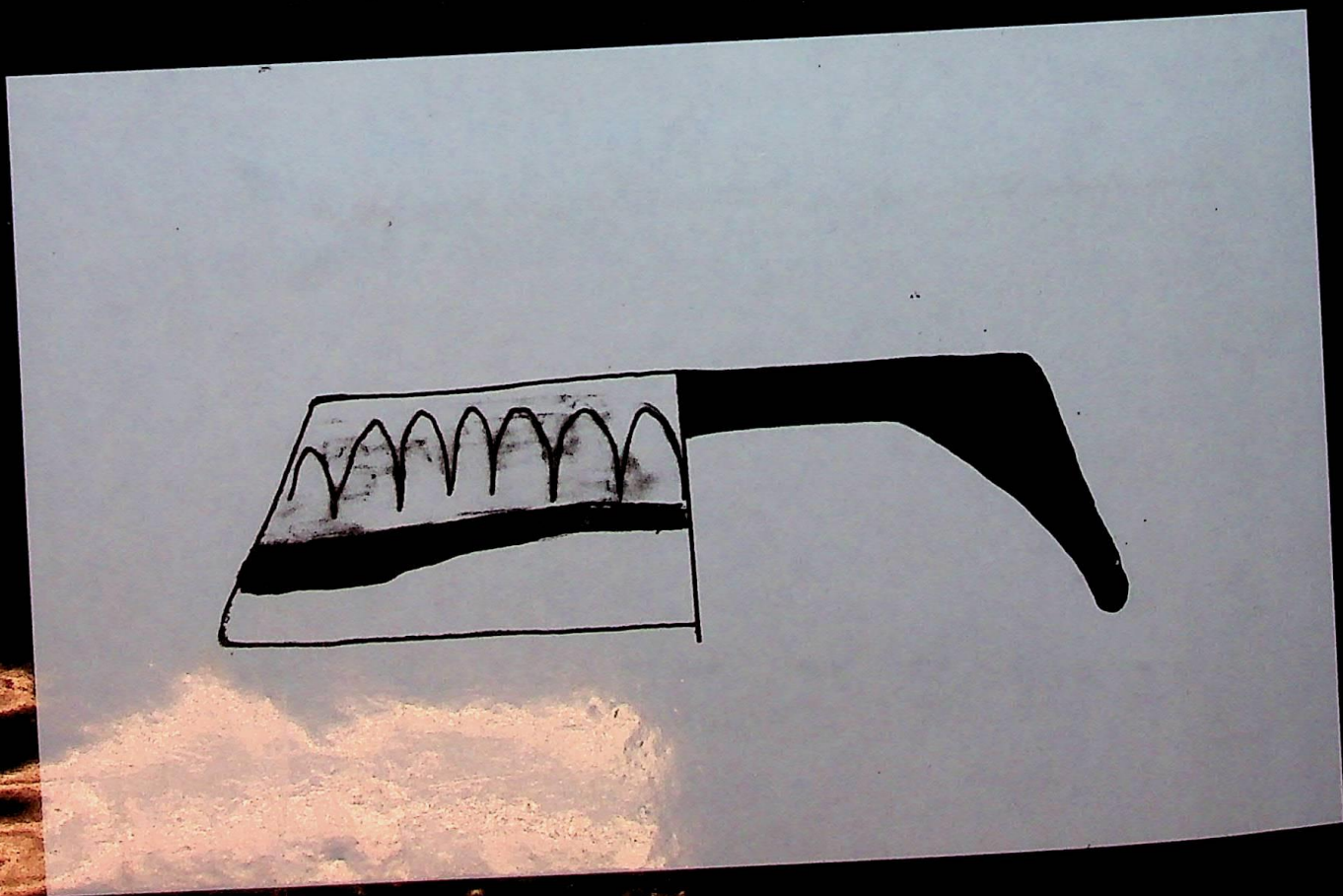


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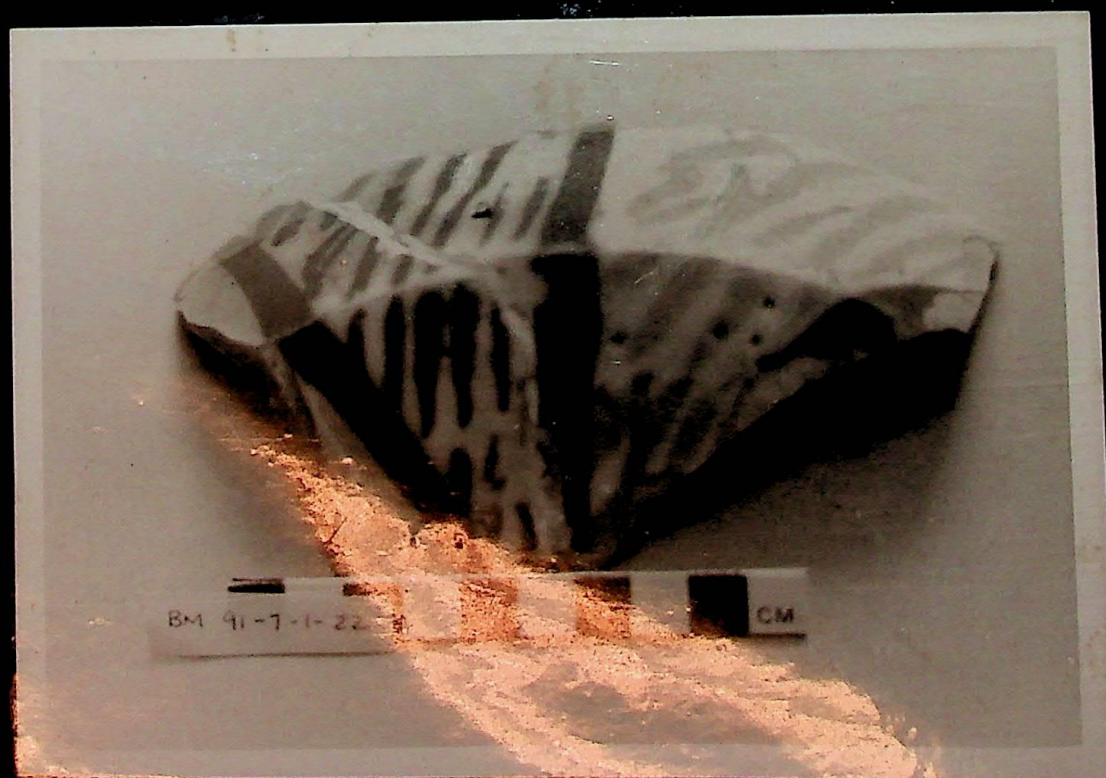


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27. British Museum no. BM 1891, 0701.22

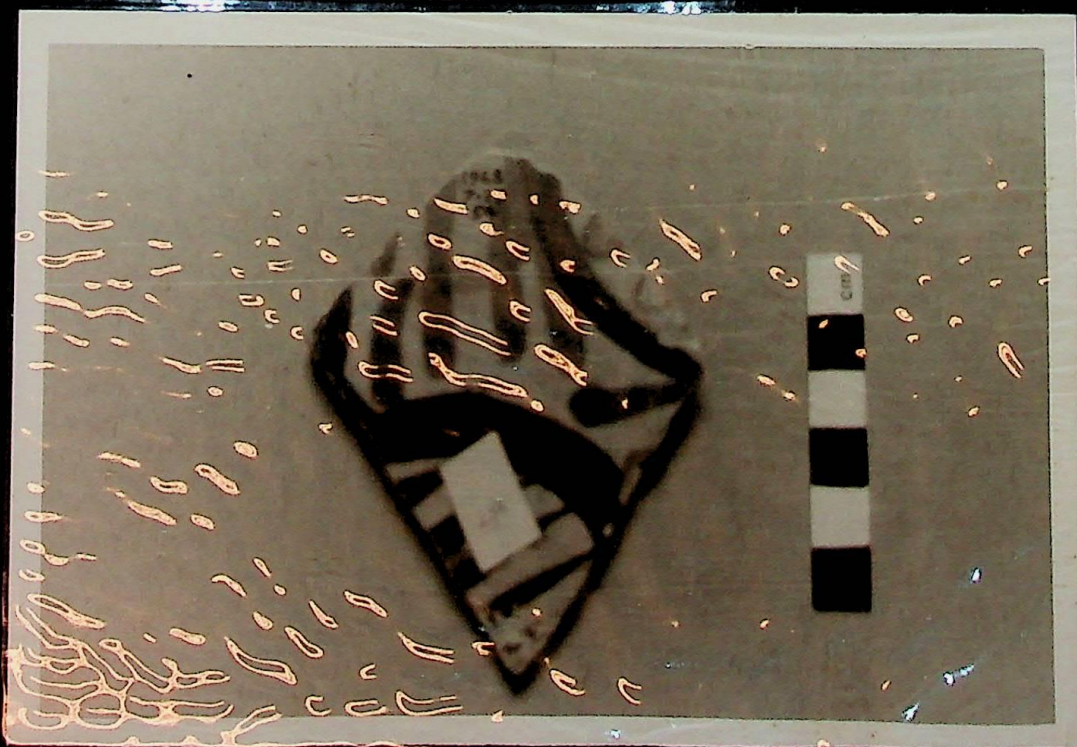




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29. British Museum no. BM 1968 7-23.54





30. British Museum no. BM 1968 7-23.55



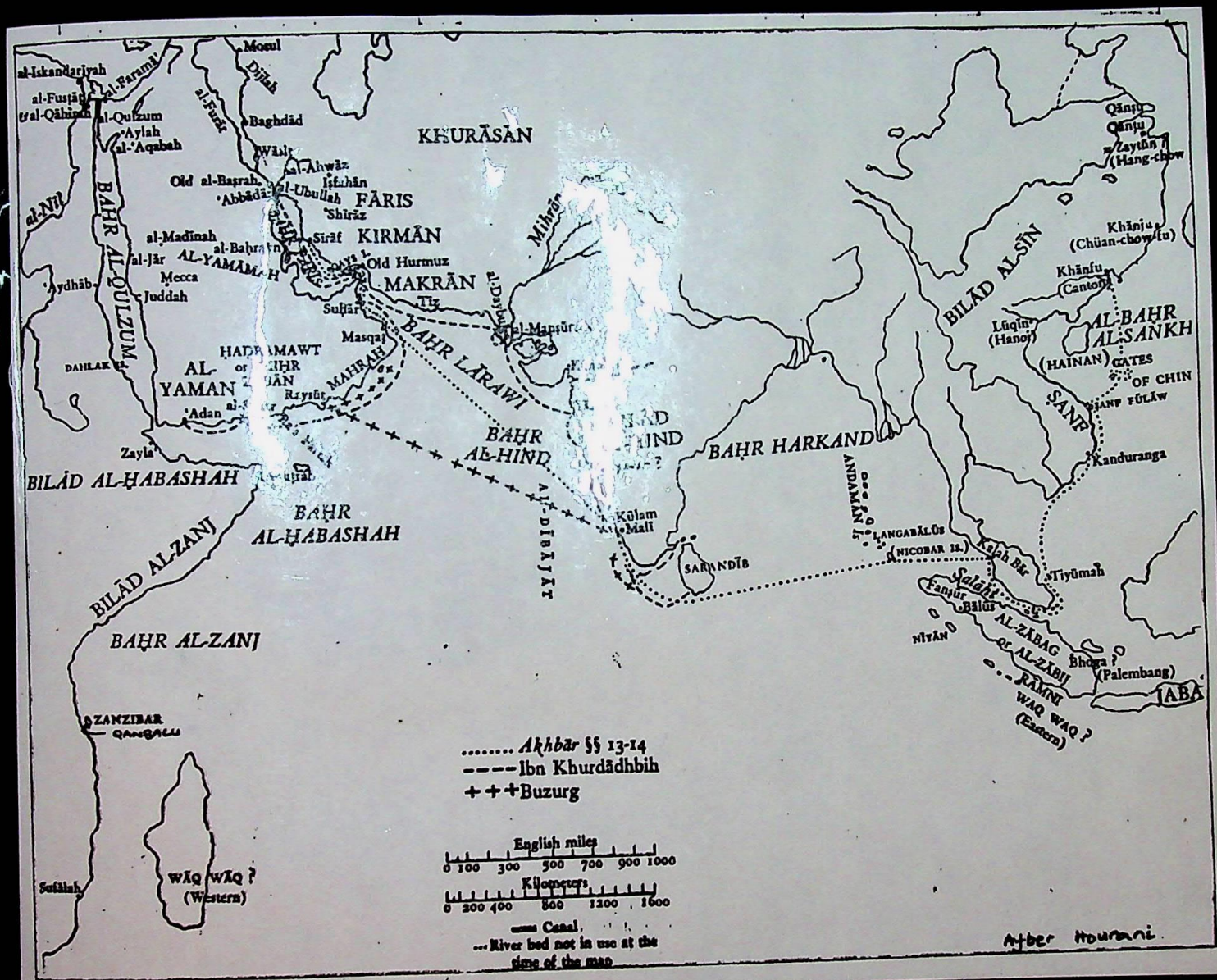
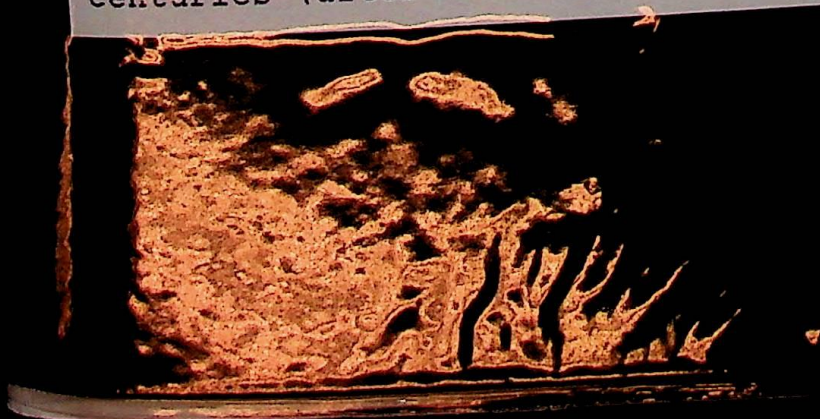


Figure 1: Sea routes in the Indian Ocean in the ninth and tenth centuries (after Hourani).



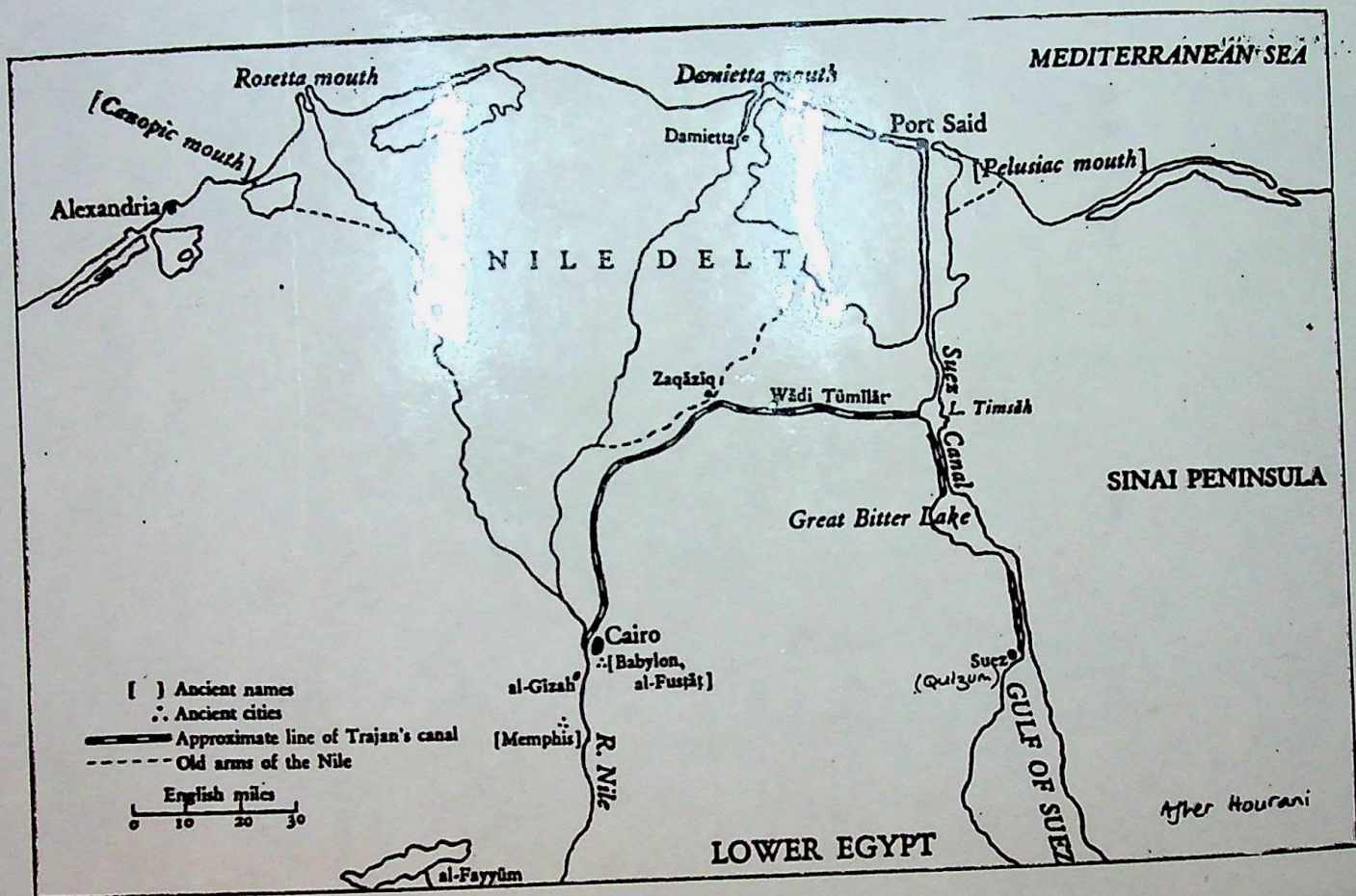


Figure 2: Lower Egypt in the ninth and tenth centuries; the land route followed that of Trajan's canal (after Hourani).

Figure
some

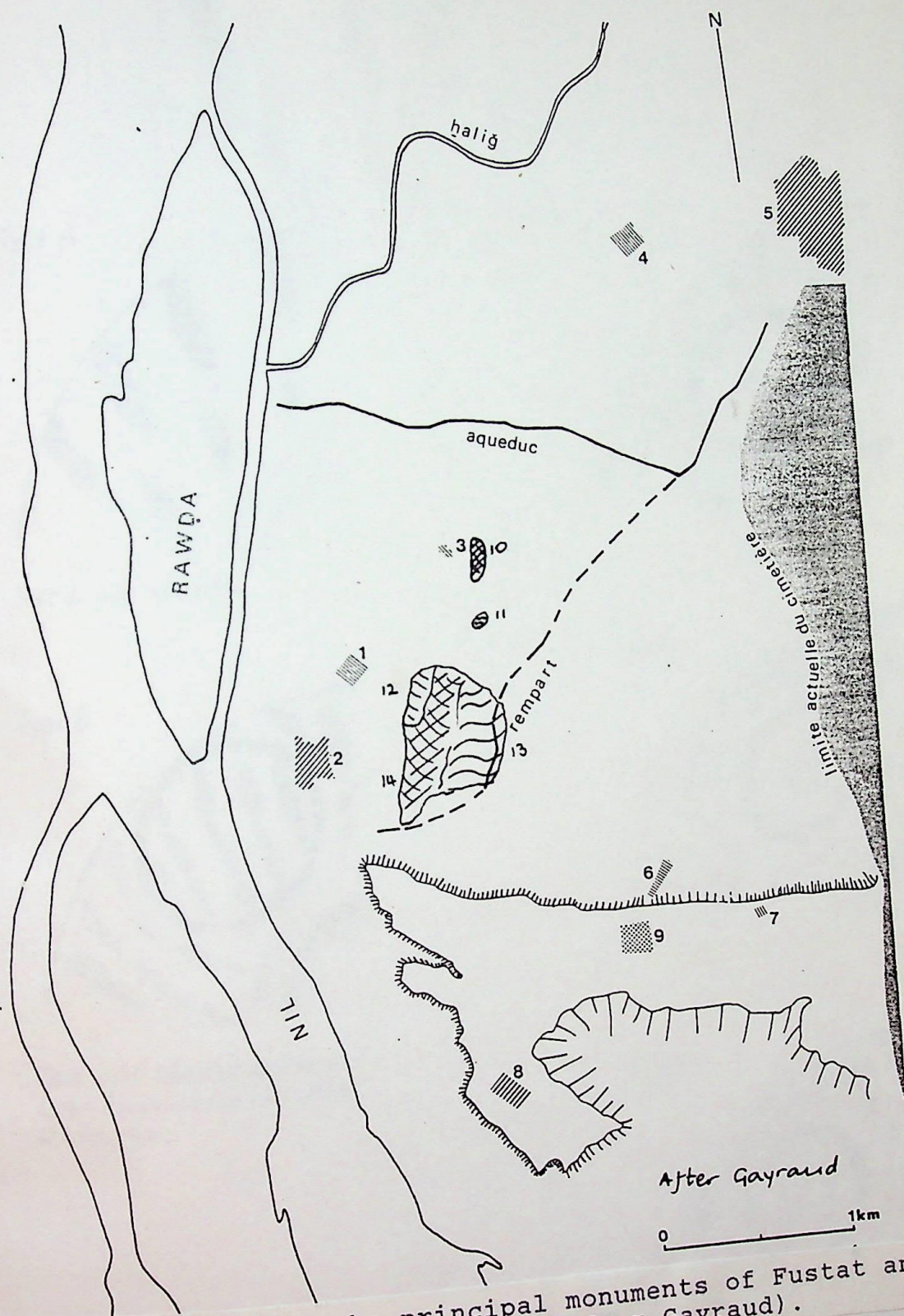
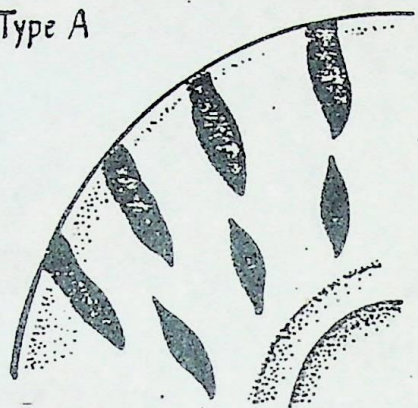


Figure 3: Rough sketch of the principal monuments of Fustat and some of the archaeological concessions (after Gayraud).

1. — Mosquée de 'Amrū ibn al-'Āṣ.
2. — Qaṣr al-Šam'.
3. — Mosquée Abū 'l-Su'ūd.
4. — Mosquée d'Ibn Ṭūlūn.
5. — Citadelle.

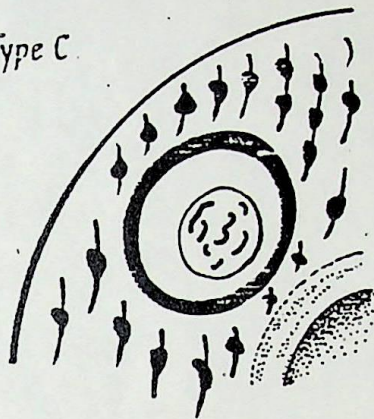
6. — Mausolées des Sab' Banāt.
7. — Mosquée funéraire al-Ḥaḍra al-Šarifa.
8. — Fort d'Iṣṭabl 'Antar.
9. — Concession de fouilles de l'IFAO.
10. — Fustat A
11. — Fustat C
12. — Japanese Exped.
13. — Bahgat
14. — Fustat B

Type A

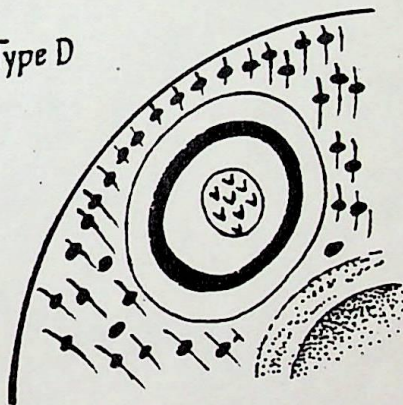


Just dashes, no circles

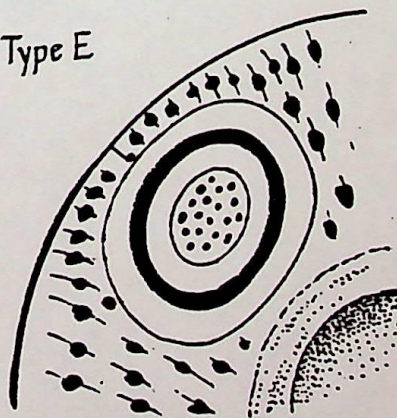
Type C



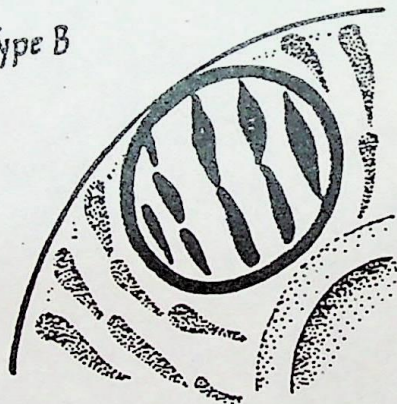
Type D



Type E



Type B



Thick, light-coloured dashes, and
dark-coloured circles with dashes
of same colour.

Figure 4: Decoration of outsides of 'Abbasid lustre-painted bowls
(after Grube).

